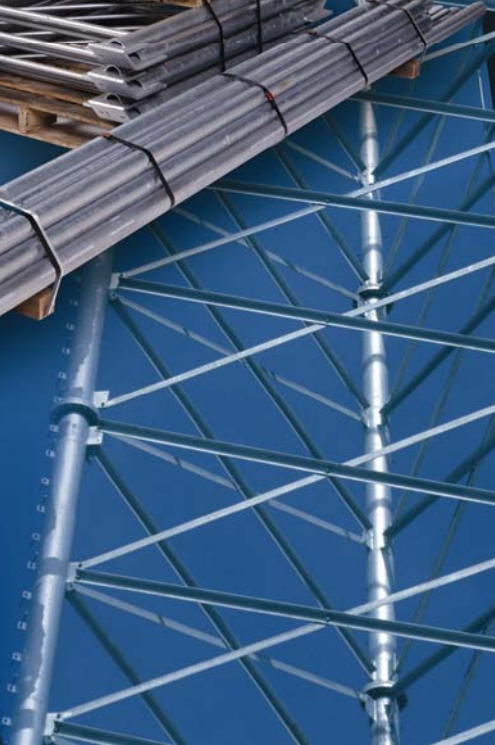




N E L L O CORPORATION



INTRODUCTION



N E L L O
CORPORATION



Nello Corporation specializes in the Communications Support Infrastructure market. We have a strategy of providing innovative and cost effective products to an industry that relies on quality, service and price.

We have grown a tremendous amount in the past few years thanks to our dedicated team of highly skilled employees who listen and respond to the needs of our growing customer base. In order to support our customers we have increased our facility's size 6-fold and even more in capacity in just three short years! We are constantly making improvements at Nello in both manufacturing and distribution with the goal of being able to supply what you need when you need it.

Nello Corporation now manufactures and distributes over 1,000 products ranging from a homeowner's satellite dish support bracket to a 1,500' tall broadcast communications tower. Some of our products are needed to support the antennas and coaxial cable used in wireless communication sites. Others are used in the consumer electronics market and in the utility industry as electrical transmission support components.

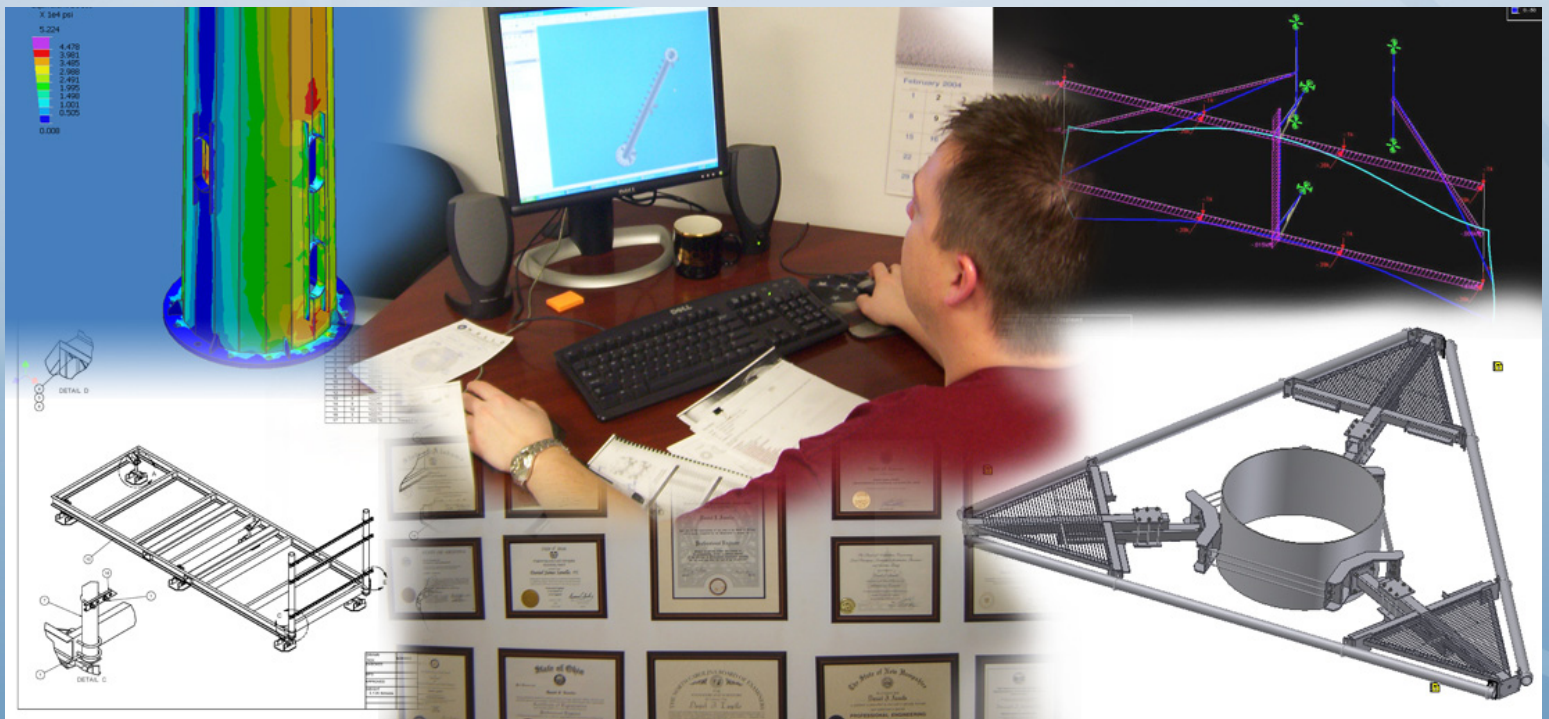
Our latest catalog speaks for itself. It contains an abundant array of products needed for your communication equipment support needs. Our products are designed by our in-house engineering team to the latest standards with engineering data available upon request. If you have any specific loading scenarios just ask, and one of our engineers would be more than happy to help.

I am proud to be a part of a team that is dedicated to the mission of becoming your single source for communication equipment support needs. At Nello we believe in what we do and, as always, we listen to our customer's needs.

Sincerely,

Dan Ianello, PE
President

ENGINEERING & TECHNOLOGY



Engineering, Design and Technology is at the core of what do at Nello. This obsession has allowed us to develop multitudes of products that span numerous markets. Our Engineering team has decades of experience and knowledge that is being leveraged using the latest software and technology to design products that bring greater value to our customers through increased functionality and reduced installation times.

Some key Engineering and Technology points are:

- Structural designs to the latest edition of EIA/TIA-222
- Nonlinear finite element design software
- Expert zoning testimony
- Solid model assembly and fabrication drawings
- Voting Member of the Telecommunications Industry Association (EIA/TIA)
- Supporting Company Member of the American Welding Society (AWS)
- Key Personnel membership in:
 - National Society of Professional Engineers (NSPE)
 - American Society of Civil Engineers (ASCE)
 - American Welding Society (AWS)
 - Canadian Welding Bureau Certified (CWB)

MANUFACTURING & DISTRIBUTION



N E L L O
CORPORATION



Nello Corporation's manufacturing and distribution facilities are strategically located in northern Indiana to allow for abundant raw material resources including galvanizing. This location allows for shipping to most US locations within 1-3 days. Our 50,000 Sq Ft manufacturing plant contains all the equipment necessary to offer complete in-house manufacturing from start to finish on most product lines. Nello's team of skilled manufacturing employees have decades of industry experience and all of our welders are AWS qualified and are routinely tested by our AWS certified inspector. Our 40,000 Sq Ft distribution plant sits on 9 acres allowing for ample storage and expansion.

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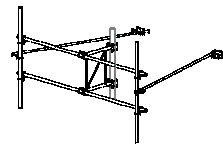


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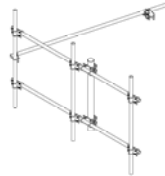


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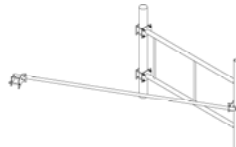
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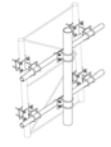
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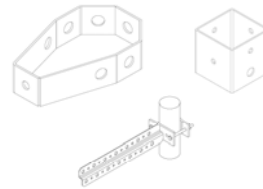
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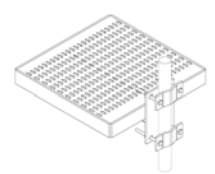
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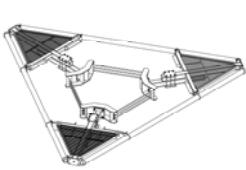


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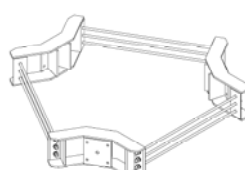
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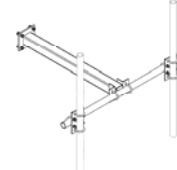
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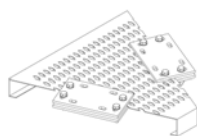


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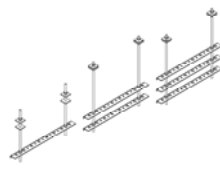
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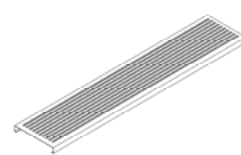
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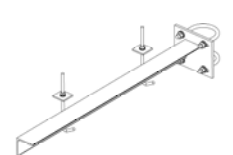
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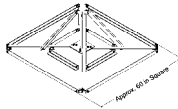
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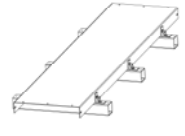
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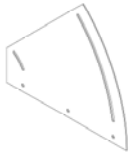
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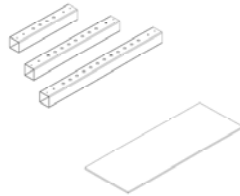
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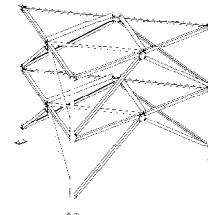
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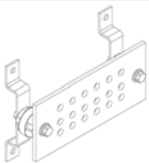


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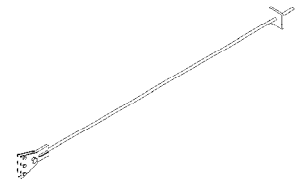
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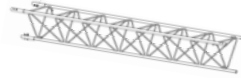
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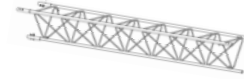
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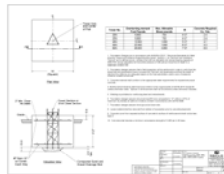
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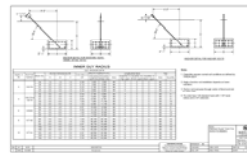
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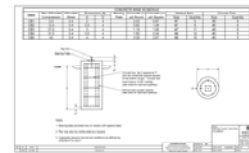
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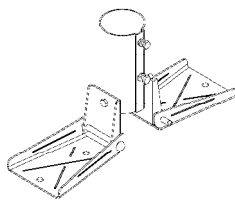


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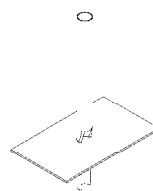
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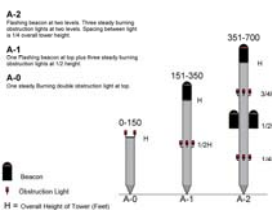


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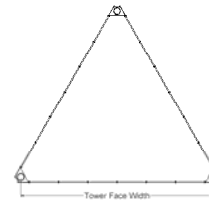


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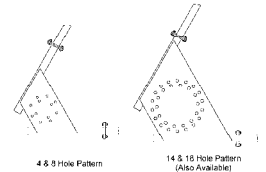


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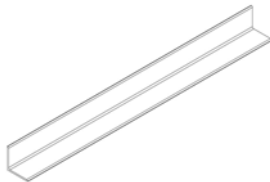


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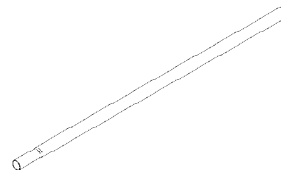
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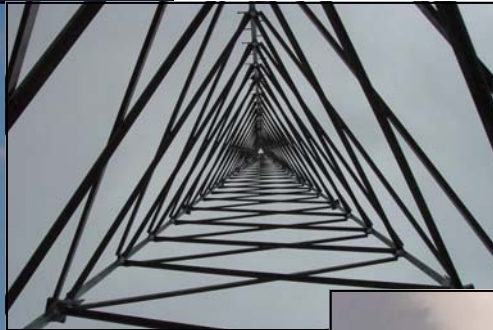
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Self-Supporting Towers



SUPPORTING YOUR WIRELESS NEEDS,
ONE TOWER AT A TIME





Self-Supporting Towers



WORLDWIDE MULTIPLE USES

The NELLO NSX series of Self-Supporting Towers provides a very efficient and cost effective way of supporting a vast array of appurtenances. Some NSX Towers are in use for cellular, microwave, PCS, weather stations and surveillance camera mounts.

ENGINEERING AND MANUFACTURING

NSX Towers are designed by professional engineers that have years of industry experience to make sure they meet the latest codes and design standards. NSX Towers are also manufactured in a highly accurate environment resulting in reduced installation time. As with all Nello Towers, NSX Towers are Hot Dip Galvanized after fabrication to prevent corrosion and assure a long service life.



Self-Supporting Towers



NSX ACCESSORIES

NSX Towers are available with a multitude of engineered accessories including:

- Platforms
- Antenna Mounts
- Ladders
- Waveguide Supports
- Lighting
- Ice Shields
- Tower Painting
- Safety Climb Devices

NSX CATALOG TOWERS

NSX Catalog Towers have been pre-engineered for a variety of heights and windspeeds. These towers have been standardized to reduce lead times on engineering drawings and foundation designs as well as anchor and tower steel. The perfect choice for tower needs in a hurry!

NSX TOWER FEATURES

- Tubular or solid steel leg design
- Applications to 300 feet
- Custom and pre-engineered designs
- All parts Hot Dip Galvanized
- Mates to N-Series for light applications
- Mates to NSK for greater heights



Self-Supporting Towers

NSX Catalog Tower Pricing

70 MPH Basic Wind Speed, No Ice			
Height, ft.	Part Number	Description	Weight (Lbs)
40	105584	65N x 40' - 70 MPH - No Ice - Catalog Tower	570.0
50	105585	65N x 50' - 70 MPH - No Ice - Catalog Tower	670.0
60	105586	65N x 60' - 70 MPH - No Ice - Catalog Tower	1000.0
70	105587	65N x 70' - 70 MPH - No Ice - Catalog Tower	1100.0
80	105588	NSX 3.5' x 80' - 70 MPH - No Ice - Catalog Tower	1680.0
90	105589	NSX 3.5' x 90' - 70 MPH - No Ice - Catalog Tower	1780.0
100	105590	NSX 5.0' x 100' - 70 MPH - No Ice - Catalog Tower	2370.0
110	105591	NSX 5.0' x 110' - 70 MPH - No Ice - Catalog Tower	2470.0
120	105592	NSX 6.5' x 120' - 70 MPH - No Ice - Catalog Tower	3200.0
130	105593	NSX 6.5' x 130' - 70 MPH - No Ice - Catalog Tower	3300.0
140	105594	NSX 8.0' x 140' - 70 MPH - No Ice - Catalog Tower	4060.0
150	105595	NSX 8.0' x 150' - 70 MPH - No Ice - Catalog Tower	4160.0
160	105596	NSX 9.5' x 160' - 70 MPH - No Ice - Catalog Tower	5300.0
170	105597	NSX 9.5' x 170' - 70 MPH - No Ice - Catalog Tower	5400.0
180	105598	NSX 11.0' x 180' - 70 MPH - No Ice - Catalog Tower	6660.0
190	105599	NSX 11.0' x 190' - 70 MPH - No Ice - Catalog Tower	6760.0

90 MPH Basic Wind Speed, No Ice			
Height, ft.	Part Number	Description	Weight (Lbs)
40	105600	65N x 40' - 90 MPH - No Ice - Catalog Tower	800.0
50	105601	65N x 50' - 90 MPH - No Ice - Catalog Tower	990.0
60	105602	NSX 3.5' x 60' - 90 MPH - No Ice - Catalog Tower	1480.0
70	105603	NSX 3.5' x 70' - 90 MPH - No Ice - Catalog Tower	1670.0
80	105604	NSX 5.0' x 80' - 90 MPH - No Ice - Catalog Tower	2170.0
90	105605	NSX 5.0' x 90' - 90 MPH - No Ice - Catalog Tower	2360.0
100	105606	NSX 6.5' x 100' - 90 MPH - No Ice - Catalog Tower	3000.0
110	105607	NSX 6.5' x 110' - 90 MPH - No Ice - Catalog Tower	3190.0
120	105608	NSX 8.0' x 120' - 90 MPH - No Ice - Catalog Tower	3860.0
130	105609	NSX 8.0' x 130' - 90 MPH - No Ice - Catalog Tower	4050.0
140	105610	NSX 9.5' x 140' - 90 MPH - No Ice - Catalog Tower	5100.0
150	105611	NSX 9.5' x 150' - 90 MPH - No Ice - Catalog Tower	5290.0
160	105612	NSX 11.0' x 160' - 90 MPH - No Ice - Catalog Tower	6460.0
170	105613	NSX 11.0' x 170' - 90 MPH - No Ice - Catalog Tower	6650.0
180	105614	NSX 12.5' x 180' - 90 MPH - No Ice - Catalog Tower	8050.0
190	105615	NSX 12.5' x 190' - 90 MPH - No Ice - Catalog Tower	8240.0

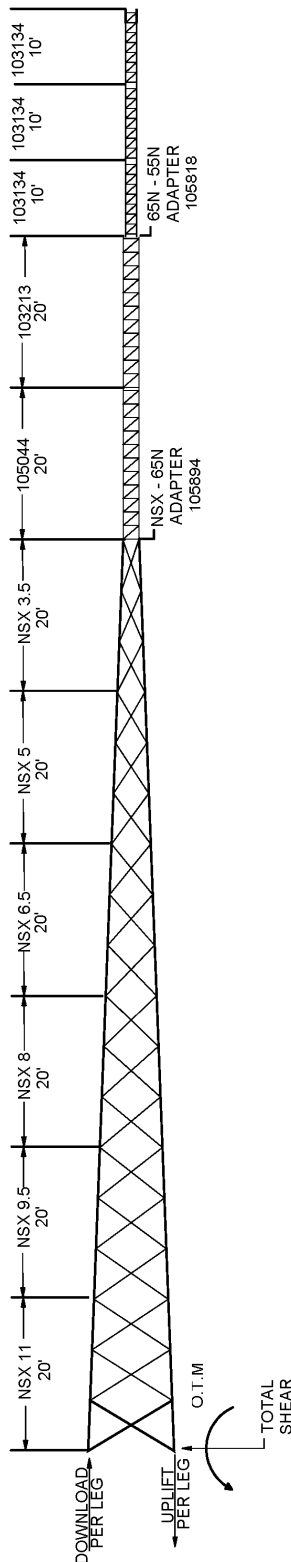
Notes:

1. All towers are galvanized after fabrication and designed for the basic wind speeds shown above, no ice. See applicable drawings for allowable antenna loads and appropriate parts lists for items included in the above tower prices.



Self-Supporting Towers

NSX Catalog Tower Sections, 70 MPH - No Ice



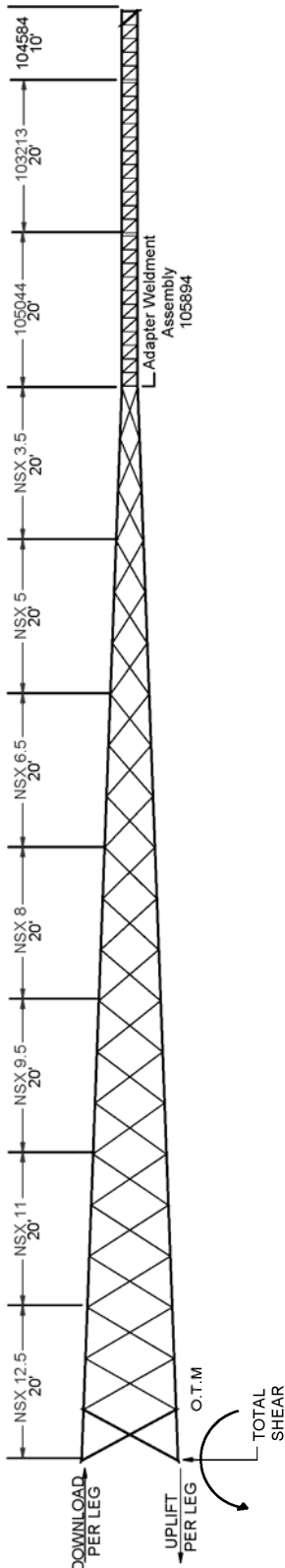
Part #	Description	Weight (Lbs)
103134	55N Section Assembly (10' Long)	92.6
105818	65N to 55N Transition Assembly	110.0
103213	65N 20' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	341.5
105044	65N 20' Heavy Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	396.3
105894	NSX-2 Transition to a 65N Section (Assembly)	46.0
NSX3.5	NSX3.5 Assembly, 3 Panel, P2.5x.203 leg, 1-1/2" x 1/8" Diagonals	635.0
NSX5	NSX5.0 Assembly, 3 Panel, P2.5x.203 leg, 1-1/2" x 1/8" Diagonals	648.0
NSX6.5	NSX6.5 Assembly, 3 Panel, P3x.216 leg, 1-1/2" x 1/8" Diagonals	776.0
NSX8	NSX8.0 Assembly, 3 Panel, P3x.216 leg, 1-1/2" x 1/8" Diagonals	799.0
NSX9.5	NSX9.5 Assembly, 3 Panel, P3x.3 leg, 1-3/4" x 3/16" Diagonals	1089.0
NSX11	NSX11.0 Assembly, 3 Panel, P3x.3 leg, 2" x 3/16" Diagonals	1261.0
105822	65N Anchor Steel Assembly - 5/8" Anchor Bolts	76.0
104734	NSX Tower Anchor Steel Assembly (1-1/2" - 3" Legs - 3/4" x 48" A687) - Includes 6 Embedment Plates	99.4

Notes:

1. Sections include hardware for connecting to section below except for the NSX12.5.
2. NSX sections include step bolt hardware for one tower leg.
3. NSX sections include all hardware and spacers for connecting diagonal bracing.
4. Weights are approximations. Weights should be field verified prior to installation.



Self-Supporting Towers



NSX Catalog Tower Sections, 90 MPH - No Ice


Part #	Description	Weight (Lbs)
103134	55N Section Assembly (10' Long)	92.6
105818	65N to 55N Transition Assembly	110.0
103213	65N 20' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	341.5
105044	65N 20' Heavy Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	396.3
105894	NSX-2 Transition to a 65N Section (Assembly)	46.0
NSX3.5	NSX3.5 Assembly, 3 Panel, P2.5x.203 leg, 1-1/2" x 1/8" Diagonals	635.0
NSX5	NSX5.0 Assembly, 3 Panel, P2.5x.203 leg, 1-1/2" x 1/8" Diagonals	648.0
NSX6.5	NSX6.5 Assembly, 3 Panel, P3x.216 leg, 1-1/2" x 1/8" Diagonals	776.0
NSX8	NSX8.0 Assembly, 3 Panel, P3x.216 leg, 1-1/2" x 1/8" Diagonals	799.0
NSX9.5	NSX9.5 Assembly, 3 Panel, P3x.3 leg, 1-3/4" x 3/16" Diagonals	1089.0
NSX11	NSX11.0 Assembly, 3 Panel, P3x.3 leg, 2" x 3/16" Diagonals	1261.0
105822	65N Anchor Steel Assembly - 5/8" Anchor Bolts	76.0
104734	NSX Tower Anchor Steel Assembly (1-1/2" - 3" Legs - 3/4" x 48" A687) - Includes 6 Embedment Plates	99.4

Notes:

1. Sections include hardware for connecting to section below except for the NSX12.5.
2. NSX sections include step bolt hardware for one tower leg.
3. NSX sections include all hardware and spacers for connecting diagonal bracing.
4. Weights are approximations. Weights should be field verified prior to installation.



Self-Supporting Towers



Nello Catalog NSX Towers - 70 MPH, No Ice

N E L L O

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 Nappanee, IN 46550
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Tower Height (ft)	Part Number	Face Spread		Allowable Projected Area (sq ft)		Base Reactions			
		Top	Base	Tower Top	30' Below Top	Download (lb)	Uplift (lb)	Total Shear (lb)	OTM (ft-lb)
40'	105584	17"	2.0'	20.0	24.0	14,800	14,100	1,100	25,200
50'	105585	17"	2.0'	18.0	22.0	20,500	19,700	1,200	35,200
60'	105586	17"	2.0'	18.0	22.0	29,000	28,100	1,300	49,900
70'	105587	17"	2.0'	16.0	20.0	35,600	34,600	1,400	61,400
80'	105588	17"	3.5'	16.0	20.0	27,800	26,400	1,800	82,400
90'	105589	17"	3.5'	14.0	18.0	32,100	30,600	1,800	95,000
100'	105590	17"	5.0'	14.0	18.0	29,500	27,500	2,300	124,100
110'	105591	17"	5.0'	12.0	17.0	32,900	30,900	2,400	138,900
120'	105592	17"	6.5'	12.0	17.0	32,800	30,000	2,900	178,800
130'	105593	17"	6.5'	11.0	16.0	36,200	33,300	3,000	197,400
140'	105594	17"	8.0'	11.0	16.0	37,500	33,900	3,600	251,000
150'	105595	17"	8.0'	10.0	15.0	40,500	36,800	3,700	271,500
160'	105596	17"	9.5'	10.0	15.0	43,100	38,300	4,500	341,300
170'	105597	17"	9.5'	9.0	15.0	46,200	41,300	4,600	366,600
180'	105598	17"	11.0'	9.0	15.0	50,000	43,700	5,500	456,400
190'	105599	17"	11.0'	8.0	14.0	52,500	46,200	5,600	480,600

- Notes:**
1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
 2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
 3. Antennas and mounts shall be symmetrically placed about the center of the tower.
 4. Design allows for one 7/8" transmission line to the top and two 7/8" transmission lines to 30' below the top, one per tower face for a total of three.
 5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
 6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
 7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
 8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
 9. Field connections shall be bolted. No field welds shall be allowed.
 10. Exposed structural steel is hot-dip galvanized per ASTM A123.
 11. Tolerance on tower steel height is plus 1% or minus 1/2%.
 12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.

DRAWN	RCH	ORIG DATE	9/26/2004	TITLE	NSX Catalog Towers - 70 MPH No Ice
CHECKED	RCH	DATE	12/21/2004	REV	1
WFG		DATE	1/25/2005	REV	2
APPROVED		DATE		REV	
WEIGHT		DATE		REV	
				SWG NO	106345
				PRJ NO	543
				SHEET	1 OF 1

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Self-Supporting Towers

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Nello Catalog NSX Towers - 90 MPH, No Ice



N E L L O

Tower Height (ft)	Part Number	Face Spread		Allowable Projected Area (sq ft)		Base Reactions			
		Top	Base	Tower Top	30' Below Top	Download (lb)	Uplift (lb)	Total Shear (lb)	OTM (ft-lb)
40'	105600	2.0'	2.0'	20.0	24.0	25,600	24,800	2,000	44,100
50'	105601	2.0'	2.0'	20.0	19.0	36,700	35,800	2,100	63,500
60'	105602	2.0'	3.5'	17.0	21.0	29,400	28,000	2,600	87,200
70'	105603	2.0'	3.5'	17.0	21.0	38,300	36,800	2,800	114,100
80'	105604	2.0'	5.0'	15.0	19.0	35,100	33,000	3,400	148,600
90'	105605	2.0'	5.0'	15.0	17.0	41,900	39,600	3,600	177,600
100'	105606	2.0'	6.5'	12.0	16.0	40,800	37,700	4,300	224,000
110'	105607	2.0'	6.5'	12.0	15.0	46,900	43,700	4,600	286,200
120'	105608	2.0'	8.0'	10.0	14.0	48,300	44,100	5,400	326,000
130'	105609	2.0'	8.0'	9.0	14.0	53,700	49,400	5,700	363,000
140'	105610	2.0'	9.5'	8.0	12.0	56,800	51,100	6,800	454,400
150'	105611	2.0'	9.5'	8.0	12.0	62,500	56,700	7,000	500,900
160'	105612	2.0'	11.0'	7.0	10.0	67,100	59,600	8,400	620,700
170'	105613	2.0'	11.0'	7.0	10.0	72,600	65,000	8,600	672,400
180'	105614	2.0'	12.5'	6.0	9.0	79,400	69,600	10,400	832,900
190'	105615	2.0'	12.5'	6.0	9.0	84,700	74,900	10,600	890,500

Notes:

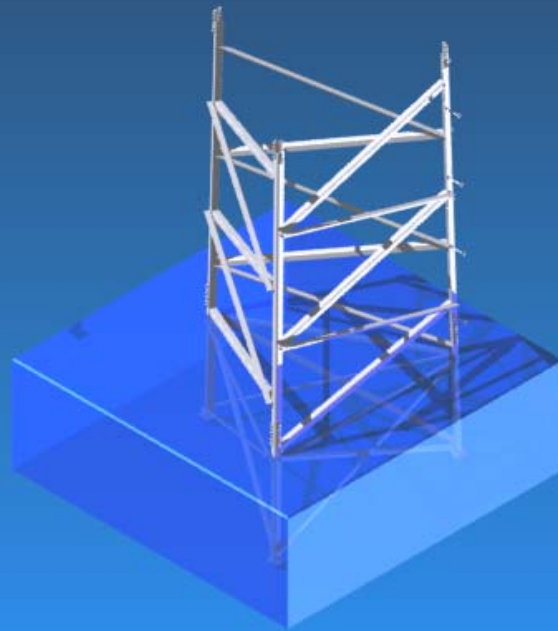
- Tower designs conform to ANSI/TIA/EIA-222-F. "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
- The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
- Antennas and mounts shall be symmetrically placed about the center of the tower.
- Design allows for one 7/8" transmission line to the top and two 7/8" transmission lines to 30' below the top, one per tower face for a total of three.
- Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
- Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
- Do not install or dismantle towers within falling distance of electrical and telephone lines.
- Installation shall conform to local, state, and federal requirements for construction marking and lighting.
- Field connections shall be bolted. No field welds shall be allowed.
- Exposed structural steel is hot-dip galvanized per ASTM A123.
- Tolerance on tower steel height is plus 1% or minus 1/2%.
- Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.

DRAWN RCH CHECKED RCH WFG APPROVED DDA WEIGHT	TITLE 12/29/04 12/21/04 1/25/05 106544	NSX Catalog Towers - 90 MPH No Ice	NELLO CORPORATION 73377 Atline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840
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Lightweight Self-Supporting Towers

SUPPORTING YOUR WIRELESS NEEDS,
ONE TOWER AT A TIME





Lightweight Self-Supporting Towers



WORLDWIDE MULTIPLE USES

The NELLO NSV series of self supporting towers provides a very efficient and cost effective way of supporting a vast array of lightweight appurtenances. NSV's lightweight design is a perfect fit for wireless internet and two-way applications.

ENGINEERING AND MANUFACTURING

NSV Towers are designed by professional engineers that have years of industry experience to make sure they meet the latest codes and design standards. As with all Nello Towers, NSV Towers are Hot Dip Galvanized after fabrication to prevent corrosion and assure a long service life.

NSV ACCESSORIES

NSV Towers are available with a multitude of engineered accessories including:

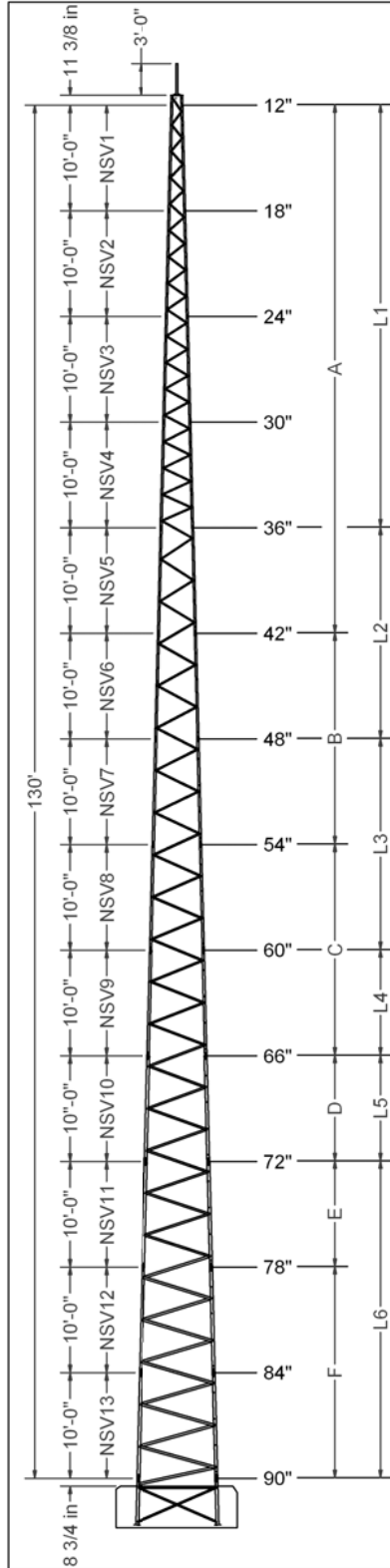
- Antenna Mounts
- Ice Shields
- Tower Painting
- Climbing Pegs
- Safety Climb Devices

NSV TOWER FEATURES

- Maximum section length of 10' for easy transport
- Complete unassembled tower in a single boxed crate
- Sections may be purchased assembled
- Applications to 130 feet
- Custom and catalog designs
- All parts Hot Dip Galvanized



Lightweight Self-Supporting Towers



Member Size Table

Member Type	Designation	Description	End Connection
Legs	L1	60 deg Formed Angle, 10 gauge	5/16" Bolts
	L2	60 deg Formed Angle, 3/16" thick	
	L3	60 deg Formed Angle, 3/16" thick	
	L4	60 deg Formed Angle, 3/16" thick	
	L5	60 deg Formed Angle, 3/16" thick	
	L6	60 deg Formed Angle, 1/4" thick	
Braces	A	90 deg Formed Angle, 18 gauge	5/16" Bolts
	B	90 deg Formed Angle, 16 gauge	
	C	90 deg Formed Angle, 14 gauge	
	D	90 deg Formed Angle, 14 gauge	
	E	90 deg Formed Angle, 14 gauge	
	F	90 deg Formed Angle, 13 gauge	

Tower Design Loading

According to ANSI/TIA/EIA-222-F-1996
See sheet 2 for design general notes

Tower Height	NSV Section Options	Tower Model	Part Number	Allowable Effective Projected Area (sq ft)													
				Basic Wind Speed (mph)						1/2" Ice Fastest Mile							
				No Ice Fastest Mile		Basic Wind Speed (mph)		1/2" Ice Fastest Mile		Basic Wind Speed (mph)		1/2" Ice Fastest Mile					
130'	1-13	NSV 7.5' X 130'	108215	70	75	80	85	90	95	100	70	75	80	85	90	95	100
120'	1-12	NSV 7.0' X 120'	108216	11	6	-	-	-	-	-	14	6	-	-	-	-	
120'	2-13	NSV 7.5' X 120'	109098	26.5	15.5	6	-	-	-	-	14.5	8.5	-	-	-	-	
110'	1-11	NSV 6.5' X 110'	108217	11.5	7	-	-	-	-	-	35	21	9	-	-	-	
110'	3-13	NSV 7.5' X 110'	109099	44	30.5	19.5	2.5	-	-	-	58.5	41	27	15	-	-	
100'	2-12	NSV 7.0' X 100'	109100	28	17.5	8	-	-	-	-	37	24	11.5	1.5	-	-	
100'	1-10	NSV 6.0' X 100'	108218	12.5	8	1.5	-	-	-	-	17	11	3	-	-	-	
100'	4-13	NSV 7.5' X 100'	109101	48.5	39	30.5	13	-	-	-	65	51.5	41	32	-	-	
100'	2-11	NSV 6.5' X 100'	109102	29	20	10.5	2.5	-	-	-	38.5	27.5	14.5	4	-	-	
100'	3-12	NSV 7.0' X 100'	109103	47	33.5	22	12	-	-	-	57.5	44.5	30	18	-	-	
90'	1-9	NSV 5.5' X 90'	108219	13.5	9	4.5	-	-	-	-	18.5	12	6.5	-	-	-	
90'	5-13	NSV 7.5' X 90'	109104	53.5	45	38	23.5	-	-	-	71.5	60	51	42.5	14	-	
80'	2-10	NSV 6.0' X 80'	109105	30	22.5	12.5	4.5	-	-	-	40.5	30.5	17.5	7	-	-	
80'	1-8	NSV 5.0' X 80'	108220	15	10	6	0.5	-	-	-	20	13.5	8.5	1	-	-	
80'	6-13	NSV 7.5' X 80'	109106	80.5	66	54	32	12	-	-	108	89	73	52	27.5	5	
80'	3-10	NSV 6.0' X 80'	109107	52.5	39	27.5	17.5	9.5	3	-	70	52.5	37	24.5	14	5	
70'	1-7	NSV 4.5' X 70'	108221	16.5	11.5	7	4	1	-	-	22	15.5	10	5.5	2	-	
70'	7-13	NSV 7.5' X 70'	109108	86.5	73	61.5	41.5	24.5	9	-	116	98.5	84	63.5	41.5	23.5	
70'	4-10	NSV 6.0' X 70'	109109	55.5	45	36	28.5	22.5	17.5	4.5	74	60	48	38.5	30	23.5	
60'	1-6	NSV 4.0' X 60'	108222	18	12.5	8.5	5	2	-	-	24	17.5	11.5	7	3.5	0.5	
50'	1-5	NSV 3.5' X 50'	108223	19.5	14	9.5	6	3	0.5	-	26.5	19.5	13.5	8.5	4.5	1.5	
40'	1-4	NSV 3.0' X 40'	108224	21	15.5	10.5	7	3.5	1	-	28.5	21	15	9.5	5.5	2	

TITLE: NSV 7.5' X 130' Tower Assembly	
CAD APP: RCH	1301 Stahly Drive
MFG APP:	Nappanee, IN 46550
ENG APP: JML	Bus: (574)773-4827
DRAWN BY: RCH NPD NO: 19	FAX: (574)773-5840 DWG NO: 108926 SHEET: 1 OF 2
ORG DATE: 12/7/2005	
WEIGHT:	

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REV	BY	DATE	DESCRIPTION
1	RCH	12/19/2005	Added Top Mast



Lightweight Self-Supporting Towers

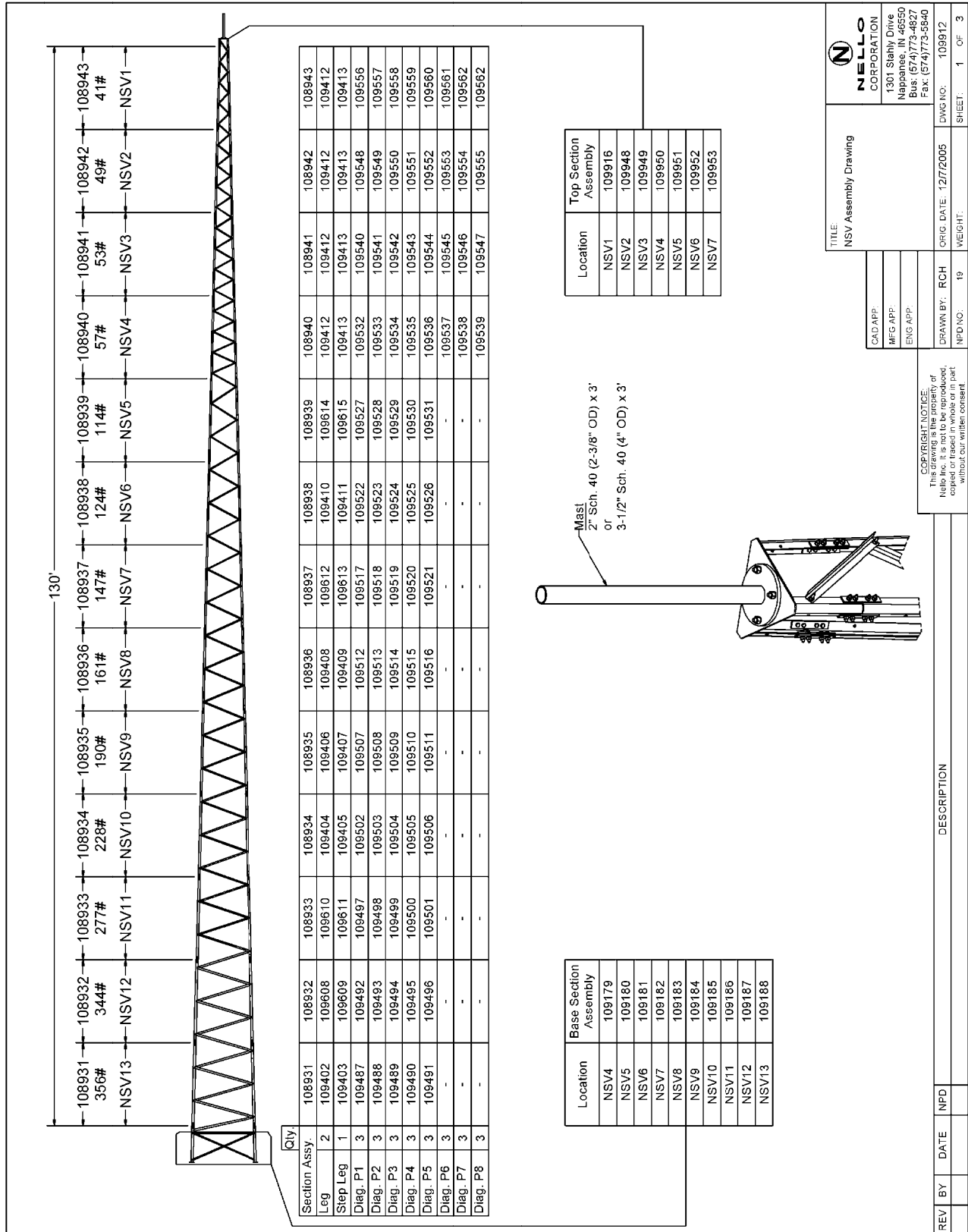
Tower Notes:

1. Nello Corporation designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for the basic wind speeds indicated without ice and for 1/2 inch radial ice. When accompanied by ice, wind pressures are reduced 25%. The specific design loading criteria for a site must be verified by others prior to installation.
2. Antennas and mounts are assumed to be symmetrically mounted at or below the top of the tower. Design assumes the weight of antennas and mounts does not exceed 300 pounds. Local stresses due to mounting arrangement have not been considered and must be investigated by others on a site by site basis.
3. Design assumes maximum top mast load is limited to 5 square feet effective projective area and 100 pounds of weight. All other loads are assumed to be mounted below the top mast.
4. Design assumes one 1/4 inch transmission line per tower face.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown. Design assumes competent and qualified personnel will erect the tower.
6. Tower and foundation installation shall be in accordance with ANSI/TIA/EIA-222-F.
7. Field connections shall be bolted. No field welds shall be allowed.
8. Structural bolts shall conform to SAE J429 Grade 5.
9. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
10. All high strength bolts are to be tightened to a "snug tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
11. Purchaser shall verify the installation is in conformance with local, state and federal requirements for construction marking and lighting.
12. Tolerance on tower steel height is equal to plus 1% or minus 1/2%.
13. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
14. Material specifications: 60 degree Angle Legs – ASTM A572 Gr. 50; 60 degree Angle Legs which are 10 ga. - ASTM A1011 Gr. 30; 90 degree Angle Diagonals - ASTM A36.

REV		BY	DATE	MPD	DESCRIPTION
1	RCH		12/19/2005	19	Added Top Mast
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CAD APP:		RCH		TITLE: NSV 7.5 x 130' Tower Assembly	
MFG APP:				NELLO CORPORATION	
ENG APP:		JML		1301 Stahly Drive Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840	
DRAWN BY:		RCH		ORIG. DATE: 12/7/2005	
MPD NO:		19		DWG NO: 108926	
				SHEET: 2 OF 2	



Lightweight Self-Supporting Towers





Lightweight Self-Supporting Towers

130'

Section Splice Detail - Bolt Diameter (Quantity)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Lower Conn.	3/8" (24)	3/8" (24)	3/8" (24)	3/8" (24)	5/16" (24)	5/16" (24)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (12)	5/16" (12)	5/16" (12)
Upper Conn.	3/8" (24)	3/8" (24)	3/8" (24)	5/16" (24)	5/16" (24)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (18)	5/16" (12)	5/16" (12)	5/16" (12)	5/16" (12)
Splice Plate P/N	109471	109471	109471	109472	109474	109476	109477	109478	109479	109480	109481	109481	109481	109481

A - E
Typical Splice View

F
Typical Splice View

G - I
Typical Splice View

J
Typical Splice View

K - N
Typical Splice View

REV	BY	DATE	NPD	DESCRIPTION

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TITLE: NSV Assembly Drawing	
CAD APP: _____	1301 Stahly Drive
MFG APP: _____	Nappanee, IN 46550
ENG APP: _____	Bus: (574)773-4827
	Fax: (574)773-5840
DRAWN BY: RCH	ORIG DATE: 12/7/2005
NPD NO.: 19	DWG NO.: 109472
	WEIGHT: _____
	SHEET: 2 OF 3



Lightweight Self-Supporting Towers

BILL OF MATERIALS																		
Tower Height	NSV Section Options	Tower Part Number	Total Weight Lbs.	NSV1	NSV2	NSV3	NSV4	NSV5	NSV6	NSV7	NSV8	NSV9	NSV10	NSV11	NSV12	NSV13	Top Plate Assembly P/N	Short Base P/N
130'	1-13	108215	2379 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109188
120'	2-13	109098	2345 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109948	109188
	1-12	108216	2016 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	108216	109187
110'	3-13	109099	2317 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109949	109188
	2-12	109100	1982 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109948	109187
100'	1-11	108217	1653 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109186
	4-13	109101	2299 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109950	109188
	2-11	109102	1619 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109948	109186
	3-12	109103	1954 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109949	109187
90'	1-10	108218	1349 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109185
	5-13	109104	2301 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109951	109188
	2-10	109105	1315 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109948	109185
	1-9	108219	1102 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109184
80'	6-13	109106	2258 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109952	109188
	3-10	109107	1287 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109949	109185
70'	1-8	108220	898 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109183
	7-13	109108	2194 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109953	109188
	4-10	109109	1269 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109950	109185
60'	1-7	108221	730 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109182
	1-6	108222	571 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109181
50'	1-5	108223	440 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109180
40'	1-4	108224	293 lbs	1	1	1	1	1	1	1	1	1	1	1	1	1	109916	109179

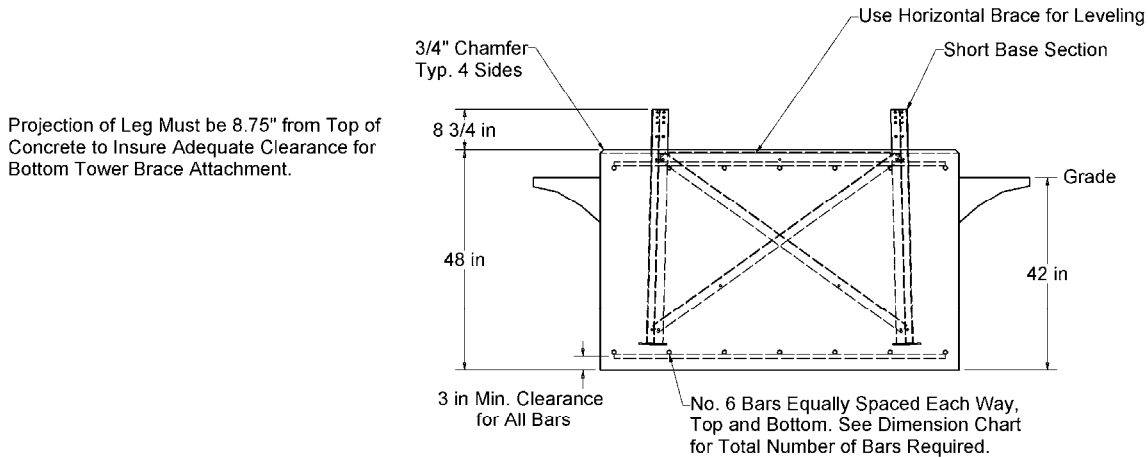
REV	BY	DATE	NPD	DESCRIPTION
<p>CONTRACT NOTE: This drawing is the property of Nello Inc. It is not to be reproduced, copied or traced in whole or in part without our written consent.</p>				
TITLE:		NSV Assembly Drawing		
CAD APP:				
MFG APP:				
ENG APP:				
DRAWN BY:		RCH		
MFG NO.:				
ORIG. DATE:		10/9/12		
WEIGHT:				
SHEET:		3 OF 3		



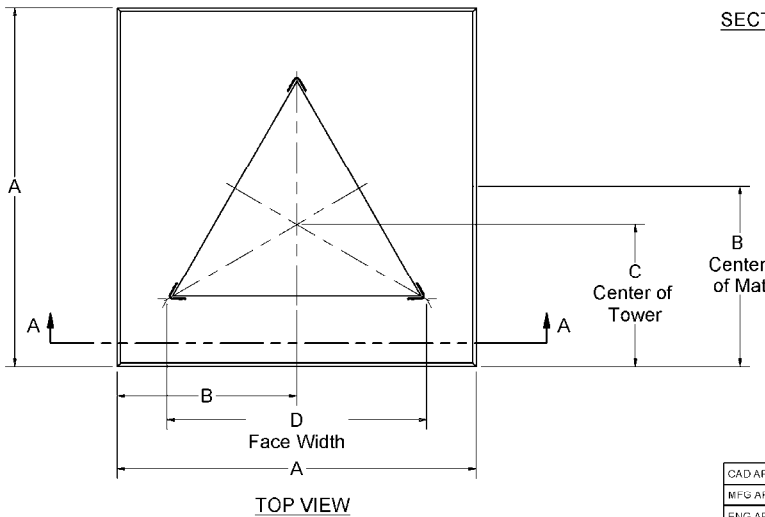
Lightweight Self-Supporting Towers

NSV FOUNDATION CHART												
Assembly Part Number	Bill of Material				Dimensions						Maximum Base Reactions	
	Leg P/N (Qty 3)	Horizontal Brace P/N (Qty 3)	Diagonal Brace P/N (Qty 6)	5/16" & 3/8" Hardware P/N (Qty 15)	A	B	C	D	Concrete Volume (Cu. Yds.)	Total #6 Bars Req.	Maximum Overturning Moment (lb-ft.)	Maximum Allowable Shear (lb.)
109179	109189	109199	109209	109397	7'-0"	3'-6"	3'-13/16"	3'-0"	7.3	36	77,000	2,000
109180	109190	109200	109210	109397	7'-6"	3'-9"	3'-2 15/16"	3'-6"	8.3	36	92,000	3,000
109181	109191	109201	109211	109397	8'-0"	4'-0"	3' 5 1/16"	4'-0"	9.5	40	111,000	3,500
109182	109192	109202	109212	109397	8'-6"	4'-3"	3'-7 3/16"	4'-6"	10.7	44	132,000	4,000
109183	109193	109203	109213	109397	9'-0"	4'-6"	3'-9 5/16"	5'-0"	12.0	44	155,000	4,500
109184	109194	109204	109214	109397	9'-6"	4'-9"	3'-11 1/2"	5'-6"	13.4	48	185,000	5,000
109185	109195	109205	109215	109397	10'-0"	5'-0"	4'-1 5/8"	6'-0"	14.8	48	215,000	5,500
109186	109196	109206	109216	109219	10'-6"	5'-3"	4'-3 3/4"	6'-6"	16.3	52	250,000	6,000
109187	109197	109207	109217	109219	11'-0"	5'-6"	4'-4 7/8"	7'-0"	17.9	52	285,000	6,500
109188	109198	109208	109218	109219	11'-6"	5'-9"	4'-8"	7'-6"	19.6	56	330,000	7,000

See Page 2 for Standard Foundation Notes.



SECTION A-A



REV	BY	DATE	NPD	DESCRIPTION

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TITLE: NSV Mat Foundation		 1301 Stahly Drive Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840
CAD APP: JML		
MFG APP:		
ENG APP: JML		
DRAWN BY: TCT	ORIG DATE: 8/19/2005	DWG NO: 109285
NPD NO:	WEIGHT:	SHEET: 1 OF 2



Lightweight Self-Supporting Towers

Foundation Notes

1. Foundation design assumes normal soil conditions as defined by ANSI/EIA/TIA-222-F. Normal soil is defined as dry, cohesive soil with an allowable net vertical bearing capacity of 4000 psf and an allowable net horizontal pressure of 400 psf per lineal foot of depth to a maximum of 4000 psf.
2. A field inspection shall be performed in order to verify that the actual site soil parameters meet or exceed the assumed soil parameters and that the depth of standard foundations are adequate based on the frost penetration and groundwater depth. Local frost depth must be no deeper than the bottom of the base foundation.
3. Reinforcement shall be deformed and conform to the requirements of ASTM A615 Grade 60 unless otherwise noted. Splices in reinforcement shall not be allowed unless otherwise indicated.
4. Welding is prohibited on reinforcing steel and anchorage.
5. Structural backfill must be compacted in 12" loose lifts to a 97% of maximum dry density at optimum moisture content in accordance with ASTM D698. Backfill must be clean and free of organic and frozen soils and foreign materials.
6. Foundation designs assume level ground at tower site.
7. Loose material shall be removed from bottom of excavation prior to concrete placement.
8. Concrete cover from exposed surface of concrete to surface of reinforcement shall not be less than 3".
9. Concrete and reinforcement installation must conform to ACI 318, "Building Code Requirements for Structural Concrete."
10. Concrete shall develop a minimum compressive strength of 3000 psi in 28 days.
11. Concrete shall be placed on the same day that the excavation is made.

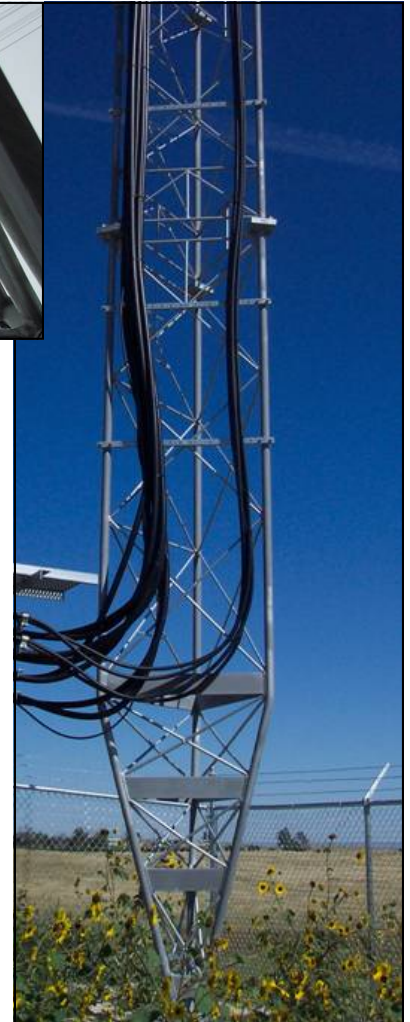
				<small>COPYRIGHT NOTICE:</small> This drawing is the property of Nello Inc. It is not to be reproduced, copied or traced in whole or in part without our written consent.		<small>TITLE:</small> NSV Mat Foundation		 NELLO CORPORATION 1301 Stahly Drive Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840		
<small>REV</small>	<small>BY</small>	<small>DATE</small>	<small>NPD</small>	<small>DESCRIPTION</small>	<small>CAD APP:</small> JML	<small>MFG APP:</small>	<small>ENG APP:</small> JML	<small>DRAWN BY:</small> TCT	<small>ORIG. DATE:</small> 8/19/2005	<small>DWG NO.:</small> 109285
								<small>NPD NO.:</small>	<small>WEIGHT:</small>	<small>SHEET:</small> 2 OF 2



Guyed Towers



SUPPORTING YOUR WIRELESS NEEDS,
ONE TOWER AT A TIME





Guyed Towers



WORLDWIDE MULTIPLE USES

The NELLO NGX series of Guyed Towers provides a very efficient and cost effective way of supporting a vast array of appurtenances. Some NGX Towers are in use for cellular, microwave, PCS and weather stations.

ENGINEERING AND MANUFACTURING

NGX Towers are designed by professional engineers that have years of industry experience to make sure they meet the latest codes and design standards. NGX Towers are also manufactured in a highly accurate environment resulting in reduced installation time. As with all Nello Towers, NGX Towers are Hot Dip Galvanized after fabrication to prevent corrosion and assure a long service life.



Guyed Towers



NGX ACCESSORIES

NGX Towers are available with a multitude of engineered accessories including:

- Platforms
- Antenna Mounts
- Torque Arms
- Waveguide Supports
- Lighting
- Ice Shields
- Tower Painting
- Safety Climb Devices

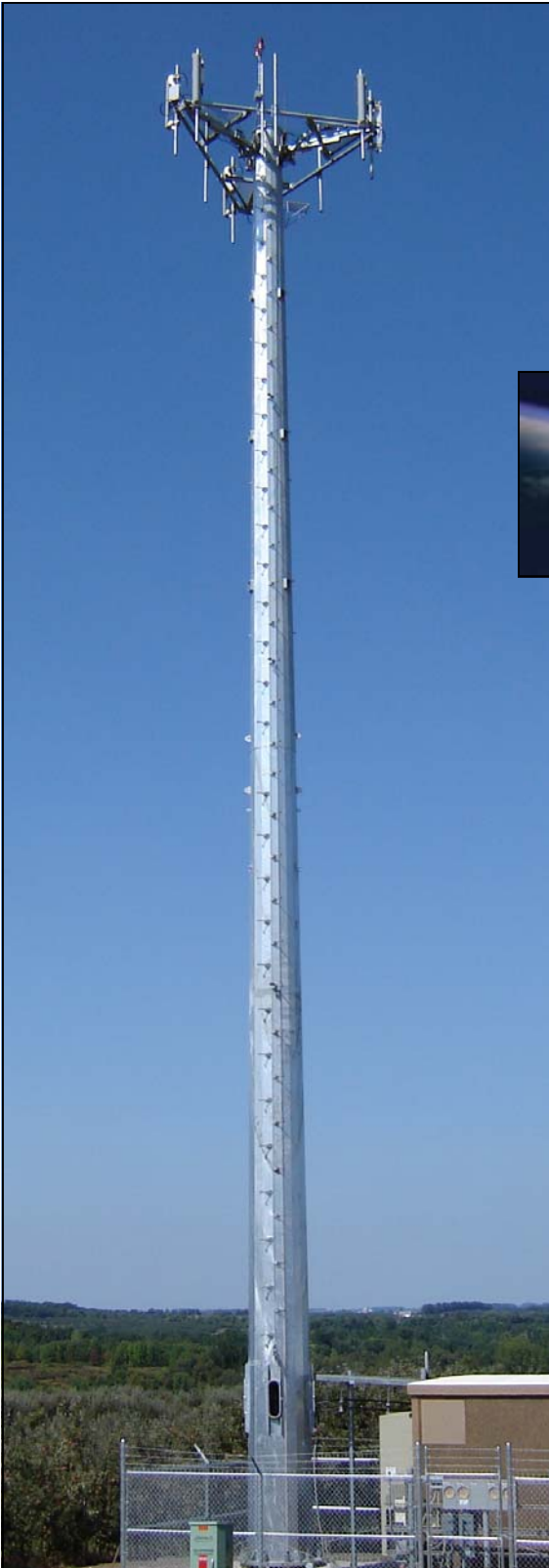
NGX TOWER FEATURES

- Tubular or solid steel leg design
- All-welded tower sections
- Applications to 800 feet
- Custom and pre-engineered designs
- All parts Hot Dip Galvanized
- Multiple tower face widths available

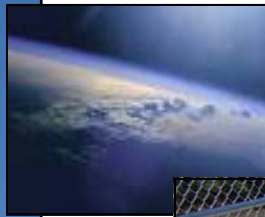




Tapered Poles



SUPPORTING YOUR WIRELESS NEEDS,
ONE TOWER AT A TIME





Tapered Poles



WORLDWIDE MULTIPLE USES

The NELLO NTP series of Tapered Pole Towers provides a very efficient and cost effective way of supporting a vast array of appurtenances. Some NTP Towers are in use for cellular, microwave and wireless internet applications

ENGINEERING AND MANUFACTURING

NTP Towers are designed by professional engineers that have years of industry experience to make sure they meet the latest codes and design standards. As with all Nello Towers, NTP Towers are Hot Dip Galvanized after fabrication to prevent corrosion and assure a long service life.

NTP ACCESSORIES

NTP Towers are available with a multitude of engineered accessories including:

- Platforms
- Antenna Mounts
- Lighting
- Ice Shields
- Tower Painting
- Safety Climb Devices

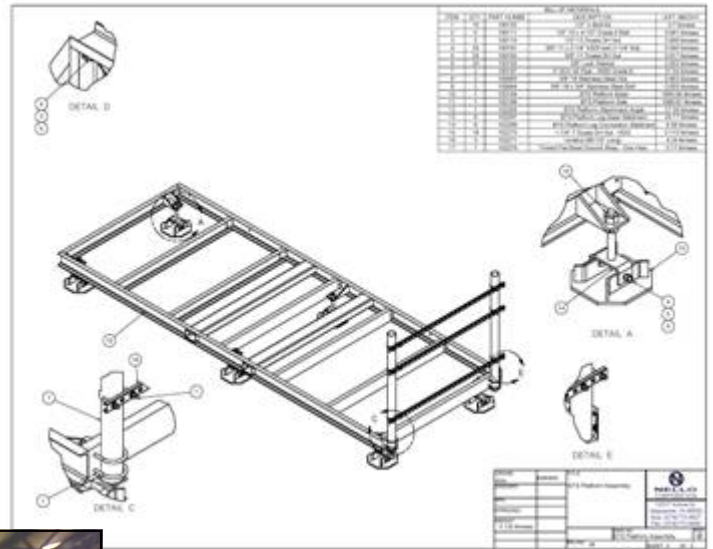
NTP TOWER FEATURES

- Tapered or straight shaft design
- Applications to 250 feet
- Custom designs
- All parts Hot Dip Galvanized



Equipment Platforms

Nello Corporation is committed to custom fabrication. Our specialty in this arena is Equipment Platforms. Our talented staff of Designers, Engineers and Fabricators go to great lengths to ensure the highest levels of quality and workmanship. We pre-build every custom fabricated platform to guarantee assembly on the job site. We also provide detailed assembly drawings, structural analysis and delivery right to the job site.

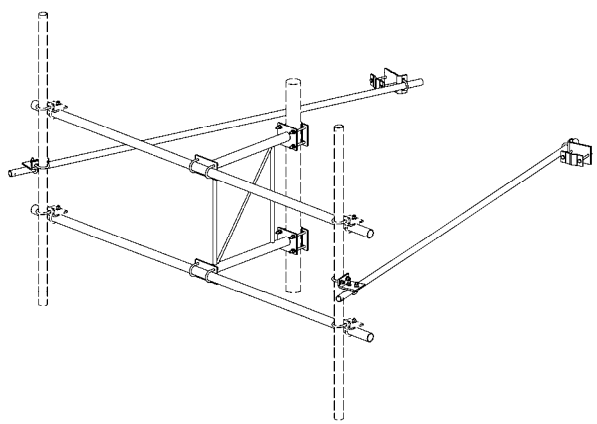


Tower Applications



KD Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Welded strut, KD face. Light weight Design.
Order Seperately:	Pipes and large leg/angle adapter	Mounts to:	1-1/4" to 4-1/2" OD - straight legs



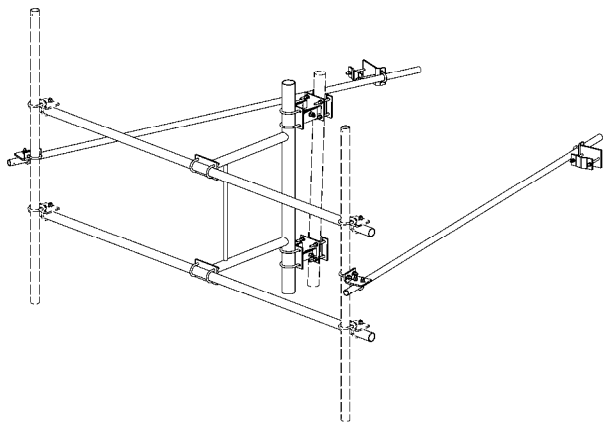
Part #	Description	Weight (Lbs)
KD Sector Frame, 10'-6" Wide		
101694	KD Sector Frame, 10'-6". Pipe mounts not included.	209.0
101695	KD Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	315.0
101696	KD Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	326.0
101697	KD Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	337.0
101698	KD Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	350.0
101699	KD Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	364.0
101700	KD Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	379.0
KD Sector Frame, 12' Wide		
101701	KD Sector Frame, 12'. Pipe mounts not included.	220.0
101702	KD Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	326.0
101703	KD Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	337.0
101704	KD Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	348.0
101705	KD Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	361.0
101706	KD Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	375.0
101707	KD Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	390.0
KD Sector Frame, 15' Wide		
101708	KD Sector Frame, 15'. Pipe mounts not included.	242.0
101709	KD Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	348.0
101710	KD Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	359.0
101711	KD Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	370.0
101712	KD Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	383.0
101713	KD Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	397.0
101714	KD Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	412.0

Tower Applications



Universal KD Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Taper/azimuth adjusting. Welded strut, KD face. Lightw eight Design.
Order Seperately:	Pipes and large leg/angle adapter	Mounts to:	1-1/4" to 4-1/2" OD



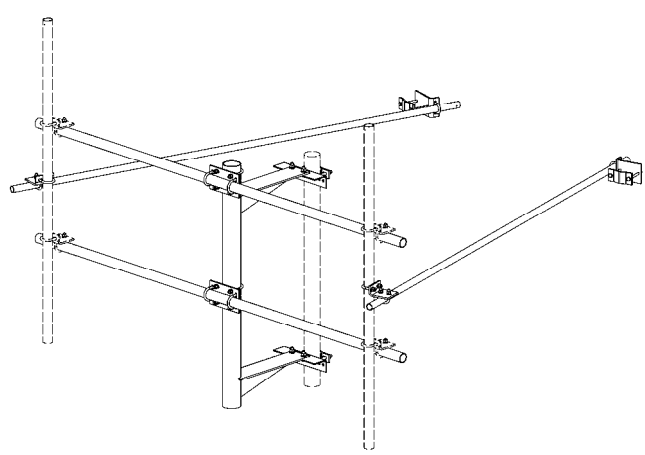
Part #	Description	Weight (Lbs)
Universal KD Sector Frame, 10'-6" Wide		
101673	Universal KD Sector Frame, 10'-6". Pipe mounts not included.	260.0
101674	Universal KD Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	366.0
101675	Universal KD Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	377.0
101676	Universal KD Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	388.0
101677	Universal KD Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	401.0
101678	Universal KD Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	415.0
101679	Universal KD Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	430.0
Universal KD Sector Frame, 12' Wide		
101680	Universal KD Sector Frame, 12'. Pipe mounts not included.	271.0
101681	Universal KD Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	377.0
101682	Universal KD Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	388.0
101683	Universal KD Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	399.0
101684	Universal KD Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	412.0
101685	Universal KD Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	426.0
101686	Universal KD Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	441.0
Universal KD Sector Frame, 15' Wide		
101687	Universal KD Sector Frame, 15'. Pipe mounts not included.	293.0
101688	Universal KD Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	399.0
101689	Universal KD Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	410.0
101690	Universal KD Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	421.0
101691	Universal KD Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	434.0
101692	Universal KD Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	448.0
101693	Universal KD Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	463.0

Tower Applications



Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or w/o mounting pipes.	Design:	Welded strut with azimuth adjusting face.
Order Seperately:	Pipes and large leg/angle adapter	Mounts to:	1-1/4" to 4-1/2" OD - staight legs



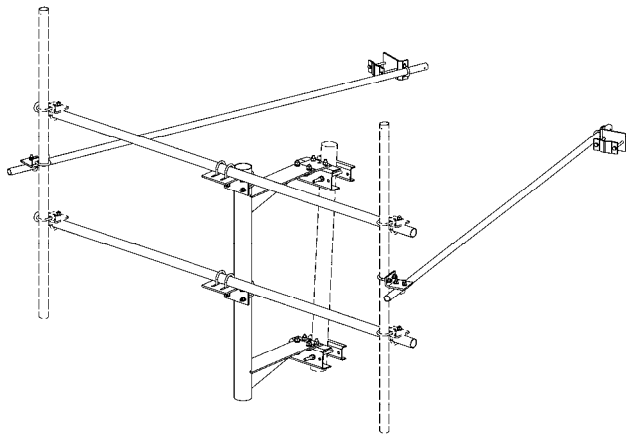
Part #	Description	Weight (Lbs)
Sector Frame, 10'-6" Wide		
109429	Sector Frame, 10'-6". Pipe mounts not included.	259.0
109430	Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	364.0
109431	Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	376.0
109432	Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	388.0
109433	Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	399.0
109434	Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	415.0
109435	Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	431.0
Sector Frame, 12' Wide		
109436	Sector Frame, 12'. Pipe mounts not included.	270.0
109437	Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	375.0
109438	Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	387.0
109439	Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	399.0
109440	Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	410.0
109441	Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	426.0
109442	Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	442.0
Sector Frame, 15' Wide		
109443	Sector Frame, 15'. Pipe mounts not included.	292.0
109444	Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	397.0
109445	Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	409.0
109446	Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	421.0
109447	Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	432.0
109448	Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	448.0
109449	Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	464.0

Tower Applications



Universal Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Taper and azimuth adjusting. Double-pivot with welded strut.
Order Separately:	Pipes	Mounts to:	1-1/2" to 8-1/2" OD or Angle Leg



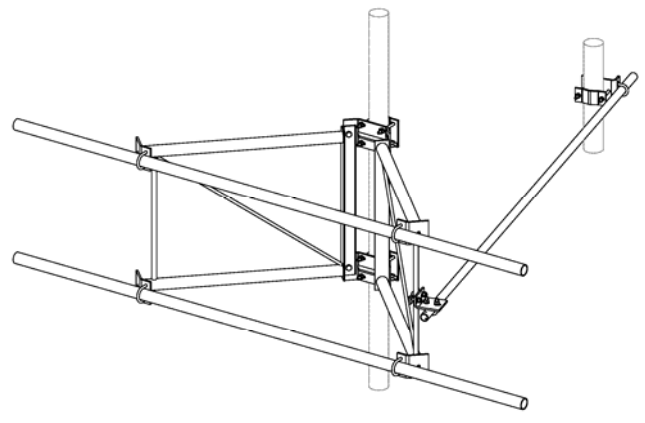
Part #	Description	Weight (Lbs)
Universal Sector Frame, 10'-6" Wide		
109450	Universal Sector Frame, 10'-6". Pipe mounts not included.	272.0
109451	Universal Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	377.0
109452	Universal Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	389.0
109453	Universal Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	401.0
109454	Universal Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	412.0
109455	Universal Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	428.0
109456	Universal Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	444.0
Universal Sector Frame, 12' Wide		
109457	Universal Sector Frame, 12'. Pipe mounts not included.	283.0
109458	Universal Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	388.0
109459	Universal Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	400.0
109460	Universal Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	412.0
109461	Universal Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	423.0
109462	Universal Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	439.0
109463	Universal Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	455.0
Universal Sector Frame, 15' Wide		
109464	Universal Sector Frame, 15'. Pipe mounts not included.	305.0
109465	Universal Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	410.0
109466	Universal Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	422.0
109467	Universal Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	434.0
109468	Universal Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	445.0
109469	Universal Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	461.0
109470	Universal Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	477.0

Tower Applications



V-Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Two welded strut design - extra stability
Order Separately:	Pipes and large leg/angle adapter	Mounts to:	1-1/4" to 4-1/2" OD - staight legs



Part #	Description	Weight (Lbs)
V-Sector Frame, 10'-6" Wide		
101749	V-Sector Frame, 10'-6". Pipe mounts not included.	255.4
101754	V-Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	361.0
101755	V-Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	372.0
101756	V-Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	383.0
101757	V-Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	396.2
101758	V-Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	410.0
101759	V-Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	425.6
V-Sector Frame, 12' Wide		
101760	V-Sector Frame, 12'. Pipe mounts not included.	266.4
101765	V-Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	372.0
101766	V-Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	383.0
101767	V-Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	394.0
101768	V-Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	407.2
101769	V-Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	421.0
101770	V-Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	436.5
V-Sector Frame, 15' Wide		
103855	V-Sector Frame, 15'. Pipe mounts not included.	288.4
103856	V-Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	394.0
110272	V-Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	405.0
103857	V-Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	416.0
103858	V-Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	429.2
110273	V-Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	443.0
103860	V-Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	458.5

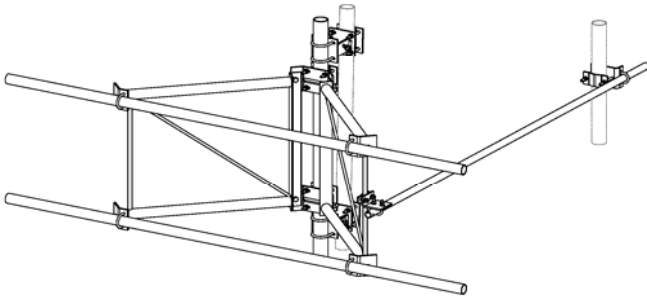


Tower Applications



Universal V-Sector Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Two welded strut design - extra stability. Taper and azimuth adjusting.
Order Seperately:	Pipes and large leg/angle adapter	Mounts to:	1-1/4" to 4-1/2" OD



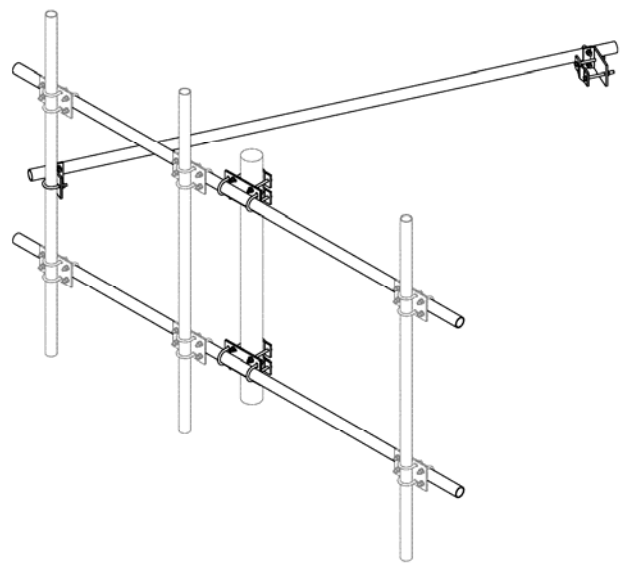
Part #	Description	Weight (Lbs)
Universal V-Sector Frame, 10'-6" Wide		
101723	Universal V-Sector Frame, 10'-6". Pipe mounts not included.	334.0
101727	Universal V-Sector Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	439.5
101728	Universal V-Sector Frame, 10'-6". Three 2-3/8" OD x 96" pipe mounts included.	451.0
101729	Universal V-Sector Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	461.5
101730	Universal V-Sector Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	474.7
101731	Universal V-Sector Frame, 10'-6". Four 2-3/8" OD x 96" pipe mounts included.	490.0
101732	Universal V-Sector Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	504.0
Universal V-Sector Frame, 12' Wide		
101733	Universal V-Sector Frame, 12'. Pipe mounts not included.	345.0
101738	Universal V-Sector Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included.	450.4
101739	Universal V-Sector Frame, 12'. Three 2-3/8" OD x 96" pipe mounts included.	462.0
101740	Universal V-Sector Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included.	472.4
101741	Universal V-Sector Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included.	485.6
101742	Universal V-Sector Frame, 12'. Four 2-3/8" OD x 96" pipe mounts included.	501.0
101743	Universal V-Sector Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included.	515.0
Universal V-Sector Frame, 15' Wide		
103861	Universal V-Sector Frame, 15'. Pipe mounts not included.	367.0
103862	Universal V-Sector Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	472.4
110274	Universal V-Sector Frame, 15'. Three 2-3/8" OD x 96" pipe mounts included.	484.0
103863	Universal V-Sector Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	494.4
103864	Universal V-Sector Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	507.6
110275	Universal V-Sector Frame, 15'. Four 2-3/8" OD x 96" pipe mounts included.	523.0
103865	Universal V-Sector Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	536.9

Tower Applications



Tower Pipe Frames

Material Included:	Hot dip galv steel frame, clamps, stiff arms, available with or without mounting pipes.	Design:	Versatile and azimuth adjusting.
Order Seperately:	Pipes and large leg adapter	Mounts to:	1-1/4" to 4-1/2" OD round member

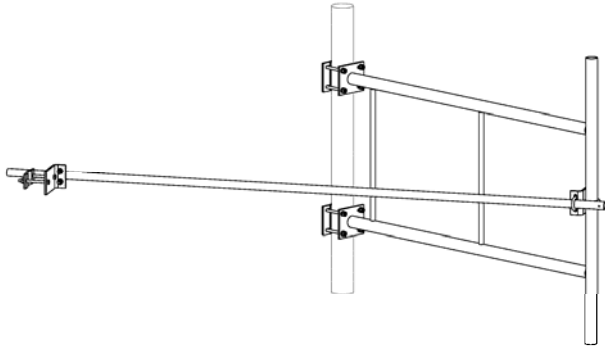


Part #	Description	Weight (Lbs)
Tower Pipe Frame, 10'-6" Wide		
103866	Tow er Pipe Frame, 10'-6". Pipe mounts not included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	151.0
103867	Tow er Pipe Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.- Fits 1-1/4" to 4-1/2" O.D. Round Member.	274.0
103868	Tow er Pipe Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.- Fits 1-1/4" to 4-1/2" O.D. Round Member.	291.0
103869	Tow er Pipe Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	315.0
103870	Tow er Pipe Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	344.0
Tower Pipe Frame, 12' Wide		
103871	Tow er Pipe Frame, 12'. Pipe mounts not included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	162.0
103872	Tow er Pipe Frame, 12'. Three 2-3/8" OD x 84" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	285.0
103873	Tow er Pipe Frame, 12'. Three 2-3/8" OD x 108" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	307.0
103874	Tow er Pipe Frame, 12'. Four 2-3/8" OD x 84" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	326.0
103875	Tow er Pipe Frame, 12'. Four 2-3/8" OD x 108" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	355.0
Tower Pipe Frame, 15' Wide		
103876	Tow er Pipe Frame, 15'. Pipe mounts not included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	184.0
103877	Tow er Pipe Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.- Fits 1-1/4" to 4-1/2" O.D. Round Member.	307.0
103878	Tow er Pipe Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	329.0
103879	Tow er Pipe Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	348.0
103880	Tow er Pipe Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included. - Fits 1-1/4" to 4-1/2" O.D. Round Member.	377.0

Tower Applications



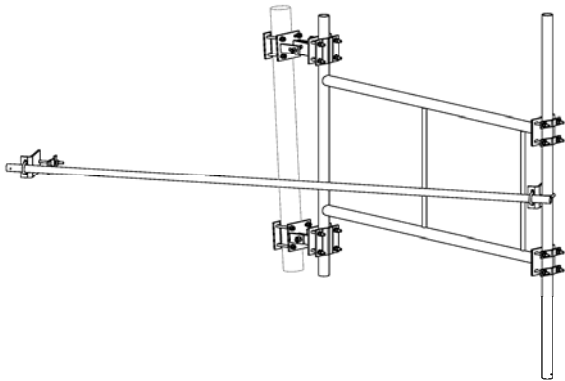
Side Arms



Material	Hot dip galv steel	Design:	Welded frame.
Included:	frame, clamps and stiff arm.		
Order	Additional stiff arm and large	Mounts to:	1-1/4" to 10-3/4" OD or angle
Seperately:	leg/angle adapter		

Part #	Description	Weight (Lbs)
103881	3' Side Arm, 1-1/4" to 4-1/2" OD-Straight.	94.0
103882	3' Side Arm with LLA, 1-1/4" to 10-3/4" OD-Straight.	137.8
100298	6' Side Arm, 1-1/4" to 4-1/2" OD-Straight.	125.0
100300	6' Side Arm with LLA, 1-1/4" to 10-3/4" OD-Straight.	177.9

Universal Side Arms



Material	Hot dip galv steel	Design:	Welded frame. Taper and azimuth adjusting.
Included:	frame, clamps, stiff arm		
Order	Additional stiff arm	Mounts to:	1-1/4" to 10-3/4" OD or angle
Seperately:	arm		

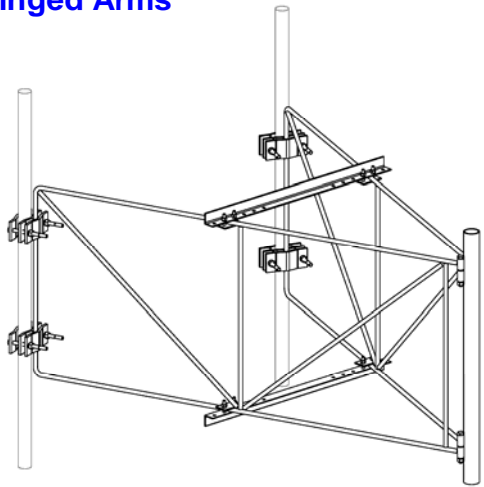
Part #	Description	Weight (Lbs)
103883	Universal 3' Side Arm, 1-1/4" to 4-1/2" OD.	161.0
103884	Universal 3' Side Arm with LLA, 1-1/4" to 10-3/4" OD.	214.2
100322	Universal 6' Side Arm, 1-1/4" to 4-1/2" OD.	192.0
100323	Universal 6' Side Arm with LLA, 1-1/4" to 10-3/4" OD.	245.1



Tower Applications



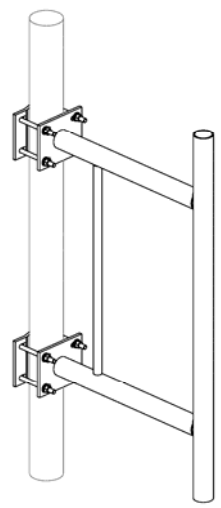
Hinged Arms



Material	Hot dip galv steel	Design:	Welded frames.
Included:	frames, clamps and hardware.		Mounts to various tower widths.
Order	n/a	Mounts to:	1-1/4" to 4-1/2" OD
Separately:			OD

Part #	Description	Weight (Lbs)
103885	3' Hinged Arm Assembly	101.0
100410	6' Hinged Arm Assembly	102.5

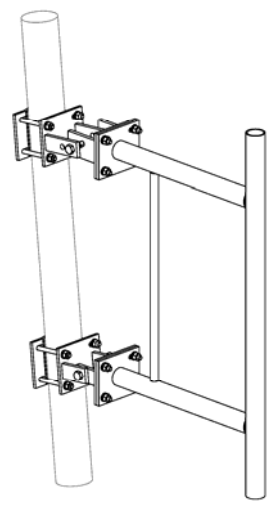
Stand-Off Arms



Material	Hot dip galv steel	Design:	Welded pipe frames.
Included:	frames, clamps and hardware.		
Order	Large leg/angle	Mounts to:	1-1/4" to 4-1/2" OD
Separately:	adapters		OD

Part #	Description	Weight (Lbs)
103886	Stand-Off Arm, 2' - 2.375" OD x 48" antenna mounting pipe.	50.2
103887	Standoff Arm, 3' - 2.375" OD x 48" antenna mounting pipe.	59.0
103888	Standoff Arm, 4' - 2.375" OD x 48" antenna mounting pipe.	72.9
103889	Standoff Arm, 5' - 2.375" OD x 48" antenna mounting pipe.	72.9
103890	Standoff Arm, 6' - 2.375" OD x 48" antenna mounting pipe.	87.5

Universal Stand-Off Arms



Material	Hot dip galv steel	Design:	Welded pipe frames. Taper adjusting.
Included:	frames, clamps and hardware.		
Order	Large leg/angle	Mounts to:	1-1/4" to 4-1/2" OD
Separately:	adapters		OD

Part #	Description	Weight (Lbs)
105881	Universal Standoff Arm, 2' - 2.375" OD x 48" antenna mounting pipe.	81.0
105882	Universal Standoff Arm, 3' - 2.375" OD x 48" antenna mounting pipe.	88.0
105883	Universal Standoff Arm, 4' - 2.375" OD x 48" antenna mounting pipe.	102.0
105884	Universal Standoff Arm, 5' - 2.375" OD x 48" antenna mounting pipe.	109.0
105885	Universal Standoff Arm, 6' - 2.375" OD x 48" antenna mounting pipe.	116.0

Tower Applications



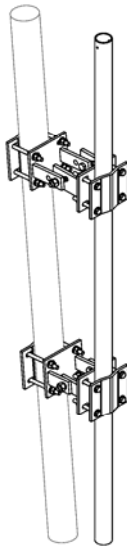
Pipe Mounts



Material	Hot dip galv steel	Design:	Designed for straight tower legs
Included:	clamps, pipe and hardw are.		
Order	n/a	Mounts to:	1-1/4" to 4-
Seperately:			1/2" OD

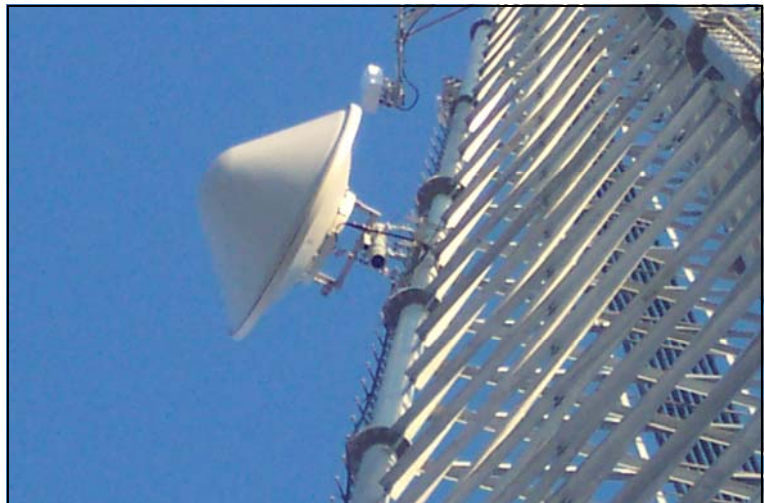
Part #	Description	Weight (Lbs)
103891	Pipe Mount, 2-3/8" x 84"	59.5
103892	Pipe Mount, 2-3/8" x 96"	63.1
103893	Pipe Mount, 2-3/8" x 108"	66.8
103894	Pipe Mount, 2-3/8" x 126"	72.3

Universal Pipe Mounts



Material	Hot dip galv steel	Design:	Various taper up to 4 degrees
Included:	clamps, pipe and hardw are.		
Order	n/a	Mounts to:	1-1/4" to 10-3/4" OD or angle
Seperately:			

Part #	Description	Weight (Lbs)
100218	Universal Pipe Mount, 2-3/8" OD x 84" antenna pipe.	72.0
100223	Universal Pipe Mount with LLA, 2-3/8" OD x 84" antenna pipe.	119.0
100167	Universal Pipe Mount, 4-1/2" OD x 63" antenna pipe.	97.0
100172	Universal Pipe Mount with LLA, 4-1/2" OD x 63" antenna pipe.	147.0

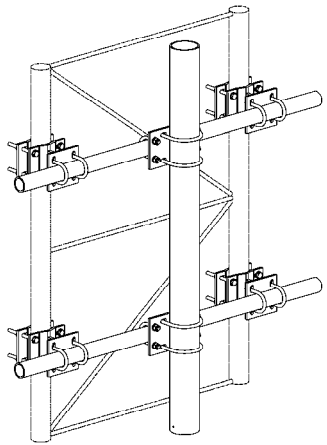


Tower Applications

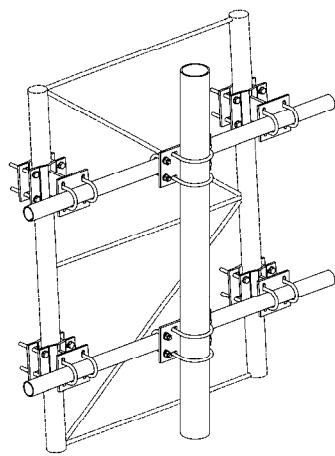


Cross-Arm Pipe Mounts

Material	Hot dip galv steel	Design:	Adjustable pipe location.
Included:	clamps, pipe and hardw are.		
Order	n/a	Mounts to:	1-1/4" to 4-1/2" OD
Seperately:			Straight leg or Tapered



Straight Version



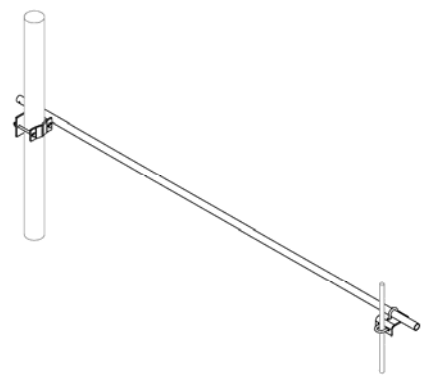
Tapered Version
(Approx. 2-1/4" per 30")

Part #	Description	Weight (Lbs)
2-3/8" OD x 84" Antenna Pipe		
104116	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 40" Wide (Straight) (2" Sch. 40 Cross Pipe)	139.0
104117	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 60" Wide (Straight) (2" Sch. 40 Cross Pipe)	147.0
104118	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 80" Wide (Straight) (2" Sch. 40 Cross Pipe)	150.0
104119	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 96" Wide (Straight) (2" Sch. 40 Cross Pipe)	154.0
104927	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 40" Wide (Taper) (2" Sch. 40 Cross Pipe)	137.0
104928	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 60" Wide (Taper) (2" Sch. 40 Cross Pipe)	145.0
104929	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 80" Wide (Taper) (2" Sch. 40 Cross Pipe)	148.0
104930	Cross-Arm Pipe Mount Assembly - 2-3/8" O.D. x 84" - 96" Wide (Taper) (2" Sch. 40 Cross Pipe)	152.0
4-1/2" OD x 63" Antenna Pipe		
104120	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 40" Wide (Straight) (2" Sch. 80 Cross Pipes)	183.0
104121	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 60" Wide (Straight) (2" Sch. 80 Cross Pipes)	193.0
104122	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 80" Wide (Straight) (2" Sch. 80 Cross Pipes)	198.0
104123	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 96" Wide (Straight) (2" Sch. 80 Cross Pipes)	203.0
104931	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 40" Wide (Taper) (2" Sch. 80 Cross Pipes)	169.0
104932	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 60" Wide (Taper) (2" Sch. 80 Cross Pipes)	180.0
104933	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 80" Wide (Taper) (2" Sch. 80 Cross Pipes)	185.0
104934	Cross-Arm Pipe Mount Assembly - 4-1/2" O.D. x 63" - 96" Wide (Taper) (2" Sch. 80 Cross Pipes)	190.0

Stiff Arms

Material	Hot dip galv steel	Design:	Schedule 40 pipe
Included:	pipe, clamps and hardw are.		
Order	Large Leg/Angle	Mounts to:	See chart
Seperately:	Adapter		

Part #	Description	Weight (Lbs)
103916	Stiff Arm, 1.66" OD x 10'-6" long. 1-1/2" to 2-3/8" OD. 1-1/4" to 4-1/2" OD.	35.0
103917	Stiff Arm, 2-3/8" OD x 12' long. 1-1/2" to 2-3/8" OD. 1-1/4" to 4-1/2" OD.	31.8

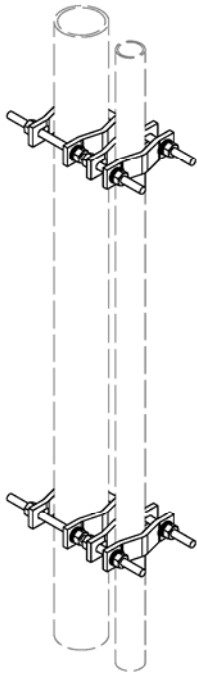


Tower Applications

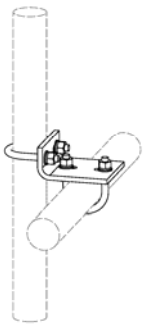


Pipe to Pipe Adapters

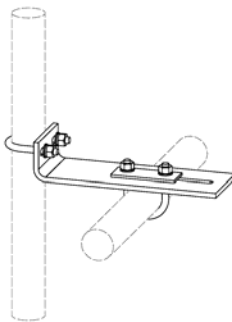
Material Included:	Hot dip galv steel clamps and hardware.	Design:	Parallel and 90 degree mounting configurations
Order Separately:	Pipe	Mounts to:	See chart



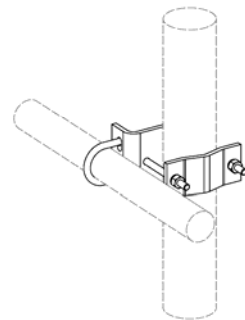
Part #	Description	Weight (Lbs)
Clamp Style, Parallel Mounting		
101296	Pipe to Pipe Clamp. (1-1/2" to 3-1/2" OD) 1/2" x 12" THD Rod	9.9
101344	Pipe to Pipe Clamp. (2-3/8" to 5" OD) 5/8" x 14" THD Rod	17.2
L - Bracket Style, 90 Degree Mounting		
100528	Pipe to Pipe Adapter, L-Bracket style. Joins one 1.66" OD round member to one 2-3/8" OD round member. 1/2" U-bolts.	4.3
100527	Pipe to Pipe Adapter, L-Bracket style. Joins two 2-3/8" OD round members. 1/2" U-bolts.	4.8
100521	Pipe to Pipe Adapter, L-Bracket style. Joins two 2-3/8" OD round members. 1/2" U-bolts with variable offset.	10.1
100529	Pipe to Pipe Adapter, L-Bracket style. Joins one 2-3/8" OD round member to one 1-1/4" OD to 4-1/2" OD round member. 1/2" U-bolts and 1/2" hardware.	7.5



Part # 100527
Part # 100528



Part # 100521

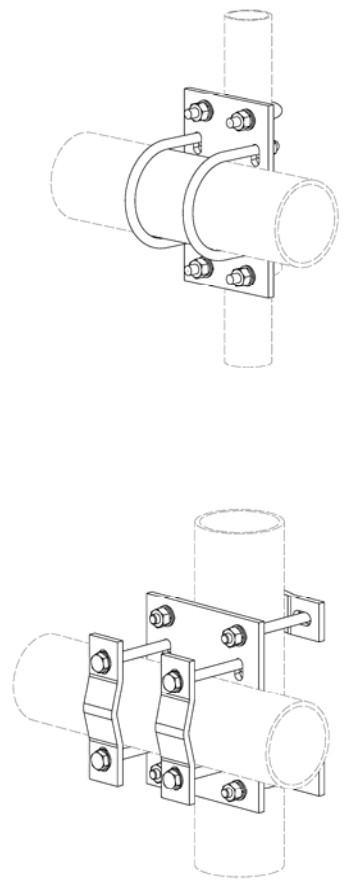


Part # 100529

Tower Applications



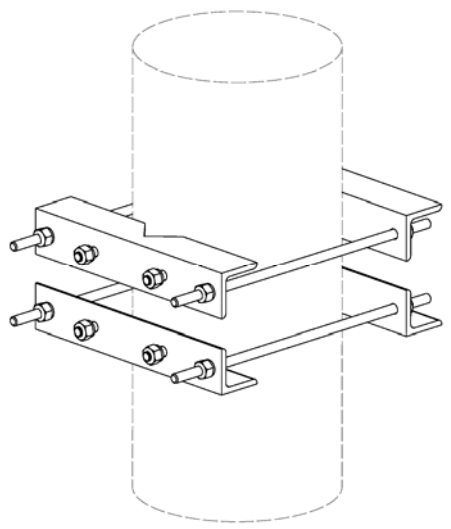
Crossover Plates



Material	Hot dip galv steel	Design:	90 degree mounting configuration
Included:	plates, u-bolts or clamps and hardware.		
Order Separately:	Pipe	Mounts to:	See chart

Part #	Description	Weight (Lbs)
U-Bolt Style		
103899	Crossover Plate Assembly, 1.66" OD to 1.66" OD Pipe	5.9
103900	Crossover Plate Assembly, 2-3/8" O.D. to 2-3/8" O.D. Pipe	7.7
100531	Crossover Plate Assembly, 2-3/8" O.D. to 3-1/2" O.D. Pipe	8.6
103902	Crossover Plate Assembly, 2-3/8" O.D. to 4-1/2" O.D. Pipe	8.9
103903	Crossover Plate Assembly, 3-1/2" OD to 3-1/2" OD Pipe	9.9
103904	Crossover Plate Assembly, 3-1/2" O.D. to 4-1/2" O.D. Pipe	10.0
103905	Crossover Plate Assembly, 4-1/2" O.D. to 4-1/2" O.D. Pipe	12.0
Clamp Style		
103906	Crossover Plate Assembly. Joins two 1-1/4" to 4-1/2" OD round members.	13.0
103907	Crossover Plate Assembly. Joins two 2-3/8" to 6-5/8" OD round members.	16.0

Large Leg/Angle Adapter



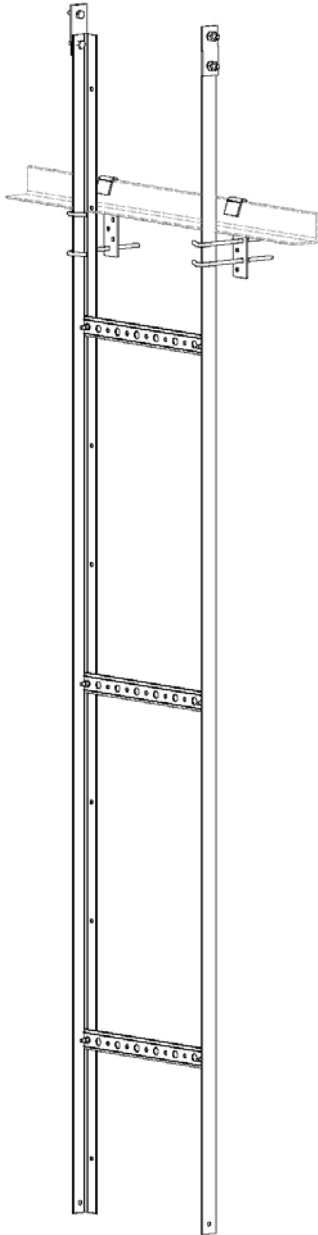
Material	Hot dip galv steel	Design:	Adapts mounts to large round or angle members
Included:	angle and hardware.		
Order Separately:	n/a	Mounts to:	Up to 10-3/4" OD or 6" Angle

Part #	Description	Weight (Lbs)
100196	Large Leg Adapter Kit Assembly for 4-1/2" to 10-3/4" OD	28.0

Tower Applications



Universal Cable Ladder



Material Included:	Hot dip galv steel ladder, splice plates and attachment kits	Design:	Angle rails with bolt on channel rungs 3' spacing
Order Separately:	n/a	Mounts to:	Round or angle members up to 4-1/2" OD

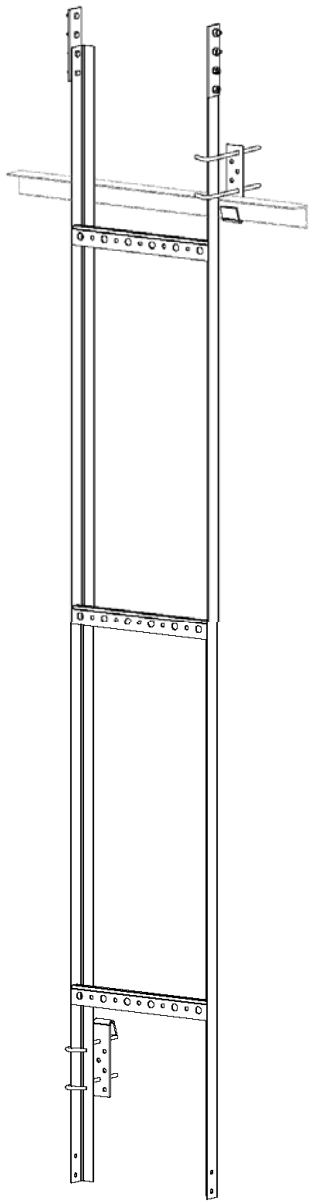
Part #	Description	Weight (Lbs)
10' Universal Cable Ladder Kit		
103918	Universal Cable Ladder, 20-1/4" wide x 10' long, 6-hole rung.	37.0
103919	Universal Cable Ladder, 29-1/4" wide x 10' long, 9-hole rung.	39.2
100228	Universal Cable Ladder, 38" wide x 10' long, 12-hole rung.	41.9
20' Universal Cable Ladder Kit		
100513	Universal Cable Ladder, 20-1/4" wide x 20' long, 6-hole rung.	75.0
101062	Universal Cable Ladder, 29-1/4" wide x 20' long, 9-hole rung.	80.0
100224	Universal Cable Ladder, 38" wide x 20' long, 12-hole rung.	84.0



Tower Applications

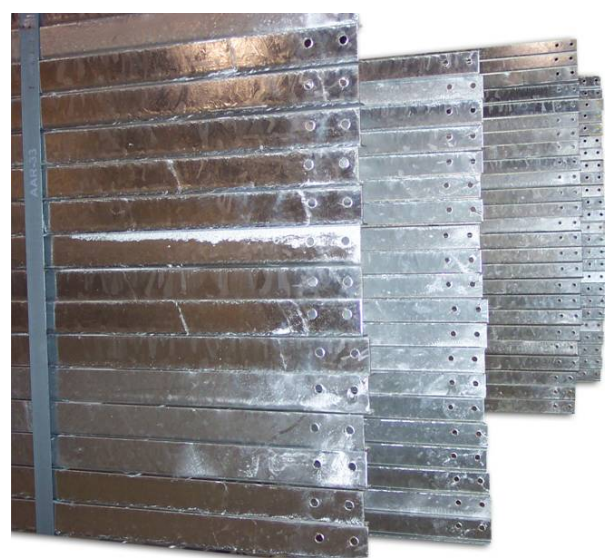


Universal Welded Cable Ladder



Material Included:	Hot dip galv steel ladder, splice plates and attachment kits	Design:	Angle rails with welded on channel rungs, 40" spacing
Order Separately:	n/a	Mounts to:	Round or angle members up to 4-1/2" OD

Part #	Description	Weight (Lbs)
10' Universal Welded Cable Ladder Kit		
100151	Universal Welded Cable Ladder, 17-1/4" wide x 10' long, 6-hole rung.	35.0
100152	Universal Welded Cable Ladder, 26-1/4" wide x 10' long, 9-hole rung.	37.0
100153	Universal Welded Cable Ladder, 35-1/4" wide x 10' long, 12-hole rung.	39.0
20' Universal Welded Cable Ladder Kit		
103920	Universal Welded Cable Ladder, 17-1/4" wide x 20' long, 6-hole rung.	72.0
103921	Universal Welded Cable Ladder, 26-1/4" wide x 20' long, 9-hole rung.	77.0
103922	Universal Welded Cable Ladder, 35-1/4" wide x 20' long, 12-hole rung.	81.0

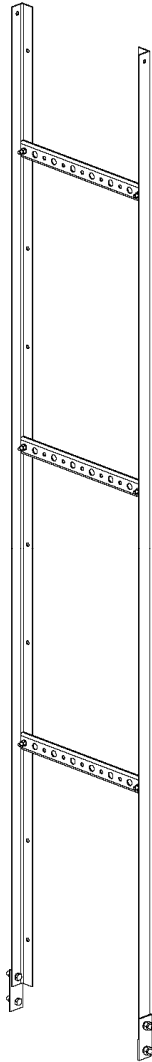


Tower Applications



Cable Ladder

Material Included:	Hot dip galv steel ladder, splice plates and rungs	Design:	Angle rails with bolt on channel rungs 3' spacing
Order Separately:	Attachment kits	Mounts to:	n/a

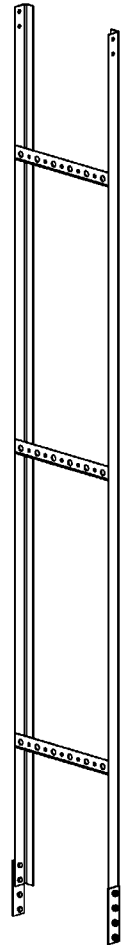


Part #	Description	Weight (Lbs)
10' Cable Ladder		
103923	Cable Ladder, 20-1/4" w ide x 10' long, 6-hole rung. No attachment hardw are.	35.0
103924	Cable Ladder, 29-1/4" w ide x 10' long, 9-hole rung. No attachment hardw are.	37.0
103925	Cable Ladder, 38" w ide x 10' long, 12-hole rung. No attachment hardw are.	39.0
20' Cable Ladder Kit		
103926	Cable Ladder, 20-1/4" w ide x 20' long, 6-hole rung. No attachment hardw are.	69.0
103927	Cable Ladder, 29-1/4" w ide x 20' long, 9-hole rung. No attachment hardw are.	75.0
103928	Cable Ladder, 38" w ide x 20' long, 12-hole rung. No attachment hardw are.	77.0

Tower Applications



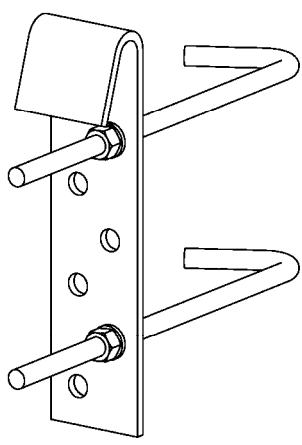
Welded Cable Ladder



Material	Hot dip galv steel	Design:	Angle rails with welded on channel rungs, 40" spacing
Included:	ladder, splice plates and rungs	Order	Attachment kits
Order	Attachment kits	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
10' Welded Cable Ladder		
103929	Welded Cable Ladder, 17-1/4" wide x 10' long, 6-hole rung. No attachment hardware.	32.0
103930	Welded Cable Ladder, 26-1/4" wide x 10' long, 9-hole rung. No attachment hardware.	35.0
103931	Welded Cable Ladder, 35-1/4" wide x 10' long, 12-hole rung. No attachment hardware.	37.0
20' Welded Cable Ladder Kit		
103932	Welded Cable Ladder, 17-1/4" wide x 20' long, 6-hole rung. No attachment hardware.	68.0
103933	Welded Cable Ladder, 26-1/4" wide x 20' long, 9-hole rung. No attachment hardware.	72.0
103934	Welded Cable Ladder, 35-1/4" wide x 20' long, 12-hole rung. No attachment hardware.	77.0

Universal Cable Ladder Attachments



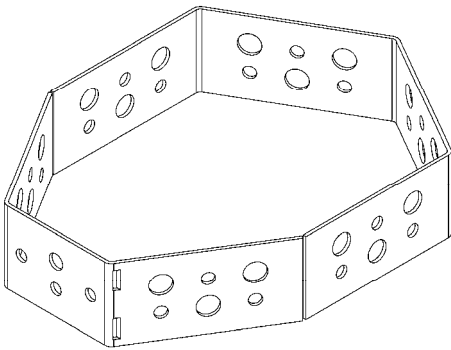
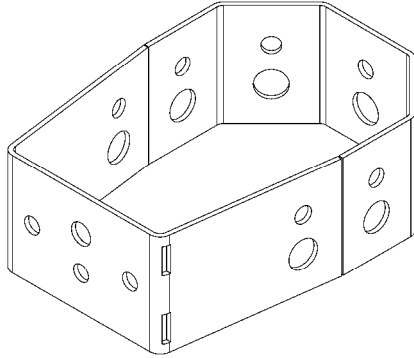
Material	Hot dip galv steel	Design:	Adapts cable ladder to tower members
Included:	plates and j-bolts	Order	Cable ladder
Order	Cable ladder	Mounts to:	Round or angle members
Seperately:			

Part #	Description	Weight (Lbs)
100344	Universal Cable Ladder Attachment Kit, 1" to 4-1/2" OD and 1-1/2" to 5" angle members.	1.1

Tower Applications



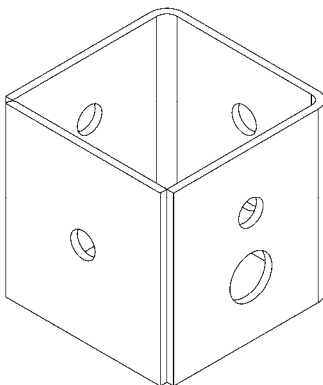
Cluster T-Line Brackets



Material	Hot dip galv steel	Design:	Minimizes
Included:	bracket and listed hardware		w ind load on cable
Order	n/a	Mounts to:	Round or angle members
Seperately:			

Part #	Description	Weight (Lbs)
Cluster T-Line Brackets		
103940	Cluster T-Line Bracket (7-Hole)	2.4
103941	Cluster T-Line Bracket with 2" to 5" OD round member adapter.	7.0
103942	Cluster T-Line Bracket with 6" to 8" OD round member attachment.	8.0
103943	Cluster T-Line Bracket with U-bolt for 2-3/8" round member attachment.	2.7
103944	Cluster T-Line Bracket with Angle member attachment.	4.0
Cluster T-Line Brackets, Large Version		
103945	Cluster T-Line Bracket, Large Version (18-Hole)	3.7
103946	Cluster T-Line Bracket, Large Version with 2" to 5" OD round member adapter.	8.0
103947	Cluster T-Line Bracket, Large Version with 6" to 8" OD round member attachment.	9.0
103948	Cluster T-Line Bracket, Large Version with U-bolt for 2-3/8" round member attachment.	4.0
103949	Cluster T-Line Bracket, Large Version with Angle member attachment.	5.0

Mini Cluster Support Bracket



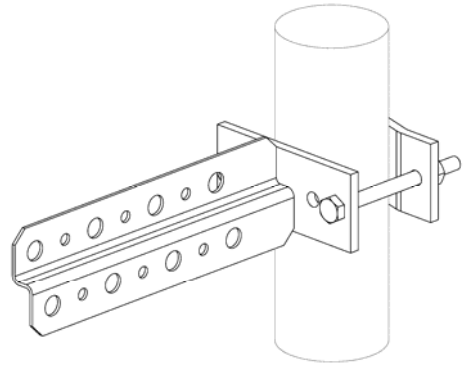
Material	Hot dip galvanized	Design:	Supports up to 3 runs of coax
Included:	bracket		
Order	Hangers and mounting hardware	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
100953	Mini Cluster Line Support Bracket, 10 pack	0.3

Tower Applications



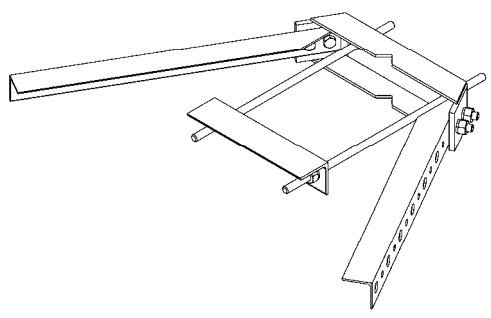
T-Line Brackets



Material	Hot dip galv steel	Design:	8 and 14 hole versions
Included:	bracket and hardware		
Order Separately:	n/a	Mounts to:	Round or angle members

Part #	Description	Weight (Lbs)
103950	8 Hole T-Line Bracket Assembly (1-1/4" to 4-1/2" OD Leg).	6.2
103951	8 Hole T-Line Bracket Assembly (1-1/4" to 12-3/4" OD Leg).	22.0
100184	14 Hole T-Line Bracket Assembly (1-1/4" to 4-1/2" OD).	7.5
100320	14 Hole T-Line Bracket Assembly (1-1/4" to 10-3/4" OD)	23.2

Star T-Line Bracket



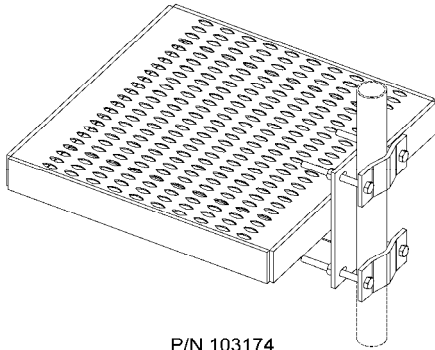
Material	Hot dip galv steel	Design:	12 line capacity
Included:	bracket and hardware		
Order Separately:	n/a	Mounts to:	1-1/2" to 7-1/2" Round or 1-1/2" to 5" angle members

Part #	Description	Weight (Lbs)
101243	Star Coax Support Assembly	18.3

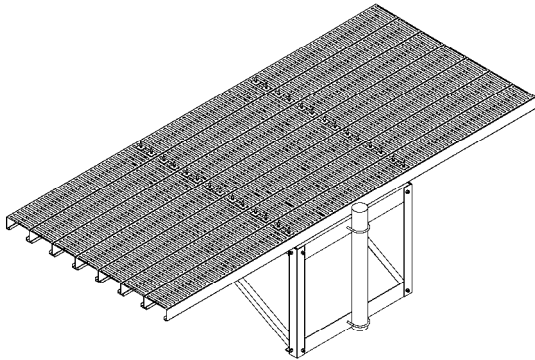
Tower Applications



Ice Shields



P/N 103174
(Fits Up To 4-1/2" O.D.)



P/N 104401 - 104405
Fits 4-1/2" O.D. Leg

Material	Hot dip galv steel	Design:	6 sizes. 8' - 12' come w/ tie-back cable.
Included:	shield and attachment hardware	Order	Pipe mount
Order	Pipe mount	Mounts to:	4-1/2" OD pipe
Seperately:			

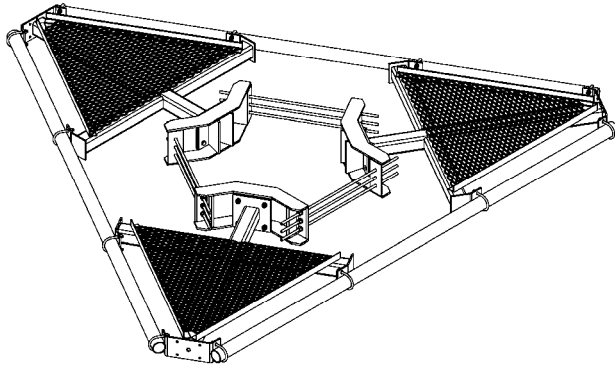
Part #	Description	Weight (Lbs)
103174	Rest Platform, Ice Shield Kit, 24" x 24"	71.4
104401	Ice Shield Kit, 48" x 54"	356.0
104402	Ice Shield Kit, 72" x 54"	389.0
104403	Ice Shield Kit, 96" x 54"	488.0
104404	Ice Shield Kit, 120" x 54"	554.0
104405	Ice Shield Kit, 144" x 54"	620.0

Monopole Applications



Monopole Applications

Low-Profile Platforms



Material Included:	Hot dip galv steel frame and hardware. Available with or without mounting pipes.	Design:	Welded corners with fixed length center arms
Order Separately:	Pipes and rail support kit	Mounts to:	See ranges below

Part #	Description	Weight (Lbs)
Low-Profile Platform, 10'-6" (10-3/4" - 18" OD Range)		
108602	Low -Profile Platform, 10'-6". Pipe mounts not included. (8-5/8" to 18" O.D.)	1147.0
109859	Low -Profile Platform, 10'-6". Nine 2-3/8" OD x 84" pipe mounts included.	1453.0
109860	Low -Profile Platform, 10'-6". Nine 2-3/8" OD x 108" pipe mounts included.	1525.0
109861	Low -Profile Platform, 10'-6". Twelve 2-3/8" OD x 84" pipe mounts included.	1555.0
109862	Low -Profile Platform, 10'-6". Twelve 2-3/8" OD x 108" pipe mounts included.	1651.0
Low-Profile Platform, 12' (10-3/4" - 36" OD Range)		
109863	Low -Profile Platform, 12'. Pipe mounts not included. (10-3/4" to 36" O.D.)	1181.0
109864	Low -Profile Platform, 12'. Nine 2-3/8" OD x 84" pipe mounts included.	1487.0
109865	Low -Profile Platform, 12'. Nine 2-3/8" OD x 108" pipe mounts included.	1559.0
109866	Low -Profile Platform, 12'. Twelve 2-3/8" OD x 84" pipe mounts included.	1589.0
109867	Low -Profile Platform, 12'. Twelve 2-3/8" OD x 108" pipe mounts included.	1685.0
Low-Profile Platform, 14' (10-3/4" to 30" OD)		
108603	Low -Profile Platform, 14'. Pipe mounts not included. (8-5/8" to 30" O.D.)	1274.0
109868	Low -Profile Platform, 14'. Nine 2-3/8" OD x 84" pipe mounts included. (8.625" to 30" O.D.)	1580.0
109869	Low -Profile Platform, 14'. Nine 2-3/8" OD x 108" pipe mounts included. (8.625" to 30"	1652.0
109870	Low -Profile Platform, 14'. Twelve 2-3/8" OD x 84" pipe mounts included. (8.625" to 30" O.D.)	1682.0
109871	Low -Profile Platform, 14'. Twelve 2-3/8" OD x 108" pipe mounts included. (8.625" to 30"	1778.0
Low-Profile Platform, 14' (30" to 48" OD)		
109872	Low -Profile Platform, 14'. Pipe mounts not included. (30" to 48" O.D.)	1226.0
109873	Low -Profile Platform, 14'. Nine 2-3/8" OD x 84" pipe mounts included. (30" to 48" O.D.)	1532.0
109874	Low -Profile Platform, 14'. Nine 2-3/8" OD x 108" pipe mounts included. (30" to 48" O.D.)	1604.0
109875	Low -Profile Platform, 14'. Twelve 2-3/8" OD x 84" pipe mounts included. (30" to 48" O.D.)	1634.0
109876	Low -Profile Platform, 14'. Twelve 2-3/8" OD x 108" pipe mounts included. (30" to 48" O.D.)	1730.0

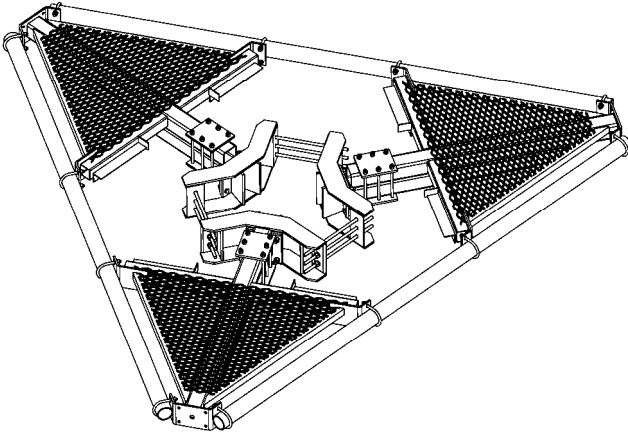
Monopole Applications



Monopole Applications

Low-Profile Telescoping Platforms

Material Included:	Hot dip galv steel frame and hardware. Available with or without mounting pipes.	Design:	Welded corners with telescoping center arms
Order Seperately:	Pipes, bar grating bridge kit and support rail kit	Mounts to:	10-3/4" to 48" tapered or straight poles



Part #	Description	Weight (Lbs)
Low-Profile Telescoping Platform, 10'-6" (10-3/4" - 18" OD Range)		
103964	Low -Profile Telescoping Platform, 10'-6". Pipe mounts not included.	1035.0
103965	Low -Profile Telescoping Platform, 10'-6". Nine 2-3/8" OD x 84" pipe mounts included.	1346.0
103966	Low -Profile Telescoping Platform, 10'-6". Nine 2-3/8" OD x 108" pipe mounts included.	1409.0
103967	Low -Profile Telescoping Platform, 10'-6". Twelve 2-3/8" OD x 84" pipe mounts included.	1450.0
103968	Low -Profile Telescoping Platform, 10'-6". Twelve 2-3/8" OD x 108" pipe mounts included.	1534.0
Low-Profile Telescoping Platform, 12' (10-3/4" - 36" OD Range)		
103969	Low -Profile Telescoping Platform, 12'. Pipe mounts not included.	1086.0
103970	Low -Profile Telescoping Platform, 12'. Nine 2-3/8" OD x 84" pipe mounts included.	1397.0
103971	Low -Profile Telescoping Platform, 12'. Nine 2-3/8" OD x 108" pipe mounts included.	1460.0
103972	Low -Profile Telescoping Platform, 12'. Twelve 2-3/8" OD x 84" pipe mounts included.	1501.0
103973	Low -Profile Telescoping Platform, 12'. Twelve 2-3/8" OD x 108" pipe mounts included.	1585.0
Low-Profile Telescoping Platform, 14' (10-3/4" - 48" OD Range)		
100447	Low -Profile Telescoping Platform, 14'. Pipe mounts not included.	1130.0
103975	Low -Profile Telescoping Platform, 14'. Nine 2-3/8" OD x 84" pipe mounts included.	1441.0
103977	Low -Profile Telescoping Platform, 14'. Nine 2-3/8" OD x 108" pipe mounts included.	1504.0
103978	Low -Profile Telescoping Platform, 14'. Twelve 2-3/8" OD x 84" pipe mounts included.	1545.0
103979	Low -Profile Telescoping Platform, 14'. Twelve 2-3/8" OD x 108" pipe mounts included.	1629.0

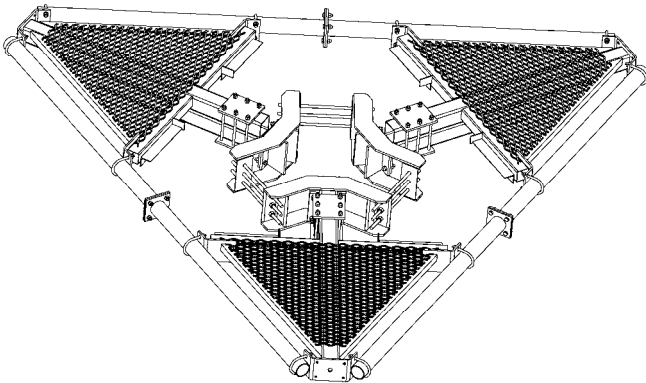
Monopole Applications



Monopole Applications

Low-Profile Telescoping Platforms, Flanged

Material	Hot dip galv steel	Design:	Welded
Included:	frame and hardware. Available with or without mounting pipes.		corners with telescoping center arms. Flanged pipe face for compact shipping.
Order Seperately:	Pipes, bar grating bridge kit and support rail kit	Mounts to:	10-3/4" to 48" tapered or straight poles



Part #	Description	Weight (Lbs)
Low-Profile Telescoping Platform, 10'-6" (10-3/4" - 32" OD)		
103980	Low -Profile Telescoping Platform, 10'-6"-Flanged. Pipe mounts not included.	1058.0
103981	Low -Profile Telescoping Platform, 10'-6"-Flanged. Nine 2-3/8" OD x 84" pipe mounts included.	1369.0
103982	Low -Profile Telescoping Platform, 10'-6"-Flanged. Nine 2-3/8" OD x 108" pipe mounts included.	1432.0
103983	Low -Profile Telescoping Platform, 10'-6"-Flanged. Tw elve 2-3/8" OD 84" pipe mounts included.	1473.0
103984	Low -Profile Telescoping Platform, 10'-6"-Flanged. Tw elve 2-3/8" OD x 108" pipe mounts included.	1557.0
Low-Profile Telescoping Platform, 12' (10-3/4" - 40" OD)		
103985	Low -Profile Telescoping Platform, 12'-Flanged. Pipe mounts not included.	1108.0
103986	Low -Profile Telescoping Platform, 12'-Flanged. Nine 2-3/8" OD x 84" pipe mounts included.	1419.0
103987	Low -Profile Telescoping Platform, 12'-Flanged. Nine 2-3/8" OD x 108" pipe mounts included.	1482.0
103988	Low -Profile Telescoping Platform, 12'-Flanged. Tw elve 2-3/8" OD x 84" pipe mounts included.	1523.0
103989	Low -Profile Telescoping Platform, 12'-Flanged. Tw elve 2-3/8" OD x 108" pipe mounts included.	1607.0
Low-Profile Telescoping Platform, 14' (10-3/4" - 48" OD)		
105624	Low -Profile Telescoping Platform, 14'-Flanged. Pipe mounts not included.	1154.0
103990	Low -Profile Telescoping Platform, 14'-Flanged. Nine 2-3/8" OD x 84" pipe mounts included.	1465.0
103991	Low -Profile Telescoping Platform, 14'-Flanged. Nine 2-3/8" OD x 108" pipe mounts included.	1528.0
103992	Low -Profile Telescoping Platform, 14'-Flanged. Tw elve 2-3/8" OD x 84" pipe mounts included.	1569.0
103994	Low -Profile Telescoping Platform, 14'-Flanged. Tw elve 2-3/8" OD x 108" pipe mounts included.	1653.0

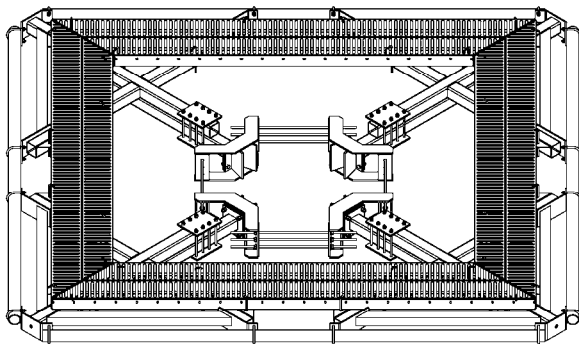
Monopole Applications



Monopole Applications

Low-Profile Telescoping Square Platforms

Material	Hot dip galv steel	Design:	Welded
Included:	frame and hardw are. Available w ith or w ithout mounting pipes.		corners w ith telescoping center arms
Order	Pipes and	Mounts to:	10-3/4" to 48"
Seperately:	Support Rail Kit		tapered or straight poles



Part #	Description	Weight (Lbs)
Low-Profile Telescoping Square Platform, 10'-6"		
104385	Low -Profile Telescoping Square Platform, 10'-6". Pipe mounts not included.	2254.0
104386	Low -Profile Telescoping Square Platform, 10'-6". Nine 2-3/8" OD x 84" pipe mounts included.	2887.0
104387	Low -Profile Telescoping Square Platform, 10'-6". Nine 2-3/8" OD x 108" pipe mounts included.	2953.0
104388	Low -Profile Telescoping Square Platform, 10'-6". Tw elve 2-3/8" OD x 84" pipe mounts included.	2986.0
104389	Low -Profile Telescoping Square Platform, 10'-6". Tw elve 2-3/8" OD x 108" pipe mounts included.	3074.0
Low-Profile Telescoping Square Platform, 12'		
104390	Low -Profile Telescoping Square Platform, 12'. Pipe mounts not included.	2380.0
104391	Low -Profile Telescoping Square Platform, 12'. Nine 2-3/8" OD x 84" pipe mounts included.	3084.0
104392	Low -Profile Telescoping Square Platform, 12'. Nine 2-3/8" OD x 108" pipe mounts included.	3150.0
104393	Low -Profile Telescoping Square Platform, 12'. Tw elve 2-3/8" OD x 84" pipe mounts included.	3183.0
104394	Low -Profile Telescoping Square Platform, 12'. Tw elve 2-3/8" OD x 108" pipe mounts included.	3271.0
Low-Profile Telescoping Square Platform, 14'		
104395	Low -Profile Telescoping Square Platform, 14'. Pipe mounts not included.	2553.0
104396	Low -Profile Telescoping Square Platform, 14'. Nine 2-3/8" OD x 108" pipe mounts included.	3429.0
104397	Low -Profile Telescoping Square Platform, 14'. Tw elve 2-3/8" OD x 84" pipe mounts included.	3462.0
104398	Low -Profile Telescoping Square Platform, 14'. Tw elve 2-3/8" OD x 108" pipe mounts included.	3550.0
104399	Low -Profile Telescoping Square Platform, 14'. Nine 2-3/8" OD x 84" pipe mounts included.	3363.0

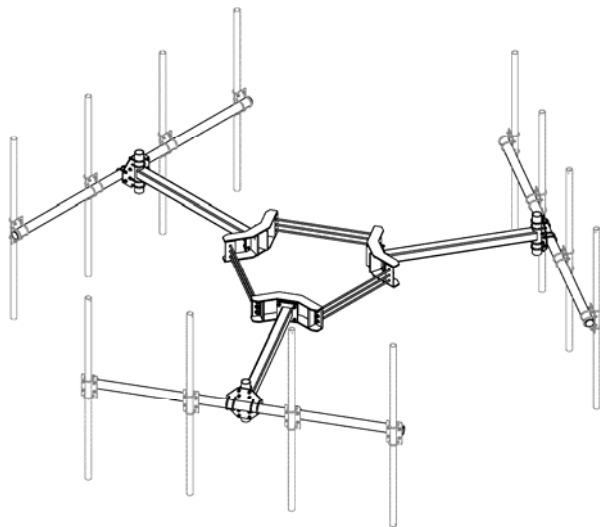
Monopole Applications



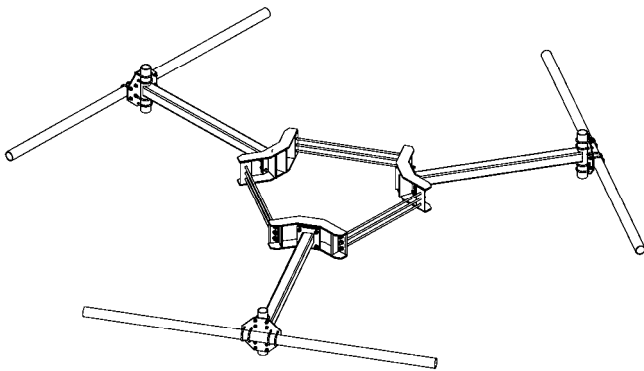
Monopole Applications

Support Arms for Clamp Rings

Material	Hot dip galv steel	Design:	Complete co-location kit. 60" support arm length.
Included:	clamp ring, support arm, pipe frame with or without pipe mounts		
Order Separately:	Pipe mounts and work platforms	Mounts to:	10-3/4" to 48" tapered or straight poles



Part #	Description	Weight (Lbs)
T-Arm Co-location Kit, 10'-6"		
104000	T-Arm Co-location Kit, 10'-6". Pipe mounts not included.	760.0
104001	T-Arm Co-location Kit, 10'-6". Nine 2-3/8" OD x 84" pipe mounts included.	1068.0
104002	T-Arm Co-location Kit, 10'-6". Nine 2-3/8" OD x 108" pipe mounts included.	1134.0
104003	T-Arm Co-location Kit, 10'-6". Twelve 2-3/8" OD x 84" pipe mounts included.	1170.0
104004	T-Arm Co-location Kit, 10'-6". Twelve 2-3/8" OD x 108" pipe mounts included.	1258.0
T-Arm Co-location Kit, 12'		
104005	T-Arm Co-location Kit, 12'. Pipe mounts not included.	794.0
104006	T-Arm Co-location Kit, 12'. Nine 2-3/8" OD x 84" pipe mounts included.	1102.0
104007	T-Arm Co-location Kit, 12'. Nine 2-3/8" OD x 108" pipe mounts included.	1168.0
104008	T-Arm Co-location Kit, 12'. Twelve 2-3/8" OD x 84" pipe mounts included.	1205.0
104009	T-Arm Co-location Kit, 12'. Twelve 2-3/8" OD x 108" pipe mounts included.	1292.0
T-Arm Co-location Kit, 14'		
104010	T-Arm Co-location Kit, 14'. Pipe mounts not included.	838.0
104011	T-Arm Co-location Kit, 14'. Nine 2-3/8" OD x 84" pipe mounts included.	1146.0
104012	T-Arm Co-location Kit, 14'. Nine 2-3/8" OD x 108" pipe mounts included.	1212.0
104013	T-Arm Co-location Kit, 14'. Twelve 2-3/8" OD x 84" pipe mounts included.	1249.0
104014	T-Arm Co-location Kit, 14'. Twelve 2-3/8" OD x 108" pipe mounts included.	1337.0

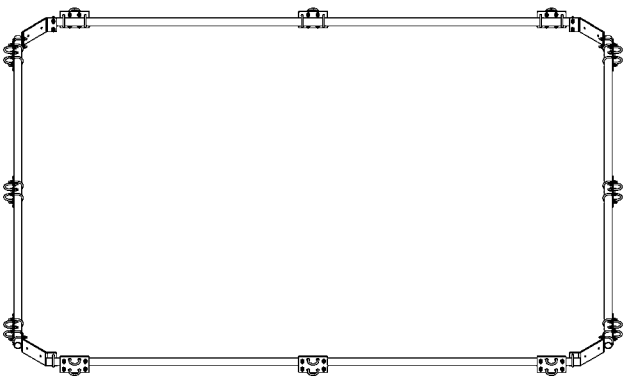
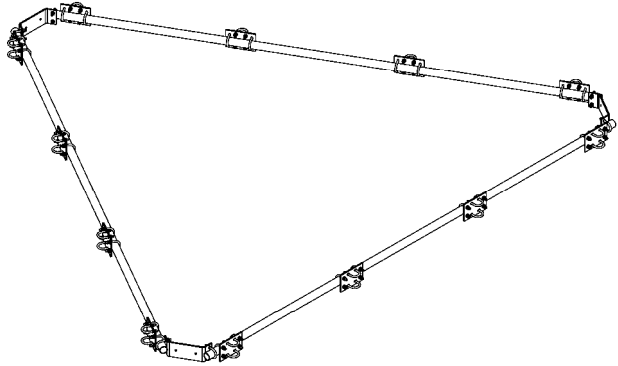


Monopole Applications



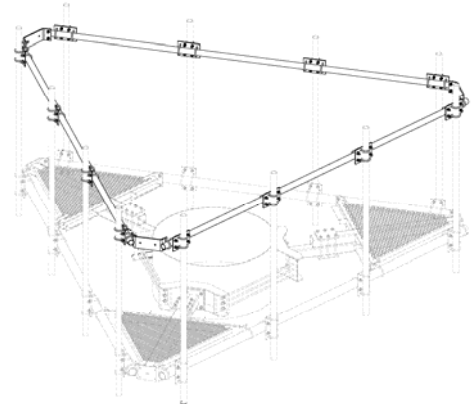
Monopole Applications

T-Arm Co-location Kits

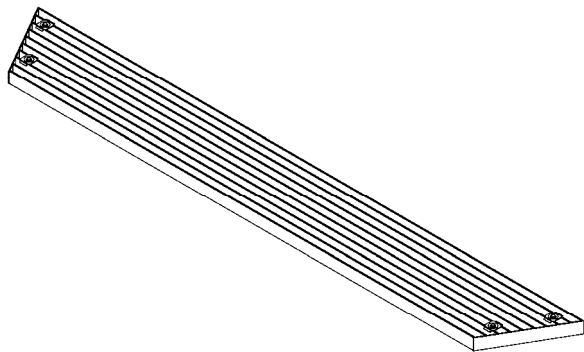


Material	Hot dip galv steel	Design:	Bolt-on upper support rail
Included:	pipes, 12 crossover plates and hardware.		
Order Separately:	Platform, pipes	Mounts to:	Low -Profile Platforms

Part #	Description	Weight (Lbs)
Low-Profile Platform, Triangular		
103995	Low -Profile Support Rail Kit, 10'-6"	263.2
103996	Low -Profile Support Rail Kit, 12'	268.7
103997	Low -Profile Support Rail Kit, 14'	276.3
Low-Profile Platform, Square		
109388	Low -Profile Support Rail Kit (Square), 10'-6"	286.0
109389	Low -Profile Support Rail Kit (Square), 12'	310.0
109380	Low -Profile Support Rail Kit (Square), 14'	338.0



Low-Profile Platform Support Rails



Material	Hot dip galv steel	Design:	Bolt-on bridge to span corners of platform
Included:	grating and hardware.		
Order Separately:	Platform, pipes	Mounts to:	Low -Profile Platforms

Part #	Description	Weight (Lbs)
103998	Low -Profile Bridge Kit, 10'-6"	36.3
103999	Low -Profile Bridge Kit, 12'	53.3
100468	Low -Profile Bridge Kit, 14'	75.0

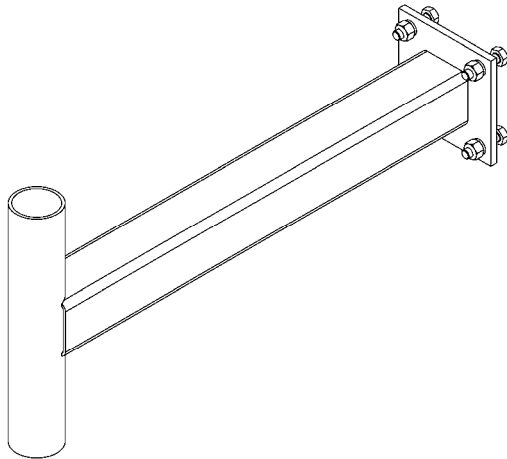
Monopole Applications



Monopole Applications

Work Platforms

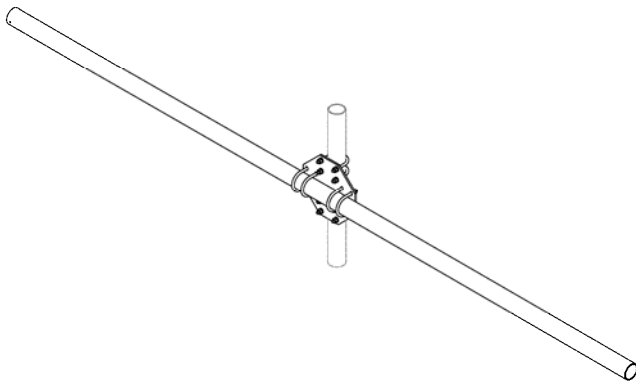
Material	Hot dip galv steel	Design:	3 or 4 sector
Included:	clamp rings and threaded rod		
Order	Arms, platforms	Mounts to:	Fits tapered or straight poles
Seperately:	and pipe		



Part #	Description	Weight (Lbs)
T-Arm Strut Kits		
109900	3' Strut for T-Arm Assembly	49.0
109907	5' Strut for T-Arm Assembly	68.0

Work Platforms

Material	Hot dip galv steel	Design:	3 or 4 sector
Included:	clamp rings and threaded rod		
Order	Clamp ring, strut, antenna pipe and work platforms	Mounts to:	T-Arm strut
Seperately:			



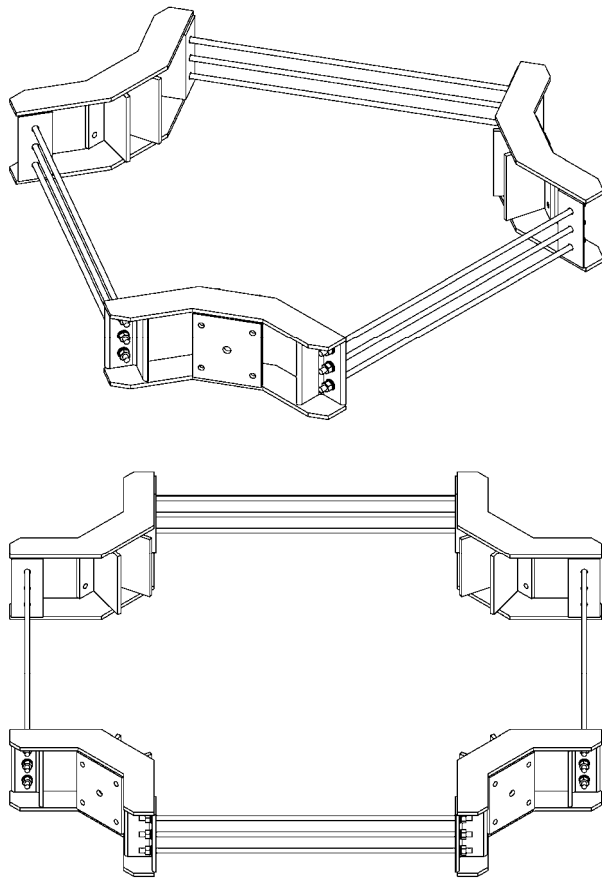
Part #	Description	Weight (Lbs)
T-Arm Cross Arm Kits		
109899	Antenna Pipe Frame, 10'-6", for T-Arm Mounting. No Antenna Pipes	102.0
107605	Antenna Pipe Frame, 12'-6", for T-Arm Mounting. No Antenna Pipes	117.0
107604	Antenna Pipe Frame, 14'-0", for T-Arm Mounting. No Antenna Pipes	128.0

Monopole Applications



Monopole Applications

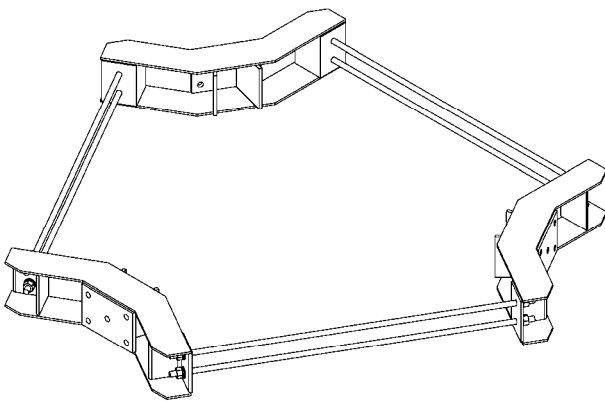
Low-Profile Platform Bridge Kit



Material: Hot dip galv steel
Included: clamp rings and threaded rod
Order Separately: Arms, platforms and pipe
Design: 3 or 4 sector
Mounts to: Fits tapered or straight poles

Part #	Description	Weight (Lbs)
3-Sector Universal Clamp Ring		
101175	Universal Clamp Ring, 3 Sector. 10-3/4" to 48" OD.	255.6
104015	Universal Clamp Ring, 3 Sector. 42" to 60" OD.	255.6
4-Sector Universal Clamp Ring		
104016	Universal Clamp Ring, 4 Sector. 10-3/4" to 60" OD.	352.9
104017	Universal Clamp Ring, 4 Sector. 42" to 60" OD.	352.9

T-Arm Components



Material: Hot dip galv steel
Included: clamp rings and threaded rod
Order Separately: Arms and pipe
Design: 3 or 4 sector lightw eight design for small load applications
Mounts to: Fits tapered or straight poles

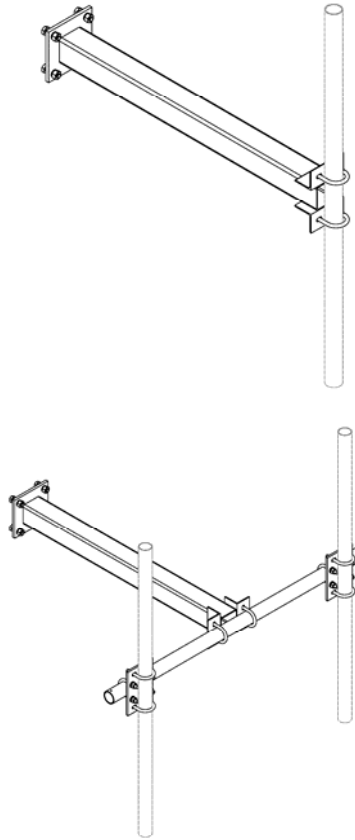
Part #	Description	Weight (Lbs)
3-Sector Universal Clamp Ring, Lightweight		
109289	Universal Clamp Ring, Lightw eight - 3 Sector. 10-3/4" to 48" OD	134.0
4-Sector Universal Clamp Ring, Lightweight		
109642	Universal Clamp Ring, Lightw eight - 4 Sector. 10-3/4" to 48" OD	178.0

Monopole Applications



Monopole Applications

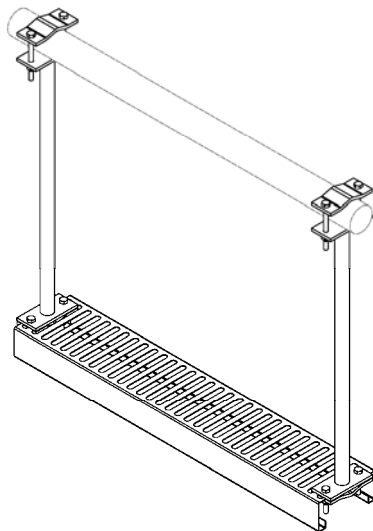
Universal Clamp Rings



Material	Hot dip galv steel	Design:	Single or double pipe arms
Included:	arm hardw are		
Order	Clamp Rings and antenna pipes	Mounts to:	Clamp Rings
Seperately:			

Part #	Description	Weight (Lbs)
Single Pipe Support Arm		
104018	Clamp Ring Stand-Off Arm, 24" Long. Includes hardw are and U-bolts for 2-3/8" OD round	32.3
104019	Clamp Ring Stand-Off Arm, 48" Long. Includes hardw are and U-bolts for 2-3/8" OD round	51.2
104020	Clamp Ring Stand-Off Arm, 72" Long. Includes hardw are and U-bolts for 2-3/8" OD round	70.1
Double Pipe Support Arm		
104021	Clamp Ring Stand-Off Arm, 24" Long-double. Includes hardw are and U-bolts for 2-3/8" OD	66.1
104022	Clamp Ring Stand-Off Arm, 48" Long-double. Includes hardw are and U-bolts for 2-3/8" OD	84.9
104023	Clamp Ring Stand-Off Arm, 72" Long-double. Includes hardw are and U-bolts for 2-3/8" OD	103.8

Universal Lightweight Clamp Rings



Material	Galv steel	Design:	Safety grated work platform
Included:	platform and clamps		
Order		Mounts to:	Support Arms
Seperately:			

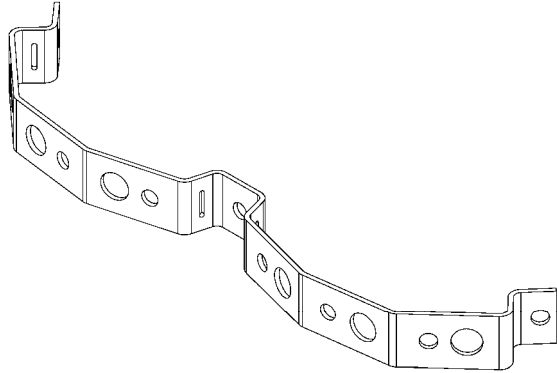
Part #	Description	Weight (Lbs)
104026	Work Platform for Support Arm, 9" x 36"	44.0
100824	Work Platform for Support Arm, 9" x 48"	49.0
104027	Work Platform for Support Arm, 9" x 60"	54.0
103314	Work Platform for Support Arm, 9" x 120"	77.0

Monopole Applications



Monopole Applications

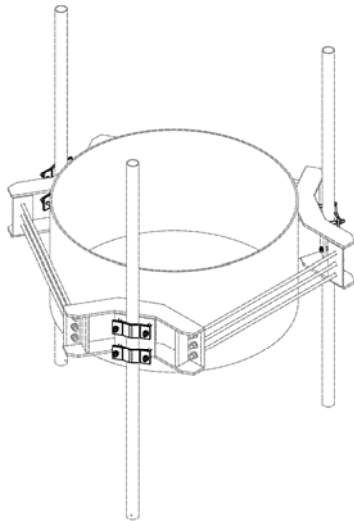
Universal Round Member Support Brackets



Material	Hot dip galv steel	Design:	Coax support for round members
Included:	bracket	Mounts to:	Round members
Order	Banding	Seperately:	

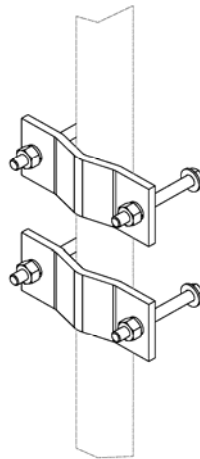
Part #	Description	Weight (Lbs)
102935	Universal Round Member Support Bracket - 10 pack	11.0

Pipe Mount Adapter for Clamp Rings



Material	Hot dip galv steel	Design:	Plate design
Included:	bracket and hardware	Mounts to:	Clamp Ring
Order	Clamp Rings and antenna pipes	Seperately:	

Part #	Description	Weight (Lbs)
104028	Pipe Mount Adapter Plate for Clamp Rings, 1-1/4" OD to 4-1/2" OD.	5.0



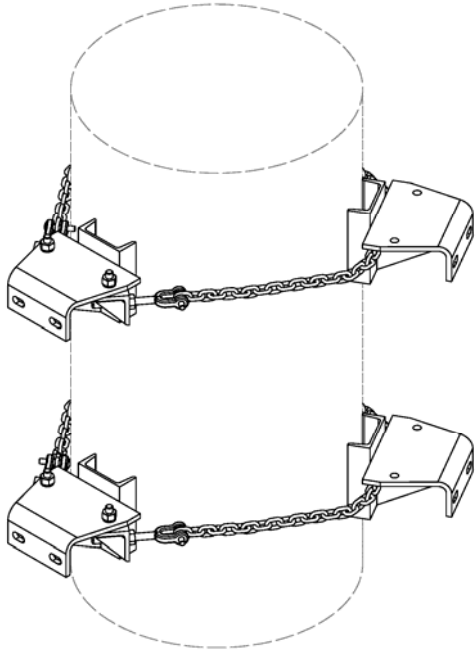
Monopole Applications



Monopole Applications

Low-Profile Chain Mounts

Material	Hot dip galv steel	Design:	Welded pipe support w ith pivot chain connection
Included:	brackets, chain and hardware		
Order	Antenna pipes up	Mounts to:	8" to 60" OD
Seperately:	to 3-1/2" OD		



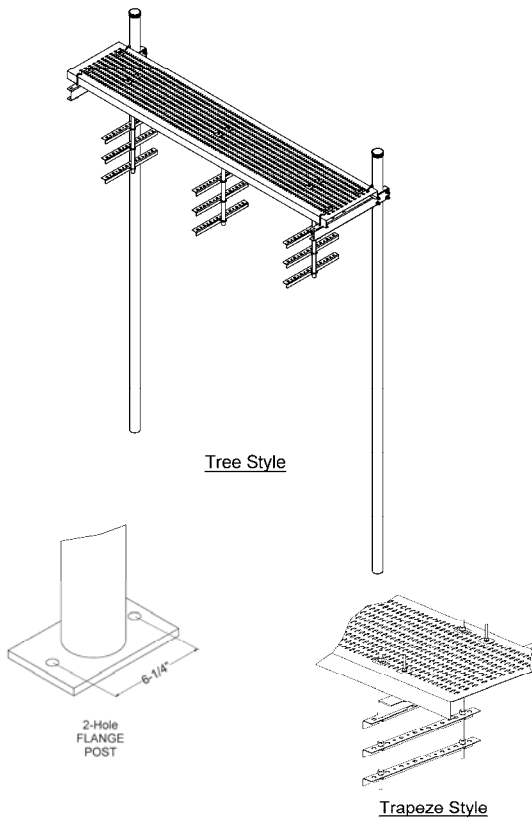
Part #	Description	Weight (Lbs)
104148	Low -Profile Chain Mount. Pipe mounts not included.	68.0
104149	Low -Profile Chain Mount. Three 2-3/8" OD x 84" pipe mounts included.	173.0
104150	Low -Profile Chain Mount. Three 2-3/8" OD x 108" pipe mounts included.	197.0

Waveguide Bridge Applications



Waveguide Applications

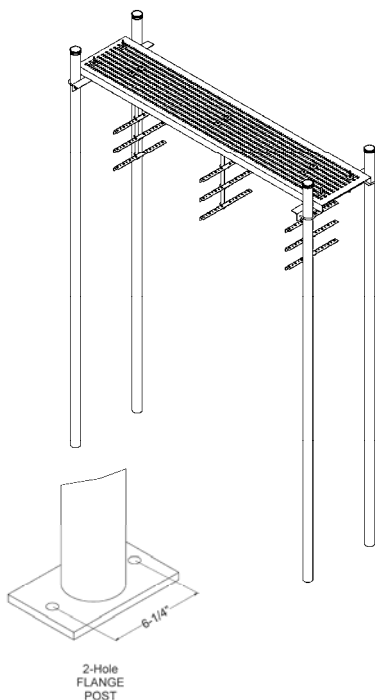
2 Post Waveguide Bridge Kits, 10'



Material Included:	Hot dip galv steel pipe, channel, supports, caps, trapeze and hardware	Design:	Two post bridge design.
Order Separately:	Additional accessories	Mounts to:	n/a

Part #	Description	Weight (Lbs)
12" Wide Bridge Kits		
104355	Two Post Waveguide Bridge Kit, 12" x 10'. No trapeze, two 14' burial posts.	267.0
104356	Two Post Waveguide Bridge Kit, 12" x 10'. Triple level trapeze, two 14' burial posts.	287.0
104357	Two Post Waveguide Bridge Kit, 12" x 10'. No trapeze, two 10'-6" flange posts.	226.0
104358	Two Post Waveguide Bridge Kit, 12" x 10'. Triple level trapeze, two 10'-6" flange posts.	245.0
24" Wide Bridge Kits		
100884	Two Post Waveguide Bridge Kit, 24" x 10'. No trapeze, two 14' burial posts.	346.0
100131	Two Post Waveguide Bridge Kit, 24" x 10'. Triple level trapeze, two 14' burial posts.	375.0
107623	Two Post Waveguide Bridge Kit, 24" x 10'. Triple level tree brackets, two 14' burial posts.	406.0
104359	Two Post Waveguide Bridge Kit, 24" x 10'. No trapeze, two 10'-6" flange posts.	305.0
100915	Two Post Waveguide Bridge Kit, 24" x 10'. Triple level trapeze, two 10'-6" flange posts.	333.6

4 Post Waveguide Bridge Kits, 10'



Material Included:	Hot dip galv steel pipe, channel, supports, caps, trapeze and hardware	Design:	Four post bridge design.
Order Separately:	Additional accessories	Mounts to:	n/a

Part #	Description	Weight (Lbs)
104360	Four Post Waveguide Bridge Kit, 24" x 10'. No trapeze, (4) 14' burial posts.	550.0
104361	Four Post Waveguide Bridge Kit, 24" x 10'. Triple level tree bracket, (4) 14' burial posts.	588.0
104362	Four Post Waveguide Bridge Kit, 24" x 10'. No trapeze, (4) 10'-6" flange posts.	467.0
104363	Four Post Waveguide Bridge Kit, 24" x 10'. Triple level tree brackets, (4) 10'-6" flange posts.	506.0

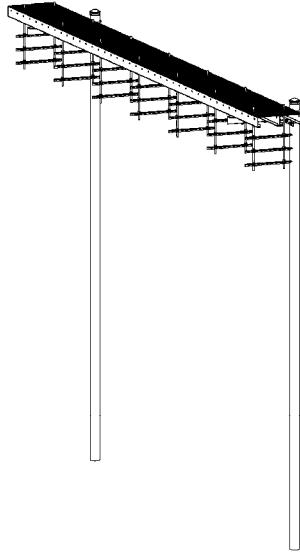
Waveguide Bridge Applications



2 Post Waveguide Bridge Kits, 20'

Material Included:	Hot dip galv steel pipe, channel, supports, caps, trapeze and hardware	Design:	Two post bridge design.
Order Separately:	Additional accessories	Mounts to:	n/a

Waveguide Applications



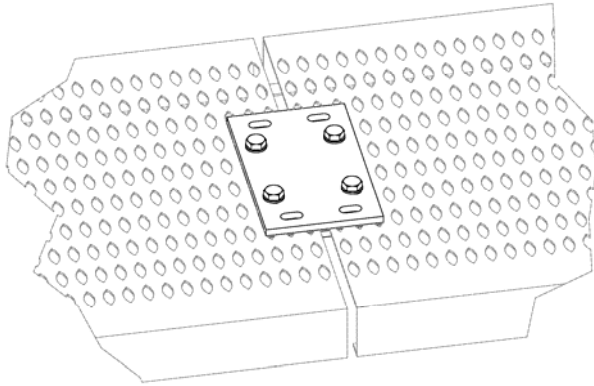
Part #	Description	Weight (Lbs)
104353	Two Post Waveguide Bridge Kit, 18" x 20'. No trapeze, two 14' burial posts.	506.0
100318	Two Post Waveguide Bridge Kit, 18" x 20'. Triple level, two 14' burial posts.	563.0
104354	Two Post Waveguide Bridge Kit, 27" x 20'. No trapeze, two 14' burial posts.	661.0
100319	Two Post Waveguide Bridge Kit, 27" x 20'. Triple Level, two 14' burial posts.	729.0

Waveguide Bridge Applications



Waveguide Applications

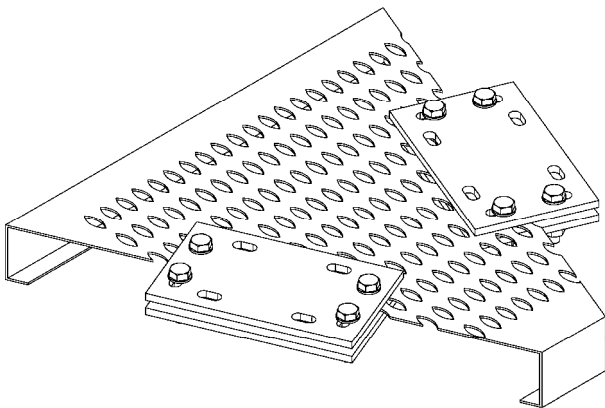
Waveguide Bridge Splice, Straight



Material Included:	Hot dip galv steel plate and hardware	Design:	Bolt-on splice plates
Order Separately:	n/a	Mounts to:	12" and 24" waveguide bridge channel

Part #	Description	Weight (Lbs)
104351	Waveguide Bridge Splice Assembly, Straight	12.0

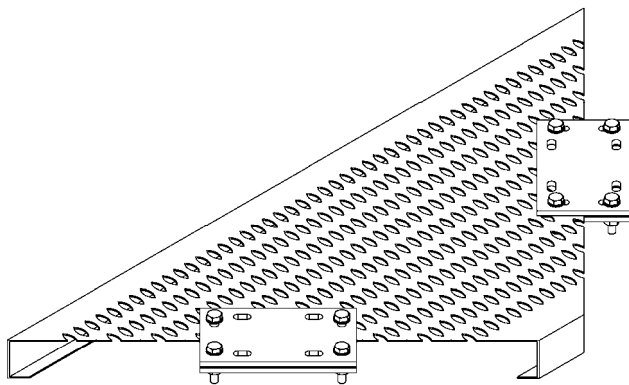
Waveguide Bridge Splice, 45 Degrees



Material Included:	Hot dip galv steel corner and hardware	Design:	Bolt-on splice corner
Order Separately:	n/a	Mounts to:	24" waveguide bridge channel

Part #	Description	Weight (Lbs)
104350	Waveguide Bridge Splice Assembly, 45 degrees - 24"	34.9

Waveguide Bridge Splice, 90 Degrees



Material Included:	Hot dip galv steel corner and hardware	Design:	Bolt-on splice corner
Order Separately:	n/a	Mounts to:	24" waveguide bridge channel

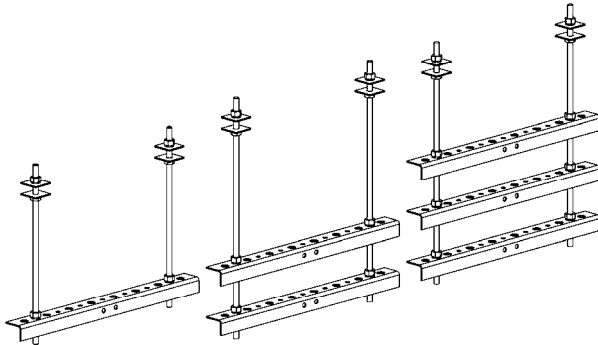
Part #	Description	Weight (Lbs)
103470	Waveguide Bridge Splice Assembly, 90 degrees - 24"	45.0

Waveguide Bridge Applications



Waveguide Applications

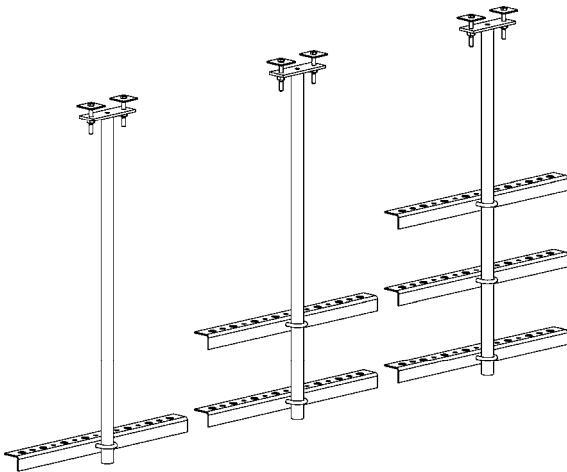
Waveguide Bridge Trapeze Kits



Material Included:	Hot dip galv steel channel and hardware	Design:	4 and 8 hole channel design
Order Separately:	n/a	Mounts to:	waveguide bridge channel

Part #	Description	Weight (Lbs)
100905	4 Hole Trapeze Kit, Single	3.8
100906	4 Hole Trapeze Kit, Double	5.8
100907	4 Hole Trapeze Kit, Triple	7.1
100222	8 Hole Trapeze Kit, Single	5.1
100297	8 Hole Trapeze Kit, Double	8.3
100200	8 Hole Trapeze Kit, Triple	11.0

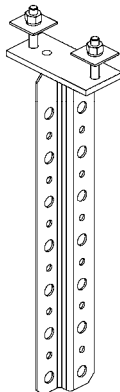
Waveguide Bridge Tree Bracket Kits



Material Included:	Hot dip galv steel channel and hardware	Design:	8 hole design with adjustable levels
Order Separately:	n/a	Mounts to:	waveguide bridge channel

Part #	Description	Weight (Lbs)
101304	8 Hole Tree Bracket Kit, Single	6.2
101303	8 Hole Tree Bracket Kit, Double	8.8
101109	8 Hole Tree Bracket Kit, Triple	11.0

Waveguide Bridge T-Line Bracket Kits



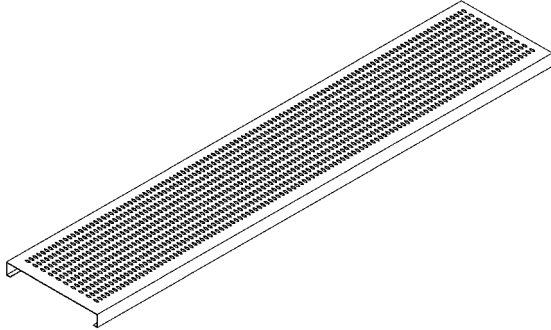
Material Included:	Hot dip galv steel bracket and hardware	Design:	8 and 14 hole design.
Order Separately:	n/a	Mounts to:	waveguide bridge channel

Part #	Description	Weight (Lbs)
104349	8 Hole T-Line Bracket Kit for Waveguide Bridge	4.3
101053	14 Hole T-Line Bracket Kit for Waveguide Bridge	5.5

Waveguide Bridge Applications



Grip Strut Waveguide Bridge Channel

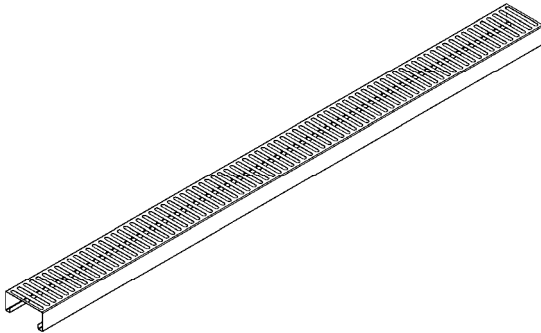


Material	G90 galvanized	Design:	Multi-diamond
Included:	channel		grip strut
Order	Posts and	Mounts to:	n/a
Seperately:	accessories		

Part #	Description	Weight (Lbs)
100908	Grip Strut Waveguide Bridge Channel, 12" x 10'- 1 1/2"	31.0
100129	Grip Strut Waveguide Bridge Channel, 24" x 10'	111.0

Waveguide Applications

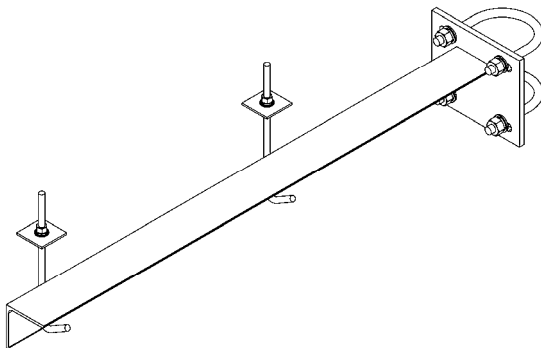
Grated Waveguide Bridge Channel



Material	G90 galvanized	Design:	Grated
Included:	channel		channel, 4" deep.
Order	Posts and	Mounts to:	n/a
Seperately:	accessories		

Part #	Description	Weight (Lbs)
100470	Grated Waveguide Bridge Channel, 9" x 10'	47.0
100221	Grated Waveguide Channel, 9" x 20'	112.0

Waveguide Bridge Support Kits



Material	Hot dip galv support and hardware	Design:	Universal design for bridge support
Order	Posts and	Mounts to:	3-1/2" to 4-1/2" OD Pipe columns
Seperately:	accessories		

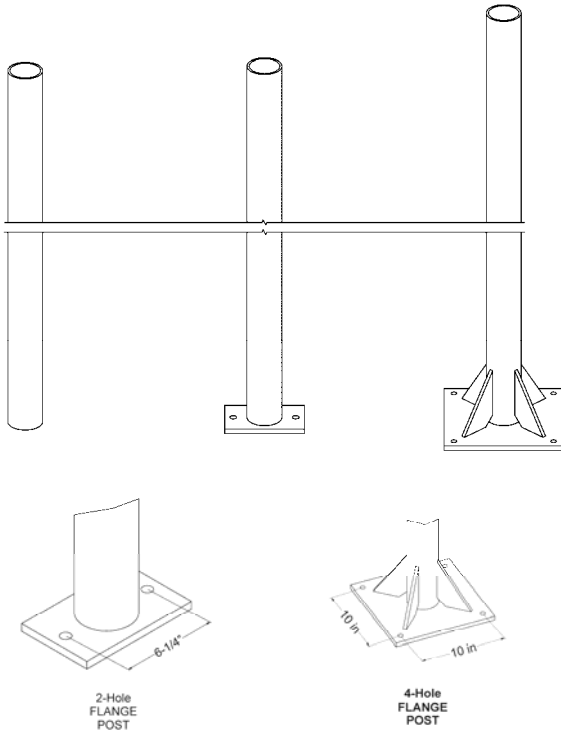
Part #	Description	Weight (Lbs)
100909	Waveguide Bridge Support Kit, 18" Long. 3-1/2" OD	12.0
100199	Waveguide Bridge Support Kit, 36" Long. 3-1/2" OD	17.0
100999	Waveguide Bridge Support Kit, 36" Long. 4-1/2" OD	18.0

Waveguide Bridge Applications



Waveguide Applications

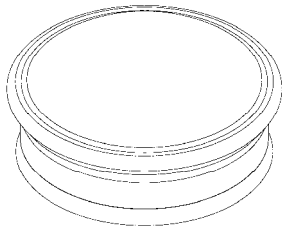
Waveguide Bridge Pipe Columns



Material Included:	Hot dip galv columns	Design:	Support pipe with and without base flanges
Order Separately:	Waveguide bridge accessories and anchors	Mounts to:	n/a

Part #	Description	Weight (Lbs)
Base Plate Post		
101270	Base Plate Pipe Column, 10'-6" Long - 2 Hole	85.2
101320	Base Plate Pipe Column, 14' Long - 2 Hole	111.8
100265	Base Plate Pipe Column, 11' Long - 4 Hole	108.6
101231	Base Plate Pipe Column, 15' Long - 4 Hole	139.0
Direct Burial Post		
100454	3" Sch. 40 Galvanized Pipe - 10'-6"	80.0
102455	3" Sch. 40 Galvanized Pipe - 12'-0"	91.0
107670	3" Sch. 40 Galvanized Pipe - 14'-0"	106.0
100198	3" Sch. 40 Galvanized Pipe - 16'-0"	121.0

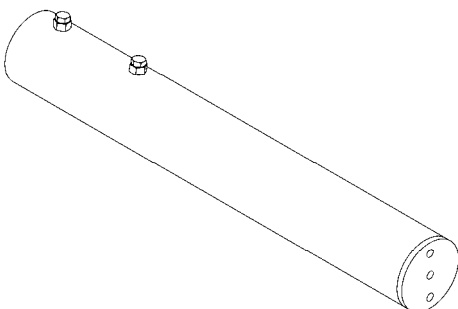
Pipe Caps



Material Included:	Hot dip galv pipe cap	Design:	Cap designed to slip over 3-1/2" OD pipe
Order Separately:	n/a	Mounts to:	n/a

Part #	Description	Weight (Lbs)
100146	3" Pipe Cap	0.6

Pipe Head



Material Included:	Hot dip galv pipe head and hardware	Design:	Bolt-on head for pipe columns for 24" extension.
Order Separately:	n/a	Mounts to:	3-1/2" OD Pipe

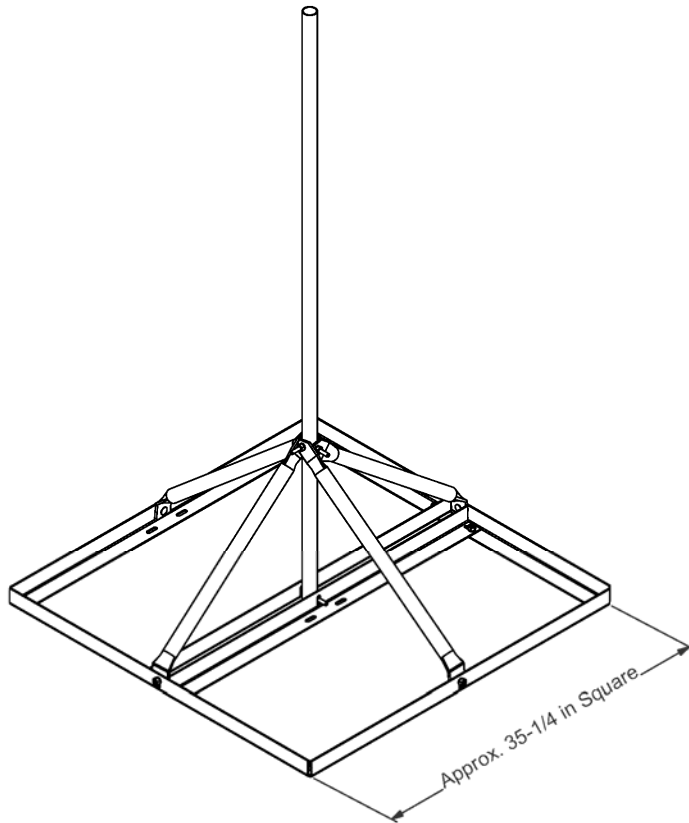
Part #	Description	Weight (Lbs)
100961	Pipe Head, 24" Long	29.6

Roof-Top Applications



Non-Penetrating Flat Roof Mounts

Material Included:	Pre galvanized mast, base and hardware	Design:	Designed for DSS support
Order Separately:	Rubber Mat	Mounts to:	n/a



Part #	Description	Weight (Lbs)
103489	FRM Non-Penetrating Roof Mount (1.25" O.D. Tubing, 60" Overall Mast Height)	31.0
103490	FRM Non-Penetrating Roof Mount (1.50" O.D. Tubing, 30" Overall Mast Height)	29.0
103491	FRM Non-Penetrating Roof Mount (1.66" O.D. Tubing, 30" Overall Mast Height)	30.0
103492	FRM Non-Penetrating Roof Mount (2.375" O.D. Tubing, 30" Overall Mast Height)	32.0
103493	FRM Non-Penetrating Roof Mount (2.375" O.D. Tubing, 60" Overall Mast Height)	37.0

Roof Applications

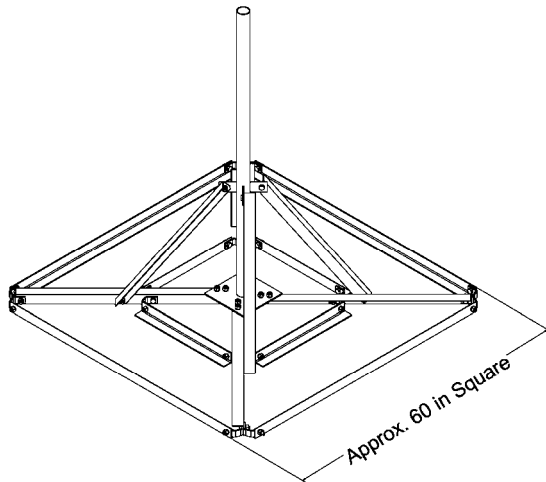


Roof-Top Applications

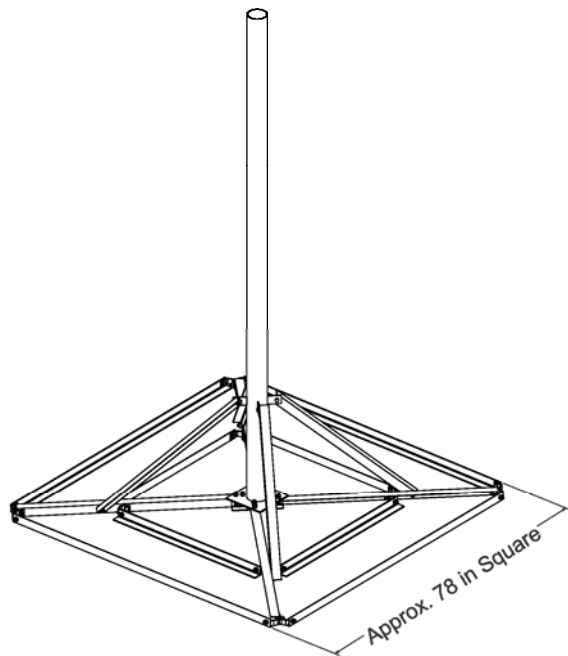


Non-Penetrating Flat Roof Mounts - Heavy Duty

Material	Hot dip	Design:	Designed for
Included:	galvanized mast, base and hardware		large dish/antenna support
Order	Rubber Mat	Mounts to:	n/a
Seperately:			



Part #	Description	Weight (Lbs)
60" Square Footprint		
103798	JRM Non-Penetrating Roof Mount (2.375 OD Tubing, 5' Overall Mast Height)	111.0
107460	JRM Non-Penetrating Roof Mount (2.875 OD Tubing, 5' Overall Mast Height)	121.0
103799	JRM Non-Penetrating Roof Mount (2.375 OD Tubing, 10' Overall Mast Height)	129.0
103801	JRM Non-Penetrating Roof Mount (2.875 OD Tubing, 10' Overall Mast Height)	150.0
78" Square Footprint		
107146	BRM Non-Penetrating Roof Mount, 2-3/8" OD x 120" Pipe Mount	161.0
107145	BRM Non-Penetrating Roof Mount, 3-1/2" OD x 120" Pipe Mount	200.0
106913	BRM Non-Penetrating Roof Mount, 4-1/2" OD x 120" Pipe Mount	233.0

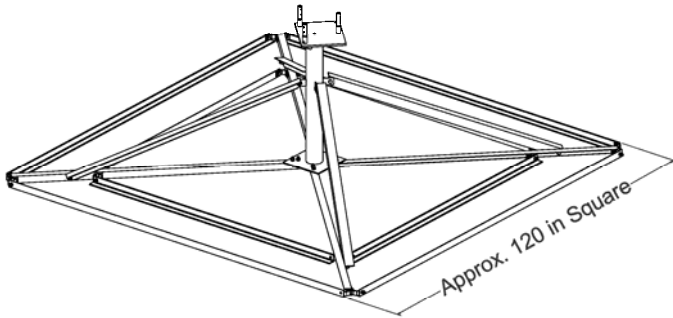


Roof-Top Applications

Roof-Top Applications



Non-Penetrating Flat Roof Mount for 25N

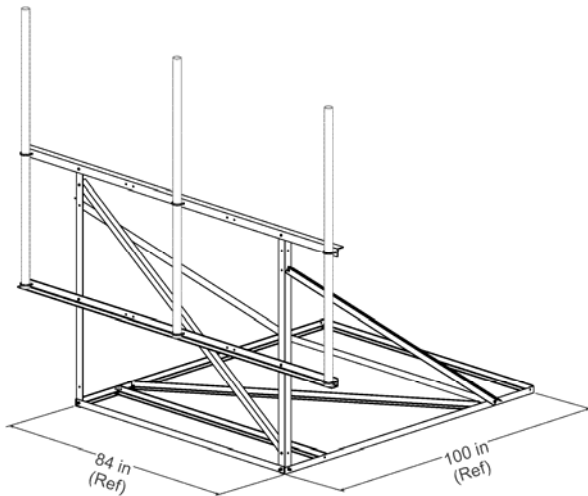


Material	Hot dip	Design:	Designed for
Included:	galvanized mast, base and hardware		15N/20N/25N support
Order	Rubber Mat	Mounts to:	n/a
Separately:			

Part #	Description	Weight (Lbs)
102815	Non Penetrating Roof Top for 25N	287.6

Roof Top Applications

Non-Penetrating Roof Frames



Material	Hot dip galv.	Design:	Single sector
Included:	frame, pipes and hardware		roof mount
Order	Rubber mats and	Mounts to:	n/a
Separately:	pipe mounts		

Part #	Description	Weight (Lbs)
Non-Penetrating Roof Frame, 10'-6" Wide		
104126	Non-Penetrating Roof Frame, 10'-6". 2-3/8" OD pipe not included.	295.0
107640	Non-Penetrating Roof Frame, 10'-6". Three 2-3/8" OD x 84" pipe mounts included.	374.0
104127	Non-Penetrating Roof Frame, 10'-6". Three 2-3/8" OD x 108" pipe mounts included.	396.0
104128	Non-Penetrating Roof Frame, 10'-6". Four 2-3/8" OD x 84" pipe mounts included.	400.0
104129	Non-Penetrating Roof Frame, 10'-6". Four 2-3/8" OD x 108" pipe mounts included.	429.0
Non-Penetrating Roof Frame, 12' Wide		
104130	Non-Penetrating Roof Frame, 12'-6". 2-3/8" OD pipe not included.	324.0
104131	Non-Penetrating Roof Frame, 12'-6". Three 2-3/8" OD x 84" pipe mounts included.	403.0
104132	Non-Penetrating Roof Frame, 12'-6". Three 2-3/8" OD x 108" pipe mounts included.	425.0
104133	Non-Penetrating Roof Frame, 12'-6". Four 2-3/8" OD x 84" pipe mounts included.	429.0
104134	Non-Penetrating Roof Frame, 12'-6". Four 2-3/8" OD x 108" pipe mounts included.	458.0
Non-Penetrating Roof Frame, 15' Wide		
104135	Non-Penetrating Roof Frame, 15'. 2-3/8" OD pipe not included.	404.0
104136	Non-Penetrating Roof Frame, 15'. Three 2-3/8" OD x 84" pipe mounts included.	483.0
104137	Non-Penetrating Roof Frame, 15'. Three 2-3/8" OD x 108" pipe mounts included.	505.0
104138	Non-Penetrating Roof Frame, 15'. Four 2-3/8" OD x 84" pipe mounts included.	509.0
104139	Non-Penetrating Roof Frame, 15'. Four 2-3/8" OD x 108" pipe mounts included.	538.0

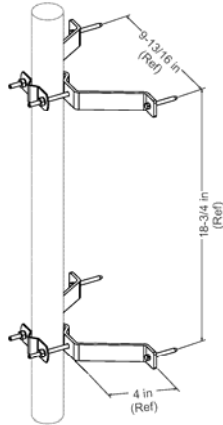
Roof-Top Applications



Roof-top Applications

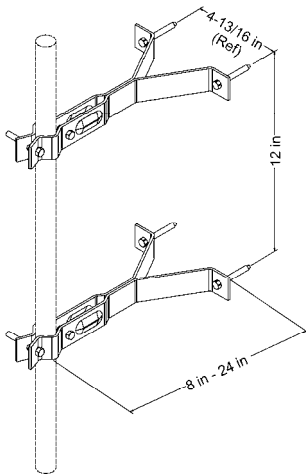
Wall Mount Brackets

Material	Pre-galv. Clamps and hardware	Design:	Knee brace included on 12" and larger
Included:	incl. lag bolts	Order	Mast pipes up to 1-3/4" OD
Seperately:	1-3/4" OD	Mounts to:	n/a



Part # 102643

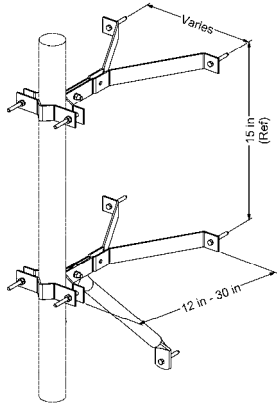
Part #	Description	Weight (Lbs)
102643	Double Wall Mount Kit, 4" Wide, Fits 1" O.D. to 2" O.D. Mast	2.1
102850	Double Wall Mount Kit, 8" - Standard, Fits 1.25" O.D. to 1.75" O.D. Mast	0.8
103024	Double Wall Mount Kit, 12" - Standard, Fits 1.25" O.D. to 1.75" O.D. Mast	4.0
104367	Double Wall Mount Kit, 18" - Standard, Fits 1.25" O.D. to 1.75" O.D. Mast	6.0
103026	Double Wall Mount Kit, 24" - Standard, Fits 1.25" O.D. to 1.75" O.D. Mast	7.0



Roof-Top Applications



Wall Mount Brackets, Heavy Duty

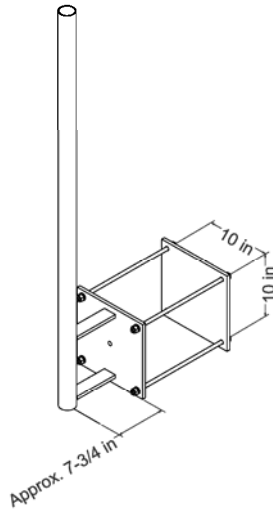


Material	Pre-galv. Clamps	Design:	Knee brace
Included:	and hardware incl. lag bolts		included on 12" and larger
Order	Mast pipes from	Mounts to:	n/a
Separately:	2" to 4" OD		

Part #	Description	Weight (Lbs)
102986	Double Wall Mount Kit, 12" Wide, Fits 2" O.D. to 4" O.D. Mast	4.0
103025	Double Wall Mount Kit, 18" Wide, Fits 2" O.D. to 4" O.D. Mast	6.0
102987	Double Wall Mount Kit, 24" Wide, Fits 2" O.D. to 4" O.D. Mast	7.0
102791	Single Wall Mount Kit, 30" Wide, Fits 2" O.D. to 4" O.D. Mast	4.0

Roof-top Applications

Universal Wall Mount



Material	Hot dip galvanized w all hardware for hollow w all.	Design:	Welded dual support arm with 2-3/8" OD mast pipe.
Included:	galvanized w all hardware for hollow w all.		
Order	Wall anchors for solid w alls	Mounts to:	Hollow or solid w all
Separately:	solid w alls		

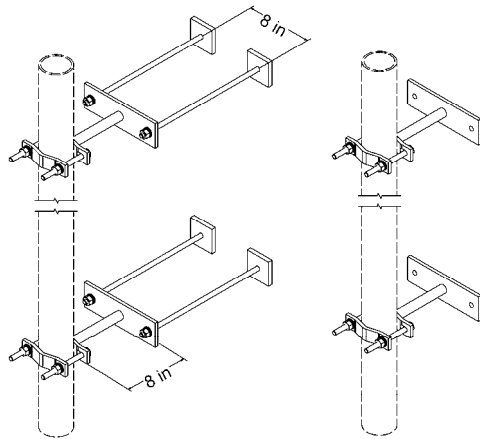
Part #	Description	Weight (Lbs)
101842	Wall Mount Assembly, Hollow Walls (2-3/8" OD x 0.154" WT x 63" Long)	68.0
101843	Wall Mount Assembly, Solid Walls (2-3/8" OD x 0.154" WT x 63" Long)	43.0
101844	Wall Mount Assembly, Hollow Walls (2-3/8" OD x 0.154" WT x 72" Long)	70.0
101845	Wall Mount Assembly, Solid Walls (2-3/8" OD x 0.154" WT x 72" Long)	46.0

Roof-Top Applications



Roof-top Applications

Gable/Eave Mount



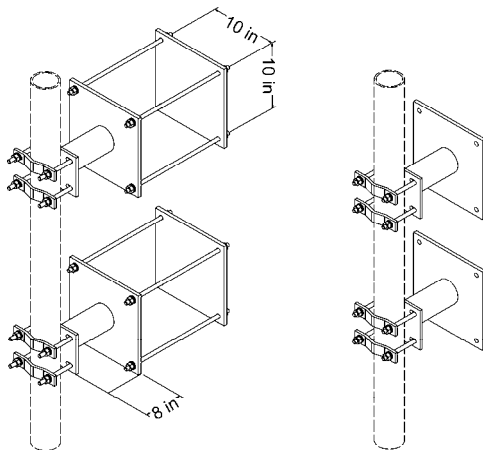
P/N 101838

P/N 101839

Material	Hot dip galvanized brackets and hardware for hollow walls.	Design:	Welded brackets w mast size up to 3-1/2" OD.
Included:		Order	Pipe mast and anchors
Order	Pipe mast and anchors	Seperately:	solid w all
Mounts to:			Hollow or solid w all

Part #	Description	Weight (Lbs)
101838	Wall Mount Brackets for Hollow Walls. 1-1/2" to 3-1/2" OD. Kit of 2.	22.2
101839	Wall Mount Brackets for Solid Walls. 1-1/2" to 3-1/2" OD. Kit of 2.	13.1

Pole Wall Mount



P/N 102483

P/N 102848

Material	Two hot dip galvanized brackets and hardware	Design:	Welded dual level brackets. 4 bolt pattern.
Included:		Order	Wall anchors for solid walls
Order	Wall anchors for solid walls	Mounts to:	Hollow or solid w all
Seperately:	solid w all		

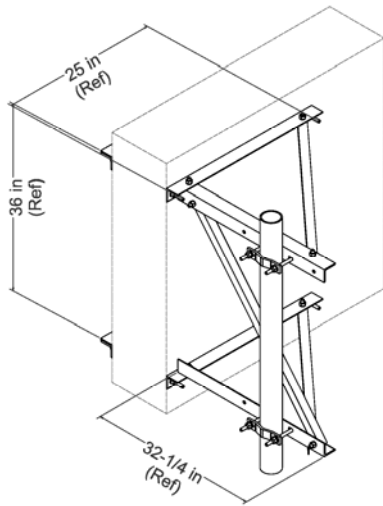
Part #	Description	Weight (Lbs)
102483	Heavy Duty Wall Mount Brackets for Hollow Walls. 1-1/2" to 4-1/2" OD. Kit of 2.	112.0
102484	Heavy Duty Wall Mount Brackets for Solid Walls. 1-1/2" to 4-1/2" OD. Kit of 2.	64.0



Roof-Top Applications



Wall Mounts

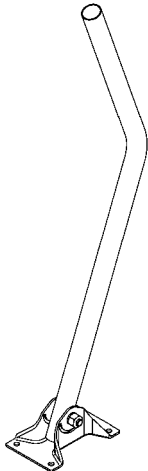


Material	Hot dip galv	Design:	Variable mast
Included:	angles, clamps and hardware		pipe location. 2-7/8" to 5" OD
Order	Mast pipe and	Mounts to:	n/a
Seperately:	w all attachment hardware		

Part #	Description	Weight (Lbs)
102506	Pole Wall Mount Assembly	83.3

Roof-top Applications

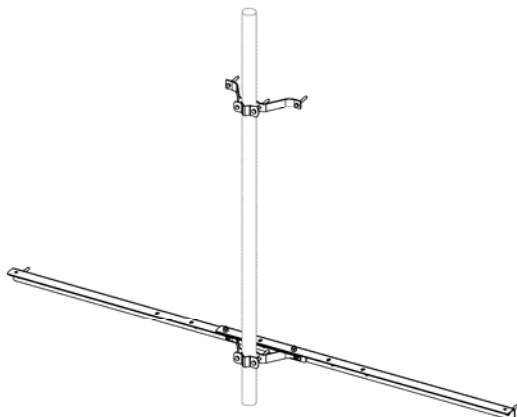
Double Wall Mount Kits, Wide



Material	Pow der coated	Design:	Universal
Included:	mast pipe, base plate and hardware		design w ith 1.66" OD mast pipe.
Order	Wall anchor	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
102342	Universal Wall Mount, 1.66" OD Mast Pipe	3.0

Double Wall Mount Kits, Standard



Material	Galvanized steel	Design:	Adjustable
Included:	support braces and connecting hardware.		design w ith two support locations
Order	Wall anchors and	Mounts to:	Gable/Eave location
Seperately:	1-1/4" mast tubing.		

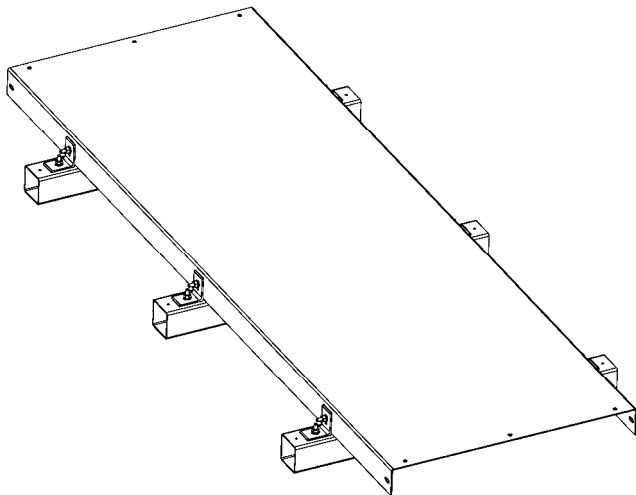
Part #	Description	Weight (Lbs)
102642	Adjustable Gable/Eave Mount (Adjusts 40"-60")	6.9

Roof-Top Applications



Roof-top Applications

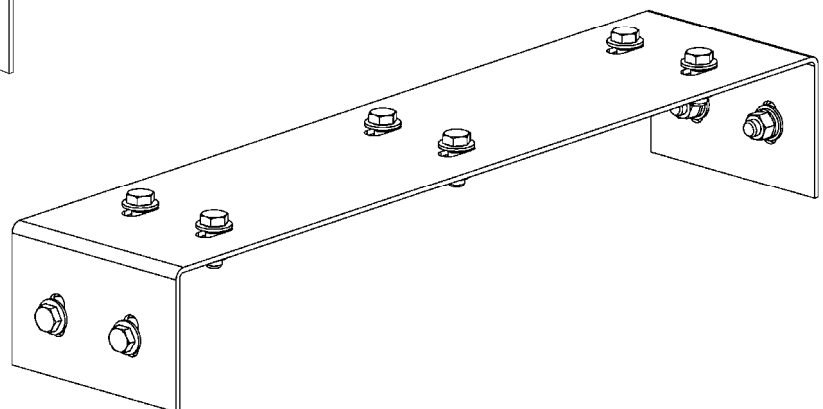
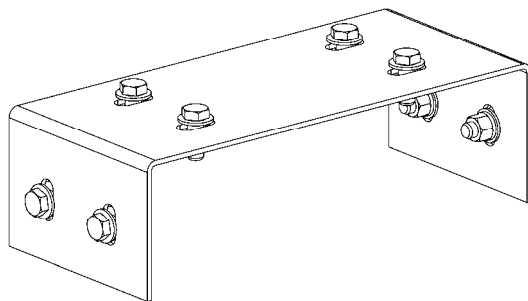
Roof-Top Coax Bridge Kits



Material	Galv steel	Design:	4, 8, 12 run
Included:	channel, 3 sleepers and hardware		version. Solid cover with PVC sleepers
Order	n/a	Mounts to:	Non- penetrating design
Seperately:			

Part #	Description	Weight (Lbs)
100914	4 Line Coax Bridge Kit.	68.0
100477	8 Line Coax Bridge Kit.	103.0
100913	12 Line Coax Bridge Kit.	138.0

Coax Bridge Splice Kits, Straight



Material	Galv steel	Design:	4, 8, 12 run
Included:	channel and hardware		version.
Order	n/a	Mounts to:	Roof-top bridge kit
Seperately:			

Part #	Description	Weight (Lbs)
101145	4 Line Coax Bridge Splice Kit, Straight.	2.9
100491	8 Line Coax Bridge Splice Kit, Straight.	4.7
100912	12 Line Coax Bridge Splice Kit, Straight.	6.3

Roof-Top Applications

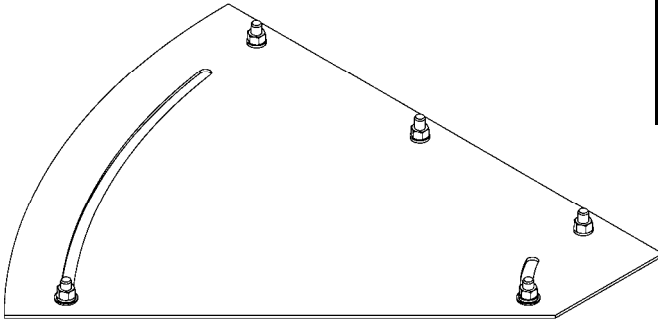


Coax Bridge Splice Kits, 0 - 45 degrees

Material	Galv steel splice and hardware	Design:	4, 8, 12 run version.
Included:		Mounts to:	Roof-top bridge kit
Order Separately:	n/a		

Part #	Description	Weight (Lbs)
100947	4 Line Coax Bridge Splice Kit, 0 - 45 degrees.	3.3
100490	8 Line Coax Bridge Splice Kit, 0 - 45 degrees.	9.0
100948	12 Line Coax Bridge Splice Kit, 0 - 45 degrees.	17.6

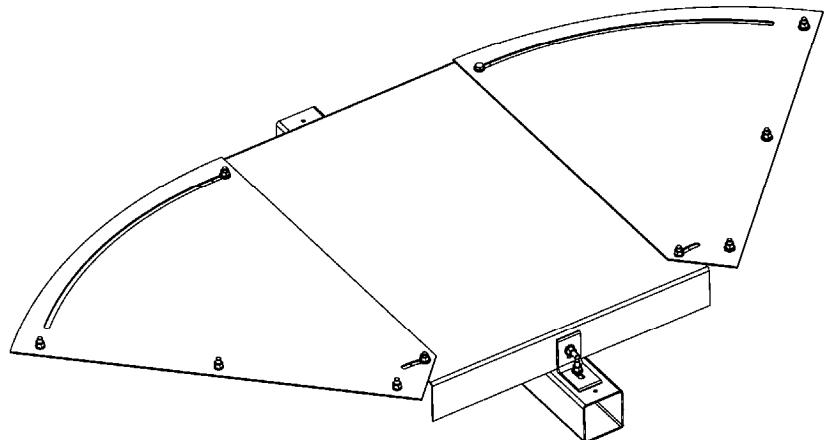
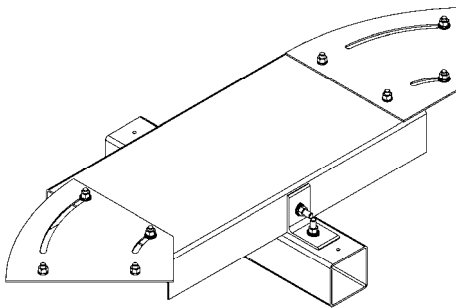
Roof-top Applications



Coax Bridge Splice Kits, 0 - 90 degrees

Material	Galv steel channel and splices. Sleeper and hardware	Design:	4, 8, 12 run version.
Included:		Mounts to:	Roof-top bridge kits
Order Separately:	n/a		

Part #	Description	Weight (Lbs)
101170	4 Line Coax Bridge Splice Kit, 0 - 90 degrees.	24.0
101139	8 Line Coax Bridge Splice Kit, 0 - 90 degrees.	45.4
101154	12 Line Coax Bridge Splice Kit, 0 - 90 degrees.	71.6

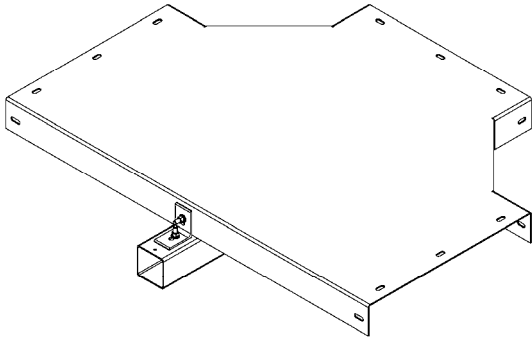


Roof-Top Applications



Roof-top Applications

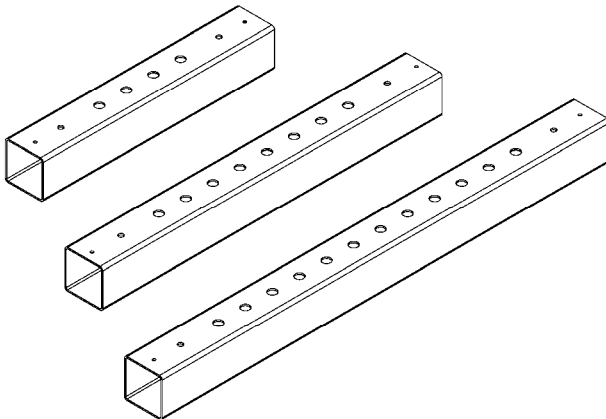
Coax Bridge Splice Kits, T-Splice



Material	Galv steel channel and splices. Sleeper and hardware	Design:	4, 8, 12 run version.
Included:		Order	n/a
Order	n/a	Mounts to:	Roof-top bridge kits
Seperately:			

Part #	Description	Weight (Lbs)
101167	4 Line Coax Bridge Splice Kit, T-Splice.	31.0
101140	8 Line Coax Bridge Splice Kit, T-Splice.	58.1
101164	12 Line Coax Bridge Splice Kit, T-Splice.	71.3

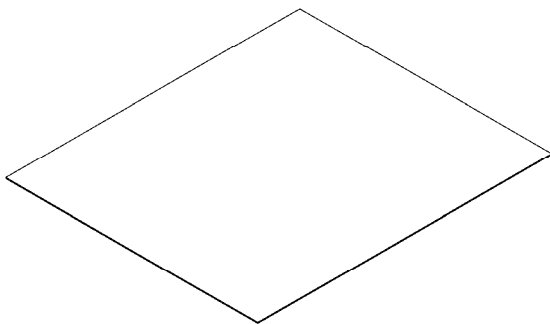
PVC Sleepers



Material	PVC sleeper	Design:	4, 8, 12 run version.
Included:		Order	n/a
Order	n/a	Mounts to:	Roof-top bridge kits
Seperately:			

Part #	Description	Weight (Lbs)
101057	4 Hole PVC Sleeper	1.8
100488	8 Hole PVC Sleeper	2.8
101092	12 Line PVC Sleeper	3.4

Rubber Mats



Material	Rubber mat	Design:	Helps to protect roof surface
Included:		Order	n/a
Order	n/a	Mounts to:	Roof-top bridge kits and Non-pens.
Seperately:			

Part #	Description	Weight (Lbs)
102758	Rubber Mat, 1/8" x 36" x 42"	7.3
101852	Rubber Mat, 1/4" x 4" x 10'	5.4
100557	Rubber Mat, 1/2" x 18" x 48"	19.5

Roof-Top Applications



Penetrating Tripod Mounts



Material	Pre galvanized	Design:	Various sizes,
Included:	tube legs, corrosion resistint clamps and hardw are		fully assembled
Order	Mast pipe	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
102633	Penetrating Tripod Mount, 36"	7.0
102634	Penetrating Tripod Mount, 60"	12.0
102637	Penetrating Tripod Mount - 120"	27.0
105307	Penetrating Tripod Mount - 120", Fits up to 2-1/4" Tubing	30.0

Roof-top Applications

Heavy Duty Penetrating Tripod Mount



Material	Pre galvanized	Design:	Fully
Included:	tube legs, corrosion resistint clamps and hardw are		assembled
Order	n/a	Mounts to:	n/a
Seperately:			

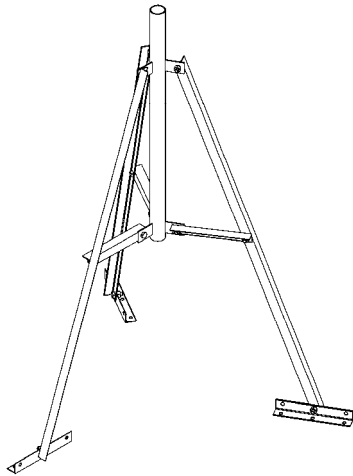
Part #	Description	Weight (Lbs)
102657	Penetrating Tri-Mast Mount, 60"	7.0

Roof-Top Applications



Roof-top Applications

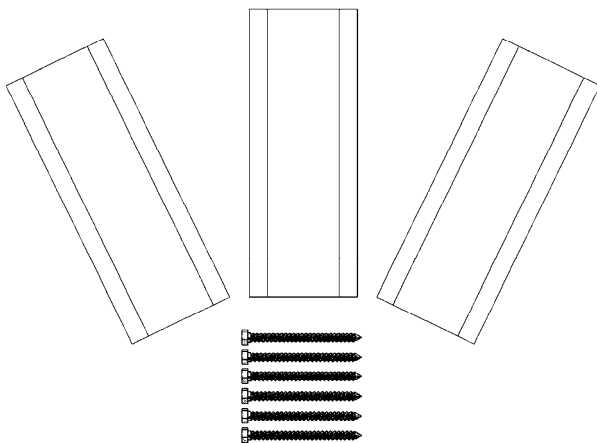
Penetrating Trimast Mounts



Material Included:	Galvanized steel support angles, support mast and hardware.	Design:	Heavy duty design for larger antenna applications. 2" mounting pipe.
Order Separately:	Roof anchors	Mounts to:	n/a

Part #	Description	Weight (Lbs)
106245	Penetrating Tripod Mount, 60" - Heavy Duty	42.0

Tri-Sector Mount



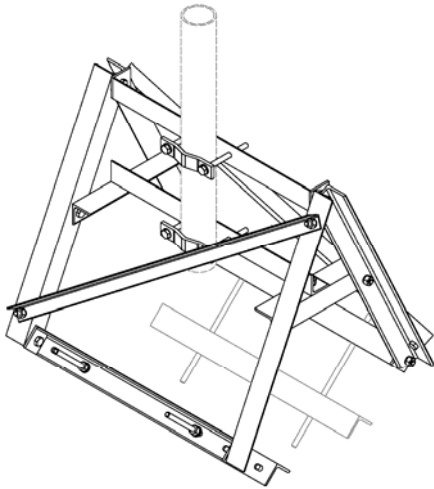
Material Included:	Rubber pads, screws and glue	Design:	Moisture/cushion barrier between mount and mounting surface.
Order Separately:	n/a	Mounts to:	n/a

Part #	Description	Weight (Lbs)
104104	Roof Pad kits	0.5

Roof-Top Applications



Pitch Pad Kit

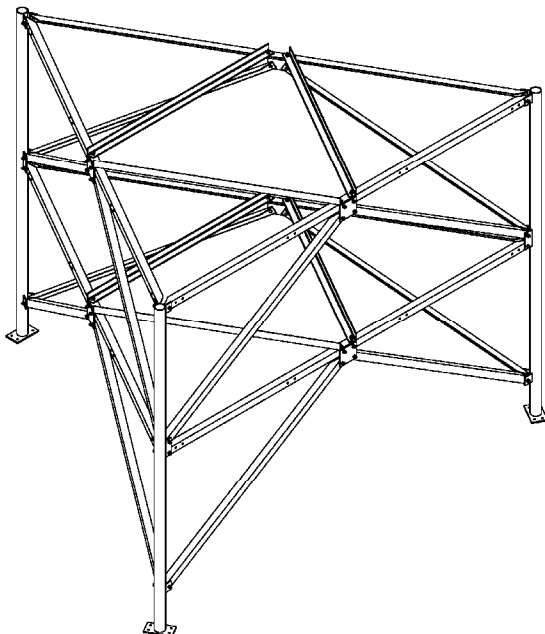


Material	Hot dip galvanized angle and hardware	Design:	Supports 1-1/4" to 4-1/2" OD mast pipes.
Included:		Mounts to:	Flat or peaked roofs to 45 degrees
Order Separately:	mast pipes and anchor hardware		

Part #	Description	Weight (Lbs)
102712	Saw-Horse Penetrating Roofmount Assembly	120.9

Roof-top Applications

Square Chimney Mount



Material	Hot dip frame members and hardware	Design:	13'-6" wide face, 10' and 15' tall.
Included:		Mounts to:	Roofs or platforms
Order Separately:	pipe mounts and roof beams		

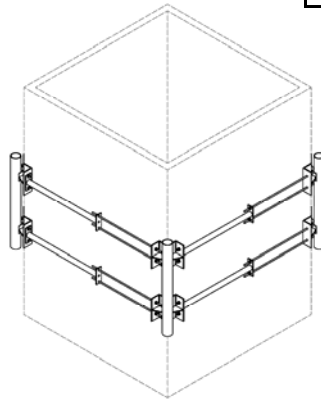
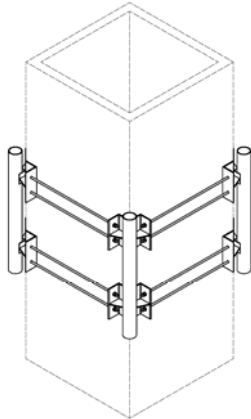
Part #	Description	Weight (Lbs)
101252	Tri-Sector Rooftop Assembly, 10' Tall	923.3
104352	Tri-Sector Rooftop Assembly, 15' Tall	1370.0

Roof-Top Applications



Roof-top Applications

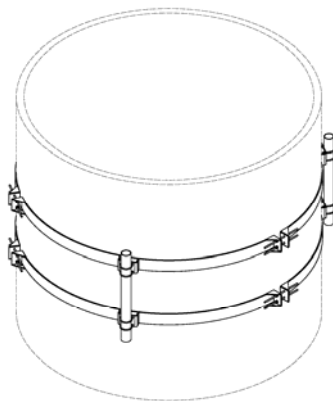
Round Chimney Mount



Material	Hot dip galvanized pipe corners, threaded rod and hardware.	Design:	Four 4-1/2" OD x 48" corner mounting pipes
Included:		Order	Cross arms and pipe mounts
Order		Mounts to:	Square or rectangular sections from 12" to 91"
Seperately:			

Part #	Description	Weight (Lbs)
101268	Chimney Mount Assembly, square. 12" - 48" face.	465.6
102042	Chimney Mount Assembly, square. 48" - 91" Chimney.	605.4

Wall Anchor



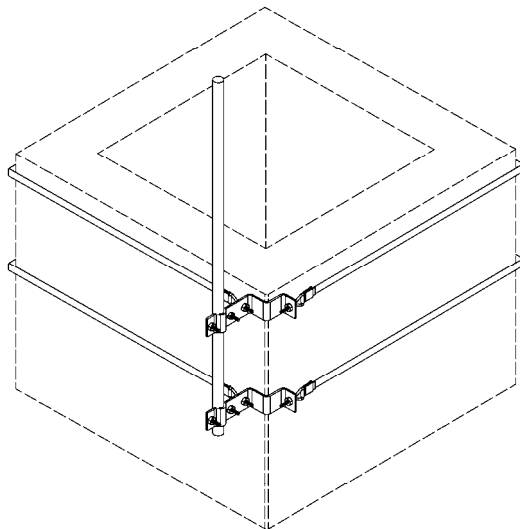
Material	Hot dip galvanized pipe sectors, threaded rod and hardware.	Design:	Three 4-1/2" OD x 48" 120 degree sector mounting pipes
Included:		Order	Cross arms and pipe mounts
Order		Mounts to:	Diameters from 8' to 11'-6"
Seperately:			

Part #	Description	Weight (Lbs)
102277	Chimney Mount Assembly, round. 8' - 11.5' diameter	1020.0

Roof-Top Applications



Light Duty Chimney Mount

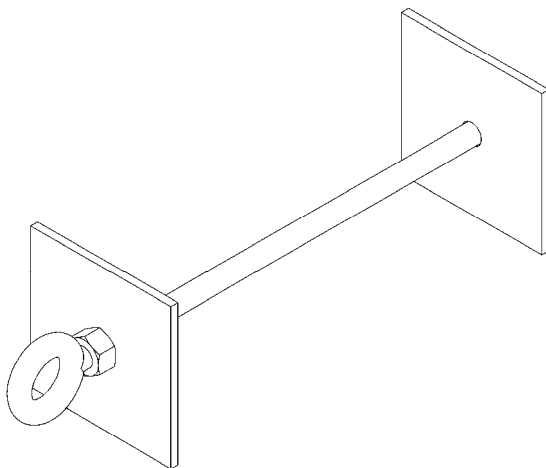


Material	Pre-galvanized material and hardware.	Design:	Light weight design with two mast supports
Included:		Mounts to:	Various Chimney sizes up a 12' circumference /perimeter
Order Separately:	1-1/4" mast tubing		

Part #	Description	Weight (Lbs)
104760	Z-Type Chimney Mount for up to 1-1/2" Dia. Tubing	1.0

Roof-top Applications

Penetrating Saw Horse Mount



Material	5/8" THD eye-bolt, nuts and wall plates.	Design:	Threaded eye-bolt design allows for adjustable wall/roof thicknesses
Included:		Mounts to:	n/a
Order Separately:	n/a		

Part #	Description	Weight (Lbs)
105010	Threaded Wall Anchor (5/8" x 18" Wall Anchor)	5.4

Coax Mounting Accessories



Nello Stackable Hangers

Material	Stainless steel	Design:	Stackable design
Included:	hanger and latch	Mounts to:	3/4" hole
Order	n/a		
Seperately:			



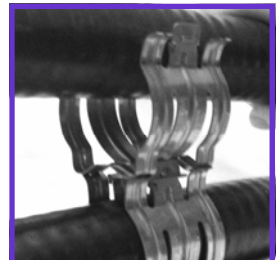
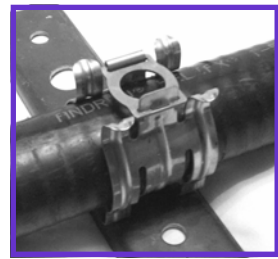
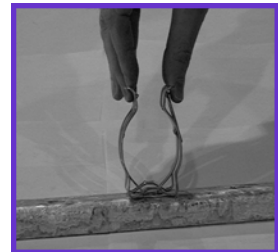
Part #	Description	Weight (Lbs)
100341	1-5/8" Nello Stackable Snap-In, 10 pack	2.0
100272	1-5/8" Nello Stackable Snap-In, 100 pack	20.0

Coax Mounting Accessories

Product Description

The Nello Patent Pending hanger is designed to attach and support a variety of brands of coaxial cable to support members .120" to .150" thick with 3/4" diameter holes. The unique design of the Nello™ hanger allows easy installation of the snap-in hanger first, which also provides easy installation of the coax. The Nello™ hanger is also stackable, reducing the need for additional support brackets.

1. Squeeze center tabs of the Nello™ hanger together and insert into 3/4" hole of support member. Then squeeze center tabs at the opening to fully snap the hanger into the support member making sure both tabs are engaged securely. (see photos #1 and #2)
2. Install coax into the Nello™ hanger and latch retainer making sure that the retainer is pushed past the locking tab. (see photos #3 and #4)
3. To Stack, repeat steps #1 and #2 using the 3/4" hole on the retainer latch on the installed Nello™ hanger. (see photos #5 and #6) Do not stack more than two 1-5/8" coaxial lines.



Coax Mounting Accessories



Snap-In Hangers



Material	Stainless steel	Design:	One piece hanger design
Included:	hanger.		
Order	n/a	Mounts to:	3/4" holes
Seperately:			

Part #	Description	Weight (Lbs)
100715	1/2" Snap-In Hanger (10 pack)	0.7
100716	7/8" Snap-In Hanger (10 pack)	1.2
100717	1-1/4" Snap-In Hanger (10 pack)	1.3
100718	1-5/8" Snap-In Hanger (10 pack)	1.5
100719	2-1/4" Snap-In Hanger (10 pack)	1.7

Coax Mounting Accessories

Butterfly Hangers



Material	Stainless steel	Design:	Bolt-on single run hanger
Included:	hanger and set bolts		
Order	Hanger bracket	Mounts to:	7/16" hole
Seperately:	kits		

Part #	Description	Weight (Lbs)
108318	1/2" Butterfly Hanger, Hardw are Included (10 pack)	1.3
108319	7/8" Butterfly Hanger, Hardw are Included (10 pack)	1.5
109849	1-1/4" Butterfly Hanger, Hardw are Included (10 pack)	1.1
108320	1-5/8" Butterfly Hanger, Hardw are Included (10 pack)	1.8
109850	2-1/4" Butterfly Hanger, Hardw are Included (10 pack)	1.5

Hanger Hardware Kits



Material	Stainless steel	Design:	Hardw are kit for hanger attachment
Included:	bolt and w asher w / optional nut		
Order	Hangers	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
100726	3/8" x 1/2" Fillister Head Screw s and Lock Washers (10 Pack)	0.6
100727	3/8" x 3/4" Fillister Head Screw s, Lock Washers, and Nuts (10 Pack)	0.6
100728	3/8" x 1" Fillister Head Screw s, Lock Washers, and Nuts (10 Pack)	0.7

Coax Mounting Accessories



Lace-Up Hoisting Grips

Material	Tinned bronze	Design:	Mesh grip with single eye support
Included:	grip, clip and tape	Mounts to:	n/a
Order Separately:	n/a		



Part #	Description	Weight (Lbs)
101259	Hoisting Grip to suit 1/2" cable - Lace Up	0.3
101260	Hoisting Grip to suit 7/8" cable - Lace Up	0.2
101261	Hoisting Grip to suit 1-1/4" cable - Lace Up	0.2
101262	Hoisting Grip to suit 1-5/8" cable - Lace Up	1.3
101263	Hoisting Grip to suit 2-1/4" cable - Lace Up	1.3

Pre-Laced Hoisting Grips

Material	Tinned bronze	Design:	Mesh grip with single eye support
Included:	grip, clip and tape	Mounts to:	n/a
Order Separately:	n/a		



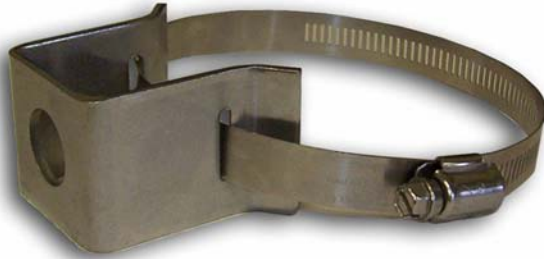
Part #	Description	Weight (Lbs)
101254	Hoisting Grip to suit 1/2" cable - Pre Laced	0.4
101255	Hoisting Grip to suit 7/8" cable - Pre Laced	0.5
101256	Hoisting Grip to suit 1-1/4" cable - Pre Laced	0.5
101257	Hoisting Grip to suit 1-5/8" cable - Pre Laced	1.3
101258	Hoisting Grip to suit 2-1/4" cable - Pre Laced	1.3

Coax Mounting Accessories



Stand-Off Adaptors, Universal

Material	Stainless steel	Design:	Adapts hangers to round members
Included:	stand-off, avail. w/o round member adapter	Mounts to:	1-1/2" to 6" OD
Order Separately:	Snap-ins		



Part #	Description	Weight (Lbs)
100693	Stand-Off Adaptor, Universal, 1-1/2" - 3" OD (10 pack)	3.7
100694	Stand-Off Adaptor, Universal, 2" - 3" OD (10 pack)	3.9
100695	Stand-Off Adaptor, Universal, 3" - 4" OD (10 pack)	4.1
100696	Stand-Off Adaptor, Universal, 4" - 5" OD (10 pack)	4.2
100697	Stand-Off Adaptor, Universal, 5" - 6" OD (10 pack)	4.2
100698	Stand-Off Adaptor, Universal, (10 pack)	2.9

Coax Mounting Accessories

Stand-Off Adaptors

Material	Stainless steel	Design:	Adapts hangers to round members
Included:	stand-off, avail. w/o round member adapter	Mounts to:	1-1/2" to 6" OD
Order Separately:	Hangers		



Part #	Description	Weight (Lbs)
100701	Stand-off Adapter, 3/8" Hardw are, 1" - 2" OD (10 Pack)	3.6
100702	Stand-Off Adapter, 3/8" Hardw are, 2" - 3" OD (10 pack)	3.8
100703	Stand-Off Adapter, 3/8" Hardw are, 3" - 4" OD (10 pack)	4.0
100704	Stand-off Adapter, 3/8" Hardw are, 4" to 5" OD (10 pack)	4.1
100705	Stand-Off Adapter, 3/8" Hardw are, 5" to 6" OD Members (10 pack)	4.1
100706	Stand-Off Adapter, 3/8" Hardw are, (10 pack)	2.8

Coax Mounting Accessories



Angle Adaptors, Universal

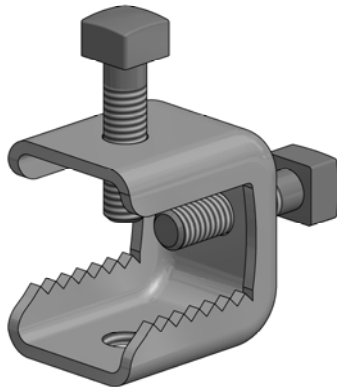


Material	Stainless steel	Design:	Adapts hangers to angle members
Included:	adapter, hardware and insert	Mounts to:	Up to 7/8" angle
Order Separately:	n/a		

Part #	Description	Weight (Lbs)
104157	Angle Adaptors, Universal (10 pack)	4.9

Coax Mounting Accessories

Angle Adaptors, 3/8" Tapped Hole



Material	Stainless steel	Design:	Adapts Hangers to angle members
Included:	adapter and hardware	Mounts to:	Up to 7/8" angle
Order Separately:	Hangers		

Part #	Description	Weight (Lbs)
100669	Angle Adapter, 3/8" Tapped Hole (10 pack)	5.4

Coax Mounting Accessories



Round Member Adaptors



Material	Stainless steel	Design:	Screw used for tightening
Included:	hose clamp	Mounts to:	1-1/2" to 6" OD
Order	Hangers		
Seperately:			

Part #	Description	Weight (Lbs)
100721	Round Member Adapter, 1" - 2" (10 pack)	0.8
100722	Round Member Adapter, 2" - 3" (10 pack)	1.0
100723	Round Member Adapter, 3" - 4" (10 pack)	1.2
100724	Round Member Adapter, 4" - 5" (10 pack)	1.3
100725	Round Member Adapter, 5" - 6" (10 pack)	1.3

Coax Support Blocks, Double

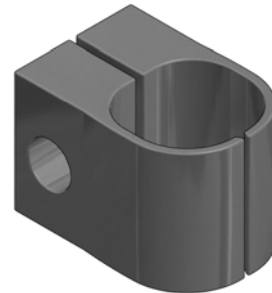
Material	Polypropylene	Design:	Supports two runs of coax
Included:	blocks	Mounts to:	3/8" threaded rod
Order	Hanger kits		
Seperately:			



Part #	Description	Weight (Lbs)
101540	Coax Support Blocks for 1/2" corrugated coax, double. 10 pack	1.0
101544	Coax Support Blocks for 7/8" corrugated coax, double. 10 pack	1.2
101547	Coax Support Blocks for 1-1/4" corrugated coax, double. 10 pack	1.4
101549	Coax Support Blocks for 1-5/8" corrugated coax, double. 10 pack	1.8

Coax Support Blocks, Single

Material	Polypropylene	Design:	Supports one run of coax
Included:	blocks	Mounts to:	3/8" threaded rod
Order	Hanger kits		
Seperately:			



Part #	Description	Weight (Lbs)
101555	Coax Support Blocks for 1/2" corrugated coax, single. 10 pack	0.5
101556	Coax Support Blocks for 7/8" corrugated coax, single. 10 pack	1.0
101557	Coax Support Blocks for 1-1/4" corrugated coax, single. 10 pack	1.3
101558	Coax Support Blocks for 1-5/8" corrugated coax, single. 10 pack	1.8

Coax Support Blocks Mounting Hardware



Material	3/8" galvanized	Design:	1,2 or 3 runs of coax support
Included:	threaded rod and hardware	Mounts to:	n/a
Order	Coax supports		
Seperately:			

Part #	Description	Weight (Lbs)
104430	3/8" Galvanized Hardware Kit for one Coax Support Block. 10 pack.	1.8
104431	3/8" Galvanized Hardware Kit for two Coax Support Blocks. 10 pack.	2.3
104432	3/8" Galvanized Hardware Kit for three Coax Support Blocks. 10 pack.	2.8

Coax Mounting Accessories

Coax Mounting Accessories



Universal Weatherproofing



Material	Butyl and vinyl.	Design:	Tape kit for multi-layer wrap
Included:	Five rolls butyl mastic, one roll 2"x20' and two rolls of 3/4"x44' tape	Order	n/a
Seperately:		Mounts to:	n/a

Part #	Description	Weight (Lbs)
100347	Universal Weather Proofing Kit	3.4

Universal Ground Kits



Material	Copper ground kit, lugs and weatherproofing kit	Design:	Universal design works with most cable sizes
Order	n/a	Mounts to:	Coax outer conductor
Seperately:			

Part #	Description	Weight (Lbs)
100346	Universal Ground Kit, 5' lead w/ unattached 1/4" & 3/8" tw o-hole lugs.	1.9

Clip On Ground Kits



Material	Copper clip on strap, ground kit, lug and weatherproofing kit	Design:	One-piece clip on style. Quick installation.
Order	n/a	Mounts to:	Coax outer conductor
Seperately:			

Part #	Description	Weight (Lbs)
101626	Clip-on Ground Kit for 7/8" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.4
101628	Clip-on Ground Kit for 1-1/4" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.4
101630	Clip-on Ground Kit for 1-5/8" corrugated coax. 5'lead w ith unattached 3/8" tw o-hole lug.	1.5
101632	Clip-on Ground Kit for 2-1/4" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.5

Standard Ground Kits



Material	Copper bolt on strap, ground kit, lug and weatherproofing kit	Design:	Bolt on strap for secure connection.
Order	n/a	Mounts to:	Coax outer conductor
Seperately:			

Part #	Description	Weight (Lbs)
108321	Bolt-on Ground Kit for 3/8" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.8
108322	Bolt-on Ground Kit for 5/8" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.8
108323	Bolt-on Ground Kit for 7/8" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.8
108324	Bolt-on Ground Kit for 1-5/8" corrugated coax. 5' lead w ith unattached 3/8" tw o-hole lug.	1.8

Coax Mounting Accessories



4" Entry Panels

Material	Aluminum port,	Design:	Entry plates
Included:	caps and mounting hardw are.		with round ports
Order	4" boot	Mounts to:	Walls
Seperately:	assemblies		



Part #	Description	Weight (Lbs)
101350	Entry Panel, 1 port, 1x1, Standard	1.0
101351	Entry Panel, 1 port, 1x1, Compact	0.6
101352	Entry Panel, 2 port, 1x2	2.3
101353	Entry Panel, 3 port, 1x3	2.9
101354	Entry Panel, 4 port, 1x4	3.5
101355	Entry Panel, 4 port, 2x2, Standard	4.2
101356	Entry Panel, 4 port, 2x2, Compact	4.0
101357	Entry Panel, 6 port, 2x3	6.1
101358	Entry Panel, 6 port, 1x6	6.0
101359	Entry Panel, 8 port, 2x4, Standard	6.0
101360	Entry Panel, 8 port, 2x4, Large	6.0
101361	Entry Panel, 9 port, 3x3	7.1
101362	Entry Panel, 10 port, 2x5	7.4
101363	Entry Panel, 12 port, 3x4, Standard	8.5
101364	Entry Panel, 12 port, 3x4, Large	7.0
101365	Entry Panel, 12 port, 2x6	0.2
101366	Entry Panel, 16 port, 4x4	9.1
101367	Entry Panel, 18 port, 3x6	13.0
101368	Entry Panel, 20 port, 4x5	11.0
101369	Entry Panel, 24 port, 4x6	15.8

Coax Mounting Accessories

4" Boot



Part #	Description	Weight (Lbs)
101439	4" Boot Assembly, cushion not included	1.3

Material	EPDM rubber boot	Design:	Compression
Included:	and two hose clamps		boot kit for aluminum entry panels
Order	4" entry panels	Mounts to:	4" engtry panels
Seperately:	and cushion insert		

Coax Mounting Accessories



4" Boot Kits

Material	EPDM rubber	Design:	Compression
Included:	boot, cushion and two hose clamps		boot kit for aluminum entry panels
Order Separately:	4" entry panels	Mounts to:	4" entry panels

Part #	Description	Weight (Lbs)
101377	Boot Assembly Kit, 4" w / 1 Hole for 1/2" corrugated coax	1.6
101378	Boot Assembly Kit, 4" w / 2 Holes for 1/2" corrugated coax	1.6
101379	Boot Assembly Kit, 4" w / 3 Holes for 1/2" corrugated coax	1.6
101380	Boot Assembly Kit, 4" w / 4 Holes for 1/2" corrugated coax	1.6
101381	Boot Assembly Kit, 4" w / 5 Holes for 1/2" corrugated coax	1.6
101382	Boot Assembly Kit, 4" w / 1 Hole for 1/2" flex coax	1.6
101383	Boot Assembly Kit, 4" w / 2 Holes for 1/2" flex coax	1.6
101384	Boot Assembly Kit, 4" w / 3 Holes for 1/2" flex coax	1.6
101385	Boot Assembly Kit, 4" w / 4 Holes for 1/2" flex coax	1.6
101386	Boot Assembly Kit, 4" w / 1 Hole for 5/8" corrugated coax	1.6
101387	Boot Assembly Kit, 4" w / 2 Holes for 5/8" corrugated coax	1.6
101388	Boot Assembly Kit, 4" w / 3 Holes for 5/8" corrugated coax	1.6
101389	Boot Assembly Kit, 4" w / 1 Hole for 7/8" corrugated coax	1.6
101390	Boot Assembly Kit, 4" w / 2 Holes for 7/8" corrugated coax	1.6
101391	Boot Assembly Kit, 4" w / 3 Holes for 7/8" corrugated coax	1.6
101392	Boot Assembly Kit, 4" w / 4 Holes for 7/8" corrugated coax	1.6
101393	Boot Assembly Kit, 4" w / 1 Hole for 1-1/4" corrugated coax	1.6
101394	Boot Assembly Kit, 4" w / 1 Hole for 1-5/8" corrugated coax	1.6
101395	Boot Assembly Kit, 4" w / 1 Hole for 2-1/4" corrugated coax	1.6



Coax Mounting Accessories

Coax Mounting Accessories



Boot Inserts

Material	EPDM rubber	Design:	Compression boot kit for aluminum entry panels
Included:	boot, cushion and two hose clamps		
Order Separately:	4" entry panels	Mounts to:	4" entry panels



Boot Insert Plugs

Material	EPDM rubber plug	Design:	Plugs for unused insert holes
Included:			
Order Separately:	Boot inserts or assemblies	Mounts to:	Boot inserts

Part #	Description	Weight (Lbs)
101495	Boot Insert Plug for 1/2" corrugated coax	0.1
101499	Boot Insert Plug for 5/8" corrugated coax	0.1
101500	Boot Insert Plug for 7/8" corrugated coax	0.2
101503	Boot Insert Plug for 1-1/4" corrugated coax	0.4
101505	Boot Insert Plug for 1-5/8" corrugated coax	0.7



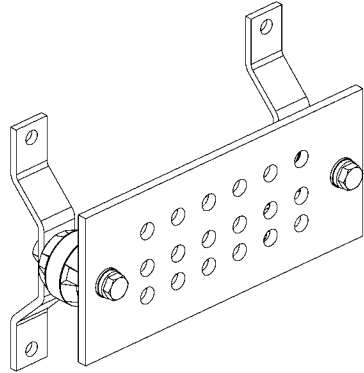
Part #	Description	Weight (Lbs)
101441	Boot Insert, Blank (no holes)	0.4
101447	Boot Insert with 1 Hole for 1/2" corrugated coax	0.4
101448	Boot Insert with 2 Holes for 1/2" corrugated coax	0.4
101449	Boot Insert with 3 Holes for 1/2" corrugated coax	0.4
101450	Boot Insert with 4 Holes for 1/2" corrugated coax	0.4
101451	Boot Insert with 5 Holes for 1/2" corrugated coax	0.4
101452	Boot Insert with 1 Hole for 1/2" flex coax	0.4
101453	Boot Insert with 2 Holes for 1/2" flex coax	0.4
101454	Boot Insert with 3 Holes for 1/2" flex coax	0.4
101455	Boot Insert with 4 Holes for 1/2" flex coax	0.4
101464	Boot Insert with 1 Hole for 5/8" corrugated coax	0.4
101465	Boot Insert with 2 Holes for 5/8" corrugated coax	0.4
101466	Boot Insert with 3 Holes for 5/8" corrugated coax	0.4
101467	Boot Insert with 4 Holes for 5/8" corrugated coax	0.4
101469	Boot Insert with 1 Hole for 7/8" corrugated coax	0.4
101470	Boot Insert with 2 Holes for 7/8" corrugated coax	0.3
101471	Boot Insert with 3 Holes for 7/8" corrugated coax	0.3
101472	Boot Insert with 4 Holes for 7/8" corrugated coax	0.2
101480	Boot Insert with 1 Hole for 1-1/4" corrugated coax	0.3
101482	Boot Insert with 1 Hole for 1-5/8" corrugated coax	0.3
101483	Boot Insert with 1 Hole for 2-1/4" corrugated coax	0.2

Coax Mounting Accessories

Grounding Solutions



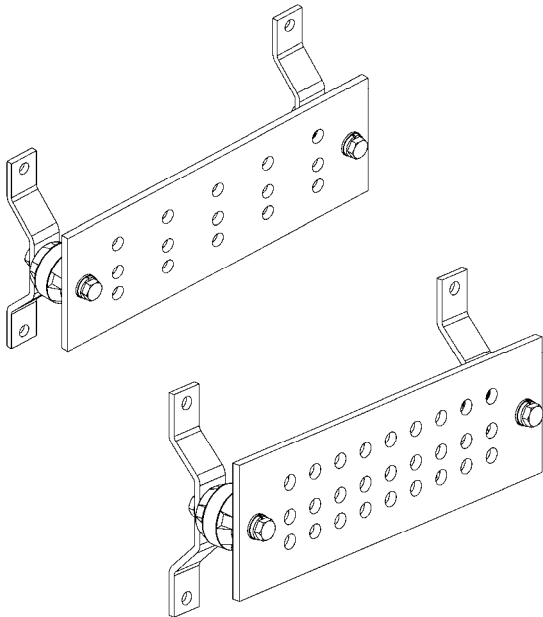
Buss Bar Kits, 1/4" x 4" x 9"



Material	Copper buss bar,	Design:	Universal
Included:	insulators, w all brackets and hardw are		patter for 1 or 2 hole lugs
Order	Wall attachment	Mounts to:	Walls
Seperately:	hardw are		

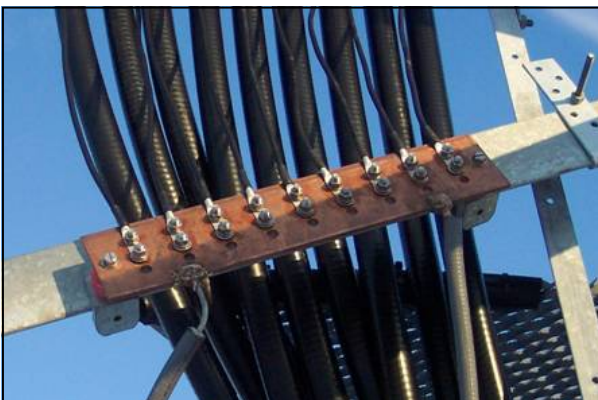
Part #	Description	Weight (Lbs)
Bare Copper		
100684	1/4" x 4" x 9" Copper Buss Bar Kit, 18 holes.	3.4
100662	1/4" x 4" x 9" Copper Buss Bar, 18 holes. Bar only.	2.9
Tinned Copper		
102280	1/4" x 4" x 9" Tinned Copper Buss Bar Kit, 18 holes.	3.4
104420	1/4" x 4" x 9" Tinned Copper Buss Bar, 18 holes. Bar only.	2.7

Buss Bar Kits, 1/4" x 4" x 12"



Material	Copper buss bar,	Design:	Universal
Included:	insulators, w all brackets and hardw are		patter for 1 or 2 hole lugs. 15 or 27 hole design.
Order	Wall attachment	Mounts to:	Walls
Seperately:	hardw are		

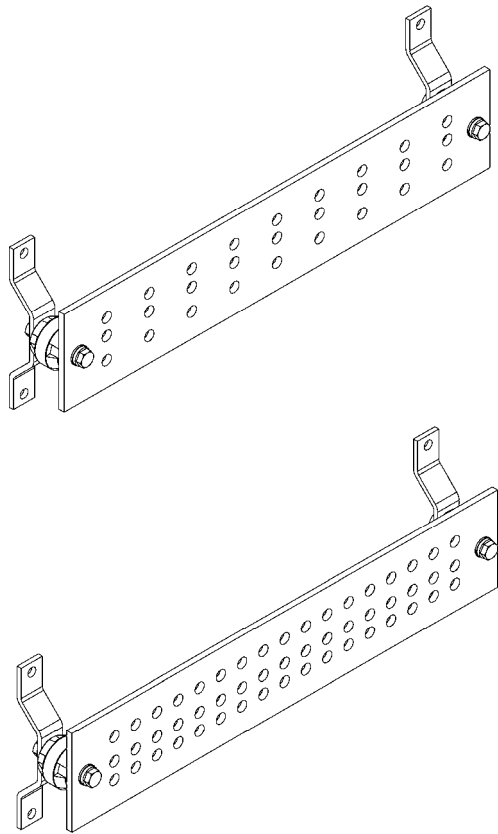
Part #	Description	Weight (Lbs)
Bare Copper		
104421	1/4" x 4" x 12" Copper Buss Bar Kit, 15 holes.	4.4
104422	1/4" x 4" x 12" Copper Buss Bar, 15 holes. Bar only.	3.7
104423	1/4" x 4" x 12" Copper Buss Bar Kit, 27 holes.	4.2
104114	1/4" x 4" x 12" Copper Buss Bar, 27 holes. Bar only.	3.5
Tinned Copper		
104424	1/4" x 4" x 12" Tinned Copper Buss Bar Kit, 15 holes.	4.4
104425	1/4" x 4" x 12" Tinned Copper Buss Bar, 15 holes - Bar only.	3.7
104426	1/4" x 4" x 12" Tinned Copper Buss Bar Kit, 27 holes.	4.2
104427	1/4" x 4" x 12" Tinned Copper Buss Bar, 27 holes- Bar only.	3.5



Grounding Solutions



Buss Bar Kits, 1/4" x 4" x 20"



Material Included:	Copper buss bar, insulators, w all brackets and hardware	Design:	Universal pattern for 1 or 2 hole lugs. 27 or 51 hole design.
Order Separately:	Wall attachment hardware	Mounts to:	Walls

Part #	Description	Weight (Lbs)
Bare Copper		
100686	1/4" x 4" x 20" Copper Buss Bar Kit, 27 holes.	6.8
100661	1/4" x 4" x 20" Copper Buss Bar, 27 holes. Bar only.	6.4
100685	1/4" x 4" x 20" Copper Buss Bar Kit, 51 holes.	6.5
100663	1/4" x 4" x 20" Copper Buss Bar, 51 holes. Bar only.	6.4
Tinned Copper		
102281	1/4" x 4" x 20" Tinned Copper Buss Bar Kit, 27 holes.	6.8
104428	1/4" x 4" x 20" Tinned Copper Buss Bar, 27 holes - Bar only.	6.1
102282	1/4" x 4" x 20" Tinned Copper Buss Bar Kit, 51 holes.	6.5
104429	1/4" x 4" x 20" Tinned Copper Buss Bar, 51 holes - Bar only.	5.8

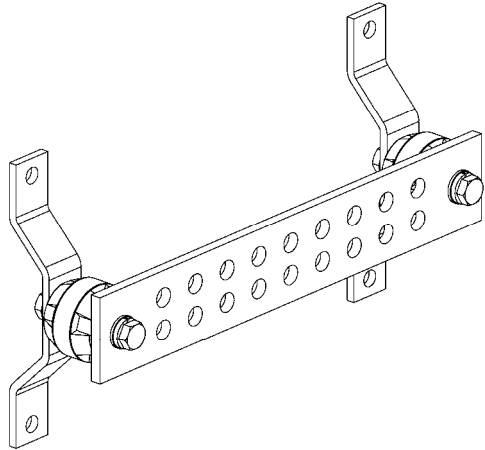
Grounding Solutions

Grounding Solutions



Grounding Solutions

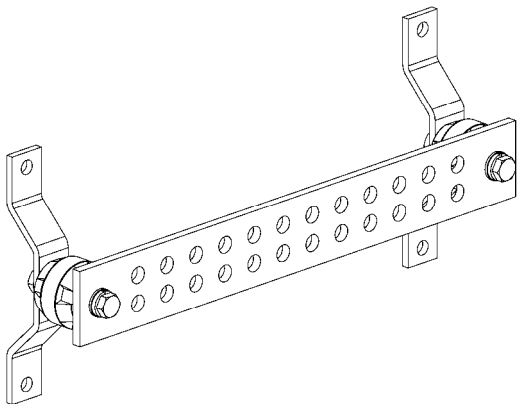
Buss Bar Kits, 1/4" x 2" x 12"



Material	Copper buss bar,	Design:	1" hole
Included:	insulators, w all brackets and hardw are		spacing.
Order	Wall attachment	Mounts to:	Walls
Seperately:	hardw are		

Part #	Description	Weight (Lbs)
Bare Copper		
101639	1/4" x 2" x 12" Copper Buss Bar Kit, 18 hole.	2.4
101640	1/4" x 2" x 12" Copper Buss Bar, 18 hole. Bar only.	1.7
Tinned Copper		
101641	1/4" x 2" x 12" Tinned Copper Buss Bar Kit, 18 hole.	2.4
101642	1/4" x 2" x 12" Tinned Copper Buss Bar, 18 hole. Bar only.	1.7

Buss Bar Kits, 1/4" x 2" x 15"



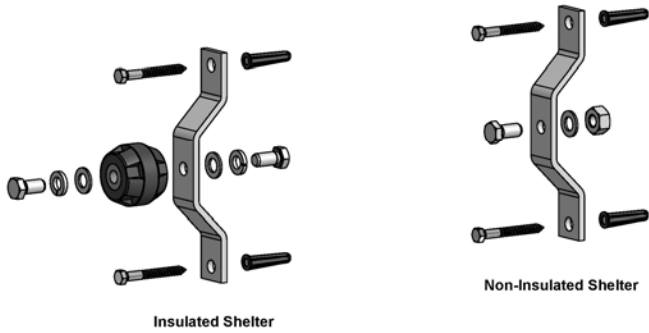
Material	Copper buss bar,	Design:	1" hole
Included:	insulators, w all brackets and hardw are		spacing.
Order	Wall attachment	Mounts to:	Walls
Seperately:	hardw are		

Part #	Description	Weight (Lbs)
Bare Copper		
101648	1/4" x 2" x 15" Copper Buss Bar Kit, 24 hole.	2.8
101649	1/4" x 2" x 15" Copper Buss Bar, 24 hole. Bar only.	2.1
Tinned Copper		
101650	1/4" x 2" x 15" Tinned Copper Buss Bar Kit, 24 hole.	2.8
101651	1/4" x 2" x 15" Tinned Copper Buss Bar, 24 hole. Bar only.	2.1

Grounding Solutions

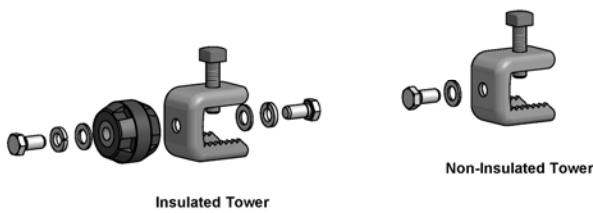


Universal Buss Bar Attachment Kit

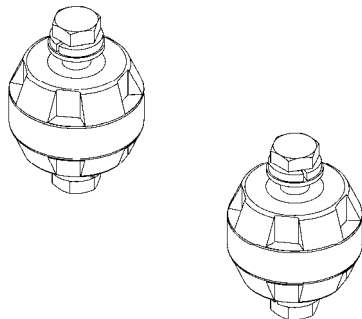


Material Included:	Insulator, angle adaptor, wall mount and attachment hardware	Design:	Universal design for shelter and tower applications
Order Separately:	Buss bar	Mounts to:	n/a

Part #	Description	Weight (Lbs)
101672	Universal Buss Bar Hardware Kit (2 required for each buss bar)	2.1



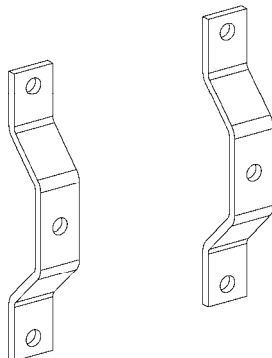
Buss Bar Insulators



Material Included:	Pair of insulators with stainless steel attachment hardware	Design:	n/a
Order Separately:	Buss bar and attachments.	Mounts to:	n/a

Part #	Description	Weight (Lbs)
104418	Buss Bar Insulator Kit, 2 pack Assembly	0.5

Buss Bar Wall Brackets



Material Included:	Pair of aluminum or stainless steel attachment brackets	Design:	n/a
Order Separately:	Buss bar and hardware.	Mounts to:	Walls

Part #	Description	Weight (Lbs)
104419	Buss Bar Mounting Bracket Kit, 2 Pack Assembly	0.3

Grounding Solutions

Grounding Solutions



Ground Clamps / Kits



P/N 101972



P/N 101973



P/N 101974

Part #	Description	Weight (Lbs)
Ground Kits		
102777	Anchor Wire grounding Kit (3 Anchors) - Galvanized Rods (For Use w / N-Series)	25.0
102779	25N/45N/55N/65N Base Grounding Kit	18.0
Ground Clamps		
101972	Ground Rod to Copper Wire Clamp	0.5
101973	Ground Wire to Guy Cable Clamp	0.3
101974	Ground Wire Clamp #2 or #1 (Includes 5/16" x 2" bolt for tower connection)	0.5
101975	Ground Wire Clamp #0 or #2/0 (Includes 5/16" x 2" bolt for tower connection)	0.6
102776	Guy Wire Ground Clamp (for use with 3/16" - 1/2" wire)	0.0

Grounding Rods



Part #	Description	Weight (Lbs)
101966	5/8" x 8' Copperclad Ground Rod	8.0
101967	5/8" x 10' Copperclad Ground Rod	10.0
101968	3/4" x 10' Copperclad Ground Rod	12.0
101969	3/4" x 10' Galvanized Ground Rod	12.0

Ground Wire



Part #	Description	Weight/1,000' (Lbs)
101959	#10 Bare Copper Ground Wire	31.0
101960	#4 Bare Copper Ground Wire	126.3
101961	Ground Wire, # 6 Stranded - Green Jacket	81.0
101962	#2 Bare Copper Ground Wire	200.9
101047	#2 Bare Solid Tinned	200.9
101963	#1/0 Bare Copper Ground Wire	319.5
101964	#2/0 Bare Copper Ground Wire	402.8
101965	#4/0 Bare Copper Ground Wire	640.5
101970	2" Copper Ground Flat Strap - 2" Wide x 0.016" thick	124.0
101971	4" Copper Ground Flat Strap - 4" Wide x 0.016" Thick.	248.1

Guy Cable & Materials



EHS Cable

Material	Class A	Design:	Left hand lay.
Included:	galvanized. ASTM A-475 Specification		7 wire up to 5/8" and 19 wire above.
Order	n/a	Mounts to:	n/a
Seperately:			



Part #	Description	Weight/1,000' (Lbs)	Breaking Strength (Lbs)
102148	3/16" EHS Guy Cable (LHL)	72.9	3,990
102474	1/4" EHS Guy Cable (LHL)	93.8	6,740
101043	5/16" EHS Guy Cable (LHL)	205.0	11,200
102965	3/8" EHS Guy Cable (LHL)	273.0	15,400
100581	7/16" EHS Guy Cable (LHL)	399.0	20,800
100647	1/2" EHS Guy Cable (LHL)	517.0	26,900
100582	9/16" EHS Guy Cable (LHL)	671.0	35,000
100583	5/8" EHS Guy Cable (LHL)	796.0	42,400
104509	11/16" EHS Guy Cable (LHL)	1000.0	42,400
101016	3/4" EHS Guy Cable (LHL)	1155.0	58,300
102430	7/8" EHS Guy Cable (LHL)	1581.0	79,700
102431	1" EHS Guy Cable (LHL)	2073.0	104,500

Guy Cable & Materials

Part #	Description	Weight/1,000' (Lbs)	Breaking Strength (Lbs)
102635	1/8" Guy Wire 6-20 Vinyl Coated, 1,000'	30.0	3,990
103761	3/16" EHS Guy Cable (LHL), 500'	364.5	3,990
102823	3/16" EHS Guy Cable (LHL), 1000'	729.0	3,990
103759	1/4" EHS Guy Cable (LHL), 500'	46.9	6,740

Guy Cable & Materials



Thimbles

Material	Hot dip galvanized thimble	Design:	Heavy duty
Included:		Mounts to:	n/a
Order Separately:			



Part #	Description	Weight (Lbs)
102766	1/4" Thimble, Standard	0.1
103167	1/4" Thimble, Heavy Duty	0.1
101039	5/16" Thimble, Heavy Duty	0.1
102756	3/8" Thimble, Heavy Duty	0.2
102772	7/16" Thimble, Heavy Duty	0.3
100593	1/2" Thimble, Heavy Duty	0.5
101048	9/16" Thimble, Heavy Duty	0.5
100594	5/8" Thimble, Heavy Duty	0.8
100595	3/4" Thimble, Heavy Duty	1.6
102435	7/8" Thimble, Heavy Duty	1.8
102436	1" Thimble, Heavy Duty	3.1

Guy Cable & Materials

Cable Clips

Material	Hot dip galv.	Design:	Malleable or forged base
Included:	Base, u-bolt and hardware		
Order Separately:		Mounts to:	EHS cable



Part #	Description	Weight (Lbs)
Malleable Base		
102767	3/16" Cable Clamp, Malleable	0.1
102774	1/4" Cable Clamp, Malleable	0.2
Forged Base		
102816	3/16" Cable Clamp, Forged	0.9
101042	5/16" Cable Clamp, Forged	0.3
104497	3/8" Cable Clamp, Forged	0.5
103137	7/16" Cable Clamp, Forged	0.8
103138	1/2" Cable Clamp, Forged	0.1
103139	9/16" Cable Clamp, Forged	1.1
103140	5/8" Cable Clamp, Forged	1.1
104498	3/4" Cable Clamp, Forged	1.4

Guy Cable & Materials



Shackles

Material	Shackle, thin	Design:	Forged
Included:	head bolt, nut and cotter pin		shackle with bolt-type anchor
Order	n/a	Mounts to:	n/a
Seperately:			



Part #	Description	Weight (Lbs)	Inside Width at Pin	Pin Dia.	Breaking Load (Lbs)
100950	1/4" Shackle	0.1	1/2"	5/16"	5,000
101040	3/8" Shackle	0.3	5/8"	7/16"	7,500
100759	1/2" Shackle	0.8	13/16"	5/8"	20,000
100596	5/8" Shackle	1.7	1-1/6"	3/4"	32,500
100597	3/4" Shackle	2.7	1-1/4"	7/8"	47,500
101017	7/8" Shackle	4.0	1-7/16"	1"	65,000
102438	1" Shackle	6.4	1-11/16"	1-1/8"	85,000

Guy Cable & Materials

Guy Cable & Materials



Turnbuckle (Jaw-Jaw)



Material	Galvanized	Design:	Jaw -Jaw
Included:	turnbuckle		design. 12" to 18" of adjustment
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)	Pin Dia.	Breaking Load (Llbs)
104506	1/2" x 12" Jaw - Jaw Turnbuckle	2.4	3/8	11,000
102968	5/8" x 12" Jaw - Jaw Turnbuckle	3.9	1/2	17,500
100590	3/4" x 12" Jaw - Jaw Turnbuckle	6.6	5/8	26,000
100591	7/8" x 12" Jaw - Jaw Turnbuckle	8.2	3/4	36,000
100592	1" x 12" Jaw - Jaw Turnbuckle	12.2	7/8	50,000
104508	1-1/4" x 12" Jaw -Jaw Turnbuckle	20.6	1 1/8	76,000
102977	1-1/2" x 18" Jaw - Jaw Turnbuckle	36.8	1 3/8	107,000

Guy Cable & Materials

Turnbuckle (Jaw-Eye)



Material	Galvanized	Design:	Jaw -Eye
Included:	turnbuckle		design. 6" - 18" of adjustment
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)	Pin Dia.	Breaking Load (Llbs)
101041	3/8" x 6" Jaw - Eye Turnbuckle	0.8	5/16	6,000
102473	1/2" x 12" Jaw - Eye Turnbuckle	2.1	3/8	11,000
102775	5/8" x 12" Jaw - Eye Turnbuckle	3.6	1/2	17,500
104499	3/4" x 18" Jaw - Eye Turnbuckle	7.0	5/8	26,000
102837	7/8" x 12" Jaw to Eye Turnbuckle	8.4	3/4	36,000
104500	7/8" x 18" Jaw - Eye Turnbuckle	9.8	3/4	36,000
104501	1" x 18" Jaw - Eye Turnbuckle	13.3	1 1/8	50,000
101018	1-1/4" x 18" Jaw - Eye Turnbuckle	24.2	1 1/8	76,000

Guy Cable & Materials



Turnbuckle (Eye-Eye)



Material	Galvanized	Design:	Eye-Eye
Included:	turnbuckle		design. 6" - 12" of adjustment
Order Separately:	n/a	Mounts to:	n/a

Part #	Description	Weight (Lbs)	Pin Dia.	Breaking Load (Llbs)
102150	3/8" x 6" Eye-to-Eye Turnbuckle	0.8	5/16	6,000
102817	1/2" x 12" Eye-Eye Turnbuckle	2.1	3/8	11,000
103770	5/8" x 12" Eye-to-Eye Turnbuckle	3.4	1/2	17,500

Guy Cable & Materials



Dead-End Grips

Material	Galvanized	Design:	n/a
Included:	preform		
Order	n/a	Mounts to:	EHS cable
Seperately:			



Part #	Description	Weight (Lbs)
102149	3/16" Dead End Grip	0.3
102755	1/4" Dead End Grip	0.5
102770	5/16" Dead End Grip	0.8
104518	3/8" Dead End Grip	1.3
100584	7/16" Dead End Grip	1.9
100648	1/2" Dead End Grip	3.2
100585	9/16" Dead End Grip	4.8
100586	5/8" Dead End Grip	6.5
104519	11/16" Dead End Grip	10.1
102974	3/4" Dead End Grip	11.0
102976	7/8" Dead End Grip.	15.0

Guy Cable & Materials

End Sleeve

Material	Hot dip	Design:	n/a
Included:	galvanized end sleeve		
Order	n/a	Mounts to:	EHS cable
Seperately:			



Part #	Description	Weight (Lbs)
102749	3/16" End Sleeve	0.1
102846	1/4" End Sleeve	0.1
102847	5/16" End Sleeve	0.1
102969	3/8" End Sleeve	0.1
100587	7/16" End Sleeve	0.1
100649	1/2" End Sleeve	0.1
100588	9/16" End Sleeve	0.1
100589	5/8" End Sleeve	0.2
106762	11/16" End Sleeve	0.1
102975	3/4" End Sleeve	0.2
102433	7/8" End Sleeve	0.2

Guy Cable & Materials



Porcelain Guy Wire Insulators



Material	Porcelain	Design:	n/a
Included:	insulator. Also know as johnny ball		
Order Separately:	n/a	Mounts to:	EHS cable

Part #	Description	Weight (Lbs)
102153	502 Porcelain Insulator (10,000#)	1.1
102154	504 Porcelain Insulator (12,000#)	1.7
102155	506 Porcelain Insulator (20,000#)	4.3

Base Insulators



Material	Base insulator.	Design:	n/a
Included:			
Order Separately:	n/a	Mounts to:	Tower Base

Part #	Description	Weight (Lbs)
102464	A4197L Base Insulator	35.0

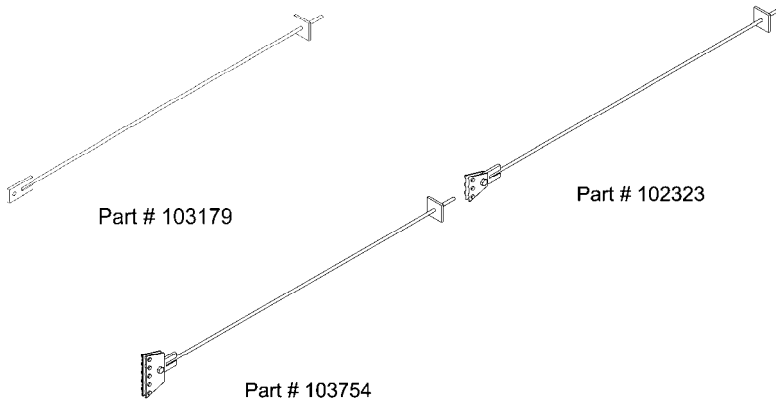
Guy Cable & Materials

Guy Cable & Materials



Guy Anchor Kits

Part #	Description	Price	Weight (Lbs)	Length (Ft)	Turnbuckle Range		# of Holes	Tensile Capacity (Kips)
					Min.	Max.		
103179	Guy Anchor Weldment, 5/8", 3/4" and 7/8" Turnbuckles. 1-Hole, 7' Long	\$50.00	12.1	7.0	5/8"	7/8"	1	8.8
102323	Guy Anchor Assembly, 3/8" and 1/2" Turnbuckles. 3-Hole, 7' Long	\$72.00	15.3	7.0	3/8"	1/2"	3	8.8
103754	Guy Anchor Assembly, 3/8" and 1/2" Turnbuckles. 5-Hole, 7' Long	\$75.00	18.2	7.0	3/8"	1/2"	5	8.8



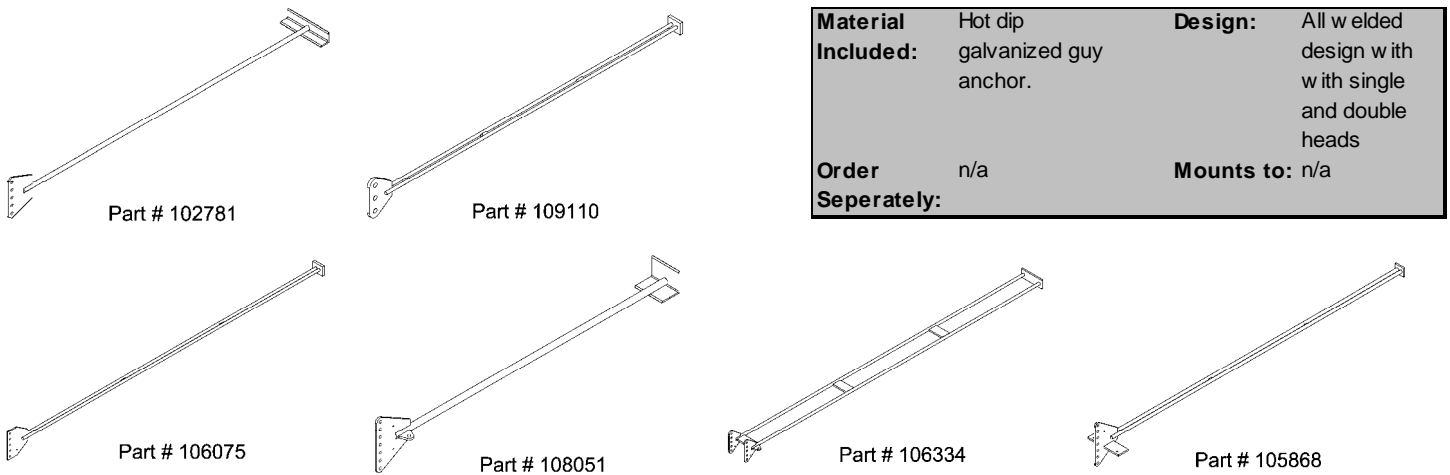
Material Included: Hot dip galvanized guy anchor, equalizer plates and hardware.
Order Separately: n/a

Design: Single rod design with bolt-on equalizer plates
Mounts to: n/a

Guy Anchors

Note: Allowable tensile strengths are based on AISC-ASD Steel Construction Manual and include a 1/3 increase in allowable stress.

Part #	Description	Weight (Lbs)	Length (Ft)	Turnbuckle Range		# of Holes	Tensile Capacity (Kips)
				Min.	Max.		
102781	Guy Anchor Weldment, 1/2", 5/8" and 3/4" Turnbuckles. 5-Hole, 7' Long	29.0	7.0	1/2"	3/4"	5	22.6
109110	Guy Anchor Weldment, 1-1/4" and 1-1/2" Turnbuckles. 3-Hole, 10' Long	85.0	10.0	1-1/4"	1-1/2"	3	45.2
106075	Guy Anchor Weldment, 5/8" and 3/4" Turnbuckles. 5-Hole, 12.5' Long	86.7	12.5	5/8"	3/4"	5	45.2
108051	Guy Anchor Weldment, 7/8" and 1" Turnbuckles. 7-Hole, 10' Long	209.0	10.0	7/8"	1"	7	159.0
106334	Guy Anchor Weldment, Double Head, 7/8", 1" and 1-1/4" Turnbuckles. 10-Hole, 20' Long	456.0	20.0	7/8"	1-1/4"	10	192.4
105868	Guy Anchor Weldment, 1-1/4" and 1-1/2" Turnbuckles. 7-Hole, 20' Long	592.0	20.0	1-1/4"	1-1/2"	7	251.3



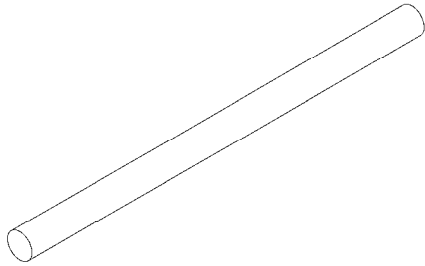
Material Included: Hot dip galvanized guy anchor.
Order Separately: n/a

Design: All welded design with single and double heads
Mounts to: n/a

Guy Cable & Materials



Anchor Accessories



Material Included:	Hot dip galvanized guy anchor.	Design:	Single rod design with welded-on equalizer plate
Order Separately:	n/a	Mounts to:	n/a

WARNING

This structure must be installed, climbed, modified, and dismantled only by a professional tower installation company. Climbing or working on this structure is dangerous and can cause serious injury or death.

- Follow all safety instructions provided with structure. Be sure you read and understand all safety information.
- Favor de seguir todas las instrucciones de seguridad que se suministran con la estructura. Favor de asegurarse que lee y comprende toda la información de seguridad.
- Suivez toutes les indications de sécurité relatives à cette structure. Lisez avec attention et comprenez tous les renseignements de sécurité.
- Alle angegebenen Sicherheitsanweisungen befolgen. Sicherstellen, daß Sie alle Sicherheitshinweise gelesen und verstanden haben.

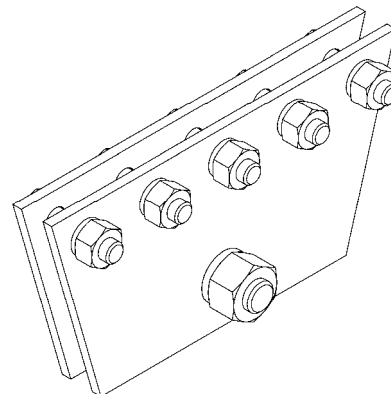
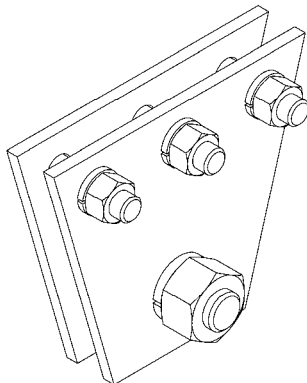
This sign must be attached in a prominent position on the structure to be easily seen by any person attempting to climb this structure. Attach during installation, and keep on the structure for the life of the structure. If this structure is disposed of, this sign and all other safety information must be provided to the new owner. If this sign should become defaced in any way, contact NELLO CORP. for immediate replacement.

NELLO CORP., P.O. Box 376, Nappanee, IN 46550, U.S.A. • Phone: 800-806-5556 • Fax: 574-773-5840

Part #	Description	Weight (Lbs)
102783	3/4" x 12" Pier Pin	1.5
102754	1/2" X 12" Base Bolt Assembly. Includes hook bolt and two nuts (A36)	0.8
102151	Turnbuckle Safety Kit, Single Anchor (3/8" to 7/8" Turnbuckles)	1.3
102465	Anti-Climb Warning Sign	0.1

Guy Cable & Materials

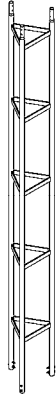
Part #	Description	Weight (Lbs)	Turnbuckle Range		# of Holes	Capacity (Kips)
			Min.	Max.		
103766	3-Hole Equalizer Plate Assembly	3.8	3/8"	1/2"	3	8.8
103767	5-Hole Equalizer Plate Assembly	6.1	3/8"	1/2"	5	8.8



N Series



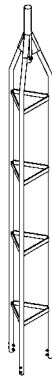
15N / 20N Series



Part #	Description	Weight (Lbs)
105858	15N Section Assembly (10' Long)	37.9



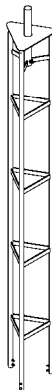
Part #	Description	Weight (Lbs)
102300	20N Section Assembly (10' Long)	29.0



Part #	Description	Weight (Lbs)
107731	15N Tapered Top Section w / ACWS (10' Long - 2" OD x 8-1/2" mast) (Special Order-Allow 60 days for delivery)	38.0



Part #	Description	Weight (Lbs)
107719	20N Tapered Top Section w / ACWS (9'-3/16" Long - 2" OD x 8-1/2" mast)	27.0



Part #	Description	Weight (Lbs)
105943	15N Flat Top Section w / ACWS (9' Long - 2" OD x 8-1/2" mast) (Special Order-Allow 60 days for delivery)	41.9



Part #	Description	Weight (Lbs)
102299	20N Flat Top Section w / ACWS (9' Long - 2" OD x 8-1/2" mast) (Special Order-Allow 60 days for delivery)	31.0

N Series Towers



25N Series - Parts List

Part #	Description	Weight (Lbs)
100957	25N Section Assembly (10' Long)	39.0
103732	25N Section Assembly (7' Long)	28.2
104555	25N Anti-Climb Section Assembly (10' Long)	73.0
107711	25N Tapered Top Section w / ACWS (9'-0" Long - 2" OD x 8-1/4" mast)	34.0
107713	25N Tapered Top Section w / ACWS (8'-2 7/8" Long No Mast) (Special Order-Allow 60 days for delivery)	40.0
107715	25N Tapered Top Section w / ACWS (9'-3 1/4" Long - 2 1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	37.0
107717	25N Tapered Top Section w / ACWS (9'-9 1/4" Long - 2 1/4" OD x 18" mast)	37.0
108017	25N Tapered Top Section w / ACWS (9'-4 1/4" Long - 1.660" OD x 12" mast w / 1-1/4" N.P.T Threads) (Special Order-Allow 60 days for delivery)	37.0
102301	25N Flat Top Section w / ACWS (9'-0 7/16" Long - 2" OD x 8-1/4" Mast) (Special Order-Allow 60 days for delivery)	37.7
102460	25N Flat Top Section w / ACWS(9'-9 15/16" Long - 2-1/4" OD x 18" Mast) (Special Order-Allow 60 days for delivery)	40.2
102687	25N Flat Top Section w / ACWS (9'-3 15/16" Long - 2-1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	39.3
102719	25N Flat Top Section w / ACWS (8'-3 7/8" Long w / Top Plate) (Special Order-Allow 60 days for delivery)	34.0
103731	25N Flat Top Section w / ACWS (8'-4 7/16" Long No Mast) (Special Order-Allow 60 days for delivery)	42.9
102322	25N Base Section w / ACWS (Short 3'-4" Long)	12.2
102457	25N Base Section w / ACWS (Short 5' Long)	18.1
102305	25N Concrete Base Plate Assembly w / ACWS	13.0
105026	25N Self Supporting Concrete Base Plate w / ACWS	52.0
102629	25N Hinged Short Base w / ACWS (3'-4" Long)	16.0
102744	25N Flat Roof Mount Assembly w / ACWS	19.3
102458	25N Hinged Base Plate Assembly w / ACWS	22.0
102928	25N Single Drive Base Assembly w / ACWS	22.0



25N Series - Parts List

Part #	Description	Weight (Lbs)
102745	25N Guy Bracket Assembly	9.0
102302	25N Adjustable House Bracket Assembly (15")	8.1
102303	25N Adjustable House Bracket Assembly (24")	10.7
102304	25N Adjustable House Bracket Assembly (36")	14.5
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	31.0
102459	25N Accessory Shelf Assembly	3.0
102463	25N Rotor Post Assembly (Special)	1.9
102622	25N Anti-Climb Panels (3) w / Hardware & ACWS	36.3
102630	25N Rotor Mount Post Assembly	2.1
102631	25N Joint Bolt Kit	0.1
102641	25N Universal Eave Bracket Assembly	6.2
102732	25N Bearing/Accessory Shelf Assembly	14.0
102733	25N Antenna Support Assembly - 1-1/2" OD 16 Ga. Tube, 3' Long	23.1
105235	25N Antenna Support Assembly - 2" Sch 40 Pipe, 3' Long	31.1
103219	25N Beacon Plate Assembly w / ACWS	12.7
103730	25N Channel Torque Arm Assembly	39.4
104192	25N Bearing Plate Assembly w / ACWS	11.0
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe (Angle)	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe (Angle)	67.0
104581	25N Single Arm Mount Assembly	10.1
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7
106264	25N Work Platform - Angle Style (Weldment)	15.0
106750	25N Peak Roof Mount Assembly	19.0
106774	25N Bearing Plate Adapter Assembly	6.0
103908	Tower Bushing (1-1/4" ID x 2" OD)	0.2

N Series Towers

N Series



25N Series



Part #	Description	Weight (Lbs)
100957	25N Section Assembly (10' Long)	39.0
103732	25N Section Assembly (7' Long)	28.2



Part #	Description	Weight (Lbs)
104555	25N Anti-Climb Section Assembly (10' Long)	73.0



Part #	Description	Weight (Lbs)
107711	25N Tapered Top Section w/ ACWS (9'-0" Long - 2" OD x 8-1/4" mast)	34.0



Part #	Description	Weight (Lbs)
107713	25N Tapered Top Section w/ ACWS (8'-2 7/8" Long No Mast) (Special Order-Allow 60 days for delivery)	40.0



Part #	Description	Weight (Lbs)
107715	25N Tapered Top Section w/ ACWS (9'-3 1/4" Long - 2 1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	37.0



Part #	Description	Weight (Lbs)
107717	25N Tapered Top Section w/ ACWS (9'-9 1/4" Long - 2 1/4" OD x 18" mast)	37.0

N Series Towers

N Series



25N Series



Part #	Description	Weight (Lbs)
108017	25N Tapered Top Section w / ACWS (9'-4 1/4" Long - 1.660" OD x 12" mast w / 1-1/4" N.P.T Threads) (Special Order-Allow 60 days for delivery)	37.0



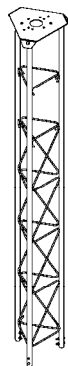
Part #	Description	Weight (Lbs)
102301	25N Flat Top Section w / ACWS (9'-0 7/16" Long - 2" OD x 8-1/4" Mast) (Special Order-Allow 60 days for delivery)	37.7



Part #	Description	Weight (Lbs)
102460	25N Flat Top Section w / ACWS(9'-9 15/16" Long - 2-1/4" OD x 18" Mast) (Special Order-Allow 60 days for delivery)	40.2



Part #	Description	Weight (Lbs)
102687	25N Flat Top Section w / ACWS (9'-3 15/16" Long - 2-1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	39.3



Part #	Description	Weight (Lbs)
102719	25N Flat Top Section w / ACWS (8'-3 7/8" Long w / Top Plate) (Special Order-Allow 60 days for delivery)	34.0



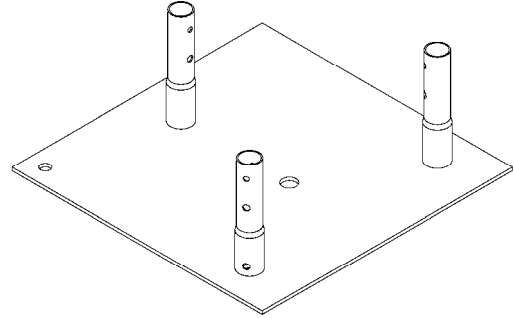
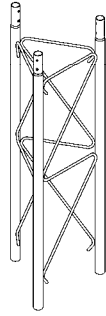
Part #	Description	Weight (Lbs)
103731	25N Flat Top Section w / ACWS (8'-4 7/16" Long No Mast) (Special Order-Allow 60 days for delivery)	42.9

N Series Towers

N Series

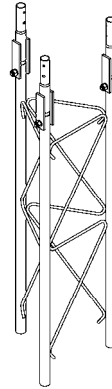
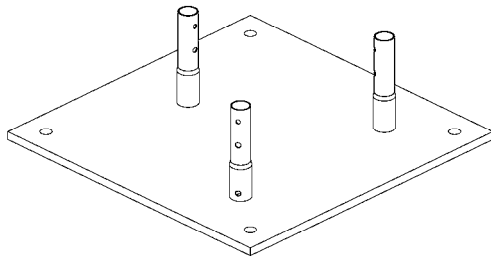


25N Series



Part #	Description	Weight (Lbs)
102322	25N Base Section w / ACWS (Short 3'-4" Long)	12.2
102457	25N Base Section w / ACWS (Short 5' Long)	18.1

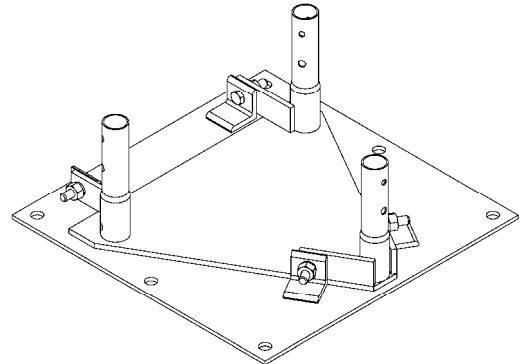
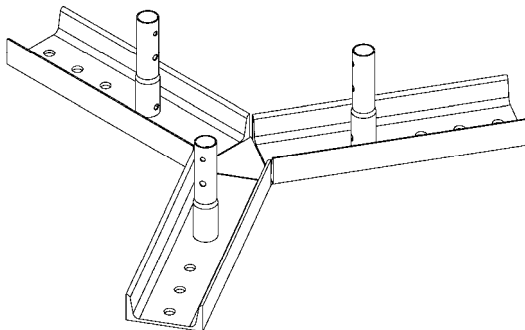
Part #	Description	Weight (Lbs)
102305	25N Concrete Base Plate Assembly w / ACWS	13.0



Part #	Description	Weight (Lbs)
105026	25N Self Supporting Concrete Base Plate w / ACWS	52.0

Part #	Description	Weight (Lbs)
102629	25N Hinged Short Base w / ACWS (3'-4" Long)	16.0

N Series Towers



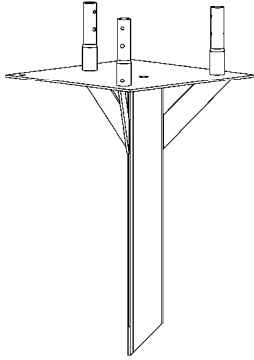
Part #	Description	Weight (Lbs)
102744	25N Flat Roof Mount Assembly w / ACWS	19.3

Part #	Description	Weight (Lbs)
102458	25N Hinged Base Plate Assembly w / ACWS	22.0

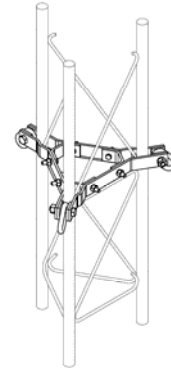
N Series



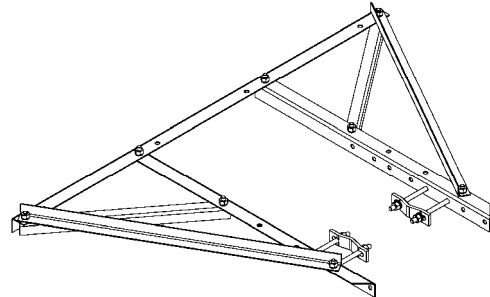
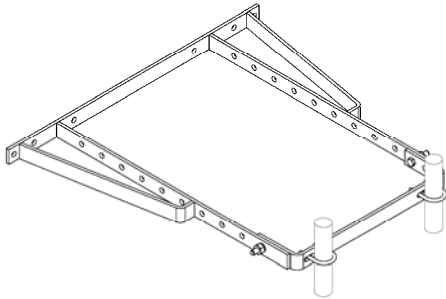
25N Series



Part #	Description	Weight (Lbs)
102928	25N Single Drive Base Assembly w/ ACWS	22.0

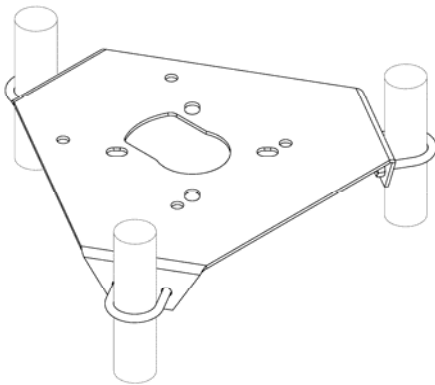


Part #	Description	Weight (Lbs)
102745	25N Guy Bracket Assembly	9.0



Part #	Description	Weight (Lbs)
102302	25N Adjustable House Bracket Assembly (15")	8.1
102303	25N Adjustable House Bracket Assembly (24")	10.7
102304	25N Adjustable House Bracket Assembly (36")	14.5

Part #	Description	Weight (Lbs)
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	31.0



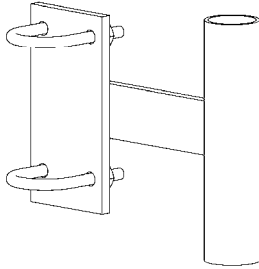
Part #	Description	Weight (Lbs)
102459	25N Accessory Shelf Assembly	3.0

N Series Towers

N Series



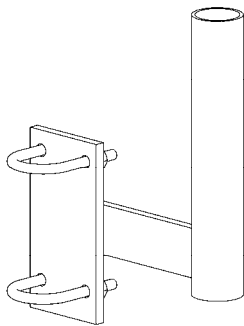
25N Series



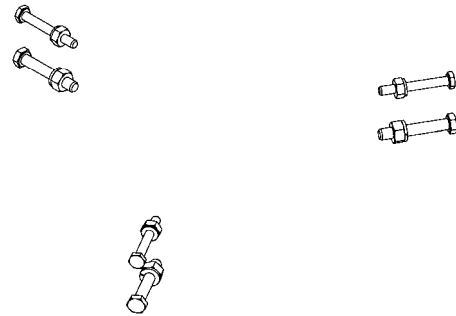
Part #	Description	Weight (Lbs)
102463	25N Rotor Post Assembly (Special)	1.9



Part #	Description	Weight (Lbs)
102622	25N Anti-Climb Panels (3) w/ Hardware & ACWS	36.3

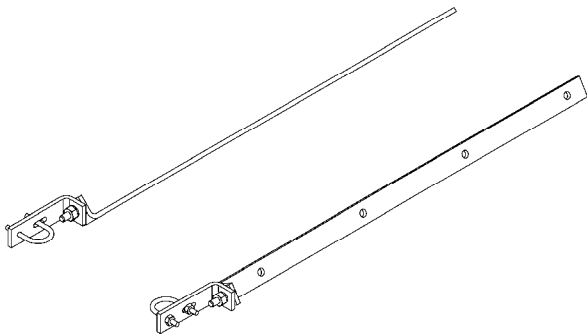


Part #	Description	Weight (Lbs)
102630	25N Rotor Mount Post Assembly	2.1

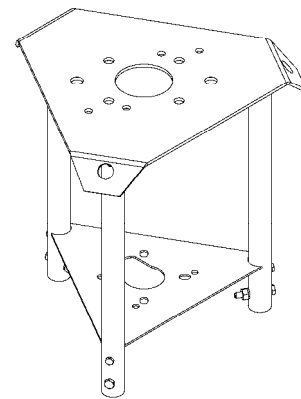


Part #	Description	Weight (Lbs)
102631	25N Joint Bolt Kit	0.1

N Series Towers



Part #	Description	Weight (Lbs)
102641	25N Universal Eave Bracket Assembly	6.2

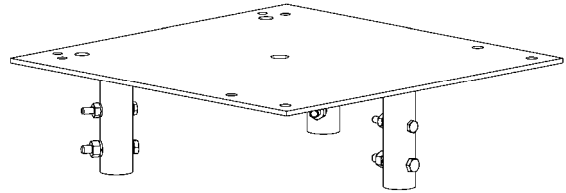
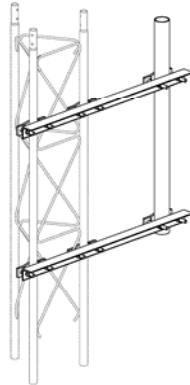


Part #	Description	Weight (Lbs)
102732	25N Bearing/Accessory Shelf Assembly	14.0

N Series

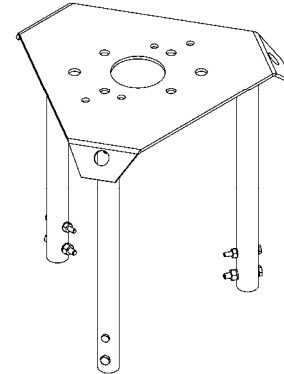
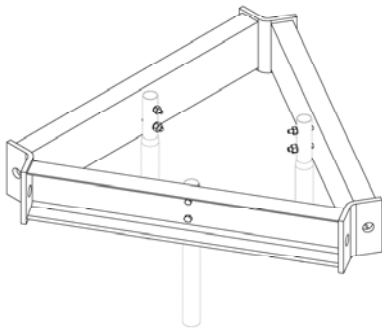


25N Series



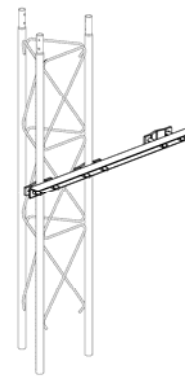
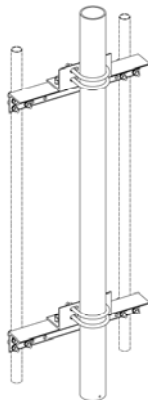
Part #	Description	Weight (Lbs)
102733	25N Antenna Support Assembly - 1-1/2" OD 16 Ga. Tube, 3' Long	23.1
105235	25N Antenna Support Assembly - 2" Sch 40 Pipe, 3' Long	31.1

Part #	Description	Weight (Lbs)
103219	25N Beacon Plate Assembly w/ ACWS	12.7



Part #	Description	Weight (Lbs)
103730	25N Channel Torque Arm Assembly	39.4

Part #	Description	Weight (Lbs)
104192	25N Bearing Plate Assembly w/ ACWS	11.0



Part #	Description	Weight (Lbs)
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe	67.0

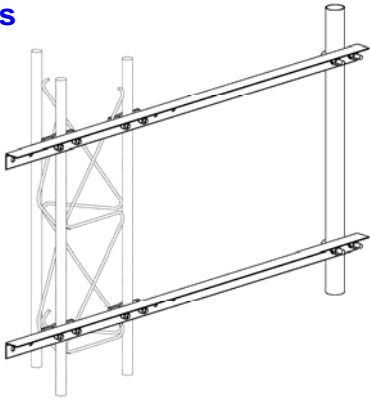
Part #	Description	Weight (Lbs)
104581	25N Single Arm Mount Assembly	10.1

N Series Towers

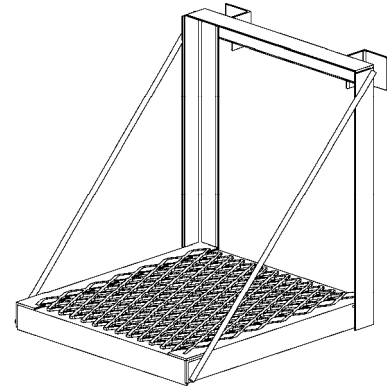
N Series



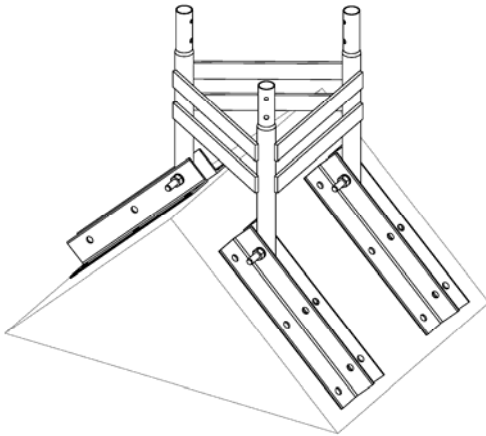
25N Series



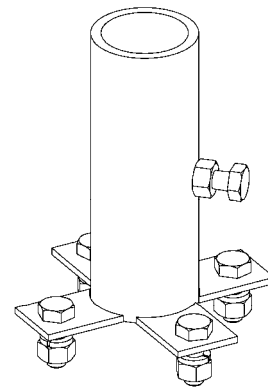
Part #	Description	Weight (Lbs)
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7



Part #	Description	Weight (Lbs)
106264	25N Work Platform - Angle Style (Weldment)	15.0



Part #	Description	Weight (Lbs)
106750	25N Peak Roof Mount Assembly	19.0



Part #	Description	Weight (Lbs)
106774	25N Bearing Plate Adapter Assembly	6.0



Part #	Description	Weight (Lbs)
103908	Tower Bushing (1-1/4" ID x 2" OD)	0.2

N Series Towers

25N Series

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Nello Catalog 25N Guy Towers - 70 MPH, No Ice



N E L L O

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.) Tower Top	Base Reactions		Anchor Reactions	
			Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Shear (lbs) Outer Anchor
40	104292	22.1	1,600	100	800	700
50	104293	21.0	2,200	100	1,000	1,100
60	104294	20.2	2,200	100	1,000	1,200
70	104295	19.4	2,400	100	1,100	1,200
80	104296	18.8	3,000	100	1,400	1,700
90	104297	18.4	3,200	100	1,400	1,800
100	104298	18.0	3,300	100	1,500	1,900
110	104299	17.6	3,400	100	1,600	2,000
120	104300	17.3	4,100	100	1,900	2,500
130	104301	16.9	4,300	100	2,000	2,600
140	104302	16.7	4,500	100	2,000	2,700
150	104303	16.4	5,300	100	2,400	3,200
160	104304	16.2	5,500	100	2,500	3,400
170	104305	16.0	5,700	100	2,600	3,500
180	104306	15.7	5,900	100	2,700	3,600
190	104307	15.6	6,100	100	2,800	3,700

Notes:

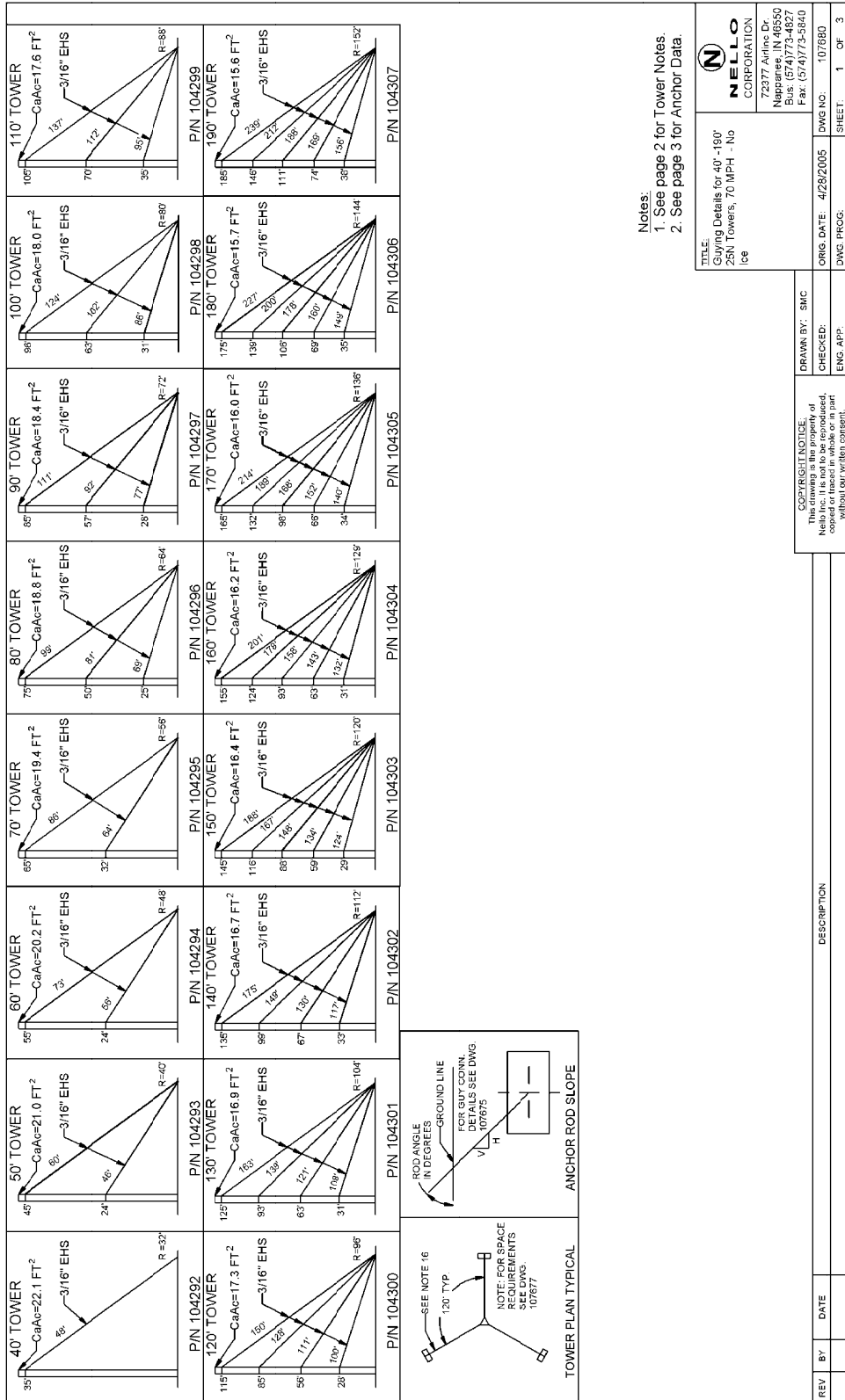
1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 5/8" transmission line to the top, per tower face for a total of three.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
12. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
13. Tower designs are based on level ground.
14. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

DRAWN	ORIG DATE	TITLE	NELLO CORPORATION 72377 Alhite Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840
RCH	12/20/2004	25N Guy Catalog Tower - 70 MPH	
CHECKED			
RCH	12/21/2004		
WFG			
APPROVED	10/25/2005		
DDA			
WEGH			
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			REV 1
			PRJNO 543
			SHEET 1 OF 1

N Series



25N Series



Notes:
1. See page 2 for Tower Notes.
2. See page 3 for Anchor Data.


	<p>NELLO CORPORATION 72377 Arline Dr Nappanee, IN 46550 Bus: (574)773-4827 F. ax: (574)773-5840</p>		<p>DWG NO: 107680 SHEET 1 OF 3</p>
<p>TITLE: Guying Details for 40' - 190' 25N Towers, 70 MPH - No Ice</p>		<p>ORIG. DATE: 4/28/2005 DWG. PROG.:</p>	
<p>DRAWN BY: SMC CHECKED: ENG. APP:</p>		<p>GO/FOR/RIGHT/NOTICE: This drawing is the property of NELLO CORPORATION. It is to be copied or traced in whole or in part without our written consent.</p>	
REV	BY	DATE	DESCRIPTION

N Series
Towers

25N Series

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 70 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 5/8" transmission line to the top, per tower face, for a total of three.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds are allowed.
10. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5.
11. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
12. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
13. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
14. Exposed structural steel is hot-dip galvanized per ASTM A123.
15. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
16. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
17. Tower designs are based on level ground.
18. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
19. Add 6% to guy chord lengths for final cut lengths.
20. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36.

REV	BY	DATE	DESCRIPTION
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DRAWN BY: SMC			DWG. NO.: 107680 SHEET: 2 OF 3
CHECKED:			
ENG. APP.			
TITLE: Guying Details for 40'-190' 25N Towers, 70 MPH - No Ice			DWG. DATE: 4/29/2005 DWG. PROG.
			
72377 Ashby Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840			

N Series



25N Series

Tower Height	Base Pier		Inner Anchor Data				Anchor				Reactions (lb)		Ref.
	Base Number	Compression (lb)	Block Number	P/N	Angle (deg)	H (in)	V (in)	Shear	Uplift				
40'	CB1	1600	4a	103179	47.4	51.8	17.3	690	750				
50'	CB1	2170	4a	102323	41.8	56.5	11.4	1120	1000				
60'	CB1	2240	4a	102323	40.6	57.3	10.2	1200	1030				
70'	CB1	2400	4a	102323	41.6	56.6	11.3	1250	1110				
80'	CB1	3040	4a	102323	38.9	56.6	8.2	1700	1370				
90'	CB1	3160	4a	102323	38.8	56.6	8.1	1780	1430				
100'	CB1	3290	4a	102323	38.9	56.5	8.3	1870	1510				
110'	CB1	3440	4a	102323	39.0	58.5	8.4	1960	1590				
120'	CB1	4130	4a	103754	37.0	59.8	6.0	2470	1860				
130'	CB1	4320	4a	103754	37.3	59.6	6.4	2570	1960				
140'	CB1	4470	4a	103754	37.3	59.6	6.1	2680	2040				
150'	CB2	5340	4a	103754	36.4	60.2	5.3	3220	2370				
160'	CB2	5500	4a	103754	36.1	60.3	5.0	3360	2450				
170'	CB2	5700	4a	103754	36.3	60.2	5.3	3480	2560				
180'	CB2	5900	4a	103754	36.3	60.2	5.2	3610	2650				
190'	CB2	6100	4a	103754	36.4	60.2	5.3	3750	2760				

Guy Cable Diameter	Guy Cable Initial Tension (lb)						
	Ambient Temperature						
3/16	0° F	20° F	40° F	60° F	80° F	100° F	120° F
1/4	590	520	460	400	340	280	220
5/16	980	870	770	670	560	460	360
	1650	1470	1300	1120	950	780	610

REV	BY	DATE	DESCRIPTION

		TITLE: Guying Details for 40' -190' 25N Towers, 70 MPH - No Ice	
72377 Ashby Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840		DWG NO.: 107680	SHEET: 3 OF 3
DRAWN BY: SMC		ORIG DATE: 4/28/2005	DWG. PROG.
CHECKED:		ENG. APP.	

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N Series Towers

N Series



25N Series

N Series Towers



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Nello Catalog 25N Guy Towers - 90 MPH, No Ice

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)	Base Reactions		Anchor Reactions		Uplift (lbs) Outer Anchor	Shear (lbs) Outer Anchor
			Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Shear (lbs) Inner Anchor		
40	104308	13.4	1900	200		900	800	
50	104309	12.6	2400	100		1200	1300	
60	104310	12.2	2500	100		1300	1400	
70	104311	11.8	2700	100		1400	1600	
80	104312	11.4	3500	100		1700	2100	
90	104313	11.2	3700	100		1800	2300	
100	104314	10.8	3900	100		1900	2400	
110	104315	10.6	4200	100		2100	2600	
120	104316	10.4	4900	100		2400	3200	
130	104317	10.2	5200	100		2600	3400	
140	104318	10	5400	100		2600	3600	
150	104072	10	6500	100		3200	4300	
160	104319	9.8	6600	100		3200	4500	
170	104320	9.6	7800	100	800	2800	3500	
180	104321	9.6	9000	100	1000	3500	3900	
190	104322	9.4	9400	100	1100	3600	4100	

Notes:

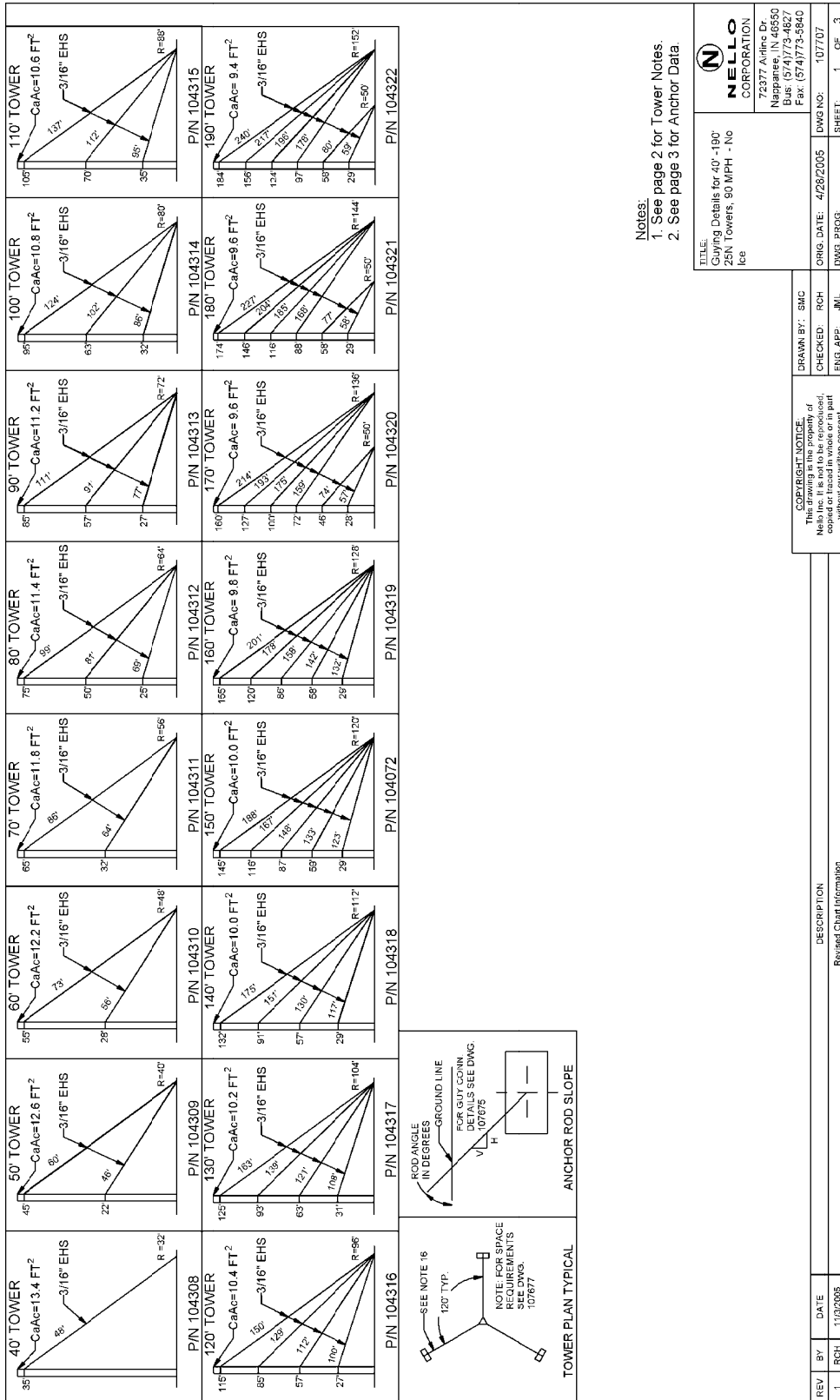
- Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
- The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
- Antennas and mounts shall be symmetrically placed about the center of the tower.
- Design allows for one 5/8" transmission line to the top per tower face for a total of three.
- Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
- Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
- Do not install or dismantle towers within falling distance of electrical and telephone lines.
- Installation shall conform to local, state, and federal requirements for construction marking and lighting.
- Field connections shall be bolted. No field welds shall be allowed.
- Exposed structural steel is hot-dip galvanized per ASTM A123.
- Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
- Anchor radius is from the tower base to the intersection of anchor rod with the ground.
- Tower designs are based on level ground.
- Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

DRAWN	ORIG DATE	TITLE	NELLO CORPORATION
RCH	12/20/2004	25N Guy Catalog Tower -	
CHECKED		80 MPH	
RCH	1/22/2004		
MG			
APPROVED	1/25/2005		
DCA			
WEIGHT			
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			REV 1
			PRJ NO 543
			SHEET 1 OF 1

N Series



25N Series



N Series Towers

N Series



25N Series

N Series Towers

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 90 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
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11. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
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17. Tower designs are based on level ground.
18. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
19. Add 6% to guy chord lengths for final cut lengths.
20. Material specifications: Tube Legs - ASTM A513 Grade 50; Solid Rod Bracing - ASTM A36.

REV	BY	DATE	DESCRIPTION	DRAMA BY	SMC
1	RCH	11/20/05	Revised Chart Information	CHECKED	RCH
				ENG APP:	JML
				DWG NO:	107707
				SHEET:	2 OF 3
TITLE:			Guying Details for 40' - 190' 25N Towers, 90 MPH - No Ice		
			 NELLO CORPORATION 72377 Avilce Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840		

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N Series



25N Series

Tower Height	Base Pier Ref. Drawing 107517				Inner Anchor Data Ref. Drawing 107249 and 107250						Outer Anchor Data Ref. Drawing 107249 and 107250						
	Base Number	Compression (lb)	Shear (lb)	Block Number	Anchor			Reactions (lb)			Anchor			Reactions (lb)			
					P/N	Angle (deg)	H (in)	V (in)	Shear	Uplift	P/N	Angle (deg)	H (in)	V (in)	Shear	Uplift	
40'	CB1	1870	170	4a	103179	47.3	51.9	17.2	830	900							
50'	CB1	2370	80	4a	102323	40.6	57.3	10.2	1340	1150							
60'	CB1	2540	110	4a	102323	41.2	56.9	10.8	1440	1260							
70'	CB1	2740	120	4a	102323	41.1	57.0	10.7	1560	1360							
80'	CB1	3460	110	4a	102323	38.5	58.8	7.8	2110	1680							
90'	CB1	3680	120	4a	102323	38.5	58.8	7.8	2260	1800							
100'	CB1	3920	140	4a	102323	38.7	58.7	8.0	2410	1930							
110'	CB1	4160	150	4a	102323	38.5	58.8	7.8	2580	2050							
120'	CB2	4930	120	4a	103754	36.9	59.8	6.0	3220	2420							
130'	CB2	5210	130	4a	103754	37.1	59.7	6.2	3410	2580							
140'	CB2	5370	130	4a	103754	35.9	60.5	4.7	3610	2610							
150'	CB2	6500	120	4a	102781	36.2	60.2	5.2	4310	3160							
160'	CB2	6630	120	4a	102781	35.7	60.6	4.5	4530	3250							
170'	CB2	7830	110	4a	102323	35.8	60.5	4.6	1110	800	4a	102781	39.1	58.4	8.5	3490	2840
180'	CB2	9010	100	4a	102323	40.2	57.7	9.7	1220	1030	4a	102781	41.6	56.6	11.3	3910	3470
190'	CB2	9350	90	4a	102323	40.7	57.3	10.2	1280	1100	4a	102781	41.7	56.6	11.3	4080	3630

Guy Cable Diameter	Guy Cable Initial Tension (lb)						
	Ambient Temperature						
	0° F	20° F	40° F	60° F	80° F	100° F	120° F
3/16	580	520	460	400	340	280	220
1/4	960	870	770	670	560	460	360
5/16	1650	1470	1300	1120	950	780	610

REV	BY	DATE	DESCRIPTION	DRAMA BY: SMC	DWG NO.	107707
1	RC-H	11/2/2005	Revised Chart Information	CHECKED: RCH	4/28/2005	3
				ENG APP: JML	DWG PROG:	OF 3
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				<p>TITLE: Guying Details for 40'-190' 25N Towers, 90 MPH - No Ice</p> <p>NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Plus: (574) 773-5847 Fax: (574) 773-5849</p>		



25N Series

N Series
Towers



N E L L O

Nello Catalog 25N Guy Towers - 110 MPH, No Ice

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1301 Stahly Dr.
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Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)		Base Reactions		Anchor Reactions			
		Tower Top		Compression (lbs)	Shear (lbs)	Uplift (lbs)		Shear (lbs)	
						Inner Anchor	Outer Anchor	Inner Anchor	Outer Anchor
40	104323	11.2	400	2,500	100	1,200	1,000	1,200	1,000
50	104324	10.0	100	2,900	100	1,500	1,700	1,500	1,700
60	104325	9.8	100	3,200	100	1,600	1,900	1,600	1,900
70	104326	9.6	200	3,600	200	1,800	2,100	1,800	2,100
80	104327	9.4	200	4,300	200	2,200	2,700	2,200	2,700
90	104328	9.2	200	4,600	200	2,400	3,000	2,400	3,000
100	104329	9.0	200	5,000	200	2,600	3,200	2,600	3,200

Notes:

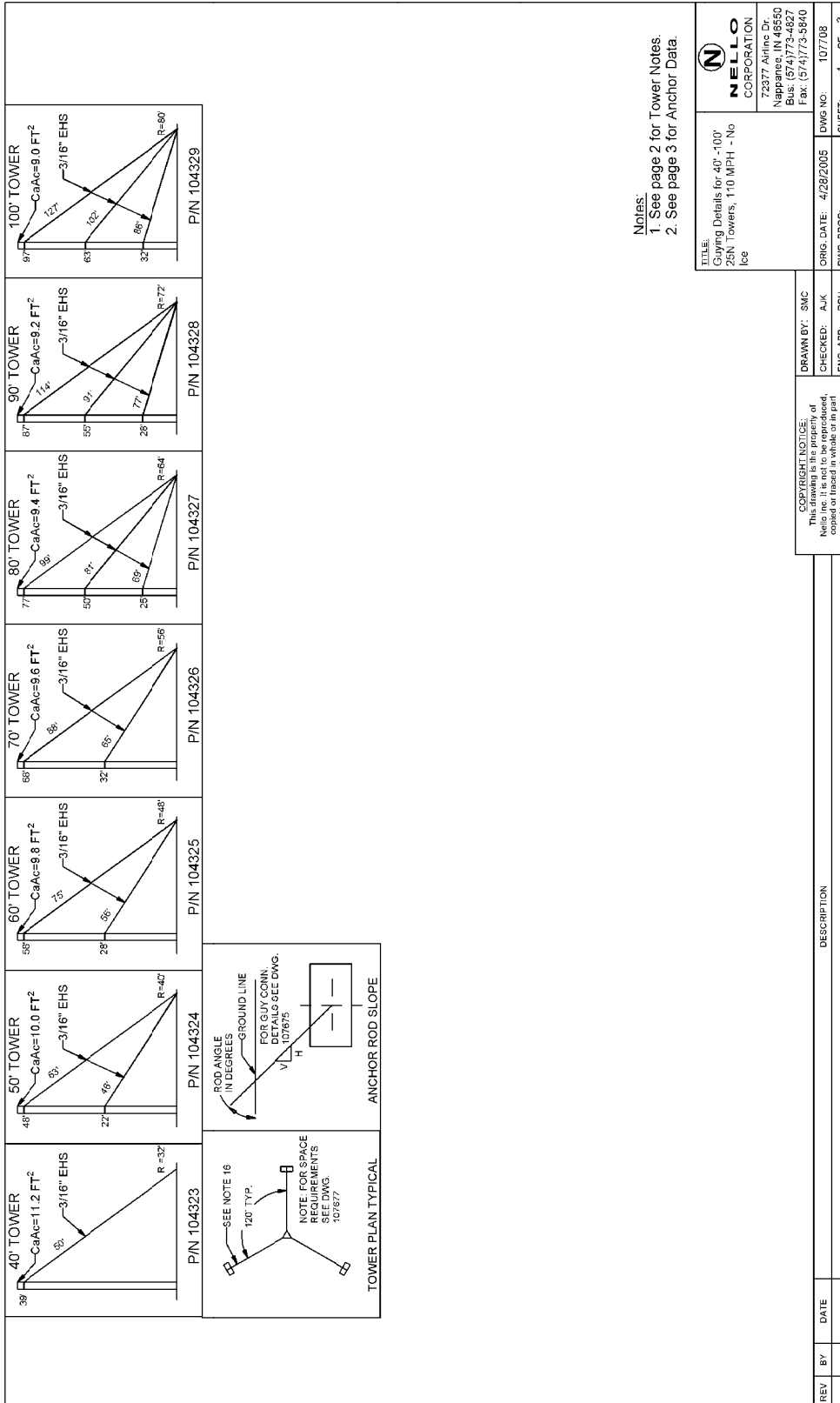
1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 5/8" transmission line to the top per tower face for a total of three.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
12. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
13. Tower designs are based on level ground.
14. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

DRAWN	ORIG DATE	TITLE	 <p>NELLO CORPORATION 79377 Kline Dr. Nappanee, IN 46550 Bus: (574)773-4927 Fax: (574)773-5840</p>
RCH	12/21/2004	25N Guy Catalog Tower - 110 MPH	
CHECKED			
RCH	1/25/2004		
MFG			
APPROVED			
DDA	1/25/2005		
WEIGHT			
COPYRIGHT NOTICE: The design is the property of Nello Inc. It is not to be reproduced, copied or traced in whole or in part without our written consent.			DWG NO 108713
			REV 1
			PRJ NO 543
			SHEET 1 OF 1

N Series



25N Series



- Notes:
- See page 2 for Tower Notes.
 - See page 3 for Anchor Data.

<p>TITLE: Guying Details for 40' - 100' 25N Towers, 110 MPH - No Ice</p>		<p>NELLO CORPORATION 72377 Avline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840</p>	
<p>ORIG. DATE: 4/28/2005</p>		<p>DWG NO. 107708</p>	
<p>DWG. PRG.:</p>		<p>SHEET: 1 OF 3</p>	
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REV	BY	DATE	DESCRIPTION


N Series
Towers

25N Series

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 110 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 5/8" transmission line to the top, per tower face, for a total of three.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds are allowed.
10. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5.
11. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
12. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
13. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
14. Exposed structural steel is hot-dip galvanized per ASTM A123.
15. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
16. Anchor radius is from the tower base to the intersection of the anchor rod with the ground.
17. Tower designs are based on level ground.
18. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
19. Add 6% to guy chord lengths for final cut lengths.
20. Material specifications: Tube Legs – ASTM A513 Grade 50, Solid Rod Bracing – ASTM A36.

REV	BY	DATE	DESCRIPTION

<p>CONSENT NOTICE This drawing is the property of Nello Inc. It is not to be reproduced, copied or passed in whole or in part without our written consent.</p>		DRAWN BY: SMC CHECKED: AJK ENG. APP: RCH
TITLE: Guying Details for 40' - 100' 25N Towers, 110 MPH - No Ice		DWG. NO.: 4/28/2005 DWG. PROC: SHEET: 2 OF 3
 NELLO CORPORATION 72377 Avilice Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840		DWG. NO.: 107703

N Series



25N Series

Tower Height	Base Pier		Inner Anchor Data				Drawing 107249 and 107250				Ref.
	Drawing 107517	Ref.	Block Number	P/N	Angle (deg)	H. (in)	V. (in)	Reactions (lb)	Reactions (lb)		
	Base Number	Shear (lb)						Uplift	Uplift		
40'	CB1	2460	4a	103179	50.3	49.1	20.2	1020	1230		
50'	CB1	2870	4a	102323	41.0	57.1	10.6	1680	1460		
60'	CB1	3270	4a	102323	41.1	57.0	10.7	1860	1620		
70'	CB1	3570	4a	102323	40.8	57.2	10.4	2060	1780		
80'	CB1	4280	4a	102323	38.7	58.7	8.1	2730	2190		
90'	CB2	4620	4a	102323	38.5	58.8	7.8	2970	2360		
100'	CB2	4890	4a	102323	38.7	58.7	8.0	3200	2560		

Guy Cable Diameter	Guy Cable Initial Tension (lb)						
	Ambient Temperature						
	0° F	20° F	40° F	60° F	80° F	100° F	120° F
3/16	590	520	460	400	340	280	220
1/4	980	870	770	670	560	460	360
5/16	1650	1470	1300	1120	950	780	610

REV	BY	DATE	DESCRIPTION

NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Plus: (574) 773-5847 Fax: (574) 773-5849		TITLE: Guying Details for 40'-100' 25N Towers, 110 MPH - No Ice	DWG NO: 107709 SHEET: 3 OF 3
DRAWN BY: SMC CHECKED: AJK ENG APP: RCH	COPYRIGHT NOTICE: This drawing is the property of Nello, Inc. It is not to be reproduced, copied, traced, or used in part without the written consent of Nello, Inc.		

N Series Towers

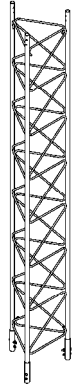
45N Series - Parts List

Part #	Description	Weight (Lbs)
102144	45N Section Assembly (10' Long)	69.1
102375	45N Anti-climb Section Assembly (10' Long)	141.4
107721	45N Tapered Top Section w / ACWS (9' Long - 2" OD x 12" mast)	54.0
107723	45N Tapered Top Section w / ACWS (9' 7/16" Long - 1.660" OD x 12" mast w / 1-1/4" N.P.T Threads)	57.0
107725	45N Tapered Top Section w / ACWS (8' 11 5/8" Long - 2-1/4" OD x 12" mast)	56.0
107727	45N Tapered Top Section w / ACWS (9'-5 1/2" Long - 2 3/8" OD x 18" mast)	56.0
107729	45N Tapered Top Section w / ACWS (10'-3 1/2" Long - 2 3/8" OD x 28" mast)	59.0
103447	45N Flat Top Section w / ACWS (9' Long - 2" OD x 12" mast) (Special Order-Allow 60 days for delivery)	65.8
102366	45N Flat Top Section w / ACWS. (Mast tube is 1-1/4" galv. pipe, threaded on top projecting 12" above apex of side rails) (Special Order-Allow 60 days for delivery)	69.0
102367	45N Flat Top Section w / ACWS (9'-6" Long - 2 3/8" OD x 18" mast) (Special Order-Allow 60 days for delivery)	76.7
102786	45N Flat Top Section w / ACWS (9' Long - 2-1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	67.6
102369	45N Flat Top Section w / ACWS (7'-8" Long w / Top Plate) (Special Order-Allow 60 days for delivery)	62.8
105135	45N Flat Top Section w / ACWS (10'-4" Long - 2 3/8" OD x 28" mast) (Special Order-Allow 60 days for delivery)	80.0
102145	45N Tapered Base Section w / ACWS (10' - For use with Pier Pins and Insulators)	98.5
102461	45N Base Section w / ACWS (5' Long - Embedment in Concrete)	30.2
106743	45N Self-Supporting Base Plate w / ACWS	151.0
102478	45N Concrete Base Plate w / ACWS	35.5
102480	45N Hinged Base Plate w / ACWS	90.0
102757	45N Flat Roof Mount w / ACWS	24.0
102764	45N Channel Torque Arm Assembly	53.5
103462	45N Channel Torque Arm Assembly (U-Bolt Style)	53.8
102477	45N Beacon Plate Assembly (w / Stubs & ACWS)	25.0
104744	45N Bearing Plate w / ACWS Assembly	24.9
102765	45N/55N Accessory Shelf Assembly	6.0
105864	45N/55N Work Platform Assembly	39.4
102147	45N Guy Bracket Assembly	20.9
102376	45N Anti-Climb Panels (3) w / Hardware & ACWS	48.0
102377	45N Joint Bolt Kit	0.1
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe (Angle)	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe (Angle)	67.0
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	31.0

N Series



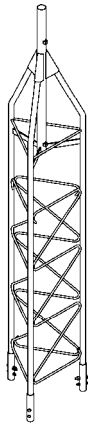
45N Series



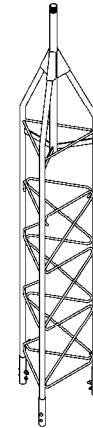
Part #	Description	Weight (Lbs)
102144	45N Section Assembly (10' Long)	69.1



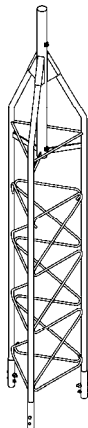
Part #	Description	Weight (Lbs)
102375	45N Anti-climb Section Assembly (10' Long)	141.4



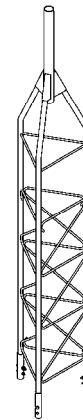
Part #	Description	Weight (Lbs)
107721	45N Tapered Top Section w / ACWS (9' Long - 2" OD x 12" mast)	54.0



Part #	Description	Weight (Lbs)
107723	45N Tapered Top Section w / ACWS (9' 7/16" Long - 1.660" OD x 12" mast w / 1-1/4" N.P.T Threads)	57.0



Part #	Description	Weight (Lbs)
107725	45N Tapered Top Section w / ACWS (8' 11 5/8" Long - 2-1/4" OD x 12" mast)	56.0



Part #	Description	Weight (Lbs)
107727	45N Tapered Top Section w / ACWS (9'-5 1/2" Long - 2 3/8" OD x 18" mast)	56.0

N Series Towers

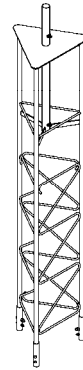
N Series



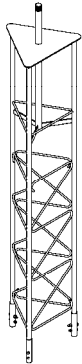
45N Series



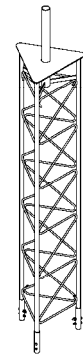
Part #	Description	Weight (Lbs)
107729	45N Tapered Top Section w/ ACWS (10'-3 1/2" Long - 2 3/8" OD x 28" mast)	59.0



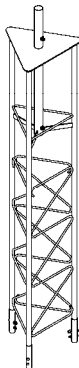
Part #	Description	Weight (Lbs)
103447	45N Flat Top Section w/ ACWS (9' Long - 2" OD x 12" mast) (Special Order-Allow 60 days for delivery)	65.8



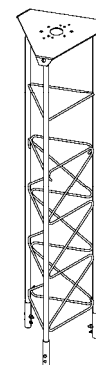
Part #	Description	Weight (Lbs)
102366	45N Flat Top Section w/ ACWS. (Mast tube is 1-1/4" galv. pipe, threaded on top projecting 12" above apex of side rails) (Special Order-Allow 60 days for delivery)	69.0



Part #	Description	Weight (Lbs)
102367	45N Flat Top Section w/ ACWS (9'-6" Long - 2 3/8" OD x 18" mast) (Special Order-Allow 60 days for delivery)	76.7



Part #	Description	Weight (Lbs)
102786	45N Flat Top Section w/ ACWS (9' Long - 2-1/4" OD x 12" mast) (Special Order-Allow 60 days for delivery)	67.6



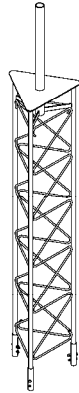
Part #	Description	Weight (Lbs)
102369	45N Flat Top Section w/ ACWS (7'-8" Long w/ Top Plate) (Special Order-Allow 60 days for delivery)	62.8

N Series Towers

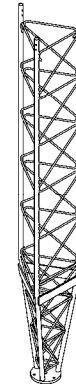
N Series



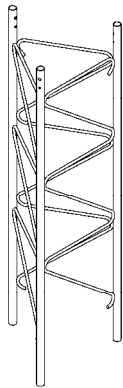
45N Series



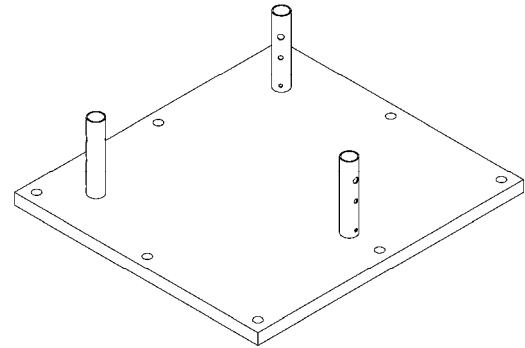
Part #	Description	Weight (Lbs)
105135	45N Flat Top Section w / ACWS (10'-4" Long - 2 3/8" OD x 28" mast) (Special Order-Allow 60 days for delivery)	80.0



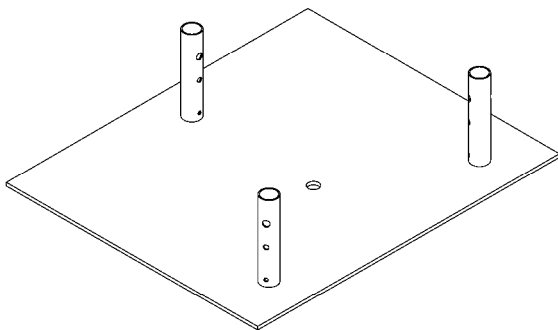
Part #	Description	Weight (Lbs)
102145	45N Tapered Base Section w / ACWS (10' - For use with Pier Pins and Insulators)	98.5



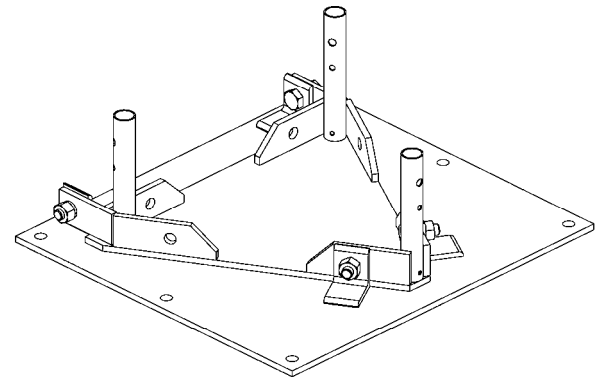
Part #	Description	Weight (Lbs)
102461	45N Base Section w / ACWS (5' Long - Embedment in Concrete)	30.2



Part #	Description	Weight (Lbs)
106743	45N Self-Supporting Base Plate w / ACWS	151.0



Part #	Description	Weight (Lbs)
102478	45N Concrete Base Plate w / ACWS	35.5



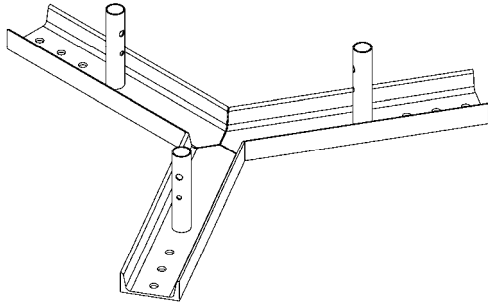
Part #	Description	Weight (Lbs)
102480	45N Hinged Base Plate w / ACWS	90.0

N Series Towers

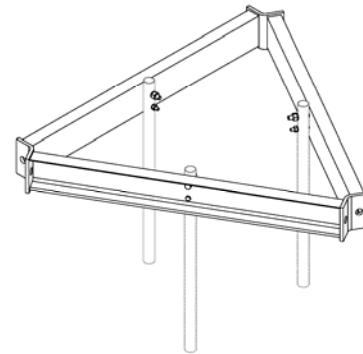
N Series



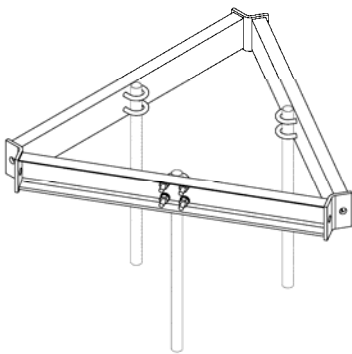
45N Series



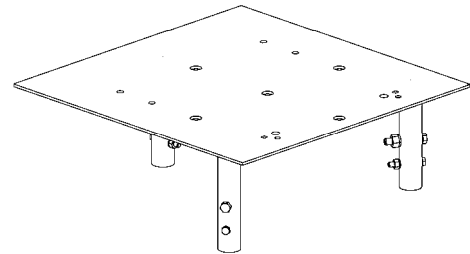
Part #	Description	Weight (Lbs)
102757	45N Flat Roof Mount w / ACWS	24.0



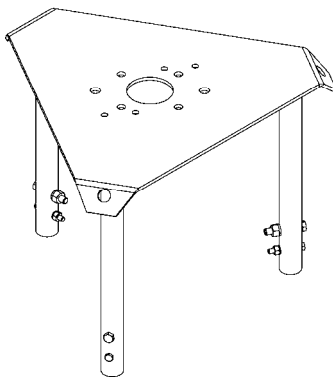
Part #	Description	Weight (Lbs)
102764	45N Channel Torque Arm Assembly	53.5



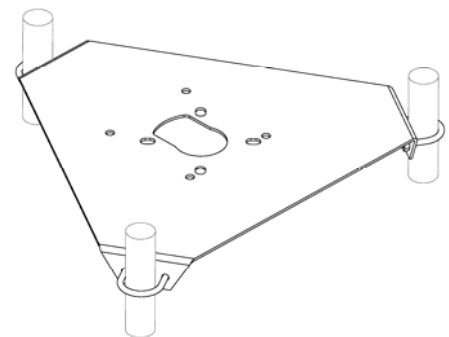
Part #	Description	Weight (Lbs)
103462	45N Channel Torque Arm Assembly (U-Bolt Style)	53.8



Part #	Description	Weight (Lbs)
102477	45N Beacon Plate Assembly (w / Stubs & ACWS)	25.0



Part #	Description	Weight (Lbs)
104744	45N Bearing Plate w / ACWS Assembly	24.9



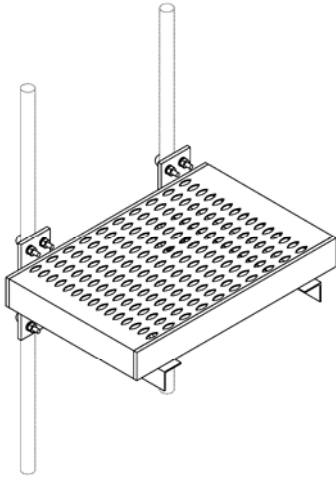
Part #	Description	Weight (Lbs)
102765	45N/55N Accessory Shelf Assembly	6.0

N Series Towers

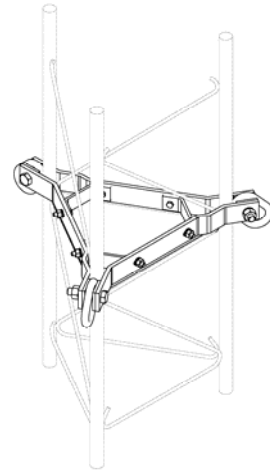
N Series



45N Series



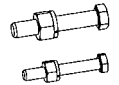
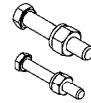
Part #	Description	Weight (Lbs)
105864	45N/55N Work Platform Assembly	39.4



Part #	Description	Weight (Lbs)
102147	45N Guy Bracket Assembly	20.9



Part #	Description	Weight (Lbs)
102376	45N Anti-Climb Panels (3) w / Hardware & ACWS	48.0



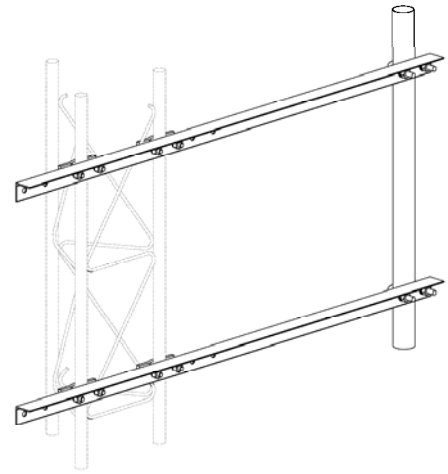
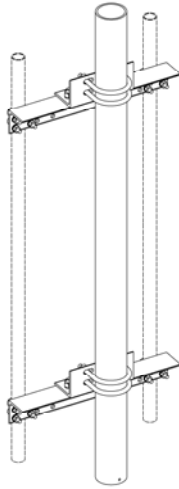
Part #	Description	Weight (Lbs)
102377	45N Joint Bolt Kit	0.1

N Series
Towers

N Series



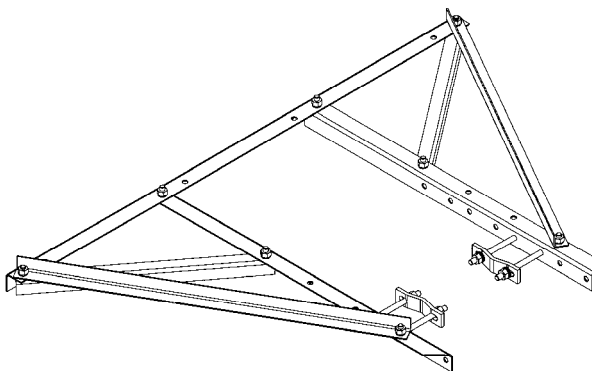
45N Series



Part #	Description	Weight (Lbs)
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe (Angle)	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe (Angle)	67.0

Part #	Description	Weight (Lbs)
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7

N Series Towers



Part #	Description	Weight (Lbs)
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	31.0

N Series



45N Series

Nello Corporation
 1301 Stahly Dr.
 Nappanee, IN 46550
 1-800-80-NELLO
 574-773-5840 FAX
 sales@nelloinc.com
 www.nelloinc.com

Nello Catalog 45N Guy Towers - 70 MPH, No Ice



N E L L O

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)	Base Reactions		Anchor Reactions	
			Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Shear (lbs) Outer Anchor
48	104230	22.6	2,400	100	1,000	1,100
50	104231	21.2	2,800	100	1,100	1,100
60	104232	20.0	2,800	100	1,200	1,300
70	104233	19.0	3,200	100	1,400	1,500
80	104234	18.2	3,600	100	1,500	1,700
90	104235	17.6	3,700	100	1,600	1,700
100	104236	17.0	4,000	100	1,700	1,900
110	104237	16.4	4,800	100	1,900	2,300
120	104238	15.8	4,900	100	2,000	2,500
130	104239	15.6	5,200	200	2,200	2,600
140	104240	15.2	5,600	200	2,400	2,900
150	104241	14.8	6,100	100	2,600	3,300
160	104242	14.4	6,600	100	2,800	3,600
170	104243	14.2	6,700	200	2,900	3,600
180	104244	14.0	7,200	200	3,100	3,900
190	104245	13.6	7,700	100	3,300	4,400
200	104246	11.0	8,300	100	3,500	4,700
210	104247	11.2	9,200	100	1,100	3,000
220	104248	10.0	9,800	100	1,400	3,300
230	104249	10.6	10,400	100	1,000	3,700
240	104250	9.6	11,000	100	1,000	3,900
250	104251	10.4	11,600	100	1,100	4,200
260	104252	9.2	11,800	100	1,300	4,500
270	104253	10.0	13,000	100	1,500	4,700
280	104254	8.6	13,100	100	1,500	4,900
290	104255	9.6	14,000	100	1,700	4,900
300	104256	8.2	14,100	100	1,700	5,000

Notes:

- Tower designs conform to ANSI/TIA/EIA-222-F. *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.*
- The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
- Antennas and mounts shall be symmetrically placed about the center of the tower.
- Design allows for one 1/2" and one 7/8" transmission line to the top per tower face for a total of six.
- Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
- Do not install or dismantle towers within falling distance of electrical and telephone lines.
- Installation shall conform to local, state, and federal requirements for construction marking and lighting.
- Field connections shall be bolted. No field welds shall be allowed.
- Exposed structural steel is hot-dip galvanized per ASTM A123.
- Tolerance on tower steel height is plus 1% or minus 1/2%.
- Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
- Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANSI/TIA/EIA-222-F).
- Tower designs, 200' and over, include 2.0 square feet of projected area for a beacon at top of tower.
- Anchor radius is from the tower base to the intersection of anchor rod with the ground.
- Tower designs are based on level ground.
- Temporary steel guy's may be required during erection or dismantling of tower must be supplied and installed by erector.

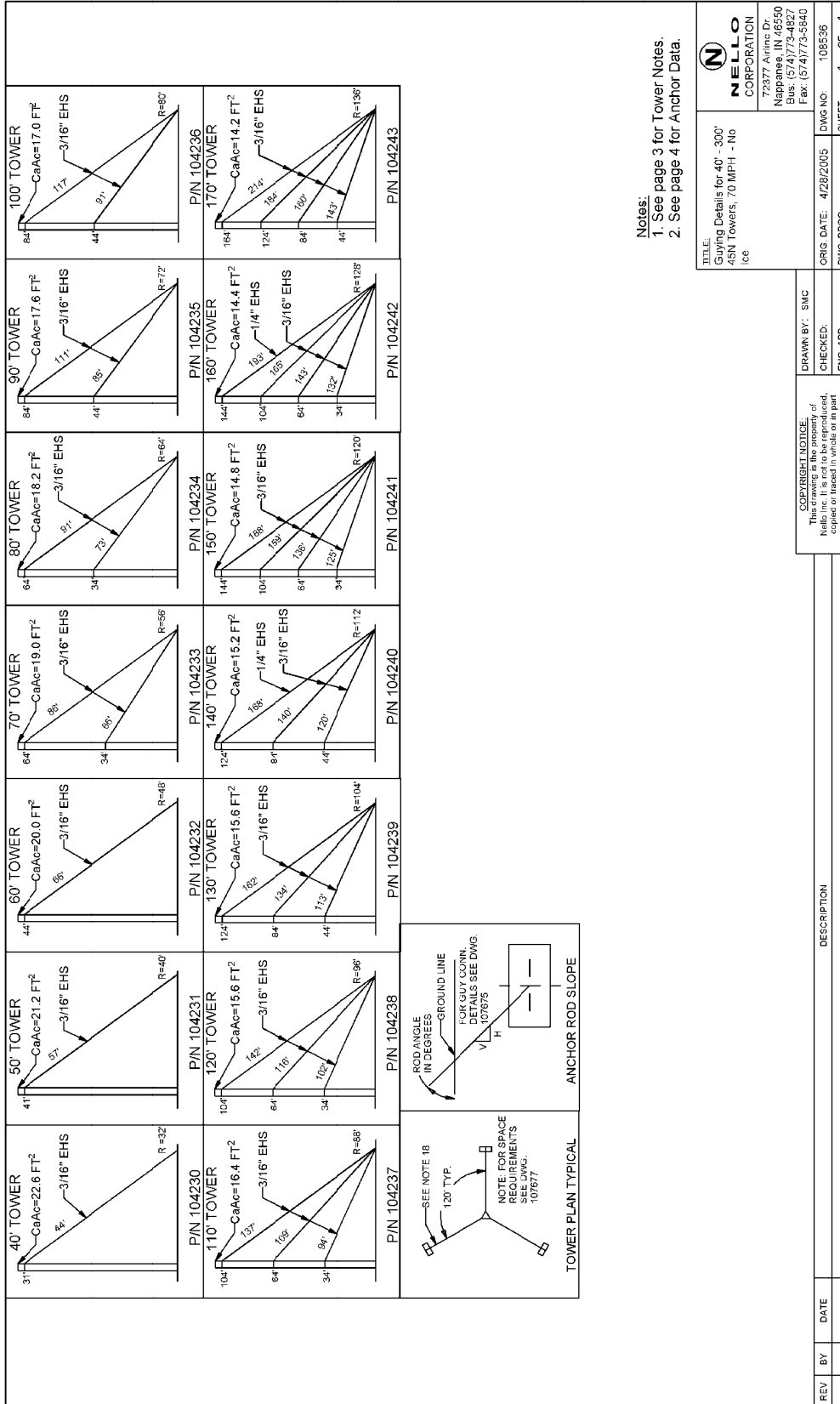
DESIGN	ORIG DATE	TITLE	NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840
RCH	12/21/2004	45N Guy Catalog Tower - 70 MPH	
CHECKED	12/21/2004		
RFC			
APPROVED	1/25/2005		
DDA			
WEIGHT			
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PRJ NO	543	DWG NO	106714
SHEET 1		OF 1	

N Series



45N Series

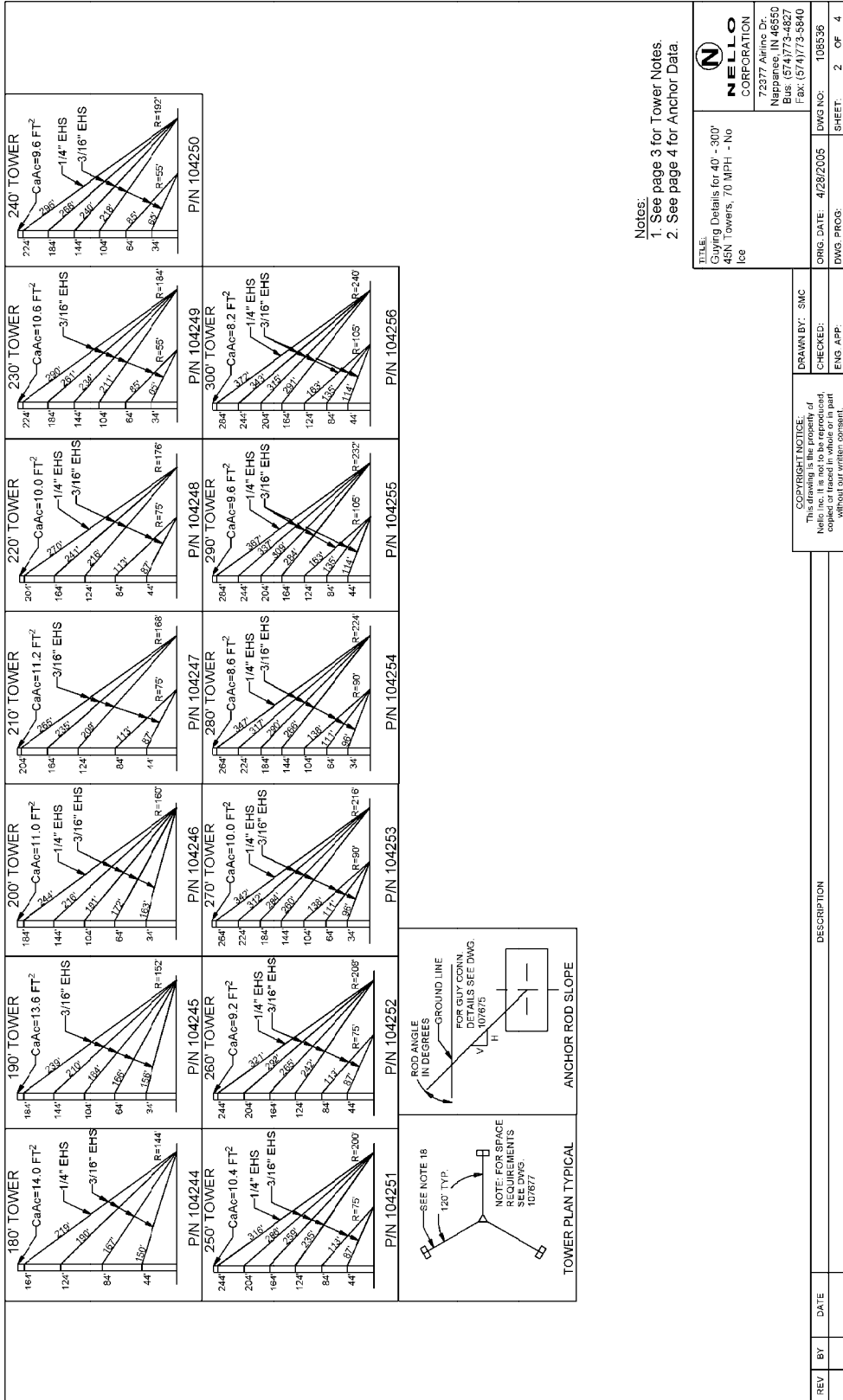
N Series
Towers



N Series



45N Series



N Series
Towers

N Series



45N Series

N Series
Towers

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 70 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet.
5. Design allows for one 1/2" diameter and one 7/8" diameter transmission line to the top, per tower face, for a total of six.
6. Tower designs, 200 feet and over, include 2.0 square feet of effective projected area for a beacon (deduct one 7/8" line for beacon).
7. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
8. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
9. Do not install or dismantle towers within falling distance of electrical and telephone lines.
10. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
11. Field connections shall be bolted. No field welds are allowed.
12. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5.
13. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
14. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
15. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
16. Exposed structural steel is hot-dip galvanized per ASTM A123.
17. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
18. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
19. Tower designs are based on level ground.
20. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
21. Add 6% to guy chord lengths for final cut lengths.
22. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36.

TITLE: Guying Details for 40' - 300' 45N Towers, 70 MPH - No Ice		NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840	
ORG. DATE: 4/28/2005 DWG. NO.: 108536		SHEET: 3 OF 4	
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REV	BY	DATE	DESCRIPTION

N Series



45N Series

Tower Height	Base Pier Ref. Drawing 107517				Inner Anchor Data Ref. Drawing 107249 and 107250								Outer Anchor Data Ref. Drawing 107249 and 107250							
	Base Number	Compression (lb)	Shear (lb)	Block Number	P/N	Anchor			Reactions (lb)			Block Number	P/N	Anchor			Reactions (lb)			
						Angle (deg)	H (in)	V (in)	Shear	Uplift	Angle (deg)			H (in)	V (in)	Shear	Uplift			
40'	CB2	2350	20	4a	103179	44.2	54.6	14.0	1070	1040										
50'	CB2	2590	70	4a	103179	45.5	53.5	15.4	1100	1120										
60'	CB2	2810	20	4a	103179	42.9	55.6	12.7	1290	1200										
70'	CB2	3210	80	4a	102323	42.6	55.8	12.4	1510	1390										
80'	CB2	3570	70	4a	102323	40.9	57.1	10.5	1720	1490										
90'	CB2	3720	130	4a	102323	42.9	55.6	12.7	1700	1580										
100'	CB2	4030	130	4a	102323	41.6	56.6	11.3	1890	1680										
110'	CB2	4640	120	4a	102323	39.6	59.0	9.1	2330	1930										
120'	CB2	4920	130	4a	102323	39.1	58.4	8.5	2470	2010										
130'	CB2	5170	160	4a	102323	40.2	57.7	9.7	2570	2170										
140'	CB2	5650	160	4a	102323	39.7	56.0	9.2	2690	2400										
150'	CB2	6120	130	4a	103754	37.9	59.2	7.1	3290	2560										
160'	CB2	6600	130	4a	103754	37.6	59.4	6.7	3640	2800										
170'	CB2	6680	160	4a	103754	38.5	58.8	7.8	3580	2850										
180'	CB2	7210	150	4a	102781	38.3	59.0	7.5	3940	3110										
190'	CB2	7670	120	4a	102781	36.7	60.0	5.7	4370	3260										
200'	CB2	8270	120	4a	102781	36.5	60.1	5.5	4750	3520										
210'	CB2	9210	130	4a	102323	39.9	57.9	9.4	1340	1120	4a	102323	44.2	54.6	14.0	3100	3010			
220'	CB2	9760	130	4a	102323	40.0	57.8	9.5	1360	1140	4a	102323	43.7	55.0	13.6	3430	3280			
230'	CB2	10350	100	4a	102323	41.5	56.7	11.2	1130	1000	4a	102781	41.7	56.6	11.4	4100	3650			
240'	CB2	10970	100	4a	102323	41.5	56.7	11.2	1130	1000	4a	102781	41.4	56.8	11.0	4470	3940			
250'	CB2	11610	120	4a	102323	40.1	57.7	9.6	1330	1120	4b	102781	42.8	55.7	12.5	4510	4170			
260'	CB2	11760	120	4a	102323	39.9	57.9	9.4	1340	1120	4b	102781	42.0	56.3	11.7	4660	4200			
270'	CB3	12980	100	4a	102323	37.0	59.8	6.1	1950	1470	4b	102781	43.2	55.3	13.1	4710	4430			
280'	CB3	13130	100	4a	102323	37.2	59.7	6.3	1950	1480	4b	102781	42.5	55.9	12.3	4850	4450			
290'	CB3	13960	120	4a	102323	38.2	59.0	7.5	2170	1710	4b	102781	43.6	55.1	13.4	4910	4670			
300'	CB3	14110	120	4a	102323	38.3	59.0	7.5	2180	1720	4b	102781	42.9	55.6	12.7	5050	4700			

Guy Cable Diameter	Guy Cable Initial Tension (lb)					
	Ambient Temperature					
3/16	0° F	20° F	40° F	60° F	80° F	120° F
1/4	590	520	460	400	340	220
5/16	980	870	770	670	560	360
	1650	1470	1300	1120	950	780
						610

REV	BY	DATE	DESCRIPTION

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TITLE: Guying Details for 40' - 300' 45N Towers, 70 MPH - No Ice		DWG NO: 108536 SHEET: 4 OF 4

N Series Towers

45N Series

N Series Towers

Nello Corporation
 1301 Stahly Dr.
 Nappanee, IN 46550
 1-800-80-NELLO
 574-773-5840 FAX
 sales@nelloinc.com
 www.nelloinc.com

Nello Catalog 45N Guy Towers - 90 MPH, No Ice

N E L L O

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)	Base Reactions		Anchor Reactions		
			Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Uplift (lbs) Shear (lbs) Outer Anchor	
40	104257	21.6	3,500	100		1,700	1,800
50	104258	20.2	3,800	100		1,800	1,800
60	104259	19.0	4,400	100		2,100	2,300
70	104260	18.2	4,700	200		2,200	2,400
80	104261	17.4	5,100	200		2,400	2,600
90	104262	16.8	5,500	200		2,600	2,800
100	104273	16.0	6,200	200		2,900	3,400
110	104263	15.4	6,600	200		3,100	3,600
120	104264	15.0	7,000	200		3,200	3,800
130	104265	14.6	7,400	200		3,400	4,100
140	104266	14.0	8,200	200		3,900	4,800
150	104267	13.6	8,700	200		4,100	5,000
160	104268	13.2	9,100	200		4,300	5,300
170	104269	12.8	10,000	200		4,700	6,100
180	104270	12.4	10,900	200		5,300	6,700
190	104271	12.0	11,500	200		5,500	7,000
200	104272	9.4	12,100	100		5,800	7,300
210	104273	9.2	14,500	100	1,400	5,700	6,200
220	104274	8.6	15,500	100	1,400	6,200	6,700
230	104275	8.4	16,200	100	1,000	1,600	7,800
240	104276	8.2	16,600	200	1,000	1,600	8,100

Notes:

1. Tower designs conform to ANS/ITIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".
2. The areas listed are effective projected areas (CaAc per ANS/ITIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 1/2" and one 7/8" transmission line to the top per tower face for a total of six.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANS/ITIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is not-dip galvanized per ASTM A123.
11. Tolerance on tower steel height is plus 1% or minus 1/2%.
12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANS/ITIA/EIA-222-F.
13. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANS/ITIA/EIA-222-F).
14. Tower designs, 200' and over, include 2.0 square feet of projected area for a beacon at top of tower.
15. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
16. Tower designs are based on level ground.
17. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

	45N Guy Catalog Tower - 90 MPH
DRAWN CHECKED DATE WFG	TITLE 45N Guy Catalog Tower - 90 MPH 12/21/2004 12/21/2004
APPROVED DDA	DWG NO H08715
WEIGHT	SHEET 1 OF 1
PRL NO 543	

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N Series



45N Series

<p>SEE NOTE 16 120° TYP.</p> <p>NOTE FOR SPACE REQUIREMENTS SEE DWG. 107677</p> <p>TOWER PLAN TYPICAL</p>		<p>ROD ANGLE IN DEGREES GROUND LINE FOR GUY DOWN DETAILS SEE DWG. 107675</p> <p>ANCHOR ROD SLOPE</p>		<p>Notes: 1. See page 3 for Tower Notes. 2. See page 4 for Anchor Data.</p>			

NELLO CORPORATION
72377 Arline Dr.
Nappanee, IN 46550
Bus: (574)773-4827
Fax: (574)773-5840

ORG. DATE: 4/28/2005
DWS NO.: 108537
DWS PROJ.:
SHEET: 1 OF 4

DESCRIPTION

REV	BY	DATE	DESCRIPTION

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ENG APP:

N Series Towers

N Series



45N Series

N Series
Towers

<p>Notes:</p> <ol style="list-style-type: none"> See page 3 for Tower Notes. See page 4 for Anchor Data. 																			
<table border="1"> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2"> TITLE: Guying Details for 40' - 240' 45N Towers, 90 MPH - No Ice </td> </tr> <tr> <td colspan="2"> ORG. DATE: 4/28/2005 DWG. NO. 108537 DWG. PROC. SHEET: 2 OF 4 </td> </tr> <tr> <td> DRAWN BY: SMC </td> <td> CHECKED: </td> </tr> <tr> <td> ENG. APP: </td> <td> COPYRIGHT NOTICE: This drawing is the property of Nello Inc. It is not to be reproduced, copied or placed in whole or in part without our written consent. </td> </tr> </table>												TITLE: Guying Details for 40' - 240' 45N Towers, 90 MPH - No Ice		ORG. DATE: 4/28/2005 DWG. NO. 108537 DWG. PROC. SHEET: 2 OF 4		DRAWN BY: SMC	CHECKED:	ENG. APP:	COPYRIGHT NOTICE: This drawing is the property of Nello Inc. It is not to be reproduced, copied or placed in whole or in part without our written consent.
TITLE: Guying Details for 40' - 240' 45N Towers, 90 MPH - No Ice																			
ORG. DATE: 4/28/2005 DWG. NO. 108537 DWG. PROC. SHEET: 2 OF 4																			
DRAWN BY: SMC	CHECKED:																		
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<table border="1"> <thead> <tr> <th>REV</th> <th>BY</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>										REV	BY	DATE	DESCRIPTION						
REV	BY	DATE	DESCRIPTION																



45N Series

REV	BY	DATE	DESCRIPTION
<p>Tower Notes</p> <ol style="list-style-type: none"> 1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 90 mph fastest-mile basic wind speed with no ice. 2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2. 3. Antennas and mounts shall be symmetrically placed about the center of the tower. 4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet. 5. Design allows for one 1/2" diameter and one 7/8" diameter transmission line to the top, per tower face, for a total of six. 6. Tower designs, 200 feet and over, include 2.0 square feet of effective projected area for a beacon (deduct one 7/8" line for beacon). 7. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown. 8. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes. 9. Do not install or dismantle towers within falling distance of electrical and telephone lines. 10. Installation shall conform to local, state, and federal requirements for construction marking and lighting. 11. Field connections shall be bolted. No field welds are allowed. 12. Structural bolts 5/8" and larger shall conform to ASTM A325 and bolts 1/2" and smaller conform to SAE J429 Grade 5. 13. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts." 14. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F. 15. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting. 16. Exposed structural steel is hot-dip galvanized per ASTM A123. 17. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F. 18. Anchor radius is from the tower base to the intersection of anchor rod with the ground. 19. Tower designs are based on level ground. 20. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector. 21. Add 6% to guy chord lengths for final cut lengths. 22. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36. 			
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DRAWN BY: SMC		DRAWN BY: SMC	
CHECKED:		CHECKED:	
ENG. APP:		ENG. APP:	
<p>TITLE: Guying Details for 40' - 240' 45N Towers, 90 MPH - No Ice</p>			
<p>ORIG. DATE: 4/28/2005 DWG NO: 108537</p>			
<p>DWG. PROJ: SHEET: 3 OF 4</p>			
<p>NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840</p>			

N Series



45N Series

N Series Towers

Tower Height	Base Pier Ref. Drawing 107517			Inner Anchor Data Ref. Drawing 107249 and 107250						Outer Anchor Data Ref. Drawing 107249 and 107250							
	Base Number	Compression (lb)	Shear (lb)	Block		Anchor		Reactions (lb)		Block		Anchor		Reactions (lb)			
				Number	Shear	PIN	Angle (deg)	H (in)	V (in)	Uplift	Number	Shear	PIN	Angle (deg)	H (in)	V (in)	Uplift
40'	CB2	3500	30	4a	103179	44.0	54.7	13.9	1750	1690							
50'	CB2	3850	130	4a	103179	45.6	53.4	15.5	1800	1840							
60'	CB2	4370	100	4a	102323	42.4	56.0	12.1	2270	2070							
70'	CB2	4700	150	4a	102323	42.9	55.6	12.7	2400	2230							
80'	CB2	5080	190	4a	102323	42.9	55.6	12.7	2570	2390							
90'	CB2	5490	220	4a	102323	43.0	55.6	12.7	2750	2560							
100'	CB2	6220	180	4a	102323	40.7	57.3	10.3	3350	2880							
110'	CB2	6570	210	4a	102323	40.7	57.3	10.3	3560	3060							
120'	CB2	6970	190	4a	102781	40.2	57.6	9.7	3820	3230							
130'	CB2	7390	170	4a	102781	39.7	58.0	9.2	4090	3400							
140'	CB2	8210	180	4a	102781	38.9	58.6	8.3	4770	3850							
150'	CB2	8660	190	4a	102781	38.9	58.6	8.2	5040	4060							
160'	CB2	9100	210	4b	102781	38.9	58.5	8.3	5290	4270							
170'	CB2	9990	180	4b	102781	37.8	59.3	7.0	6100	4740							
180'	CB2	10920	170	4c	102781	38.3	59.0	7.5	6710	5290							
190'	CB2	11490	170	4c	102781	38.3	59.0	7.6	7030	5550							
200'	CB2	12080	150	4c	102781	38.1	59.1	7.3	7350	5760							
210'	CB3	14500	140	4a	102323	41.3	56.9	10.9	1550	1360	4c	102781	42.7	55.8	12.5	6220	5740
220'	CB3	15550	130	4a	102323	40.5	57.4	10.1	1660	1420	4c	102781	42.6	55.8	12.4	6720	6190
230'	CB3	16240	140	4a	102323	31.1	62.8	-1.1	1640	990	4d	102781	41.6	56.7	11.2	7750	6870
240'	CB3	16650	60	4a	102323	31.3	62.7	-0.8	1609	980	4d	102781	41.3	56.8	11.0	8100	7120

Guy Cable Diameter	Guy Cable Initial Tension (lb)					
	Ambient Temperature					
	0° F	20° F	40° F	60° F	80° F	100° F
3/16	590	520	460	400	340	280
1/4	980	870	770	670	560	460
5/16	1650	1470	1300	1120	950	780


REV	BY	DATE	DESCRIPTION

DRAWN BY: SMC CHECKED: ENG APP:		DRWN BY: SMC CHECKED: ENG APP:
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TITLE: Clipping Details for 40' - 240' 45N Towers, 90 MPH - No Ice	NELLO CORPORATION 72377 Avline Dr. Nappanee, IN 46550 U.S. (765) 473-5840 Fax: (574) 773-5840	DWG NO.: 108537 DWG DATE: 4/28/2005 DWG PROG.:	SHEET: 4 OF 4
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45N Series



N E L L O


Nello Catalog 45N Guy Towers - 110 MPH, No Ice

Nello Corporation
1301 Stahly Dr
Nappanee, IN 46550
1-800-80-NELLO
574-773-5840 FAX
sales@nelloinc.com
www.nelloinc.com

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)		Base Reactions		Anchor Reactions		
		Tower Top	Shear (lbs)	Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Uplift (lbs) Outer Anchor	Shear (lbs) Outer Anchor
40	104278	13.0	300	4,100	300		2,000	1,900
50	104279	12.0	400	4,600	400		2,300	2,000
60	104280	11.6	200	5,300	200		2,600	2,800
70	104281	11.0	200	5,800	200		2,800	3,100
80	104282	10.6	300	6,400	300		3,100	3,400
90	104283	9.6	300	6,900	300		3,300	3,700
100	104284	9.4	200	7,700	200		3,700	4,400
110	104285	9.0	300	8,400	300		4,000	4,700
120	104286	8.6	200	9,400	200		4,600	5,400
130	104287	8.2	300	10,100	300		5,000	6,000
140	104288	7.8	200	11,300	200		5,700	7,000
150	104289	7.4	200	12,000	200		6,000	7,400
160	104290	7.2	300	12,700	300		6,300	7,800
170	104291	7.0	200	14,000	200		7,000	8,900

Notes:

1. Tower designs conform to ANSI/TIA/EIA-222-F. "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for one 1/2" and one 7/8" transmission line to the top per tower face for a total of six.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Tolerance on tower steel height is plus 1% or minus 1/2%.
12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
13. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANSI/TIA/EIA-222-F).
14. Tower designs, 200' and over, include 2.0 square feet of projected area for a beacon at top of tower.
15. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
16. Tower designs are based on level ground.
17. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

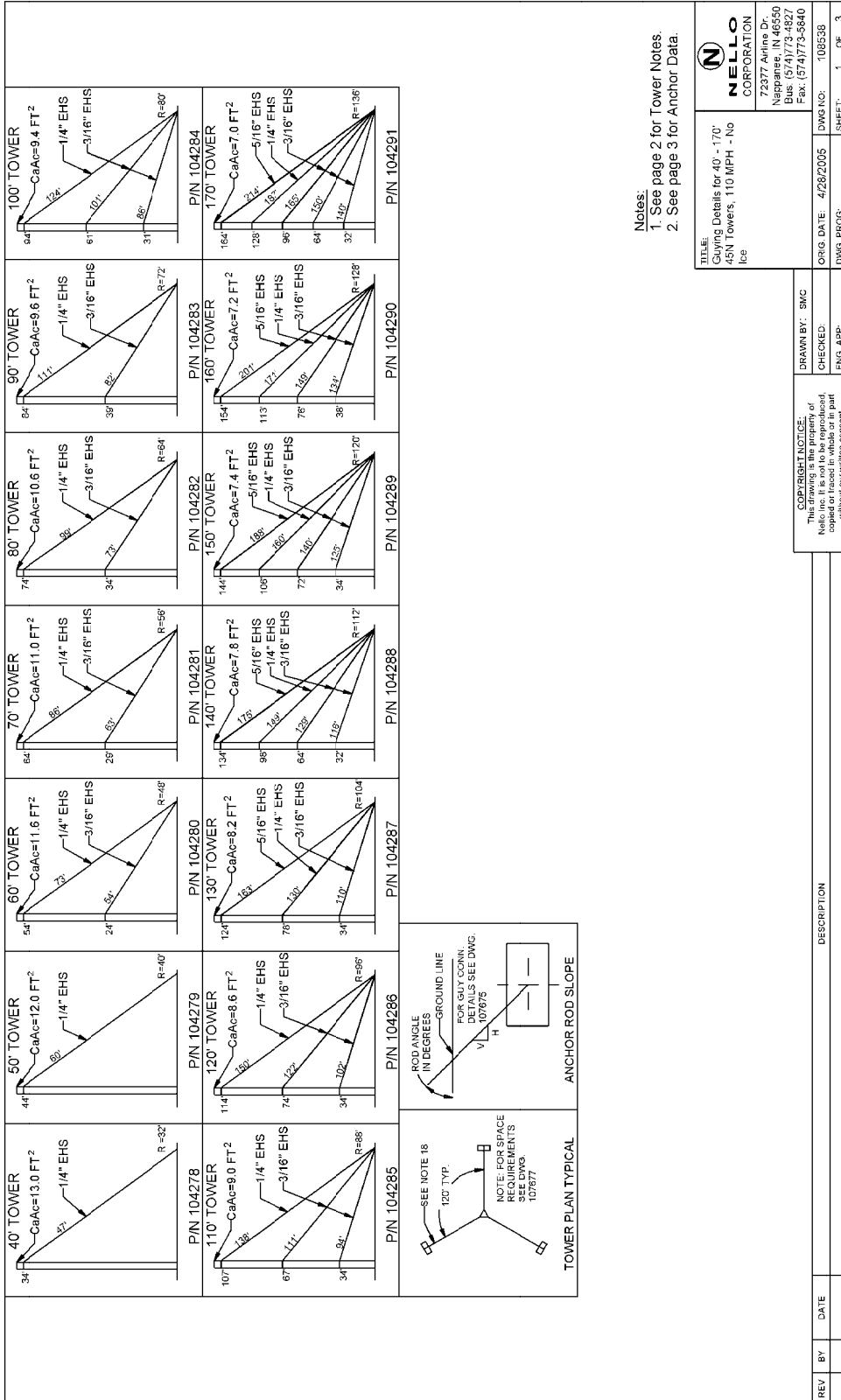
 <p>NELLO CORPORATION 72977 Stahly Dr. Nappanee, IN 46550 Bus: (574)773-4927 Fax: (574)773-5840</p>	<p>DRAWN: 12/21/2004</p> <p>CHECKED: 12/21/2004</p> <p>RF: MFG</p> <p>APPROVED: 12/25/2005</p> <p>DC: DCA</p> <p>WEIGHT: PWSG NO 106716</p>	<p>ORIG DATE: 12/21/2004</p> <p>TITLE: 45N Guy Catalog Tower - 110 MPH</p>	<p>REV: 1</p> <p>SHEET 1 OF 1</p>
	<p>COPYRIGHT NOTICE: The design and drawings are the property of Nello Inc. It is not to be reproduced, copied or traced in whole or in part without our written consent.</p>		
	<p>PRJ NO: 543</p>	<p>REV: 1</p>	<p>REV: 1</p>
	<p>PRJ NO: 543</p>		

N Series



45N Series

N Series Towers





45N Series

REV	BY	DATE	DESCRIPTION

<p>Tower Notes</p> <ol style="list-style-type: none"> 1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 110 mph fastest-mile basic wind speed with no ice. 2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2. 3. Antennas and mounts shall be symmetrically placed about the center of the tower. 4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet. 5. Design allows for one 1/2" diameter and one 7/8" diameter transmission line to the top, per tower face, for a total of six. 6. Tower designs, 200 feet and over, include 2.0 square feet of effective projected area for a beacon (deduct one 7/8" line for beacon). 7. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown. 8. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes. 9. Do not install or dismantle towers within falling distance of electrical and telephone lines. 10. Installation shall conform to local, state, and federal requirements for construction marking and lighting. 11. Field connections shall be bolted. No field welds are allowed. 12. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5. 13. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts." 14. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F. 15. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting. 16. Exposed structural steel is hot-dip galvanized per ASTM A123. 17. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F. 18. Anchor radius is from the tower base to the intersection of anchor rod with the ground. 19. Tower designs are based on level ground. 20. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector. 21. Add 6% to guy chord lengths for final cut lengths. 22. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36. 	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">N</td> <td rowspan="2" style="text-align: center;">NELLO CORPORATION</td> </tr> <tr> <td style="text-align: center;">72377 Ailing Dr. Naperville, IL 60560 Bus: (574) 773-4827 Fax: (574) 773-5840</td> </tr> </table> <table border="1" style="width: 100%;"> <tr> <td>TITLE: Cuying Details for 40' - 170' 45N Towers, 110 MPH - No Ice</td> <td>DWG NO.: 108538</td> </tr> <tr> <td>ORIG DATE: 4/28/2005</td> <td>SHEET: 2 OF 3</td> </tr> <tr> <td>DWG. PROG.</td> <td></td> </tr> </table> <table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">DRAWN BY: SMC</td> <td style="width: 40%;">CHECKED: _____</td> </tr> <tr> <td colspan="2">ENG. APP: _____</td> </tr> </table> <p style="font-size: small;"> COPYRIGHT NOTICE: This drawing is the property of Nello Inc. It is not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, without our written consent. </p>	N	NELLO CORPORATION	72377 Ailing Dr. Naperville, IL 60560 Bus: (574) 773-4827 Fax: (574) 773-5840	TITLE: Cuying Details for 40' - 170' 45N Towers, 110 MPH - No Ice	DWG NO.: 108538	ORIG DATE: 4/28/2005	SHEET: 2 OF 3	DWG. PROG.		DRAWN BY: SMC	CHECKED: _____	ENG. APP: _____	
N	NELLO CORPORATION													
72377 Ailing Dr. Naperville, IL 60560 Bus: (574) 773-4827 Fax: (574) 773-5840														
TITLE: Cuying Details for 40' - 170' 45N Towers, 110 MPH - No Ice	DWG NO.: 108538													
ORIG DATE: 4/28/2005	SHEET: 2 OF 3													
DWG. PROG.														
DRAWN BY: SMC	CHECKED: _____													
ENG. APP: _____														

N Series



45N Series

N Series Towers

Tower Height	Base Pier Ref. Drawing 107517			Inner Anchor Delta Ref. Drawing 107249 and 107250					Reactions (lb)	
	Base Number	Compression (lb)	Shear (lb)	Block Number	P/N	Angle (deg)	H (in)	V (in)		Uplift
40'	CB2	4140	280	4a	103179	47.3	51.9	17.3	1880	2040
50'	CB2	4610	420	4a	103179	48.1	51.2	18.0	2030	2260
60'	CB2	5270	170	4a	102323	42.4	56.0	12.2	2810	2570
70'	CB2	5790	230	4a	102323	42.6	55.9	12.3	3070	2820
80'	CB2	6360	260	4a	102323	42.3	56.1	12.1	3380	3080
90'	CB2	6870	300	4a	102323	42.1	56.2	11.8	3660	3310
100'	CB2	7700	250	4a	102781	40.3	57.6	9.8	4380	3710
110'	CB2	8350	270	4a	102781	40.3	57.6	9.8	4720	4000
120'	CB2	9380	230	4b	102781	40.2	57.7	9.7	5420	4580
130'	CB2	10150	260	4b	102781	39.8	57.9	9.3	6010	5010
140'	CB2	11330	240	4c	102781	39.1	58.4	8.5	6970	5670
150'	CB2	12040	240	4c	102781	39.0	58.5	8.4	7400	6000
160'	CB3	12740	270	4c	102781	39.0	58.5	8.3	7810	6320
170'	CB3	13980	230	4d	102781	38.2	59.0	7.4	8910	7010

Guy Cable Diameter	Guy Cable Initial Tension (lb)						
	Ambient Temperature						
3/16	0° F	20° F	40° F	60° F	80° F	100° F	120° F
1/4	590	520	460	400	340	280	220
5/16	980	870	770	670	560	460	360
	1650	1470	1300	1120	950	780	610

REV	BY	DATE	DESCRIPTION

TITLE: Guying Details for 40' - 170' 45N Towers, 110 MPH - No Ice	DRG. DATE: 4/28/2003	DWG. NO.: 108538
DRG. PROG.	SHEET: 3	OF 3

DRAWN BY: SMC
CHECKED:
ENG. APP.

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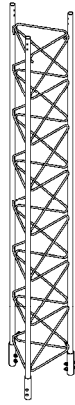
55N Series - Parts List

Part #	Description	Price	Weight (Lbs)
103134	55N Section Assembly (10' Long)	394.00	92.6
104551	55N Anti-climb Section Assembly (10' Long)	784.00	185.0
103136	55N Tapered Base Section w / ACWS (10' - For use with Pier Pins and Insulators)	957.00	137.0
103757	55N Base Section w / ACWS (5' Long - Embedment in Concrete)	176.00	41.2
102462	55N Concrete Base Plate w / ACWS	148.00	37.0
106744	55N Self-Supporting Base Plate w / ACWS	456.00	152.0
102927	55N Guy Bracket Assembly	190.00	24.4
103135	55N Joint Bolt Kit	6.00	0.2
103463	55N Bearing Plate w / ACWS Assembly	149.00	28.3
103779	55N Anti-Climb Panels (3) w / Hardware & ACWS	268.00	48.0
105361	55N Beacon Plate Assembly (w / Stubs & ACWS)	142.00	27.0
105818	65N to 55N Transition Assembly	450.00	110.0
104141	55N Torque Arm Stabilizer Assembly	222.00	54.1
102765	45N/55N Accessory Shelf Assembly	113.00	6.0
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	170.00	26.7
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	125.00	31.0
105864	45N/55N Work Platform Assembly	165.00	39.4
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe (Angle)	172.00	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe (Angle)	268.00	67.0

N Series



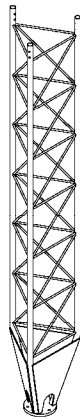
55N Series



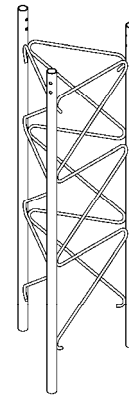
Part #	Description	Weight (Lbs)
103134	55N Section Assembly (10' Long)	92.6



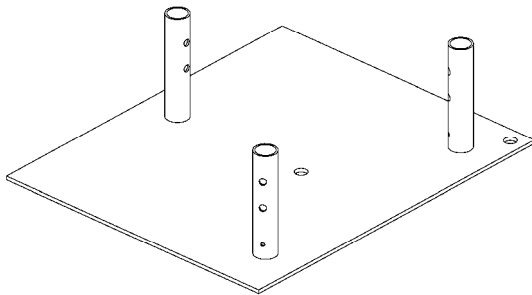
Part #	Description	Weight (Lbs)
104551	55N Anti-climb Section Assembly (10' Long)	185.0



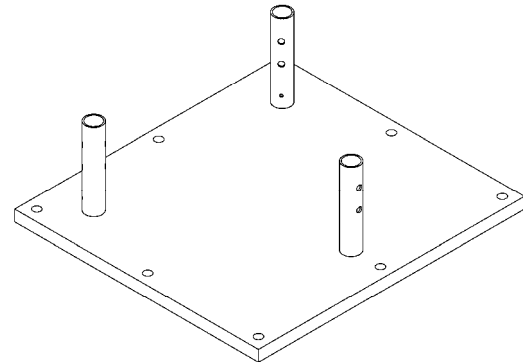
Part #	Description	Weight (Lbs)
103136	55N Tapered Base Section w/ ACWS (10' - For use with Pier Pins and Insulators)	137.0



Part #	Description	Weight (Lbs)
103757	55N Base Section w/ ACWS (5' Long - Embedment in Concrete)	41.2



Part #	Description	Weight (Lbs)
102462	55N Concrete Base Plate w/ ACWS	37.0



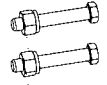
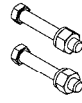
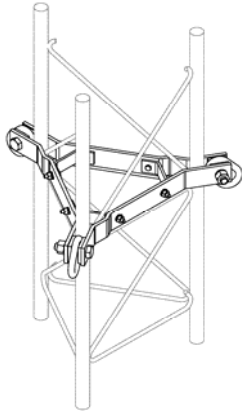
Part #	Description	Weight (Lbs)
106744	55N Self-Supporting Base Plate w/ ACWS	152.0

N Series Towers

N Series

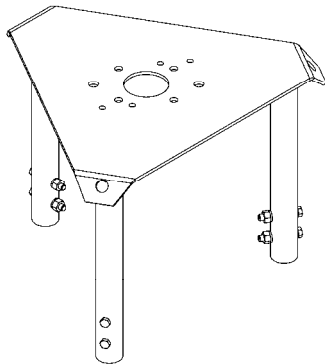


55N Series



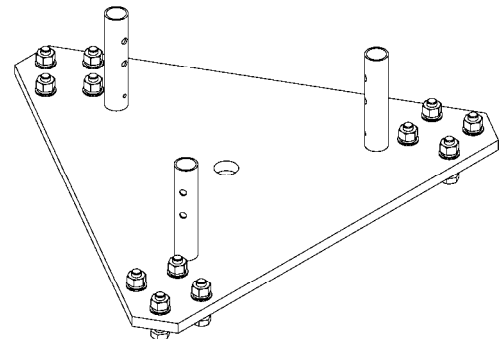
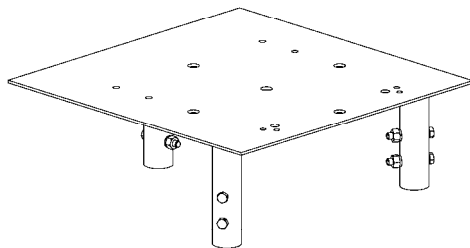
Part #	Description	Weight (Lbs)
102927	55N Guy Bracket Assembly	24.4

Part #	Description	Weight (Lbs)
103135	55N Joint Bolt Kit	0.2



Part #	Description	Weight (Lbs)
103463	55N Bearing Plate w/ ACWS Assembly	28.3

Part #	Description	Weight (Lbs)
103779	55N Anti-Climb Panels (3) w/ Hardware & ACWS	48.0



Part #	Description	Weight (Lbs)
105361	55N Beacon Plate Assembly (w/ Stubs & ACWS)	27.0

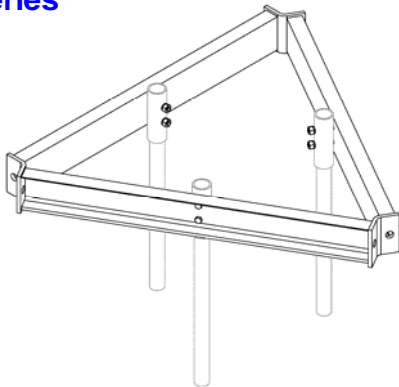
Part #	Description	Weight (Lbs)
105818	65N to 55N Transition Assembly	110.0

N Series Towers

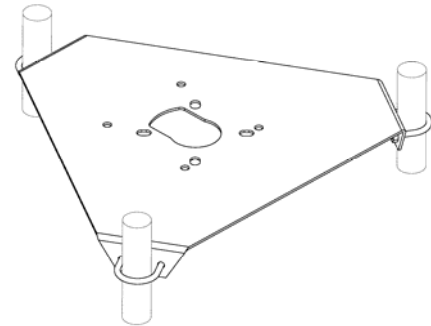
N Series



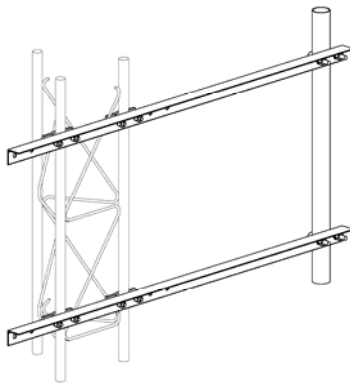
55N Series



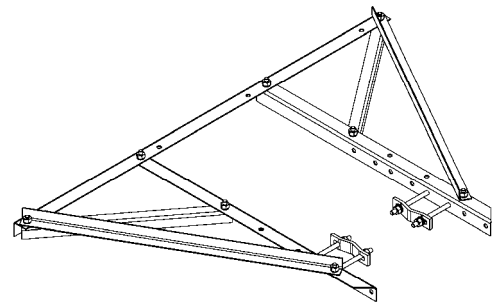
Part #	Description	Weight (Lbs)
104141	55N Torque Arm Stabilizer Assembly	54.1



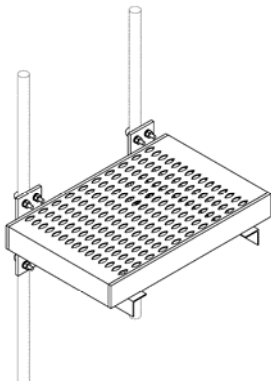
Part #	Description	Weight (Lbs)
102765	45N/55N Accessory Shelf Assembly	6.0



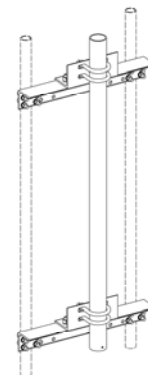
Part #	Description	Weight (Lbs)
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7



Part #	Description	Weight (Lbs)
102731	Heavy Duty Universal House Bracket Assembly (25N, 45N & 55N)	31.0



Part #	Description	Weight (Lbs)
105864	45N/55N Work Platform Assembly	39.4



Part #	Description	Weight (Lbs)
109739	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 2-3/8" O.D. x 48" Long Pipe	43.0
109738	Face Dish Mount Assembly for 25N, 45N, & 55N Tower, 3-1/2" O.D. x 60" Long Pipe	67.0

N Series Towers



55N Series

N E L L O

Nello Catalog 55N Guy Towers - 70 MPH, No Ice

Nello Corporation
 1301 Stahly Dr.
 Nappanee, IN 46550
 1-800-80-NELLO
 574-773-5840 FAX
 sales@nelloinc.com
 www.nelloinc.com

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)		Base Reactions		Anchor Reactions			
		Tower Top	Shear (lbs)	Compression (lbs)	Shear (lbs)	Uplift (lbs)	Inner Anchor	Outer Anchor	Shear (lbs)
100	104433	32.00	100	5,300	100	2,200		2,400	2,400
110	104434	31.20	100	5,600	200	2,400		2,500	2,500
120	104435	30.40	100	6,300	100	2,600		3,000	3,000
130	104436	29.60	100	6,600	100	2,700		3,200	3,200
140	104437	28.80	100	6,900	100	2,900		3,300	3,300
150	104438	28.00	200	7,200	200	3,000		3,600	3,600
160	104439	27.20	200	7,600	200	3,100		3,600	3,600
170	104440	27.40	100	8,200	100	3,500		4,200	4,200
180	104441	27.00	200	8,600	200	3,600		4,400	4,400
190	104442	26.60	200	8,900	200	3,700		4,600	4,600
200	104443	24.20	200	9,400	200	3,900		4,800	4,800
210	104444	23.80	200	9,800	200	4,000		5,000	5,000
220	104445	23.40	200	10,600	200	4,400		5,700	5,700
230	104446	23.00	200	11,000	200	4,800		6,000	6,000
240	104447	22.60	100	11,800	100	5,100		6,400	6,400
250	104448	22.60	200	12,200	200	5,200		6,600	6,600
260	104449	22.20	100	14,200	100	1,300	1,400	5,200	5,600
270	104450	22.00	100	14,600	100	1,300	1,400	5,300	5,800
280	104451	21.80	100	15,100	100	1,300	1,400	5,500	6,000
290	104452	21.40	100	15,800	100	1,400	1,500	5,700	6,100
300	104453	21.20	100	16,800	100	1,600	2,300	5,700	6,000
310	104454	21.00	100	17,500	100	1,900	2,900	5,900	6,200
320	104455	20.80	100	17,900	100	1,900	2,900	6,100	6,400
330	104456	20.60	100	18,500	100	2,000	2,500	6,200	6,500
340	104457	20.40	100	19,300	100	1,900	2,200	6,900	7,500
350	104458	20.20	100	20,300	100	1,900	2,200	7,300	8,100
360	104459	20.00	100	20,900	100	1,900	2,300	7,500	8,300
370	104460	19.80	100	21,600	100	2,000	2,300	7,800	8,500
380	104461	19.60	100	21,900	100	2,000	2,400	7,900	8,700
390	104462	19.40	100	22,400	100	2,000	2,400	8,100	8,900
400	104463	19.20	100	22,500	100	1,900	2,500	8,200	9,100

Notes:

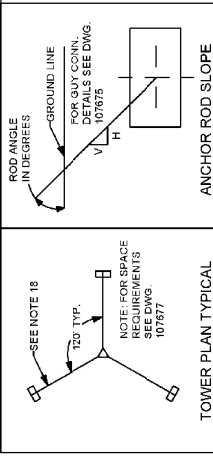
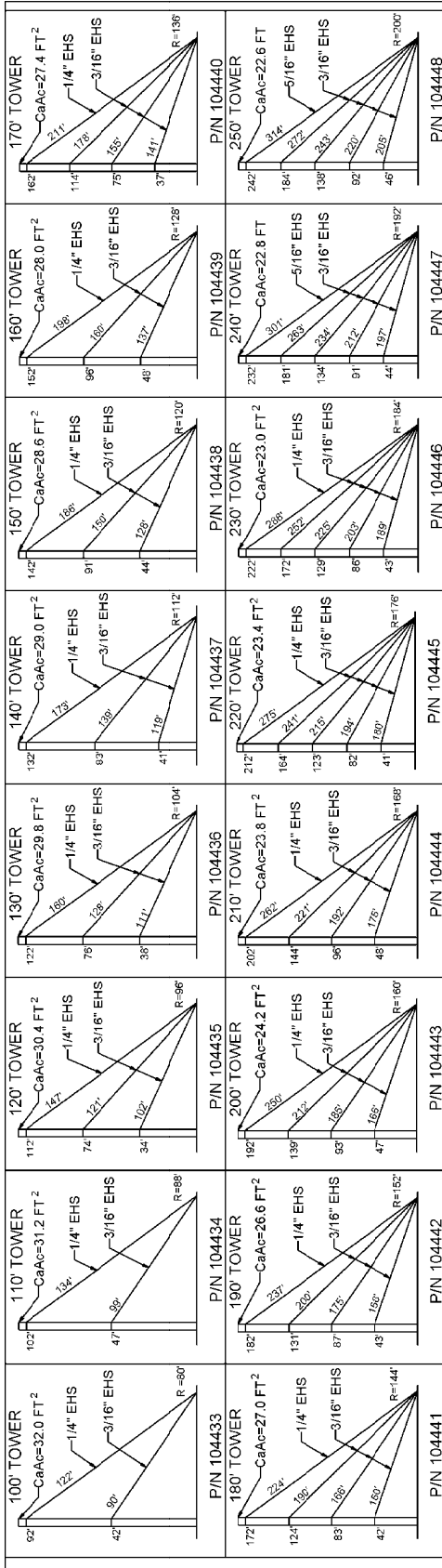
1. Tower designs conform to ANSI/TIA/EIA-222-F. *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.*
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for two 7/8" transmission lines to the top per tower face for a total of six.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Tolerance on tower steel height is plus 1% or minus 3/8".
12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
13. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANSI/TIA/EIA-222-F).
14. Tower designs, 20' and over, include 2.0 square feet of projected area for a beacon at top of tower. Tower designs 35' and over, include 2.0 square feet of projected area for a mid level beacon.
15. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
16. Tower designs are based on level ground.
17. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

	ORG/DATE 12/21/2004	TITLE 55N Guy Catalog Tower - 70 MPH	SHEET 1 OF 1
	CHECKED RCH	12/21/2004	
	APPROVED DDA	12/21/2005	
	WEIGHT	DWG NO 106717	
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N Series



55N Series



- Notes:
 1. See page 3 for Tower Notes.
 2. See page 4 for Anchor Data.

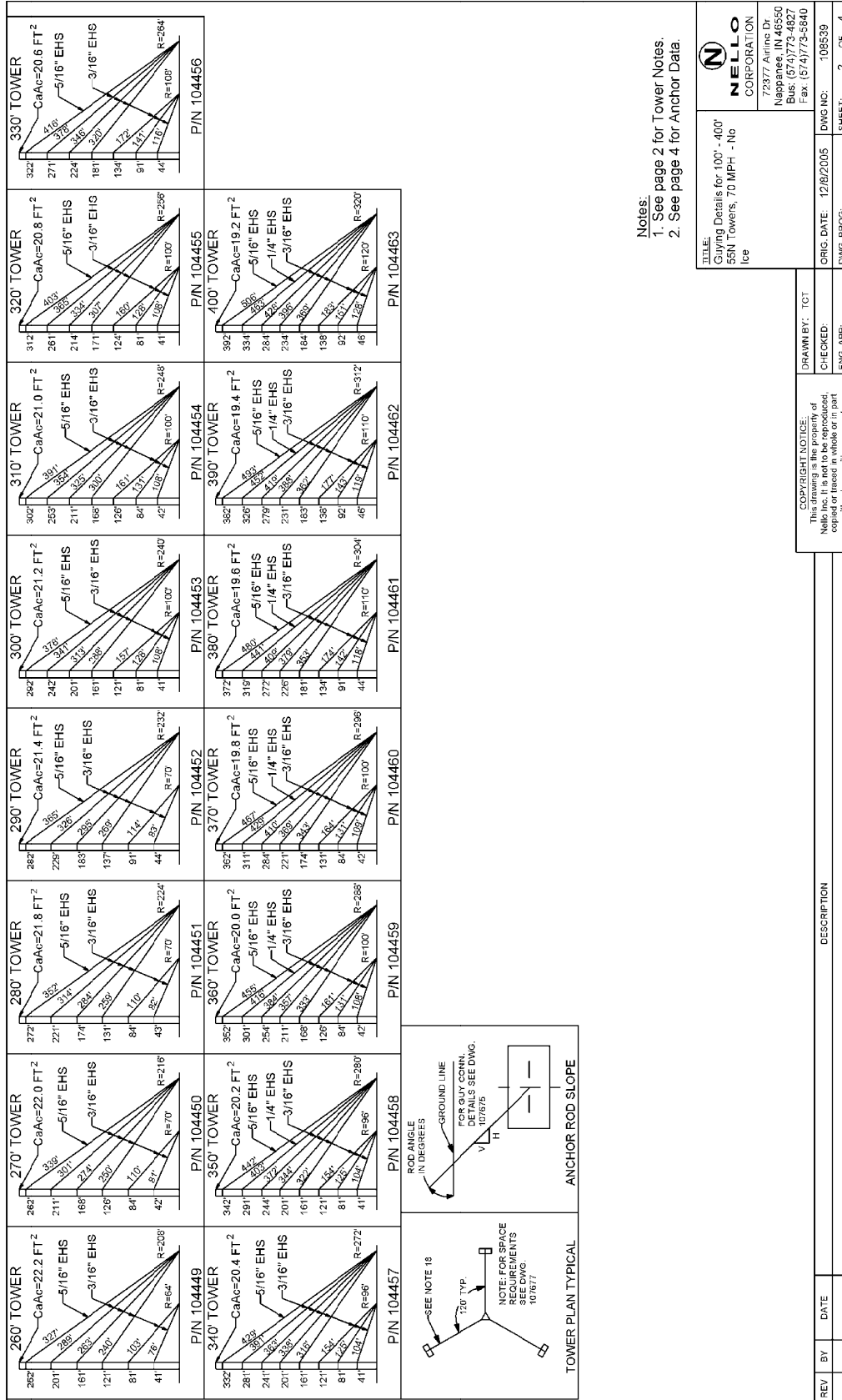
		TITLE: Guying Details for 100' - 400' 55N Towers, 70 MPH - No Ice	
DRAWN BY: TCT CHECKED: ENG. APP:		ORG. DATE: 12/8/2005 DWG. NO.: 108539 SHEET: 1 OF 4	
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REV	BY	DATE	DESCRIPTION

N Series Towers

N Series



55N Series



N Series Towers



55N Series

N Series Towers

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 70 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet.
5. Design allows for two 7/8" diameter transmission lines to the top, per tower face, for a total of six.
6. Tower designs, 200 feet and over, include 2.0 square feet of effective projected area for a beacon (deduct one 7/8" line for beacon).
7. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
8. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
9. Do not install or dismantle towers within falling distance of electrical and telephone lines.
10. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
11. Field connections shall be bolted. No field welds are allowed.
12. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5.
13. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
14. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
15. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
16. Exposed structural steel is hot-dip galvanized per ASTM A123.
17. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
18. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
19. Tower designs are based on level ground.
20. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
21. Add 6% to guy chord lengths for final cut lengths.
22. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36.

		72377 Alhambra Dr. Nello Inc. IN 46650 Bus: (574)773-4837 Fax: (574)73-5940	
TITLE: Buying Details for 100' - 400' 55N Towers, 70 MPH - No Ice		DWG NO.: 108539 SHEET: 3 OF 4	
ORG. DATE: 12/8/2005 DWG. PROC.:		DRAWN BY: TCT C-CHECKED: ENG. APP:	
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REV	BY	DATE	

N Series



55N Series

Tower Height	Base Pier Ref. Drawing 107517				Inner Anchor Data Ref. Drawing 107248 and 107250								Outer Anchor Data Ref. Drawing 107248 and 107250							
	Base Number	Base Compression (lb)	Shear (lb)	Block Number	P/N	Anchor			Reactions (lb)			Block Number	P/N	Anchor			Reactions (lb)			
						Angle (deg)	H (in)	V (in)	Shear	Uplift	Angle (deg)			H (in)	V (in)	Shear	Uplift	Angle (deg)	H (in)	V (in)
100'	CB2	5240	130	4a	102323	43.3	55.3	13.1	2330	2240										
110'	CB2	5580	160	4a	102323	43.2	55.3	13.0	2510	2360										
120'	CB2	6240	130	4a	102323	40.8	57.2	10.4	3170	2740										
130'	CB2	6560	140	4a	102323	40.7	57.3	10.3	3320	2860										
140'	CB2	6870	150	4a	102323	40.7	57.3	10.2	3480	2990										
150'	CB2	7220	160	4a	102323	40.6	57.4	10.2	3640	3120										
160'	CB2	7570	170	4a	102323	39.3	58.3	8.7	4420	3620										
170'	CB2	8210	150	4a	102781	38.1	58.4	8.5	4610	3750										
180'	CB2	8590	160	4a	102781	39.2	58.4	8.5	4790	3900										
190'	CB2	8940	160	4a	102781	39.0	58.5	8.3	4980	4030										
200'	CB2	9430	170	4a	102781	38.1	59.1	7.3	5660	4430										
210'	CB2	9790	170	4a	102781	38.5	58.8	7.7	6390	5080										
220'	CB2	10590	160	4b	102323	42.6	55.9	12.3	1360	1250	4b	102781	42.8	55.7	12.6	5580	5170			
230'	CB2	10960	160	4b	102323	42.1	56.3	11.8	1430	1290	4c	102781	42.8	55.7	12.6	5750	5330			
240'	CB2	11790	150	4b	102781	38.5	58.8	7.8	6380	5080										
250'	CB2	12170	150	4b	102781	38.4	58.9	7.7	6590	5220										
260'	CB3	14170	110	4a	102323	43.4	55.2	13.3	6420	6080										
270'	CB3	14600	110	4a	102323	39.5	58.2	8.9	2320	1930	4c	102781	43.4	55.2	13.3	6420	6080			
280'	CB3	15110	120	4a	102323	39.4	58.2	8.8	2470	2030	4c	102781	43.6	55.0	13.4	6530	6220			
290'	CB3	15780	110	4a	102323	39.7	58.0	9.1	2220	1840	4d	102781	42.4	56.0	12.1	7550	6890			
300'	CB3	16760	110	4a	102323	39.6	58.1	9.0	2200	1820	4d	102781	42.2	56.1	11.9	8090	7340			
310'	CB3	17460	110	4a	102323	39.8	57.9	9.3	2290	1910	4e	102781	42.3	56.1	12.1	8270	7530			
320'	CB3	17860	110	4a	102323	40.4	57.5	10.0	2300	1960	4e	102781	42.4	56.0	12.2	8520	7790			
330'	CB3	18460	110	4a	102323	39.1	58.4	8.4	2440	1980	4e	106862	42.4	82.6	36.4	8660	7900			
340'	CB3	19280	110	4a	102323	39.6	58.1	9.0	2470	2040	4e	106862	42.3	82.8	36.2	8880	8070			
350'	CB3	20270	110	4a	102323	37.4	59.5	6.5	2500	1910	4e	106862	42.1	83.0	35.9	9120	8240			
360'	CB3	20860	110	4a	102323															
370'	CB4	21550	110	4a	102323															
380'	CB4	21870	110	4a	102323															
390'	CB4	22390	110	4a	102323															
400'	CB4	22550	110	4a	102323															

Rev. Table:

REV	BY	DATE	DESCRIPTION

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Drawn By: TCT
Checked:
Eng. App:

Guy Cable Initial Tension (lb)

Guy Cable Diameter	Ambient Temperature				
	0° F	20° F	40° F	60° F	80° F
3/16	590	520	460	400	340
1/4	980	870	770	670	560
5/16	1650	1470	1300	1120	950

Company Information:

NELLO CORPORATION
72977 Avire Dr.
Nappanee, IN 46550
Bus: (574)773-4827
Fax: (574)773-5840

Project Details:
TITLE: Guying Details for 100' - 400' 55N Towers, 70 MPH - No Ice
ORIG. DATE: 12/02/2005
DWG. PROG:

Sheet Information:
DWG NO: 108539
SHEET 4 OF 4

N Series Towers

55N Series

N Series Towers

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Nello Catalog 55N Guy Towers - 90 MPH, No Ice

N E L L O

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)		Base Reactions		Anchor Reactions		Uplift (lbs)	Shear (lbs)	Uplift (lbs)	Shear (lbs)
		Tower Top		Compression (lbs)	Shear (lbs)	Inner Anchor	Outer Anchor				
100	104464	19.20		6,900	200			3,200			3,600
110	104465	18.60		7,400	200			3,400			4,100
120	104466	18.20		8,000	200			3,600			4,400
130	104467	17.80		8,500	200			3,800			5,100
140	104468	17.20		9,300	200			4,200			5,400
150	104469	16.80		9,800	200			4,400			6,000
160	104470	16.40		10,800	200			5,000			6,300
170	104471	16.20		11,200	200			5,100			6,300
180	104472	15.60		12,100	200			5,700			7,100
190	104473	15.60		13,300	200			6,300			7,800
200	104474	15.60		14,000	200			6,500			8,100
210	104475	13.00		14,600	200			6,800			8,500
220	104476	12.80		17,800	100	1,700	1,900	6,700			7,200
230	104477	12.60		18,300	100	2,300	1,900	7,000			7,500
240	104478	12.40		19,800	100	2,500	2,800	7,200			7,400
250	104479	12.20		20,700	100	2,500	3,000	7,400			7,700
260	104480	12.00		21,500	200	2,600	3,100	7,700			7,900
270	104481	11.80		22,600	100	2,300	2,700	8,600			9,300
280	104482	11.60		24,000	100	2,400	2,900	9,100			9,900
290	104483	11.40		24,900	200	2,500	3,000	9,400			10,200
300	104484	11.20		26,100	100	2,500	3,200	10,100			10,900

Notes:

1. Tower designs conform to ANS/I/IA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
2. The areas listed are effective projected areas (CaAc per ANS/I/IA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for two 7/8" transmission lines to the top per tower face for a total of six.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANS/I/IA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Tolerance on tower steel height is plus 1% or minus 1/2%.
12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANS/I/IA/EIA-222-F.
13. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANS/I/IA/EIA-222-F).
14. Tower designs, 200' and over, include 2.0 square feet of projected area for a beacon at top of tower.
15. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
16. Tower designs are based on level ground.
17. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

	55N Guy Catalog Tower - 90 MPH	55N Guy Catalog Tower - 90 MPH
DRAWN	ORIG DATE	TITLE
RCH	1/2/2004	55N Guy Catalog Tower - 90 MPH
CHECKED		
RCH	1/27/2004	
WFG		
APPROVED	1/25/2005	
DCA		
WEIGHT		
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PRJNO 543 SHEET 1 OF 1		

N Series



55N Series

<p>100' TOWER CaAc=19.2 FT² R=80</p>	<p>110' TOWER CaAc=18.6 FT² R=88</p>	<p>120' TOWER CaAc=18.2 FT² R=96</p>	<p>130' TOWER CaAc=17.8 FT² R=104</p>	<p>140' TOWER CaAc=17.2 FT² R=112</p>	<p>150' TOWER CaAc=16.8 FT² R=120</p>	<p>160' TOWER CaAc=16.4 FT² R=128</p>	<p>170' TOWER CaAc=16.2 FT² R=136</p>	<p>180' TOWER CaAc=15.8 FT² R=144</p>	<p>190' TOWER CaAc=15.6 FT² R=152</p>	<p>200' TOWER CaAc=13.2 FT² R=160</p>	<p>210' TOWER CaAc=13.0 FT² R=168</p>	<p>220' TOWER CaAc=12.8 FT² R=176</p>	<p>230' TOWER CaAc=12.6 FT² R=184</p>	<p>240' TOWER CaAc=12.4 FT² R=192</p>	<p>250' TOWER CaAc=12.2 FT² R=200</p>	<p>260' TOWER CaAc=12.0 FT² R=208</p>	<p>270' TOWER CaAc=11.8 FT² R=216</p>	<p>280' TOWER CaAc=11.6 FT² R=224</p>	<p>290' TOWER CaAc=11.4 FT² R=232</p>	<p>300' TOWER CaAc=11.2 FT² R=240</p>
<p>ANCHOR ROD SLOPE</p>														<p>TOWER PLAN TYPICAL</p>						
<p>ROC ANGLE IN DEGREES</p> <p>GROUND LINE</p> <p>FOR GUY CONN. DETAILS SEE DWG. 107575</p>														<p>NOTE: FOR SPACE REQUIREMENTS SEE DWG. 107577</p>						
<p>Notes: 1. See page 2 for Tower Notes. 2. See page 3 for Anchor Data.</p>														<p>TITLE: Guying Details for 100' - 300' 55N Towers, 90 MPH - No Ice</p> <p>NELLO CORPORATION 72377 Avline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5950</p> <p>ORIG. DATE: 12/8/2005 DWG. NO.: 106540 SHEET: 1 OF 3</p>						
<p>DESCRIPTION</p>														<p>DRAWN BY: TCT CHECKED: ENG. APP:</p>						
<p>REV BY DATE</p>														<p>DESCRIPTION</p>						

N Series Towers




55N Series

N Series
Towers

Tower Notes

1. Tower designs conform to ANSITIAIEIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 90 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSITIAIEIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet.
5. Design allows for two 7/8" diameter transmission lines to the top, per tower face, for a total of six.
6. Tower designs, 200 feet and over, include 2.0 square feet of effective projected area for a beacon (deduct one 7/8" line for beacon).
7. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
8. Tower erection shall be performed by competent and qualified personnel in accordance with ANSITIAIEIA-222-F and national and local codes.
9. Do not install or dismantle towers within falling distance of electrical and telephone lines.
10. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
11. Field connections shall be bolted. No field welds are allowed.
12. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAE J429 Grade 5.
13. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
14. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSITIAIEIA-222-F.
15. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
16. Exposed structural steel is hot-dip galvanized per ASTM A123.
17. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSITIAIEIA-222-F.
18. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
19. Tower designs are based on level ground.
20. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
21. Add 6% to guy chord lengths for final cut lengths.
22. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36.

		TITLE: Guying Details for 100' - 300' 55N Towers, 90 MPH - No Ice		72377 Arline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840	
DWG. PROG:		ORIG. DATE: 12/09/2005		DWG NO: 108540	
REV. BY:		DATE:		SHEET: 2 OF 3	
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N Series



55N Series

Tower Height	Base Pier Ref. Drawing 107517				Inner Anchor Data Ref. Drawing 107249 and 107250						Outer Anchor Data Ref. Drawing 107249 and 107250						
	Base Number	Compression (lb)	Shear (lb)	Block Number	Anchor			Reactions (lb)			Anchor			Reactions (lb)			
					P/N	Angle (deg)	H (in)	V (in)	Shear	Uplift	P/N	Angle (deg)	H (in)	V (in)	Shear	Uplift	
100'	CB2	6930	200	4a	102781	41.3	56.9	10.9	3610	3170							
110'	CB2	7440	200	4a	102781	41.3	57.1	10.6	3870	3360							
120'	CB2	7950	220	4a	102781	41.3	56.9	10.9	4100	3600							
130'	CB2	8470	240	4a	102781	41.1	57.0	10.7	4380	3820							
140'	CB2	9280	220	4b	102781	39.6	58.1	9.0	5120	4230							
150'	CB2	9810	220	4b	102781	39.3	58.3	8.7	5430	4450							
160'	CB2	10830	220	4b	102781	39.8	58.0	9.2	6030	5020							
170'	CB2	11150	240	4b	102781	39.2	58.3	8.6	6280	5110							
180'	CB2	12140	210	4c	102781	38.4	58.9	7.7	7120	5650							
190'	CB3	13330	200	4c	102781	38.8	58.6	8.2	7810	6290							
200'	CB3	14020	210	4d	102781	38.8	58.6	8.1	8150	6550							
210'	CB3	14650	200	4d	102781	38.7	58.7	8.0	8520	6820							
220'	CB3	17760	130	4a	102323	41.7	56.6	11.3	1910	1700	4d	102781	43.4	55.3	13.2	7150	6750
230'	CB3	18320	130	4a	102323	42.0	56.3	11.7	1890	1700	4d	102781	43.0	55.5	12.8	7520	7010
240'	CB3	18820	150	4a	102323	38.5	58.9	7.7	2820	2240	4d	102781	43.9	54.8	13.8	7440	7170
250'	CB3	20680	150	4a	102323	38.8	57.9	9.3	2950	2460	4d	102781	44.0	54.7	13.9	7690	7430
260'	CB4	21540	170	4a	102323	40.3	57.6	9.8	3070	2600	4e	102781	44.0	54.8	13.8	7950	7670
270'	CB4	22640	140	4a	102323	39.9	57.9	9.4	2750	2300	4e	106862	47.3	76.3	43.7	7950	8610
280'	CB4	24020	130	4a	102323	39.9	57.9	9.4	2920	2440	4e	106862	44.6	79.9	39.7	9280	9140
290'	CB4	24860	150	4a	102323	40.2	57.7	9.7	3020	2550	4e	106862	43.7	81.0	38.3	9860	9410
300'	CB4	26080	150	4a	102323	37.8	59.3	7.0	3220	2500	6a	106862	44.7	79.7	16.0	10170	10080

Guy Cable Diameter	Guy Cable Initial Tension (lb)					
	Ambient Temperature					
	0° F	20° F	40° F	60° F	80° F	100° F
3/16	590	920	460	400	340	220
1/4	980	870	770	670	560	360
5/16	1650	1470	1300	1120	950	610

REV	BY	DATE	DESCRIPTION

DRAWN BY: TCT		CHECKED:		ENG APP:	

TITLE:	ORIG. DATE:	DWG. NO.:	DWG. PROC.:	SHEET:
Guying Details for 100' - 300' 55N Towers, 90 MPH - No Ice	12/8/2005	105540		3 OF 3

NELO CORPORATION
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N Series Towers



55N Series

N Series
Towers

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Nello Catalog 55N Guy Towers - 110 MPH, No Ice



N E L L O

Tower Height (ft)	Part Number	Allowable Projected Area (sq. ft.)		Base Reactions		Anchor Reactions			
		Tower Top		Compression (lbs)	Shear (lbs)	Uplift (lbs) Inner Anchor	Shear (lbs) Outer Anchor	Uplift (lbs) Outer Anchor	Shear (lbs) Outer Anchor
100	104485	14.60	400	9,600	400			4,700	5,300
110	104486	14.20	400	10,300	400			5,000	5,700
120	104487	13.60	400	11,000	400			5,300	6,100
130	104488	12.00	400	11,600	400			5,600	6,500
140	104489	11.00	300	12,700	300			6,200	7,500
150	104492	10.00	300	13,400	300			6,500	7,900
160	104493	9.80	300	14,300	300			6,900	8,400
170	104494	9.60	400	15,200	400			7,400	9,100
180	104495	9.20	300	16,600	300			8,200	10,300
190	104496	9.00	300	17,700	300			8,700	10,900

Notes:

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Design allows for two 7/8" transmission lines to the top tower face for a total of six.
5. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
6. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
7. Do not install or dismantle towers within falling distance of electrical and telephone lines.
8. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
9. Field connections shall be bolted. No field welds shall be allowed.
10. Exposed structural steel is hot-dip galvanized per ASTM A123.
11. Tolerance on tower steel height is plus 1% or minus 1/2%.
12. Maintenance and inspection shall be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
13. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet (CaAc per ANSI/TIA/EIA-222-F).
14. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
15. Tower designs are based on level ground.
16. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.

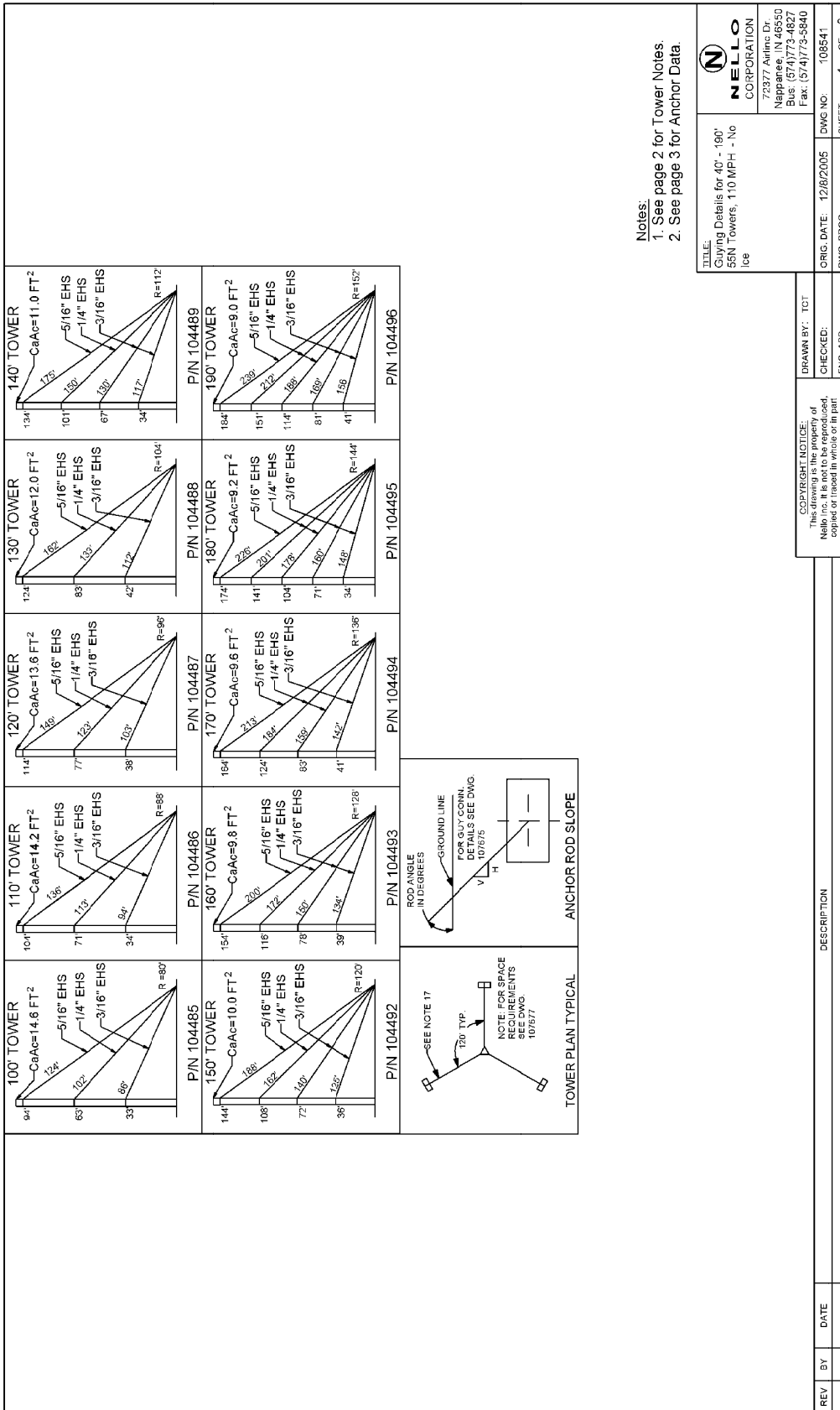
DRAWN	ORIG DATE	TITLE	NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840
12/21/2004	12/21/2004	55N Guy Catalog Tower - 110 MPH	
CHECKED	12/21/2004		
APPROVED	12/29/2005		
WEIGHT			DWG NO H08719
			REV 1
			PRJ NO 543
			SHEET 1 OF 1

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N Series



55N Series



N Series Towers

N Series



55N Series

N Series
Towers

Tower Notes

1. Tower designs conform to ANSI/TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," for a 110 mph fastest-mile basic wind speed with no ice.
2. The areas listed are effective projected areas (CaAc per ANSI/TIA/EIA-222-F), which include drag factors. Areas for round member antennas can be found by dividing by 1.2. Areas for flat member antennas can be found by dividing by 2.
3. Antennas and mounts shall be symmetrically placed about the center of the tower.
4. Tower designs include three side arms, symmetrically placed, having a total effective projected area equal to 8.0 square feet.
5. Design allows for two 7/8" diameter transmission lines to the top, per tower face, for a total of six.
6. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown.
7. Tower erection shall be performed by competent and qualified personnel in accordance with ANSI/TIA/EIA-222-F and national and local codes.
8. Do not install or dismantle towers within falling distance of electrical and telephone lines.
9. Installation shall conform to local, state, and federal requirements for construction marking and lighting.
10. Field connections shall be bolted. No field welds are allowed.
11. Structural bolts 5/8" and larger shall conform to ASTM A325, and bolts 1/2" and smaller conform to SAF J429 Grade 5.
12. All high strength bolts are to be tightened to a "sung tight" condition as defined in the November 13, 1985, AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
13. Structural steel and connection bolts shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
14. Purchaser shall verify the installation is in conformance with local, state, and federal requirements for construction marking and lighting.
15. Exposed structural steel is hot-dip galvanized per ASTM A123.
16. Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
17. Anchor radius is from the tower base to the intersection of anchor rod with the ground.
18. Tower designs are based on level ground.
19. Temporary steel guys may be required during erection or dismantling of tower must be supplied and installed by erector.
20. Add 6% to guy chord lengths for final cut lengths.
21. Material specifications: Tube Legs – ASTM A513 Grade 50; Solid Rod Bracing – ASTM A36.

REV	BY	DATE	DESCRIPTION	DRAWN BY: ICT CHECKED: ENG. APP:	NELLO CORPORATION 72977 Avires Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840	TITLE: Guying Details for 40' - 180' 55N Towers, 110 MPH - No Ice	DWG NO: 105541 SHEET 2 OF 3
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N Series



55N Series

Tower Height	Base Pier Ref. Drawing 107517		Inner Anchor Data Ref. Drawing 107249 and 107250					Reactions (lb)		
	Base Number	Base Compression (lb)	Shear (lb)	Block Number	P/N	Angle (deg)	H (in)		V (in)	Shear
100'	CB2	9560	360	4b	102781	41.6	56.7	11.2	5290	4690
110'	CB2	10280	350	4b	102781	41.2	56.9	10.8	5710	5000
120'	CB2	11000	380	4c	102781	41.0	57.0	10.7	6110	5320
130'	CB2	11600	390	4c	102781	40.7	57.3	10.3	6470	5570
140'	CB3	12720	310	4c	102781	39.6	58.1	9.1	7490	6200
150'	CB3	13430	290	4d	102781	39.3	58.3	8.7	7950	6510
160'	CB3	14250	310	4d	102781	39.3	58.3	8.7	8410	6880
170'	CB3	15180	380	4d	102781	39.0	58.5	8.4	9120	7390
180'	CB3	16640	280	4e	106862	38.3	87.2	30.0	10340	8180
190'	CB3	17660	310	4e	106862	38.5	87.0	30.2	10870	8650

Guy Cable Diameter	Guy Cable Initial Tension (lb)						
	Ambient Temperature						
3/16	0° F	20° F	40° F	60° F	80° F	100° F	120° F
1/4	590	520	460	400	340	280	220
5/16	980	870	770	670	560	460	360
	1650	1470	1300	1120	950	780	610

REV	BY	DATE	DESCRIPTION	DRAWN BY	CHECKED	ENG. APP.	ORIG. DATE	DWG. NO.	DWG. PROG.	SHEET	OF
				TCT			12/02/2005	108541		3	3

NELLO CORPORATION
 72377 Avline Dr.
 Nappanee, IN 46550
 Bus: (574)773-4827
 Fax: (574)773-5640

TITLE: Guying Details for 40' - 190' 55N Towers, 110 MPH - No Ice
 ORIG. DATE: 12/02/2005
 DWG. NO.: 108541
 DWG. PROG.:
 SHEET: 3 OF 3

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N Series Towers

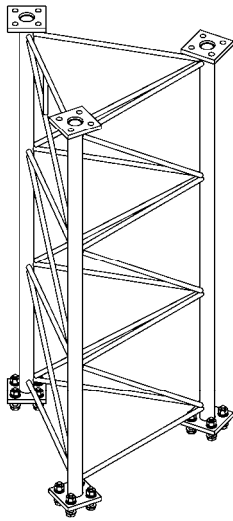
65N Series - Parts List

Part #	Description	Weight (Lbs)
106830	65N 5' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	108.0
105772	65N 5' Double Braced Special Section w/ NSX Footpads - 2" Sch 80 Pipe (2.375" OD) (Assembly)	197.8
106953	65N 5' Heavy Double Braced Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	144.0
104584	65N 10' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	172.5
105773	65N 10' Heavy Transition Section to an NSX - NSX Footpad at Bottom - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	211.0
106291	65N 12' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	220.1
103213	65N 20' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	341.5
105044	65N 20' Heavy Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	396.3
105397	65N 20' Heavy Double Braced Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	481.9
104567	65N Tapered Base Section w/ ACWS	203.2
104570	65N Tapered Base Section - for A41971 Base Insulator	232.9
104573	65N Tapered Base Section w/ ACWS (10' - For use with A4722B Insulator)	250.0
103214	65N 5' Standard Base Embedment Section - 1-1/2" Sch 40 (1.900" O.D.) (Assembly)	96.8
105822	65N Anchor Steel Assembly - 5/8" Anchor Bolts	76.0
103742	65N Joint Bolt Kit	0.9
104571	65N Cap Plates for a lightning rod (Set of 3 w/ hardware)	12.0
104568	Bolt-on Guy Lug Assembly for up to 1/2" EHS and 2.375" Legs.	24.0
105894	NSX-2 Transition to a 65N Section (Assembly)	46.0
105389	Face Dish Mount Assembly for 65N - 2-3/8" O.D. Mounting Pipe	54.0
105390	Face Dish Mount Assembly for 65N - 3-1/2" O.D. Mounting Pipe	77.0
103215	65N Anti-Climb Panels (3) w/ Hardware & ACWS	71.6
106957	65N Wall Mount Base Support Assembly	268.0
106960	65N Wall Mount Upper Support Assembly	92.0
105483	65N Torque Arm Assembly	195.0
104963	HD Universal House Bracket Assembly (65N)	103.0
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7
105818	65N to 55N Transition Assembly	110.0
106949	65N Side Arm Assembly	82.0

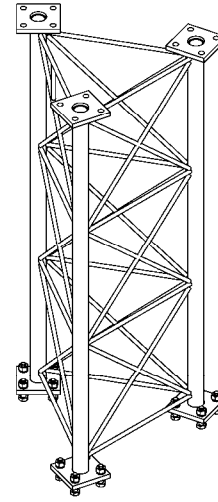
N Series



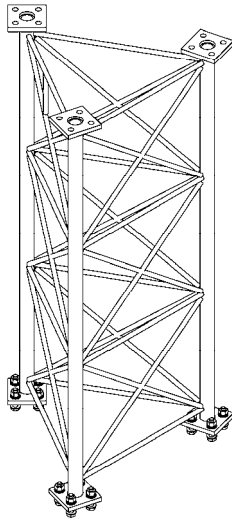
65N Series



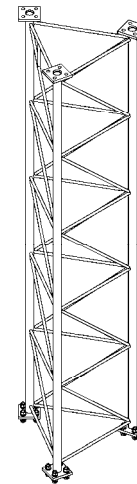
Part #	Description	Weight (Lbs)
106830	65N 5' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	108.0



Part #	Description	Weight (Lbs)
105772	65N 5' Double Braced Special Section w/ NSX Footpads - 2" Sch 80 Pipe (2.375" OD)	197.8



Part #	Description	Weight (Lbs)
106953	65N 5' Heavy Double Braced Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	144.0



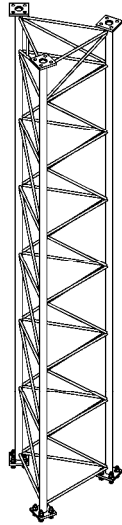
Part #	Description	Weight (Lbs)
104584	65N 10' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	172.5
105773	65N 10' Heavy Transition Section to an NSX - NSX Footpad at Bottom - 1-1/2" Sch 80 Pipe	211.0

N Series Towers

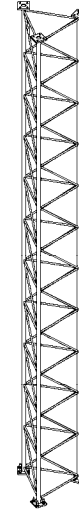
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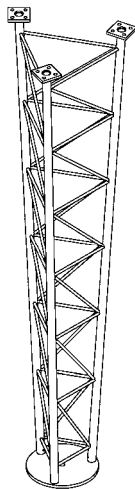
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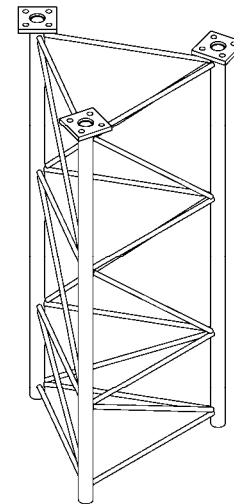
Part #	Description	Weight (Lbs)
106291	65N 12' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	220.1



Part #	Description	Weight (Lbs)
103213	65N 20' Standard Section - 1-1/2" Sch 40 Pipe (1.900" OD) (Assembly)	341.5
105044	65N 20' Heavy Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	396.3
105397	65N 20' Heavy Double Braced Section - 1-1/2" Sch 80 Pipe (1.900" OD) (Assembly)	481.9



Part #	Description	Weight (Lbs)
104567	65N Tapered Base Section w/ ACWS	203.2
104570	65N Tapered Base Section - for A41971 Base Insulator	232.9
104573	65N Tapered Base Section w/ ACWS (10' - For use with A4722B Insulator)	250.0



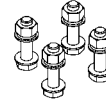
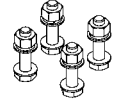
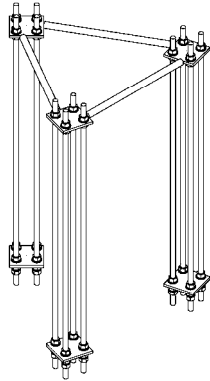
Part #	Description	Weight (Lbs)
103214	65N 5' Standard Base Embedment Section - 1-1/2" Sch 40 (1.900" O.D.) (Assembly)	96.8

N Series Towers

N Series

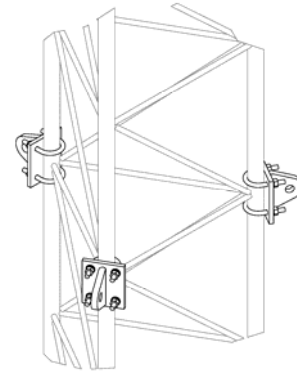
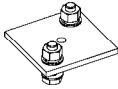
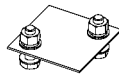


65N Series



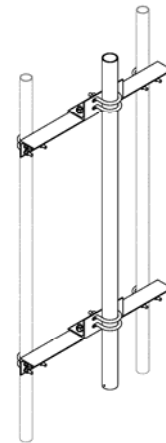
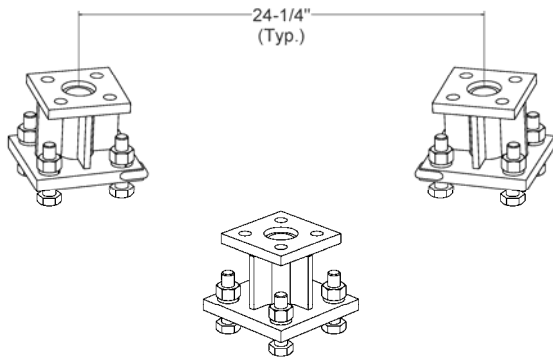
Part #	Description	Weight (Lbs)
105822	65N Anchor Steel Assembly - 5/8" Anchor Bolts	76.0

Part #	Description	Weight (Lbs)
103742	65N Joint Bolt Kit	0.9



Part #	Description	Weight (Lbs)
104571	65N Cap Plates for a lightning rod (Set of 3 w/ hardware)	12.0

Part #	Description	Weight (Lbs)
104568	Bolt-on Guy Lug Assembly for up to 1/2" EHS and 2.375" Legs.	24.0



Part #	Description	Weight (Lbs)
105894	NSX-2 Transition to a 65N Section (Assembly)	46.0

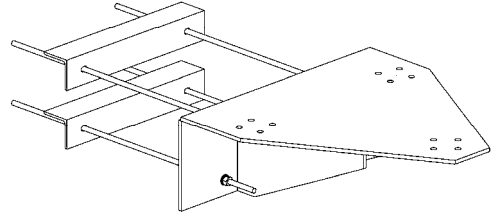
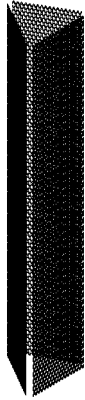
Part #	Description	Weight (Lbs)
105389	Face Dish Mount Assembly for 65N - 2-3/8" O.D. Mounting Pipe	54.0
105390	Face Dish Mount Assembly for 65N - 3-1/2" O.D. Mounting Pipe	77.0

N Series Towers

N Series

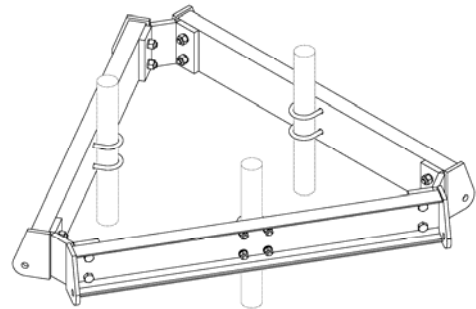
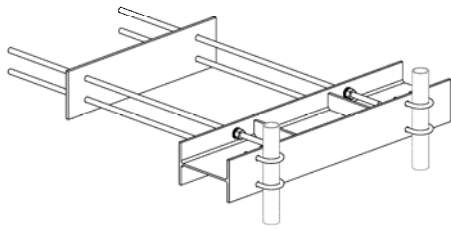


65N Series



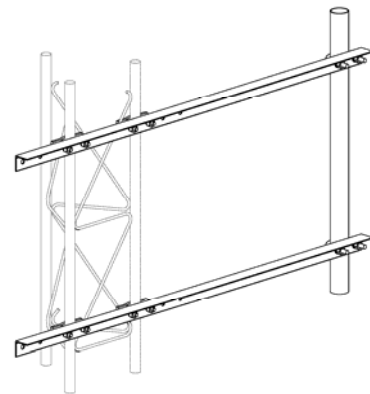
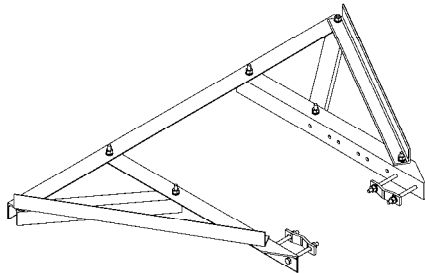
Part #	Description	Weight (Lbs)
103215	65N Anti-Climb Panels (3) w/ Hardware & ACWS	71.6

Part #	Description	Weight (Lbs)
106957	65N Wall Mount Base Support Assembly	268.0



Part #	Description	Weight (Lbs)
106960	65N Wall Mount Upper Support Assembly	92.0

Part #	Description	Weight (Lbs)
105483	65N Torque Arm Assembly	195.0



Part #	Description	Weight (Lbs)
104963	HD Universal House Bracket Assembly (65N)	103.0

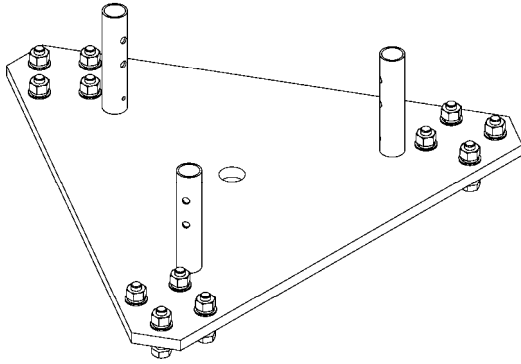
Part #	Description	Weight (Lbs)
105845	Universal Side Arm Assembly, 2-1/4" O.D. x 36" Long Tube (25N, 45N, 55N & 65N)	26.7

N Series Towers

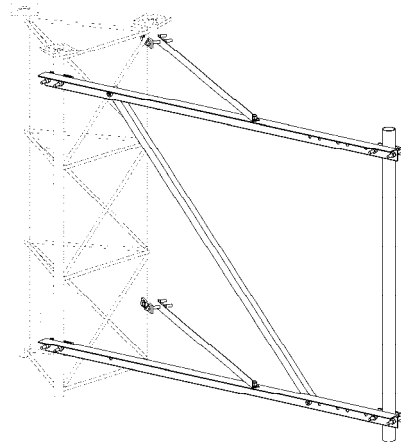
N Series



65N Series



Part #	Description	Weight (Lbs)
105818	65N to 55N Transition Assembly	110.0



Part #	Description	Weight (Lbs)
106949	65N Side Arm Assembly	82.0

N Series
Towers



N - SERIES SELF-SUPPORTING TOWERS ALLOWABLE ANTENNA AREAS (SQ.FT. - C₁A₁)

Height (Ft.)	70 MPH										80 MPH										90 MPH														
	No Ice					1/2" Ice					No Ice					1/2" Ice					No Ice					1/2" Ice									
	20N	25N	45N	55N	65N	20N	25N	45N	55N	65N	20N	25N	45N	55N	65N	20N	25N	45N	55N	65N	20N	25N	45N	55N	65N	20N	25N	45N	55N	65N					
10		8.7	42.5	75.0	175.9	22.8	55.0	99.0	231.4	14.3	30.0	57.0	133.0	6.5	40.0	74.0	174.3	10.5	25.0	45.0	103.6						10.5	30.0	57.0	135.0					
20		14.2	22.0	43.0	117.0	14.4	25.0	52.0	150.0	9.0	16.0	30.0	85.0	7.1	16.0	35.0	105.0	6.9	11.0	23.0	65.0	2.1	10.0	26.0	85.0										
30		6.4	12.0	26.0	76.2	2.5	9.0	27.0	95.0	3.7	7.5	17.0	55.8	2.7	16.0	65.0		1.7	4.0	12.0	40.0										9.0	49.0			
35		3.6	8.7	21.9	61.2	4.7	22.2	76.4		14	4.7	14.5	44.0		12.4	53.4		19	9.4	32.2										5.7	37.7				
40		1.5	5.1	16.0	48.8		8.0	59.1		14	8.0	34.1		2.5	39.0					4.0	24.1										25.0				
45		2.3	11.4	39.0		5.5	45.7		5.9	28.2		28.8								2.2	17.7										17.2				
50			6.5	29.3			33.5		15	17.7		16.1								14.5										8.0					
55			4.0	24.4			25.0		14.5			11.4								7.7										2.6					
60				16.4			16.0		9.4			4.1								3.3										0.0					
70				8.7			1.9		1.3			0.0								0.0										0.0					
80				0.9			0.0		0.0			0.0								0.0										0.0					

Notes:

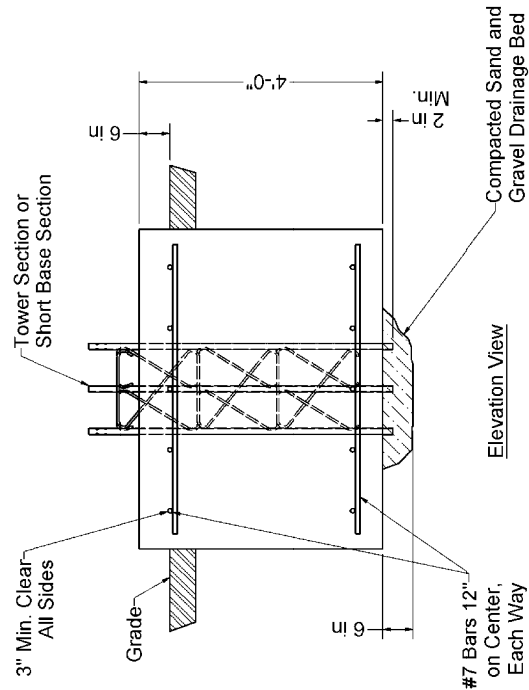
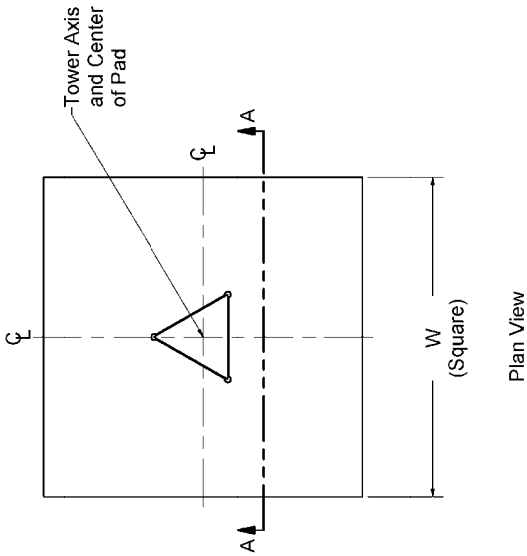
- Nello Corporation designs conform to ANSI/TIA/EIA-222-F, unless otherwise specified under tower design loading.
- The design loading criteria has been provided to Nello Corporation. The design loading criteria has been assumed to be based on site-specific data in accordance with ANSI/TIA/EIA-222-F and must be verified by others prior to installation.
- Tower member design does not include stresses due to erection since erection equipment and condition are unknown.
- Design assumes competent and qualified personnel will erect the tower.
- Work shall be in accordance with ANSI/TIA/EIA-222-F, "Structural Standards For Steel Antenna Towers and Antenna Supporting Structures."
- Field connections shall be bolted. No field welds shall be allowed.
- Structural steel shall be hot-dipped galvanized after fabrication in accordance with ANSI/TIA/EIA-222-F.
- Purchaser shall verify the installation is in conformance with local, state and federal requirements for construction marking and lighting.
- Tolerance on tower steel height is equal to plus 1/4" minus 1/8".
- Design assumes, as a minimum, maintenance and inspection will be performed over the life of the structure in accordance with ANSI/TIA/EIA-222-F.
- Design assumes level grade at tower site.
- Tower must have "fixed" base. Pinned base must not be used.
- Design assumes two 7/8" transmission lines on each face of tower for a total of six lines.
- Antennas and mounts are assumed to be symmetrically placed at tower apex.
- Do not install or dismantle towers within falling distance of electrical and/or telephone lines.
- Install Anti-climb warning sign in highly visible location.

DRAWN	RCH	DATE	8/25/2004	TITLE	N-Series Self-Supporting Towers Allowable Antenna Area
CHECKED	RCH	DATE	8/25/2004	PROJECT	
APPROVED		DATE	8/25/2004	DESIGN NO	106378
WEIGHT		PRJ. NO		REV	0
				PRJ. NO	106378
				SHEET	1 OF 1



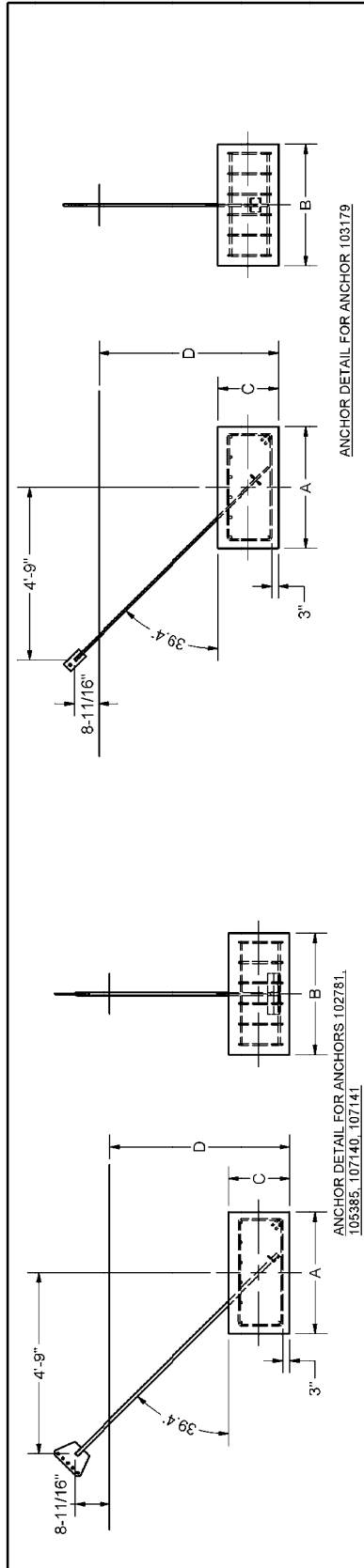
Tower No.	Overturning moment Foot Pounds	Max. Allowable Shear pounds	W	Concrete Required Cu. Yds.
20N	6,800	700	4'-0"	2.4
25N	6,800	700	4'-0"	2.4
45N	12,800	1,600	5'-3"	4.1
55N	22,900	1,600	6'-0"	5.3
65N	49,600	3,800	7'-9"	8.9

- Foundation Designs are in accordance with ANSI/EIA-272-F "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures", Section 7, for "Normal" soil conditions. "Normal" soil is defined as dry, cohesive soil with an allowable net vertical bearing capacity of 4000 PSF and an allowable net horizontal pressure of 400 psf per lineal foot of depth to a maximum of 4000 PSF.
- Foundation designs assume that a field inspection will be performed in order to verify that the actual site soil parameters meet or exceed EIA "Normal" soil parameters and that the depth of standard foundations are adequate based on the frost penetration and/or zone of seasonal moisture variation at the site.
- Concrete material shall conform to the appropriate state requirements for exposed structural concrete.
- Reinforcement shall be deformed and conform to the requirements of ASTM A615 Grade 60 unless otherwise noted. Splices in reinforcement shall not be allowed unless otherwise indicated.
- Welding is prohibited on reinforcing steel and embedments.
- Foundation designs assume structural backfill to be compacted in 12" Lifts to a 97% of maximum dry density at optimum moisture content in accordance with ASTM D698.
- Foundation designs assume level ground at tower site.
- Loose material shall be removed from bottom of excavation prior to concrete placement.
- Concrete cover from exposed surface of concrete to surface of reinforcement shall not be less than 3".
- Concrete shall develop a minimum compressive strength of 3,000 psi in 28 days.



DRAWN	ORIG DATE	TITLE	 NELLO CORPORATION 72377 Airline Dr. Nappanee, IN 46550 Pus: (574) 773-6527 Fax: (574) 773-6560
RCH	12/10/2003	Foundation Details	
CHECKED		Self-Supporting 20N, 25N, 45N, 55N & 65N Towers	
JML	2/12/2004		
MFG			
APPROVED	12/10/2003		
WEIGHT			
			PAGE NO 103337
			REV @
			PRJ NO
			SHEET 1 OF 1

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ANCHOR DETAIL FOR ANCHOR 103179

ANCHOR DETAIL FOR ANCHORS 102781, 105885, 107140, 107141

INNER GUY RADIUS

GUY ANCHOR DATA

Depth, D (ft)	Rod Part Number	Block No.	Anchor Dimensions (ft)			Concrete (cu yd)	Maximum Allowable Uplift (lb)	Maximum Allowable Shear (lb)	Longitudinal Bars			Ties		
			A	B	C				Quantity in Top Layer	Quantity in Front Layer	Quantity in Back Layer	Size	Quantity	Size
3	103179	3a	1.5	1.5	1.0	0.08	1,000	1,500	#4	2	2	2	#3	3
		3b	2.0	2.0	1.0	0.15	1,500	2,000	#4	3	2	2	#3	4
		3c	2.5	2.5	1.0	0.23	2,100	2,500	#4	3	2	2	#3	4
		3d	3.0	3.0	1.0	0.33	2,850	3,000	#4	4	2	2	#3	5
		3e	3.0	4.0	1.0	0.44	3,600	4,000	#4	4	2	2	#3	7
4	103179 or 102781	4a	3.0	3.0	1.5	0.50	4,150	5,850	#4	4	2	2	#3	6
		4b	3.0	4.0	1.5	0.67	5,250	7,600	#4	4	2	2	#3	8
		4c	3.0	5.0	1.5	0.83	6,950	9,750	#4	4	2	2	#3	8
		4d	3.0	6.0	1.5	1.00	7,450	11,700	#4	4	2	2	#3	10
		4e	4.0	6.0	1.5	1.33	9,450	11,700	#4	5	2	2	#3	10
6	105835	6a	3.0	4.0	1.5	0.87	10,950	12,600	#4	4	2	2	#3	8
		6b	3.0	5.0	1.5	0.83	12,700	15,750	#4	4	2	2	#3	8
		6c	3.0	6.0	1.5	1.00	14,550	18,900	#4	4	2	2	#3	10
		6d	4.0	6.0	1.5	1.33	17,500	18,900	#4	5	2	2	#3	10
		6e	5.0	5.0	1.5	0.83	23,400	21,750	#4	4	2	2	#3	8
8	107140	8a	3.0	6.0	1.5	1.00	26,150	26,100	#4	4	2	2	#3	10
		8b	4.0	6.0	1.5	1.33	30,400	26,100	#4	5	2	2	#3	10
		8c	6.0	6.0	2.0	2.67	36,700	33,600	#4	7	3	2	#3	10
		10a	3.0	6.0	2.0	1.33	39,500	43,200	#4	4	3	2	#3	10
		10b	4.0	6.0	2.0	1.78	45,200	43,200	#4	5	3	2	#3	10
10	107141	10c	4.0	7.0	2.0	2.07	49,600	50,400	#4	5	3	2	#3	12
		10d	5.0	7.0	2.0	2.59	55,900	50,400	#4	6	3	2	#3	12
		10e	5.0	9.0	2.0	3.33	66,000	64,800	#4	6	3	2	#3	14

- Notes:
- Capacities assume normal soil conditions as defined by TIA/EIA-222-F.
 - Angle of anchor rod installation depends on tower reactions.
 - Anchor rod must pass through center of block and rest on rebar cage.
 - The ends have 135 standard hook with 1-1/8" bend radius and 2-1/4" extension.

		TITLE: Standard Guyed Tower Guy Anchor Foundations	
72377 Avilinc Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5640		DWG NO.: 107249P SHEET: 1 OF 1	
REV: 2 BY: SMC DATE: 5/2/2005	DESCRIPTION: Revised Per:	DRAWN BY: JML CHECKED: ENG. APP:	ORIG. DATE: DWG. PROC:

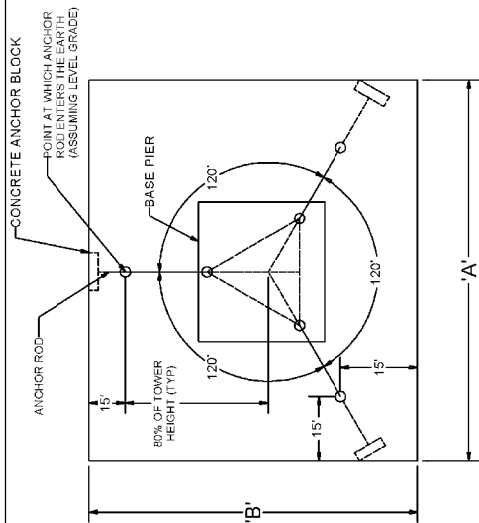
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N Series

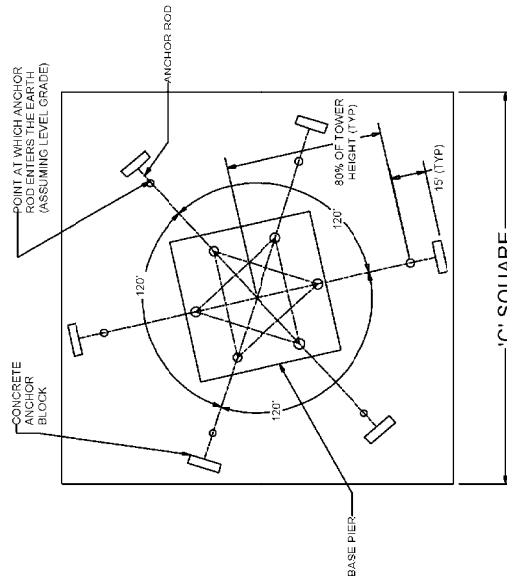


Tower Height	Layout A		Layout B	
	Acres	A (ft.)	B (ft.)	C (ft.)
550	12.59	795	690	910
600	14.89	865	750	990
650	17.39	935	810	1070
700	19.97	1000	870	1150
750	22.85	1070	930	1230
800	25.91	1140	990	1310
850	29.17	1210	1050	1390
900	32.62	1280	1110	1470
950	36.26	1350	1170	1550
1000	40.10	1420	1230	1630
1050	43.98	1485	1290	1710
1100	48.19	1555	1350	1790
1150	52.60	1625	1410	1870
1200	57.20	1695	1470	1950

Tower Height (ft.)	Layout A		Layout B	
	Acres	A (ft.)	B (ft.)	C (ft.)
20	0.08	60	55	65
30	0.12	75	70	80
40	0.17	90	80	95
50	0.21	100	90	110
60	0.28	115	105	130
70	0.35	130	115	145
80	0.43	145	130	160
90	0.50	155	140	175
100	0.59	170	150	190
110	0.70	185	165	210
120	0.80	200	175	225
130	0.94	215	190	240
140	1.04	225	200	255
150	1.16	240	210	270
160	1.32	255	225	290
170	1.46	270	235	305
180	1.64	285	250	320
190	1.76	295	260	335
200	1.92	310	270	350
210	2.13	325	285	370
220	2.31	340	295	385
230	2.50	350	310	400
240	2.68	365	320	415
250	2.88	380	330	430
260	3.13	395	345	450
270	3.34	410	355	465
280	3.57	420	370	480
290	3.80	435	380	495
300	4.03	450	390	510
320	4.53	475	415	545
330	4.84	480	430	560
340	5.10	505	440	575
350	5.37	520	450	590
370	5.94	545	475	625
380	6.30	560	490	640
390	6.60	575	500	655
400	6.91	590	510	670
410	7.23	600	525	690
420	7.55	615	535	705
430	7.96	630	550	720
440	8.29	645	560	735
450	8.64	660	570	750
460	9.00	670	585	770
470	9.36	685	595	785
480	9.80	700	610	800
490	10.18	715	620	815
500	10.49	725	630	830



THIS IS THE MINIMUM AREA OF LAND REQUIRED, HOWEVER, THIS AREA WILL NOT ALWAYS PERMIT ORIENTING TOWER INTO THE BEST POSITION FOR ANTENNA PATH DIRECTION.



THIS IS THE MINIMUM AREA OF LAND REQUIRED TO PERMIT ORIENTING THE TOWER IN ANY POSITION FOR ANTENNA PATH DIRECTION.

NELLO CORPORATION
 72377 Alhita Dr.
 Nappanee, IN 46550
 Pkx. (574)773-6627
 Fax. (574)773-5840

TITLE: Land Area Required for 80% Guyed Towers

DRAWN BY: SMC
 MFG APP: AJK
 ENG APP:

ORIG. DATE: 2/14/2005
 DWG NO.: 107677
 SHEET: 1 OF 1

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DESCRIPTION

REV	BY	DATE	MPD

N Series Towers

N Series

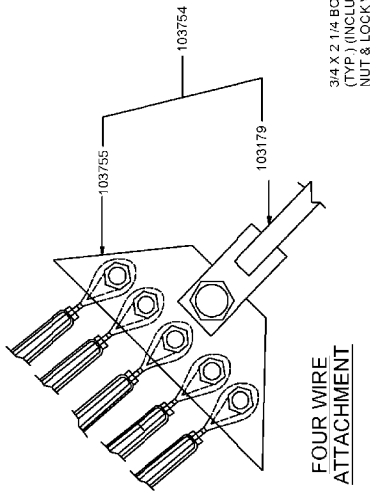
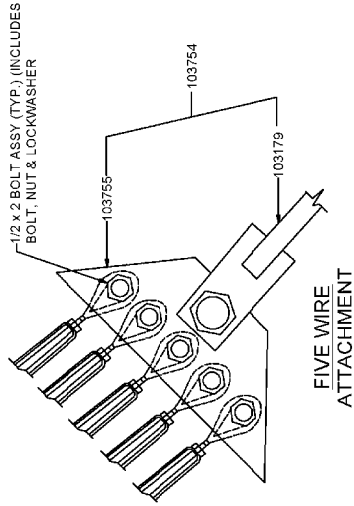
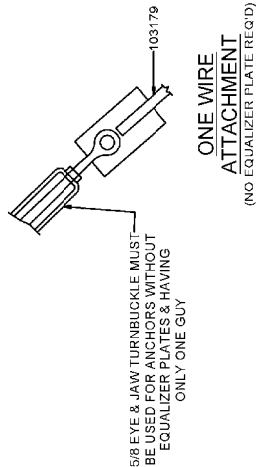
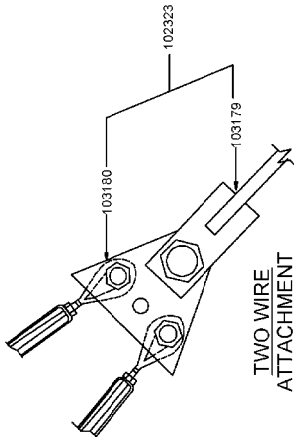
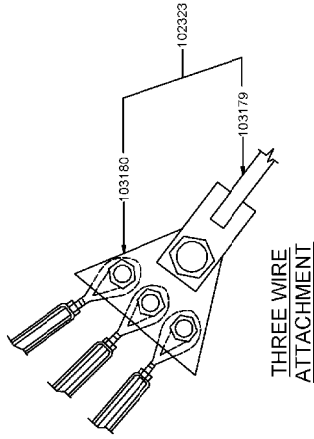


NELLO CORPORATION
 1301 Stahly Drive
 Nappanee, IN 46550
 Phone: (574)773-4827
 Fax: (574)773-5840

TITLE: Anchor Attachment Detail for Guy Anchors with Equalizer Plates
 CAD APP: RCH
 MFG APP:
 ENG APP: JML

DRAWN BY: SMC
 NPD NO:
 ORG. DATE: 2/14/2005
 DWG NO: 107675
 WEIGHT:
 SHEET: 1 OF 1

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Note:
 Stake all nuts after assembly.

REV	BY	DATE	NPD	DESCRIPTION
1	RCH	11/3/2005	771	Revised P/N 103179

CONCRETE BASE SCHEDULE											
Base	Max Allowable Compression	Allowable Shear	Dimensions (ft)		Bearing Plate	Concrete (cu yd) Round	Concrete (cu yd) Square	Vertical Bars		Circular Ties	
			A	D				Size	Quantity	Size	Quantity
CB1	4.5	0.4	2	4		0.52	0.67	#7	5	#3	6
CB2	12.5	0.4	2.5	4		0.82	1.04	#7	8	#3	6
CB3	21.5	0.4	3	4		1.18	1.50	#7	11	#3	6
CB4	31.5	0.4	3.5	4		1.60	2.04	#8	12	#3	5
CB5	43	0.4	4	4		2.09	2.67	#8	15	#3	5

Pier Pin
Bearing Plate
Grade
4"
6"
3"

A
3"

Circular ties, top 2 spaced at 5" with the remainder spaced equally to the bottom of pier. Circular ties must have a 12.82" overlap. (see chart for size and quantity)

Vertical bars equally spaced (see chart for size and quantity)

Notes:

- Bearing plate provided only on towers with tapered base.
- Pier may also be constructed as a square.
- Capacities assume normal soil conditions as defined by ANS/IEA/ITA-222-F.

REV	BY	DATE	DESCRIPTION
1	SMC	5/2/2005	Revised text.

NELLO CORPORATION	
Standard Curved Tower Base Foundations	72377 Avline Dr. Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5840

DRAWN BY: SMC	DWG NO: 107517
CHECKED:	ORIG. DATE: 1/24/2005
ENG. APP:	DWG. PROG:
SHEET: 1 OF 2	

Base	Max Allowable Compression	Allowable Shear	Dimensions (ft)						Concrete (cu yd) Round	Concrete (cu yd) Square	Vertical Bars		Circular Ties	
			A	B	C	D	E	F			Size	Quantity	Size	Quantity
			Bearing Plate											
CB6	74.5	0.7	2	4.5	1.25	4	3.25	1.25	1.32	1.42	#7	5	#3	5
CB7	93	0.7	2	5	1.5	4.5	3.75	1.25	1.59	1.71	#7	5	#3	5
CB8	114	0.7	2	5.5	1.75	4.5	3.75	1.25	1.84	1.96	#7	5	#3	5
CR9	137	0.7	2	6	2	4.5	3.5	1.5	2.41	2.52	#7	5	#3	5
CB10	161	0.7	2	6.5	2.25	4.5	3.5	1.5	2.75	2.87	#7	5	#3	5
CB11	184	1.3	2.5	7	2.25	5	3.75	1.75	3.86	4.04	#7	8	#3	5
CB12	213	1.3	2.5	7.5	2.5	5	3.75	1.75	4.33	4.51	#7	8	#3	5
CB13	243	1.3	2.5	8	2.75	5	3.75	1.75	4.83	5.02	#7	8	#3	5
CB14	275	1.3	3	8.5	2.75	5	3.5	2	6.27	6.52	#7	11	#3	5
CB15	309	1.3	3	9	3	5	3.5	2	6.92	7.17	#7	11	#3	5

Circular ties, top 2 spaced at 5" with the remainder spaced equally to the top of pad. Circular ties must have a 12.82" overlap (see chart for size and quantity)

Vertical bars equally spaced with 2.625" bend radius and 10.5" long 90 degree standard hook. (see chart for size and quantity)

Horizontal bars equally spaced each way. (see chart for size and quantity)

CONCRETE BASE SCHEDULE

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Drawn by: SMC
Checked:
Eng. App:

Original Date: 1/24/2005
DWG. NO.: 107517
Sheet: 2 of 2



Foundation Notes

1. Foundation design assumes normal soil conditions as defined by ANSI/EIA/TIA-222-F. Normal soil is defined as dry, cohesive soil with an allowable net vertical bearing capacity of 4000 psf and an allowable net horizontal pressure of 400 psf per lineal foot of depth to a maximum of 4000 psf.
2. A field inspection shall be performed in order to verify that the actual site soil parameters meet or exceed the assumed soil parameters and that the depth of standard foundations are adequate based on the frost penetration and groundwater depth. Local frost depth must be no deeper than the bottom of the base foundation or top of the anchor.
3. Reinforcement shall be deformed and conform to the requirements of ASTM A615 Grade 60 unless otherwise noted. Splices in reinforcement shall not be allowed unless otherwise indicated.
4. Welding is prohibited on reinforcing steel and anchorage.
5. Structural backfill must be compacted in 12" loose lifts to a 97% of maximum dry density at optimum moisture content in accordance with ASTM D698. Backfill must be clean and free of organic and frozen soils and foreign materials.
6. Foundation designs assume level ground at tower site.
7. Loose material shall be removed from bottom of excavation prior to concrete placement.
8. Concrete cover from exposed surface of concrete to surface of reinforcement shall not be less than 3".
9. Concrete and reinforcement installation must conform to ACI 318, "Building Code Requirements for Structural Concrete."
10. Concrete shall develop a minimum compressive strength of 3000 psi in 28 days.
11. Concrete shall be placed on the same day that the excavation is made.

REV		BY	DATE	DESCRIPTION	DRAWN BY: JML		 NELLO CORPORATION 1381 Stahly Drive Nappanee, IN 46550 Bus: (574)773-4827 Fax: (574)773-5640	
					CHECKED:		ORIG. DATE: 8/17/2004	DWG NO.: 107250
					ENG. APP:		DWG. PROG.	SHEET: 1 OF 1
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Telescoping Masts

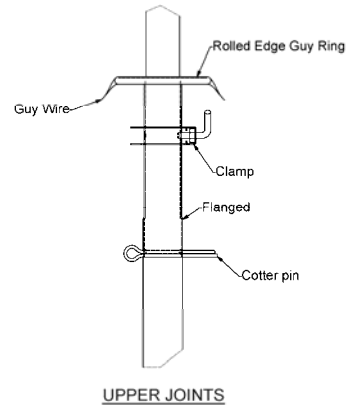


Telescoping Masts



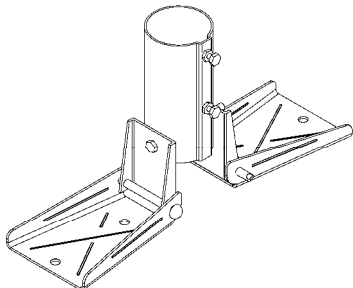
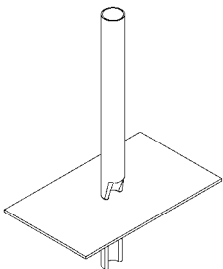
Material Included:	Pre-galvanized pipe sections. Clamps and guy rings.	Design:	Light weight masts for quick installation
Order Separately:	Bases and wire	Mounts to:	n/a

Part #	Description	Weight (Lbs)
103541	20' Telescoping Mast	15.0
103542	30' Telescoping Mast	24.0
103543	40' Telescoping Mast	32.0
102527	50' Telescoping Mast	42.0



Mast Accessories

Telescoping Mast



Part #	Description	Weight (Lbs)
105285	Drive-in Telescoping Ground Mount	1.7

Part #	Description	Weight (Lbs)
105164	Universal Ridge Mount (Fits up to 1-3/8" Mast)	1.3
105163	Universal Ridge Mount (Fits up to 1-7/8" Mast)	1.8
104755	Universal Ridge Mount (for 2-1/4" Mast)	2.1

Telescoping Masts



Mast Accessories



Part #	Description	Weight (Lbs)
104722	Earth Screw Anchor, 11/16" x 48" Long	6.5



Part #	Description	Weight (Lbs)
103584	6 Strand, 18 Ga. Guy Wire, 1000'	31.5
103585	6 Strand, 20 Ga. Guy Wire, 1000'	25.0

Telescoping Mast

Lighting



Red Light Kits

These FAA Red Obstruction Lighting Systems provide a complete tower lighting solution for up to 700'. In addition to the beacons and OB lights each kit includes a controller, photocell and all junction boxes, conduit and related hardware. These systems comply with FAA Advisory Circular AC 70/7460-1K.

Part #	Description	Weight (Lbs)	Height Range (Ft)	FAA Type	Beacons	OB Levels
107704	A-0 Red Double Obstruction Light Kit, 150'.	0.0	0 - 150	A-0	0	1
107049	A-1 Red Incandescent Light Kit, 151' - 350'. TWR	775.0	151 - 350	A-1	1	1
106779	A-2 Red Incandescent Light Kit, 351' - 700'.	955.0	351 - 700	A-2	2	2

A-2

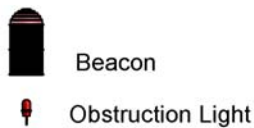
Flashing beacon at two levels. Three steady burning obstruction lights at two levels. Spacing between light is 1/4 overall tower height.

A-1

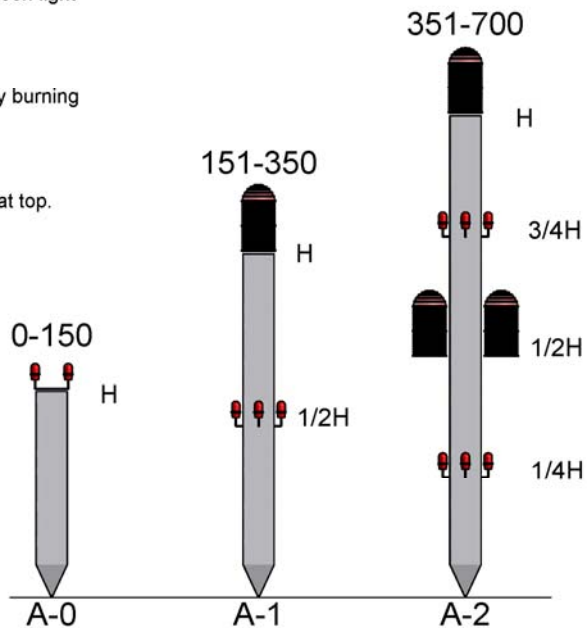
One Flashing beacon at top plus three steady burning obstruction lights at 1/2 height.

A-0

One steady Burning double obstruction light at top.



H = Overall Height of Tower (Feet)



Lighting / Paint



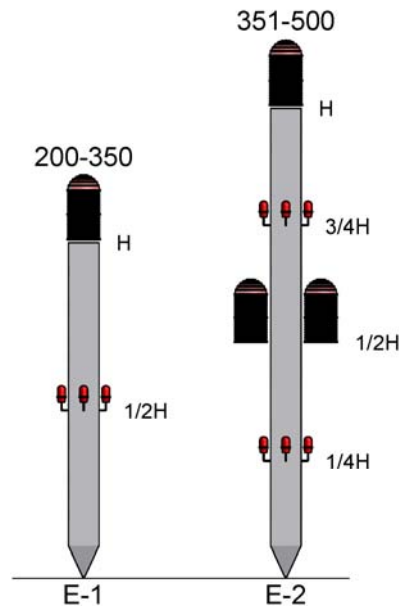
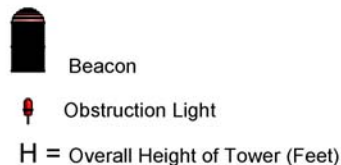
Medium Intensity Dual Light Kits

These FAA Medium Intensity Dual Light Kits provide a complete tower lighting solution for up to 500'. In addition to the dual strobe and OB lights each kit includes a controller, photocell, Flashhead Cable, side light cable and all associated hardware. These systems with FAA Advisory Circular AC 70/7460-1K.

Part #	Description	Weight (Lbs)	Height Range (Ft)	FAA Type	Beacons	OB Levels
TWR						
109743	FAA E-1 Dual Lighting kit w ith alarms 200' (50' extra cable) (TWR)	500.0	0 - 200	E-1	1	1
103744	FAA E-1 Dual Lighting kit w ith alarms 201'-250' (50' extra cable) (TWR)	500.0	201 - 250	E-1	1	1
109744	FAA E-1 Dual Lighting kit w ith alarms 251'-300' (50' extra cable) (TWR)	500.0	251 - 300	E-1	1	1
104726	FAA E-1 Dual Lighting kit w ith alarms 301'-350' (50' extra cable) (TWR)	500.0	200 - 350	E-1	1	1
109745	FAA E-2 Dual Lighting kit w ith alarms 351'-400' (50' extra cable) (TWR)	1500.0	351 - 400	E-2	3	2
109746	FAA E-2 Dual Lighting kit w ith alarms 401'-500' (50' extra cable) (TWR)	1500.0	351 - 500	E-2	3	2
Honeywell						
109747	FAA E-1 Dual Lighting kit w ith alarms 200' (50' extra cable) (Honeywell)	400.0	0 - 200	E-1	1	1
109748	FAA E-1 Dual Lighting kit w ith alarms 201'-250' (50' extra cable) (Honeywell)	400.0	201 - 250	E-1	1	1
109749	FAA E-1 Dual Lighting kit w ith alarms 251'-300' (50' extra cable) (Honeywell)	400.0	251 - 300	E-1	1	1
109750	FAA E-1 Dual Lighting kit w ith alarms 301'-350' (50' extra cable) (Honeywell)	400.0	200 - 350	E-1	1	1
109751	FAA E-2 Dual Lighting kit w ith alarms 351'-400' (50' extra cable) (Honeywell)	770.0	351 - 400	E-2	3	2
109752	FAA E-2 Dual Lighting kit w ith alarms 401'-500' (50' extra cable) (Honeywell)	770.0	401 - 500	E-2	3	2

E-2
Flashing beacon at two levels. Three steady burning obstruction lights at two levels. Spacing between light is 1/4 overall tower height.

E-1
One Flashing beacon at top plus three steady burning obstruction lights at 1/2 height.



Lighting / Paint

Lighting

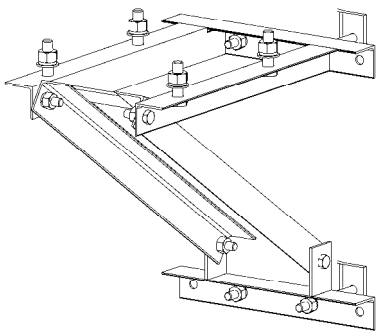


Beacons and Accessories

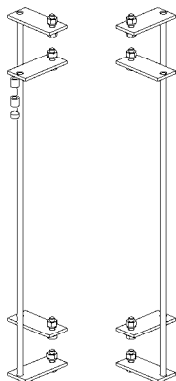


Material Included:	Frame, red lens and hardw are.	Design:	Beacon complies w ith FAA requirements.
Order Separately:	Bulbs, external flasher unit and mount	Mounts to:	Beacon mount

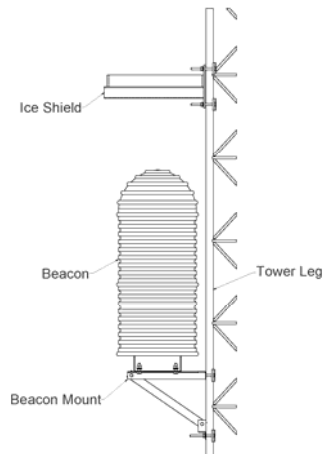
Part #	Description	Weight (Lbs)	FAA Type
105565	300mm Red Incandescent Beacon	100.0	L864



Part Number
100610



Part Number
100473



Part Number
108374

Part #	Description	Weight (Lbs)
Beacon Replacement Parts		
105566	Beacon Bulb, 620 w att w ith Durex Glass	1.0
103582	Red Beacon Filter Lens	3.0
109894	Red Flashing Beacon Dome Lens	9.0
109895	Red Flashing Beacon Upper Lens	15.0
109896	Red Flashing Beacon Low er Lens	10.0
109897	Red Flashing Beacon Gasket Kit	1.0
109898	Red Flashing Beacon Lamp Receptacle	1.0

Part #	Description	Weight (Lbs)
Beacon Accessories		
100610	Beacon Side Mount Assembly, Tapered or Straight (1-1/2 to 4-1/2" OD)	22.0
108374	Beacon Platform Mount Assembly, 1-1/2 to 4-1/2" OD	67.0
100473	Beacon Stacker Assembly	38.0

Lighting / Paint

Paint



Tower Paint

Detailed specifications covering tower marking can be found in the latest revision to FAA Advisory Circular AC 70/7460-1, "Obstruction marking and Lighting". Alternate sections of aviation orange and aviation white paint provide maximum visibility of a structure by contrasting color. To be effective, paint should meet specific color requirements when freshly applied to a structure. However, all outdoor paints deteriorate with time. While it is not practical to give a maintenance schedule for all climates, surfaces should be repainted when the color changes noticeably or its effectiveness is reduced by scaling, oxidation, chipping or layers of industrial contamination. Tolerance charts are available for determining when repainting is required. The color should be sampled on the upper half of the structure since weathering is greater there.

Part #	Description	Weight (Lbs)
104833	FAA Orange Paint - 1 Gallon	11.0
104834	FAA White Paint - 1 Gallon	11.0
106777	Paint Mitt	0.2

Color Band Characteristics

1. Band Width is one-seventh of height of towers 700 feet or less.
For each additional 200 feet, or fraction thereof, add two additional bands.
2. Bands are equal in width, provided each band is not more than 100 feet.
3. There will be an odd number of bands, perpendicular to the axis, with bands at top and bottom ends colored orange.

Tower Height	Band Width
Up to 700 Feet	1/7 of Height
701 to 900 Feet	1/9 of Height
901 to 1100 Feet	1/11 of Height
1101 to 1300 Feet	1/13 of Height

Cold Galvanizing Spray

Part #	Description	Weight (Lbs)
100230	Cold Galvanizing Spray (1 Can)	0.8

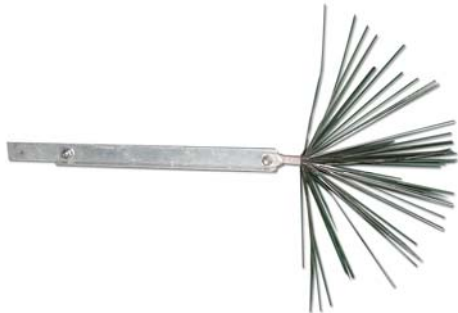


Lighting / Paint

Dissipaters



Gila Stat Dissipaters



Material	Dissipater. Mount	Design:	1/8" Stainless steel rods on applications over 100'
Included:	included for applications over 100'	Mounts to:	Tow er legs, roof mounts, guy w ires and beacon mounts
Order Seperately:	Mounts for applications under 100'		

Part #	Description	Weight (Lbs)	Height Range (Ft)
110001	Gila Stat GS-1	1.0	0 - 100
110002	Gila Stat GS-3 with leg mount	8.0	101 - 200
110003	Gila Stat Eagles Nest with mount	30.0	201+



The **GILA-STAT** is an improved version of a design that has had great success for more than 15 years. Constructed of stainless steel and high quality aluminum, it is extremely rugged to survive the worst weather conditions for many years. Unlike some dissipaters that are made with thin wires that can be damaged by wind, ice and hail, the **GILA-STAT** is made with 1/8" stainless steel individually sharpened rods which will not be damaged by weather, birds or other hazards.

Included is a mount which is custom manufactured to suit the customer's application. Normally a ground wire is not needed if there is an adequate path for the small electrical current, but ground wire and ground rods can be supplied. There must be a path of low resistance to the current to ground, but this is not difficult to attain.

The **GILA-STAT** can be used singly or as a system of dissipaters for large facilities such as tall broadcast or communication towers.



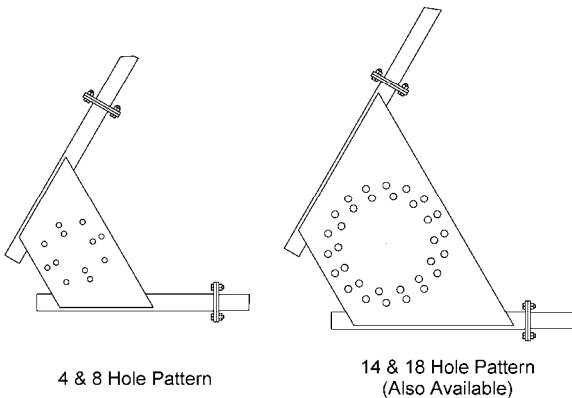
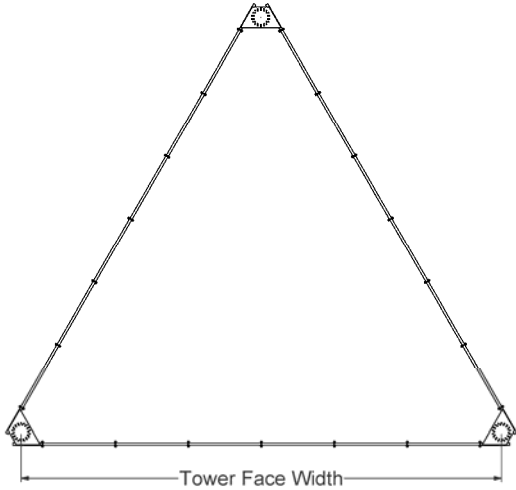
Dissipaters / Templates

Templates



NSX Tower Universal Templates

Material	Corner templates, spacers and hardware	Design:	Universal design with dual hole patterns
Order Separately:	N/A	Mounts to:	N/A



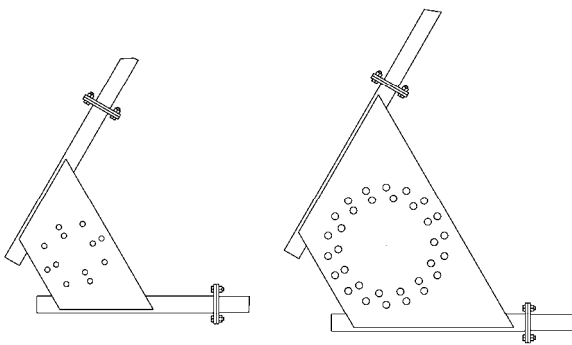
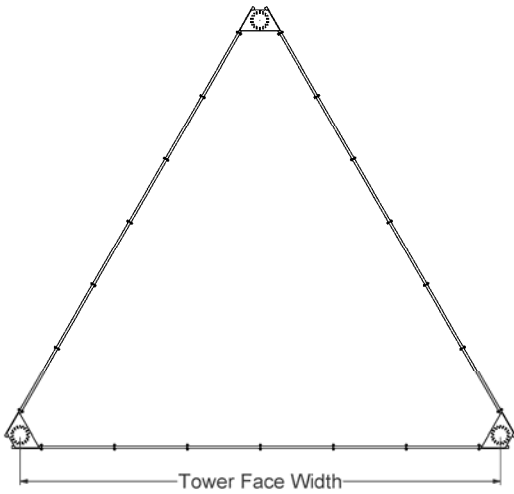
Part #	Description	Weight (Lbs)	Face Width (Ft)
Universal 4 - 8 Hole Pattern			
106193	NSX Tower Template Assembly - NSX-3.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	122.9	3.5
106194	NSX Tower Template Assembly - NSX-5.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	149.9	5.0
106195	NSX Tower Template Assembly - NSX-6.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	166.4	6.5
106196	NSX Tower Template Assembly - NSX-8.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	193.4	8.0
106197	NSX Tower Template Assembly - NSX-9.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	199.3	9.5
106198	NSX Tower Template Assembly - NSX-11.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	226.3	11.0
106199	NSX Tower Template Assembly - NSX-12.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	242.8	12.5
106200	NSX Tower Template Assembly - NSX-14.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	269.8	14.0
106201	NSX Tower Template Assembly - NSX-15.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	275.7	15.5
106202	NSX Tower Template Assembly - NSX-17.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	302.7	17.0
106203	NSX Tower Template Assembly - NSX-18.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	319.2	18.5
106204	NSX Tower Template Assembly - NSX-20.0 (Universal 4 - 8 Hole Pattern) (Pipe Style)	346.2	20.0
106205	NSX Tower Template Assembly - NSX-21.5 (Universal 4 - 8 Hole Pattern) (Pipe Style)	352.1	21.5

Templates



NSX Tower Universal Templates

Material Included:	Corner templates, spacers and hardware for various face widths	Design:	Universal design with dual hole patterns
Order Separately:	N/A	Mounts to:	N/A



4 & 8 Hole Pattern

14 & 18 Hole Pattern

Part #	Description	Weight (Lbs)	Face Width (Ft)
Universal 14 - 18 Hole Pattern			
106482	NSX Tower Template Assembly - NSX-11 (Universal 14 - 18 Hole Pattern) (Pipe Style)	338.1	11.0
106208	NSX Tower Template Assembly - NSX-12.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	354.6	12.5
106209	NSX Tower Template Assembly - NSX-14.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	381.6	14.0
106210	NSX Tower Template Assembly - NSX-15.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	387.5	15.5
106211	NSX Tower Template Assembly - NSX-17.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	414.5	17.0
106212	NSX Tower Template Assembly - NSX-18.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	431.0	18.5
106213	NSX Tower Template Assembly - NSX-20.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	458.0	20.0
106214	NSX Tower Template Assembly - NSX-21.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	463.9	21.5
106215	NSX Tower Template Assembly - NSX-23.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	490.9	23.0
106216	NSX Tower Template Assembly - NSX-24.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	507.4	24.5
106217	NSX Tower Template Assembly - NSX-26.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	534.4	26.0
106218	NSX Tower Template Assembly - NSX-27.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	540.3	27.5
106219	NSX Tower Template Assembly - NSX-29.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	567.3	29.0
106220	NSX Tower Template Assembly - NSX-30.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	583.8	30.5
106221	NSX Tower Template Assembly - NSX-32.0 (Universal 14 - 18 Hole Pattern) (Pipe Style)	610.8	32.0
106222	NSX Tower Template Assembly - NSX-33.5 (Universal 14 - 18 Hole Pattern) (Pipe Style)	616.7	33.5

NSX Tower Multi-Universal Templates

Material Included:	Corner templates, spacers and hardware for various face widths	Design:	Universal design with dual hole patterns
Order Separately:	N/A	Mounts to:	N/A

Part #	Description	Weight (Lbs)	Face Width Range (Ft)	
			Min.	Max.
Multi-Universal 4 - 8 Hole Pattern				
106412	NSX Tower Template Assembly (Pipe Style) (Multi-Universal) - NSX-3.5 to NSX-21.5	422.4	3.5	21.5
Mult-Universal 14 - 18 Hole Pattern				
106347	NSX Tower Template Assembly (Pipe Style) (Multi-Universal) - NSX-12.5 to NSX-33.5	687.0	12.5	33.5

Safety Climbs

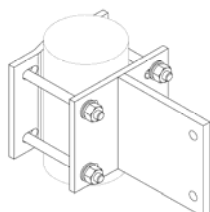


Safety Climbs, Self Supporting and Pole Towers

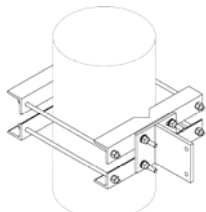
Safety climbs meet or exceed the performance requirements of OSHA, FAA RR-S-001301 and ANSI A14.3-1984. The safety climb system consists of a tensioned steel cable running the length of the climbing area. The top bracket incorporates a rubber impact attenuator to help absorb shock while arresting falls. Non-metallic cable guides reduce cable wear and allow unhindered passage by the climber.



Guyed Version Pictured



Part Number 103376



Part Number 103377



Part Number 104041



Part Number 104042



Part Number 104868

Part #	Description	Weight (Lbs)
Safety Climbs, Self Supporting and Pole Towers		
103583	NSX Safety Climb Kit, 100'. Includes Cable and Guides.	50.0
103574	NSX Safety Climb Kit, 200'. Includes Cable and Guides.	70.0
103574	NSX Safety Climb Kit, 200'. Includes Cable and Guides.	70.0
106414	NSX Safety Climb Kit, 400'. Includes Cable and Guides.	130.0
Safety Climbs, Guyed Towers		
106054	NGX Safety Climb Kit, 100'. Includes Cable, Guides and Top/Bottom Mounting Brackets	60.0
103712	NGX Safety Climb Kit, 200'. Includes Cable, Guides and Top/Bottom Mounting Brackets	90.0
103709	NGX Safety Climb Kit, 300'. Includes Cable, Guides and Top/Bottom Mounting Brackets	125.0
103711	NGX Safety Climb Kit, 400'. Includes Cable, Guides and Top/Bottom Mounting Brackets	150.0
106053	NGX Safety Climb Kit, 500'. Includes Cable, Guides and Top/Bottom Mounting Brackets	190.0
Safety Climb Mounting Brackets		
103376	Bolt-on Safety Climb Assembly (1-1/2" OD to 4-1/2" OD)	14.0
103377	Bolt-on Safety Climb Assembly (5" OD to 13" OD)	41.0
Safety Climb Accessories		
104041	2D Full Body Harness	5.0
104042	Small Autolock Carabiner	2.0
104868	Wire Grab Fall Arrestor	2.0

Hardware



Bolts

Material	Hot dip	Design:	Grade 5 and A325
Included:	galvanized bolt	Mounts to:	n/a
Order	Nuts and		
Seperately:	washers		



Part #	Description	Weight (Lbs)
100137	3/8"-16 x 1" Grade 5 bolt, HDG (1" Thd)	0.1
100233	3/8"-16 x 1-1/2" Grade 5 bolt, HDG (1" Thd)	0.1
100406	3/8"-16 x 2" Grade 5 bolt, HDG (1-1/8" Thd)	0.1
100242	1/2"-13 x 1-1/2" Grade 5 bolt, HDG (Full Thd)	0.1
100110	1/2"-13 x 2" Grade 5 bolt, HDG (1-1/4" Thd)	0.2
100580	1/2"-13 x 2" A325 HDG Bolt (1" Thd)	0.2
100302	1/2"-13 x 2-1/2" A325 Bolt, HDG (1" Thd)	0.2
100111	1/2"-13 x 4-1/2" Grade 5 bolt, HDG (Full Thd)	0.3
100112	1/2"-13 x 6" Grade 5 bolt, HDG Full Thread	0.4
100450	1/2"-13 x 10" Grade 5 bolt, HDG (1-1/2" Thd)	0.6
100191	5/8"-11 x 2-1/4" A325 bolt, HDG (Full Thd)	0.3
100379	5/8"-11 x 4-1/2" A325 Bolt, HDG (1-1/4" Thd)	0.5
100237	3/4"-10 x 2" A325 Bolt HDG (1-3/8" Thd)	0.4
100377	3/4"-10 x 2-1/2" A325 Bolt, HDG (1-3/8" Thd)	0.5

Nuts

Material	Hot dip	Design:	ASTMA563
Included:	galvanized nut		specification
Order	Bolts and	Mounts to:	n/a
Seperately:	washers		



Flat Washers

Material	Galvanized lock	Design:	helical spring
Included:	washer		design
Order	Bolts and nuts	Mounts to:	n/a
Seperately:			



Part #	Description	Weight (Lbs)
100114	3/8"-16 Grade DH Nut HDG	0.1
100115	1/2"-13 Grade DH Nut - HDG	0.1
100192	5/8"-11 Grade DH Nut - HDG	0.1
100380	3/4"-10 Grade DH Nut - HDG	0.2

Part #	Description	Weight (Lbs)
100120	3/8" Lock Washer HDG or MG	0.1
100121	1/2" Lock Washer HDG or MG	0.1
100194	5/8" Lock Washer HDG or MG	0.1
100381	3/4" Lock Washer HDG or MG	0.1

Hardware



Lock Washers

Material	Galvanized	Design:	ASTM F436
Included:	washer		specification.
Order	Bolts and nuts	Mounts to:	n/a
Seperately:			



Threaded Rod

Material	Galvanized	Design:	ASTM
Included:	threaded rod		specifications
Order	Nuts and	Mounts to:	n/a
Seperately:	washers		show n below



Part #	Description	Weight (Lbs)
100117	3/8" Flat Washer HDG or MG	0.1
100118	1/2" Flat Washer F436 HDG or MG	0.1
100193	5/8" Flat Washer F436 - HDG or MG	0.1
100236	3/4" Hard Round Washer F436 HDG	0.1

Part #	Description	Weight (Lbs)
100105	1/2"-13 x 13" Threaded Rod, Grade 2 - HDG	0.7
100147	1/2"-13 x 18" A449 Threaded Rod - HDG	1.0
100106	1/2"-13 x 24" Threaded Rod, Grade 2 - HDG	1.3
100107	1/2"-13 x 36" Threaded Rod, Grade 2 - HDG	2.0
102279	5/8"-11 x 8-3/8" Threaded Rod, A449 - HDG	0.7
101716	5/8"-11 x 10-1/2" Threaded Rod, A449 - HDG	0.9
101935	5/8"-11 x 14" Threaded Rod, A449 - HDG	1.2
101234	5/8"-11 x 21" Threaded Rod, A449 - HDG	1.8

U-Bolt Kit



Material	Galvanized Ubolt,	Design:	ASTMA36
Included:	washers, lock washers and nuts		specifications with DH nuts
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
100216	1/2"-13 U-Bolt 1/2"-13 x 3-3/8" x 1-3/4" x 2" (DxLxCxT) Galvanized, Assembled w ith Nuts	0.5
100100	1/2"-13 U-Bolt 1/2"-13 x 4" x 2-1/2" x 2" (DxLxCxT) Galvanized, Assembled w ith Nuts	0.6
105625	1/2"-13 U-Bolt 1/2"-13 x 5" x 3-5/8" x 2" (DxLxCxT) Galvanized, Assembled w ith Hardw are.	0.7
105626	1/2"-13 U-Bolt 1/2"-13 x 6" x 4-5/8" x 2" (DxLxCxT)(Grade 5) Galvanized, Assembled w ith Hardw are.	0.9

Hardware



J-Bolt Kit



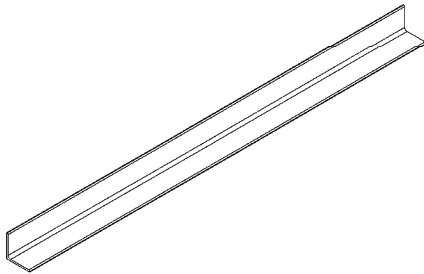
Material	Galvanized J-bolt	Design:	SAE J429 Gr.
Included:	and nut		2
			specifications
Order	Washers	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
100108	3/8" J-Bolt 3/8"-16 x 9" x 1-1/2" x 7" x 60 deg. HDG, Assembled w ith DH Nut	0.4

Angle, Pipe & Tube



Angle



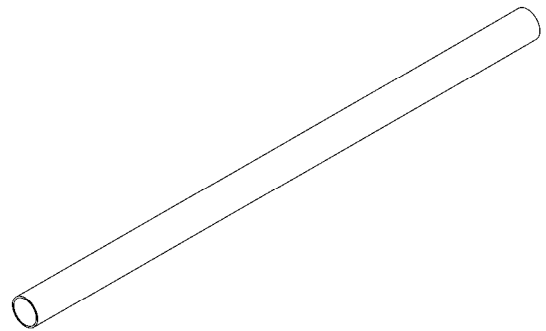
Material	Hot dip	Design:	A36
Included:	galvanized angle		
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
Bulk Angle		
104533	Angle, 2" x 2" x 3/16", 20' Long. Galvanized	48.8
104534	Angle, 2-1/2" x 2-1/2" x 3/16", 20' Long. Galvanized	63.0
104535	Angle, 3" x 3" x 3/16", 20' Long. Galvanized	75.0

Part #	Description	Weight (Lbs)
Pre-Cut Plain End Pipe		
100203	1-1/4" Sch. 40 Galvanized Pipe - 10'-6"	24.0
100204	1-1/4" Sch. 40 Galvanized Pipe - 12'-0"	27.0
100618	2" Sch. 40 Galvanized Pipe - 6'-0"	22.0
100201	2" Sch. 40 Galvanized Pipe - 7'-0"	26.0
100615	2" Sch. 40 Galvanized Pipe - 8'-0"	29.0
100282	2" Sch. 40 Galvanized Pipe - 9'-0"	33.0
100266	2" Sch. 40 Galvanized Pipe - 10'-6"	38.0
100348	2" Sch. 40 Galvanized Pipe - 12'-0"	44.0
103686	2" Sch. 40 Galvanized Pipe - 13'-6"	49.0
100267	2" Sch. 40 Galvanized Pipe - 15'-0"	55.0
100879	3" Sch. 40 Galvanized Pipe - 5'-0"	38.0
100454	3" Sch. 40 Galvanized Pipe - 10'-6"	80.0
102455	3" Sch. 40 Galvanized Pipe - 12'-0"	91.0
100128	3" Sch. 40 Galvanized Pipe - 14'-0"	106.0
100198	3" Sch. 40 Galvanized Pipe - 16'-0"	121.0
101247	3" Sch. 40 Galvanized Pipe - 16'-6"	125.0
100166	4" Sch. 40 Galvanized Pipe - 5'-2" Long	56.0
Bulk Pipe		
102507	2" Sch. 40 Galvanized Pipe - 21'-0"	77.0
103341	3" Sch. 40 Galvanized Pipe - 21'-0"	159.0
102508	4" Sch. 40 Galvanized Pipe - 21'-0"	227.0

Pipe

Material	Hot dip	Design:	Schedule 40.
Included:	galvanized pipe		A500 Grade B
Order	n/a	Mounts to:	n/a
Seperately:			

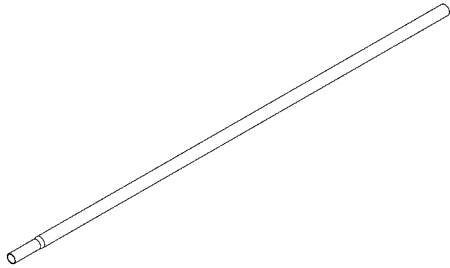


Hardware / Angle, Pipe, Tube

Angle, Pipe & Tube



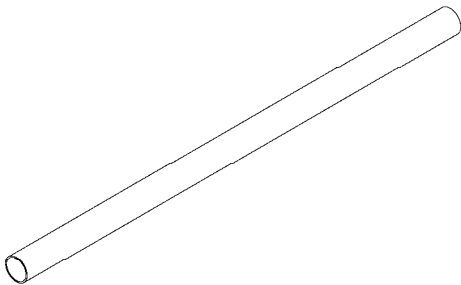
1-1/4" Tubing, Swaged



Material	Hot dip	Design:	Schedule 40.
Included:	galvanized pipe		A500 Grade B
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
102639	1-1/4" OD x 18 Ga x 5' Pre-Galv. Tubing - Sw aged End	3.1
102841	1-1/4" OD x 18 Ga x 10' Pre-Galv. Tubing - Sw aged End	6.3
102325	1-1/4" OD x 16 Ga x 5' Galv. Tubing - Sw aged End	4.1
102842	1-1/4" OD x 16 Ga x 10' Galv. Tubing - Sw aged End	8.2
102640	1-1/4" OD x 16 Ga x 10' Pre-Galv. Tubing - Sw aged End	8.2

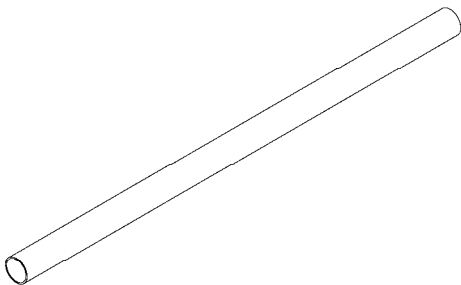
1.66" OD Tubing



Material	Hot dip	Design:	Schedule 40.
Included:	galvanized pipe		A500 Grade B
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
102646	1.66" OD x 18 Ga x 5' Pre-Galv. Tubing	4.2
102348	1.66" OD x 18 Ga x 10' Pre-Galv. Tubing	8.4

2" OD Tubing



Material	Hot dip	Design:	Schedule 40.
Included:	galvanized pipe		A500 Grade B
Order	n/a	Mounts to:	n/a
Seperately:			

Part #	Description	Weight (Lbs)
100495	2" OD x 18 Ga x 6' Pre-Galv. Tubing	16.3

Index By Part Number



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100100	0.6	185
100105	0.7	185
100106	1.3	185
100107	2.0	185
100108	0.4	186
100110	0.2	184
100111	0.3	184
100112	0.4	184
100114	0.1	184
100115	0.1	184
100117	0.1	185
100118	0.1	185
100120	0.1	184
100121	0.1	184
100128	106.0	187
100129	111.0	59
100131	375.0	55
100137	0.1	184
100146	0.6	60
100147	1.0	185
100151	35.0	38
100152	37.0	38
100153	39.0	38
100166	56.0	187
100167	97.0	33
100172	147.0	33
100184	7.5	42
100191	0.3	184
100192	0.1	184
100193	0.1	185
100194	0.1	184
100196	28.0	36
100198	121.0	187
100199	17.0	59
100200	11.0	58
100201	26.0	187
100203	24.0	187
100204	27.0	187
100216	0.5	185
100218	72.0	33
100221	112.0	59
100222	5.1	58
100223	119.0	33
100224	84.0	37
100228	41.9	37
100230	0.8	179
100233	0.1	184
100236	0.1	185
100237	0.4	184
100242	0.1	184
100265	108.6	60
100266	38.0	187
100267	55.0	187
100272	20.0	76
100282	33.0	187
100297	8.3	58
100298	125.0	31
100300	177.9	31
100302	0.2	184
100318	563.0	56
100319	729.0	56
100320	23.2	42
100322	192.0	31
100323	245.1	31
100341	2.0	76

Part Number	Weight (Lbs)	Page Number
100344	1.1	40
100346	1.9	82
100347	3.4	82
100348	44.0	187
100377	0.5	184
100379	0.5	184
100380	0.2	184
100381	0.1	184
100406	0.1	184
100410	102.5	32
100447	1,130.0	45
100450	0.6	184
100454	80.0	187
100468	75.0	49
100470	47.0	59
100473	38.0	178
100477	103.0	68
100488	2.8	70
100490	9.0	69
100491	4.7	68
100495	16.3	188
100513	75.0	37
100521	10.1	35
100527	4.8	35
100528	4.3	35
100529	7.5	35
100531	8.6	36
100557	19.5	70
100580	0.2	184
100581	0.4	91
100582	0.7	91
100583	0.8	91
100584	1.9	96
100585	4.8	96
100586	6.5	96
100587	0.1	96
100588	0.1	96
100589	0.2	96
100590	6.6	94
100591	8.2	94
100592	12.2	94
100593	0.5	92
100594	0.8	92
100595	1.6	92
100596	1.7	93
100597	2.7	93
100610	22.0	178
100615	29.0	187
100618	22.0	187
100647	0.5	91
100648	3.2	96
100649	0.1	96
100661	6.4	87
100662	2.9	86
100663	6.4	87
100669	5.4	80
100684	3.4	86
100685	6.5	87
100686	6.8	87
100693	3.7	79
100694	3.9	79
100695	4.1	79
100696	4.2	79
100697	4.2	79
100698	2.9	79

Part Number	Weight (Lbs)	Page Number
100701	3.6	79
100702	3.8	79
100703	4.0	79
100704	4.1	79
100705	4.1	79
100706	2.8	79
100715	0.7	77
100716	1.2	77
100717	1.3	77
100718	1.5	77
100719	1.7	77
100721	0.8	81
100722	1.0	81
100723	1.2	81
100724	1.3	81
100725	1.3	81
100726	0.6	77
100727	0.6	77
100728	0.7	77
100759	0.8	93
100824	49.0	52
100879	38.0	187
100884	346.0	55
100905	3.8	58
100906	5.8	58
100907	7.1	58
100908	31.0	59
100909	12.0	59
100912	6.3	68
100913	138.0	68
100914	68.0	68
100915	333.6	55
100947	3.3	69
100948	17.6	69
100950	0.1	93
100953	0.3	41
100957	39.0	103
100961	29.6	60
100999	18.0	59
101016	1.2	91
101017	4.0	93
101018	24.2	94
101039	0.1	92
101040	0.3	93
101041	0.8	94
101042	0.3	92
101043	0.2	91
101047	0.2	90
101048	0.5	92
101053	5.5	58
101057	1.8	70
101062	80.0	37
101092	3.4	70
101109	11.0	58
101139	45.4	69
101140	58.1	70
101145	2.9	68
101154	71.6	69
101164	71.3	70
101167	31.0	70
101170	24.0	69
101175	255.6	51
101231	139.0	60
101234	1.8	185
101243	18.3	42

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101247	125.0	187
101252	923.3	73
101254	0.4	78
101255	0.5	78
101256	0.5	78
101257	1.3	78
101258	1.3	78
101259	0.3	78
101260	0.2	78
101261	0.2	78
101262	1.3	78
101263	1.3	78
101268	465.6	74
101270	85.2	60
101296	9.9	35
101303	8.8	58
101304	6.2	58
101320	111.8	60
101344	17.2	35
101350	1.0	83
101351	0.6	83
101352	2.3	83
101353	2.9	83
101354	3.5	83
101355	4.2	83
101356	4.0	83
101357	6.1	83
101358	6.0	83
101359	6.0	83
101360	6.0	83
101361	7.1	83
101362	7.4	83
101363	8.5	83
101364	7.0	83
101365	0.2	83
101366	9.1	83
101367	13.0	83
101368	11.0	83
101369	15.8	83
101377	1.6	84
101378	1.6	84
101379	1.6	84
101380	1.6	84
101381	1.6	84
101382	1.6	84
101383	1.6	84
101384	1.6	84
101385	1.6	84
101386	1.6	84
101387	1.6	84
101388	1.6	84
101389	1.6	84
101390	1.6	84
101391	1.6	84
101392	1.6	84
101393	1.6	84
101394	1.6	84
101395	1.6	84
101439	1.3	83
101441	0.4	85
101447	0.4	85
101448	0.4	85
101449	0.4	85
101450	0.4	85
101451	0.4	85
101452	0.4	85

Part Number	Weight (Lbs)	Page Number
101453	0.4	85
101454	0.4	85
101455	0.4	85
101464	0.4	85
101465	0.4	85
101466	0.4	85
101467	0.4	85
101469	0.4	85
101470	0.3	85
101471	0.3	85
101472	0.2	85
101480	0.3	85
101482	0.3	85
101483	0.2	85
101495	0.1	85
101499	0.1	85
101500	0.2	85
101503	0.4	85
101505	0.7	85
101540	1.0	81
101544	1.2	81
101547	1.4	81
101549	1.8	81
101555	0.5	81
101556	1.0	81
101557	1.3	81
101558	1.8	81
101626	1.4	82
101628	1.4	82
101630	1.5	82
101632	1.5	82
101639	2.4	88
101640	1.7	88
101641	2.4	88
101642	1.7	88
101648	2.8	88
101649	2.1	88
101650	2.8	88
101651	2.1	88
101672	2.1	89
101673	260.0	25
101674	366.0	25
101675	377.0	25
101676	388.0	25
101677	401.0	25
101678	415.0	25
101679	430.0	25
101680	271.0	25
101681	377.0	25
101682	388.0	25
101683	399.0	25
101684	412.0	25
101685	426.0	25
101686	441.0	25
101687	293.0	25
101688	399.0	25
101689	410.0	25
101690	421.0	25
101691	434.0	25
101692	448.0	25
101693	463.0	25
101694	209.0	24
101695	315.0	24
101696	326.0	24
101697	337.0	24
101698	350.0	24

Part Number	Weight (Lbs)	Page Number
101699	364.0	24
101700	379.0	24
101701	220.0	24
101702	326.0	24
101703	337.0	24
101704	348.0	24
101705	361.0	24
101706	375.0	24
101707	390.0	24
101708	242.0	24
101709	348.0	24
101710	359.0	24
101711	370.0	24
101712	383.0	24
101713	397.0	24
101714	412.0	24
101716	0.9	185
101723	334.0	29
101727	439.5	29
101728	451.0	29
101729	461.5	29
101730	474.7	29
101731	490.0	29
101732	504.0	29
101733	345.0	29
101738	450.4	29
101739	462.0	29
101740	472.4	29
101741	485.6	29
101742	501.0	29
101743	515.0	29
101749	255.4	28
101754	361.0	28
101755	372.0	28
101756	383.0	28
101757	396.2	28
101758	410.0	28
101759	425.6	28
101760	266.4	28
101765	372.0	28
101766	383.0	28
101767	394.0	28
101768	407.2	28
101769	421.0	28
101770	436.5	28
101838	22.2	66
101839	13.1	66
101842	68.0	65
101843	43.0	65
101844	70.0	65
101845	46.0	65
101852	5.4	70
101935	1.2	185
101959	0.0	90
101960	0.1	90
101961	0.1	90
101962	0.2	90
101963	0.3	90
101964	0.4	90
101965	0.6	90
101966	8.0	90
101967	10.0	90
101968	12.0	90
101969	12.0	90
101970	0.1	90
101971	0.2	90

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101972	0.5	90
101973	0.3	90
101974	0.5	90
101975	0.6	90
102042	605.4	74
102144	69.1	123
102145	98.5	125
102147	20.9	127
102148	0.1	91
102149	0.3	96
102150	0.8	95
102151	1.3	99
102153	1.1	97
102154	1.7	97
102155	4.3	97
102277	1,020.0	74
102279	0.7	185
102280	3.4	86
102281	6.8	87
102282	6.5	87
102299	31.0	100
102300	29.0	100
102301	37.7	104
102302	8.1	106
102303	10.7	106
102304	14.5	106
102305	13.0	105
102322	12.2	105
102323	15.3	98
102325	4.1	188
102342	3.0	67
102348	8.4	188
102366	69.0	124
102367	76.7	124
102369	62.8	124
102375	141.4	123
102376	48.0	127
102377	0.1	127
102430	1.6	91
102431	2.1	91
102433	0.2	96
102435	1.8	92
102436	3.1	92
102438	6.4	93
102455	91.0	187
102457	18.1	105
102458	22.0	105
102459	3.0	106
102460	40.2	104
102461	30.2	125
102462	37.0	144
102463	1.9	107
102464	35.0	97
102465	0.1	99
102473	2.1	94
102474	0.1	91
102477	25.0	126
102478	35.5	125
102480	90.0	125
102483	112.0	66
102484	64.0	66
102506	83.3	67
102507	77.0	187
102508	227.0	187
102527	42.0	174
102622	36.3	107

Part Number	Weight (Lbs)	Page Number
102629	16.0	105
102630	2.1	107
102631	0.1	107
102633	7.0	71
102634	12.0	71
102635	30.0	91
102637	27.0	71
102639	3.1	188
102640	8.2	188
102641	6.2	107
102642	6.9	67
102643	2.1	64
102646	4.2	188
102657	7.0	71
102687	39.3	104
102712	120.9	73
102719	34.0	104
102731	31.0	106
102732	14.0	107
102733	23.1	108
102744	19.3	105
102745	9.0	106
102749	0.1	96
102754	0.8	99
102755	0.5	96
102756	0.2	92
102757	24.0	126
102758	7.3	70
102764	53.5	126
102765	6.0	126
102766	0.1	92
102767	0.1	92
102770	0.8	96
102772	0.3	92
102774	0.2	92
102775	3.6	94
102776	0.0	90
102777	25.0	90
102779	18.0	90
102781	29.0	98
102783	1.5	99
102786	67.6	124
102791	4.0	65
102815	287.6	63
102816	0.9	92
102817	2.1	95
102823	729.0	91
102837	8.4	94
102841	6.3	188
102842	8.2	188
102846	0.1	96
102847	0.1	96
102850	0.8	64
102927	24.4	145
102928	22.0	106
102935	11.0	53
102965	0.3	91
102968	3.9	94
102969	0.1	96
102974	11.0	96
102975	0.2	96
102976	15.0	96
102977	36.8	94
102986	4.0	65
102987	7.0	65
103024	4.0	64

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103025	6.0	65
103026	7.0	64
103134	92.6	144
103135	0.2	145
103136	137.0	144
103137	0.8	92
103138	0.1	92
103139	1.1	92
103140	1.1	92
103167	0.1	92
103174	71.4	43
103179	12.1	98
103213	341.5	162
103214	96.8	162
103215	71.6	164
103219	12.7	108
103314	77.0	52
103341	159.0	187
103376	14.0	181
103377	41.0	181
103447	65.8	124
103462	53.8	126
103463	28.3	145
103470	45.0	57
103489	31.0	61
103490	29.0	61
103491	30.0	61
103492	32.0	61
103493	37.0	61
103541	15.0	174
103542	24.0	174
103543	32.0	174
103574	70.0	181
103582	3.0	178
103583	50.0	181
103584	31.5	175
103585	25.0	175
103686	49.0	187
103709	125.0	181
103711	150.0	181
103712	90.0	181
103730	39.4	108
103731	42.9	104
103732	28.2	103
103742	0.9	163
103743	100.0	181
103744	500.0	177
103754	18.2	98
103757	41.2	144
103759	46.9	91
103761	364.5	91
103766	3.8	99
103767	6.1	99
103770	3.4	95
103779	48.0	145
103798	111.0	62
103799	129.0	62
103801	150.0	62
103855	288.4	28
103856	394.0	28
103857	416.0	28
103858	429.2	28
103860	458.5	28
103861	367.0	29
103862	472.4	29
103863	494.4	29

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103864	507.6	29
103865	536.9	29
103866	151.0	30
103867	274.0	30
103868	291.0	30
103869	315.0	30
103870	344.0	30
103871	162.0	30
103872	285.0	30
103873	307.0	30
103874	326.0	30
103875	355.0	30
103876	184.0	30
103877	307.0	30
103878	329.0	30
103879	348.0	30
103880	377.0	30
103881	94.0	31
103882	137.8	31
103883	161.0	31
103884	214.2	31
103885	101.0	32
103886	50.2	32
103887	59.0	32
103888	72.9	32
103889	72.9	32
103890	87.5	32
103891	59.5	33
103892	63.1	33
103893	66.8	33
103894	72.3	33
103899	5.9	36
103900	7.7	36
103902	8.9	36
103903	9.9	36
103904	10.0	36
103905	12.0	36
103906	13.0	36
103907	16.0	36
103908	0.2	109
103916	35.0	34
103917	31.8	34
103918	37.0	37
103919	39.2	37
103920	72.0	38
103921	77.0	38
103922	81.0	38
103923	35.0	39
103924	37.0	39
103925	39.0	39
103926	69.0	39
103927	75.0	39
103928	77.0	39
103929	32.0	40
103930	35.0	40
103931	37.0	40
103932	68.0	40
103933	72.0	40
103934	77.0	40
103940	2.4	41
103941	7.0	41
103942	8.0	41
103943	2.7	41
103944	4.0	41
103945	3.7	41
103946	8.0	41

Part Number	Weight (Lbs)	Page Number
103947	9.0	41
103948	4.0	41
103949	5.0	41
103950	6.2	42
103951	22.0	42
103964	1,035.0	45
103965	1,346.0	45
103966	1,409.0	45
103967	1,450.0	45
103968	1,534.0	45
103969	1,086.0	45
103970	1,397.0	45
103971	1,460.0	45
103972	1,501.0	45
103973	1,585.0	45
103975	1,441.0	45
103977	1,504.0	45
103978	1,545.0	45
103979	1,629.0	45
103980	1,058.0	46
103981	1,369.0	46
103982	1,432.0	46
103983	1,473.0	46
103984	1,557.0	46
103985	1,108.0	46
103986	1,419.0	46
103987	1,482.0	46
103988	1,523.0	46
103989	1,607.0	46
103990	1,465.0	46
103991	1,528.0	46
103992	1,569.0	46
103994	1,653.0	46
103995	263.2	49
103996	268.7	49
103997	276.3	49
103998	36.3	49
103999	53.3	49
104000	760.0	48
104001	1,068.0	48
104002	1,134.0	48
104003	1,170.0	48
104004	1,258.0	48
104005	794.0	48
104006	1,102.0	48
104007	1,168.0	48
104008	1,205.0	48
104009	1,292.0	48
104010	838.0	48
104011	1,146.0	48
104012	1,212.0	48
104013	1,249.0	48
104014	1,337.0	48
104015	255.6	51
104016	352.9	51
104017	352.9	51
104018	32.3	52
104019	51.2	52
104020	70.1	52
104021	66.1	52
104022	84.9	52
104023	103.8	52
104026	44.0	52
104027	54.0	52
104028	5.0	53
104041	5.0	181

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104042	2.0	181
104072	1,108.0	114
104073	1,121.0	134
104104	0.5	72
104114	3.5	86
104116	139.0	34
104117	147.0	34
104118	150.0	34
104119	154.0	34
104120	183.0	34
104121	193.0	34
104122	198.0	34
104123	203.0	34
104126	295.0	63
104127	396.0	63
104128	400.0	63
104129	429.0	63
104130	324.0	63
104131	403.0	63
104132	425.0	63
104133	429.0	63
104134	458.0	63
104135	404.0	63
104136	483.0	63
104137	505.0	63
104138	509.0	63
104139	538.0	63
104141	54.1	146
104148	68.0	54
104149	173.0	54
104150	197.0	54
104157	4.9	80
104192	11.0	108
104230	531.0	129
104231	606.0	129
104232	679.0	129
104233	817.0	129
104234	890.0	129
104235	970.0	129
104236	1,046.0	129
104237	1,189.0	129
104238	1,264.0	129
104239	1,352.0	129
104240	1,443.0	129
104241	1,593.0	129
104242	1,685.0	129
104243	1,772.0	129
104244	1,883.0	129
104245	2,059.0	129
104246	2,166.0	129
104247	2,233.0	129
104248	2,329.0	129
104249	2,515.0	129
104250	2,612.0	129
104251	2,724.0	129
104252	2,802.0	129
104253	2,975.0	129
104254	3,053.0	129
104255	3,169.0	129
104256	3,250.0	129
104257	535.0	134
104258	611.0	134
104259	745.0	134
104260	827.0	134
104261	906.0	134
104262	982.0	134

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104263	1,202.0	134
104264	1,316.0	134
104265	1,394.0	134
104266	1,551.0	134
104267	1,638.0	134
104268	1,722.0	134
104269	1,898.0	134
104270	2,040.0	134
104271	2,138.0	134
104272	2,243.0	134
104273	2,442.0	134
104274	2,545.0	134
104275	2,724.0	134
104276	2,821.0	134
104278	535.0	139
104279	611.0	139
104280	748.0	139
104281	827.0	139
104282	906.0	139
104283	985.0	139
104284	1,168.0	139
104285	1,252.0	139
104286	1,376.0	139
104287	1,466.0	139
104288	1,638.0	139
104289	1,722.0	139
104290	1,808.0	139
104291	1,994.0	139
104292	312.0	110
104293	398.0	110
104294	447.0	110
104295	495.0	110
104296	584.0	110
104297	635.0	110
104298	686.0	110
104299	737.0	110
104300	851.0	110
104301	904.0	110
104302	957.0	110
104303	1,077.0	110
104304	1,140.0	110
104305	1,198.0	110
104306	1,249.0	110
104307	1,315.0	110
104308	312.0	114
104309	398.0	114
104310	447.0	114
104311	495.0	114
104312	584.0	114
104313	635.0	114
104314	686.0	114
104315	737.0	114
104316	851.0	114
104317	904.0	114
104318	957.0	114
104319	1,172.0	114
104320	1,314.0	114
104321	1,370.0	114
104322	1,433.0	114
104323	312.0	118
104324	398.0	118
104325	447.0	118
104326	495.0	118
104327	587.0	118
104328	641.0	118
104329	689.0	118

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104349	4.3	58
104350	34.9	57
104351	12.0	57
104352	1,370.0	73
104353	506.0	56
104354	661.0	56
104355	267.0	55
104356	287.0	55
104357	226.0	55
104358	245.0	55
104359	305.0	55
104360	550.0	55
104361	588.0	55
104362	467.0	55
104363	506.0	55
104367	6.0	64
104385	2,254.0	47
104386	2,887.0	47
104387	2,953.0	47
104388	2,986.0	47
104389	3,074.0	47
104390	2,380.0	47
104391	3,084.0	47
104392	3,150.0	47
104393	3,183.0	47
104394	3,271.0	47
104395	2,553.0	47
104396	3,429.0	47
104397	3,462.0	47
104398	3,550.0	47
104399	3,363.0	47
104401	356.0	43
104402	389.0	43
104403	488.0	43
104404	554.0	43
104405	620.0	43
104418	0.5	89
104419	0.3	89
104420	2.7	86
104421	4.4	86
104422	3.7	86
104423	4.2	86
104424	4.4	86
104425	3.7	86
104426	4.2	86
104427	3.5	86
104428	6.1	87
104429	5.8	87
104430	1.8	81
104431	2.3	81
104432	2.8	81
104433	1,396.0	147
104434	1,504.0	147
104435	1,687.0	147
104436	1,791.0	147
104437	1,902.0	147
104438	2,012.0	147
104439	2,122.0	147
104440	2,352.0	147
104441	2,465.0	147
104442	2,578.0	147
104443	2,693.0	147
104444	2,804.0	147
104445	3,028.0	147
104446	3,138.0	147
104447	3,337.0	147

Part Number	Weight (Lbs)	Page Number
104448	3,455.0	147
104449	3,678.0	147
104450	3,800.0	147
104451	3,922.0	147
104452	4,041.0	147
104453	4,260.0	147
104454	4,379.0	147
104455	4,499.0	147
104456	4,634.0	147
104457	4,873.0	147
104458	5,040.0	147
104459	5,153.0	147
104460	5,268.0	147
104461	5,560.0	147
104462	5,670.0	147
104463	5,831.0	147
104464	1,495.0	152
104465	1,606.0	152
104466	1,717.0	152
104467	1,827.0	152
104468	2,017.0	152
104469	2,129.0	152
104470	2,304.0	152
104471	2,370.0	152
104472	2,576.0	152
104473	2,765.0	152
104474	3,003.0	152
104475	3,003.0	152
104476	3,236.0	152
104477	3,354.0	152
104478	3,567.0	152
104479	3,684.0	152
104480	3,807.0	152
104481	4,181.0	152
104482	4,368.0	152
104483	4,485.0	152
104484	4,685.0	152
104485	1,556.0	156
104486	1,674.0	156
104487	1,789.0	156
104488	1,899.0	156
104489	2,104.0	156
104492	2,214.0	156
104493	2,332.0	156
104494	2,470.0	156
104495	2,806.0	156
104496	2,955.0	156
104497	0.5	92
104498	1.4	92
104499	7.0	94
104500	9.8	94
104501	13.3	94
104506	2.4	94
104508	20.6	94
104509	1.0	91
104518	1.3	96
104519	10.1	96
104533	48.8	187
104534	63.0	187
104535	75.0	187
104551	185.0	144
104555	73.0	103
104567	203.2	162
104568	24.0	163
104570	232.9	162
104571	12.0	163

Index By Part Number



Part Number	Weight (Lbs)	Page Number
104573	250.0	162
104581	10.1	108
104584	172.5	161
104722	6.5	175
104726	500.0	177
104734	99.4	5
104744	24.9	126
104755	2.1	174
104760	1.0	75
104833	11.0	179
104834	11.0	179
104868	2.0	181
104927	137.0	34
104928	145.0	34
104929	148.0	34
104930	152.0	34
104931	169.0	34
104932	180.0	34
104933	185.0	34
104934	190.0	34
104963	103.0	164
105010	5.4	75
105026	52.0	105
105044	396.3	162
105135	80.0	125
105163	1.8	174
105164	1.3	174
105235	31.1	108
105285	1.7	174
105307	30.0	71
105361	27.0	145
105389	54.0	163
105390	77.0	163
105397	481.9	162
105483	195.0	164
105565	100.0	178
105566	1.0	178
105584	570.0	4
105585	670.0	4
105586	1,000.0	4
105587	1,100.0	4
105588	1,680.0	4
105589	1,780.0	4
105590	2,370.0	4
105591	2,470.0	4
105592	3,200.0	4
105593	3,300.0	4
105594	4,060.0	4
105595	4,160.0	4
105596	5,300.0	4
105597	5,400.0	4
105598	6,660.0	4
105599	6,760.0	4
105600	800.0	4
105601	990.0	4
105602	1,480.0	4
105603	1,670.0	4
105604	2,170.0	4
105605	2,360.0	4
105606	3,000.0	4
105607	3,190.0	4
105608	3,860.0	4
105609	4,050.0	4
105610	5,100.0	4
105611	5,290.0	4
105612	6,460.0	4

Part Number	Weight (Lbs)	Page Number
105613	6,650.0	4
105614	8,050.0	4
105615	8,240.0	4
105624	1,154.0	46
105625	0.7	185
105626	0.9	185
105772	197.8	161
105773	211.0	161
105818	110.0	145
105822	76.0	163
105845	26.7	109
105858	37.9	100
105864	39.4	127
105868	592.0	98
105881	81.0	32
105882	88.0	32
105883	102.0	32
105884	109.0	32
105885	116.0	32
105894	46.0	163
105943	41.9	100
106053	190.0	181
106054	60.0	181
106075	86.7	98
106193	122.9	182
106194	149.9	182
106195	166.4	182
106196	193.4	182
106197	199.3	182
106198	226.3	182
106199	242.8	182
106200	269.8	182
106201	275.7	182
106202	302.7	182
106203	319.2	182
106204	346.2	182
106205	352.1	182
106208	354.6	183
106209	381.6	183
106210	387.5	183
106211	414.5	183
106212	431.0	183
106213	458.0	183
106214	463.9	183
106215	490.9	183
106216	507.4	183
106217	534.4	183
106218	540.3	183
106219	567.3	183
106220	583.8	183
106221	610.8	183
106222	616.7	183
106245	42.0	72
106264	15.0	109
106291	220.1	162
106334	456.0	98
106347	687.0	183
106412	422.4	183
106414	130.0	181
106482	338.1	183
106743	151.0	125
106744	152.0	144
106750	19.0	109
106762	0.1	96
106774	6.0	109
106777	0.2	179

Part Number	Weight (Lbs)	Page Number
106779	955.0	176
106830	108.0	161
106913	233.0	62
106949	82.0	165
106953	144.0	161
106957	268.0	164
106960	92.0	164
107049	775.0	176
107145	200.0	62
107146	161.0	62
107460	121.0	62
107604	128.0	50
107605	117.0	50
107623	406.0	55
107640	374.0	63
107670	106.0	60
107704	0.0	176
107711	34.0	103
107713	40.0	103
107715	37.0	103
107717	37.0	103
107719	27.0	100
107721	54.0	123
107723	57.0	123
107725	56.0	123
107727	56.0	123
107729	59.0	124
107731	38.0	100
108017	37.0	104
108051	209.0	98
108215	2,379.0	11
108216	2,016.0	11
108217	1,653.0	11
108218	1,349.0	11
108219	1,109.0	11
108220	898.0	11
108221	730.0	11
108222	571.0	11
108223	440.0	11
108224	293.0	11
108318	1.3	77
108319	1.5	77
108320	1.8	77
108321	1.8	82
108322	1.8	82
108323	1.8	82
108324	1.8	82
108374	67.0	178
108602	1,147.0	44
108603	1,274.0	44
108931	356.0	13
108932	344.0	13
108933	277.0	13
108934	228.0	13
108935	190.0	13
108936	161.0	13
108937	147.0	13
108938	124.0	13
108939	114.0	13
108940	57.0	13
108941	53.0	13
108942	49.0	13
108943	41.0	13
109098	2,345.0	11
109099	2,317.0	11
109100	1,982.0	11

Index By Part Number



Part Number	Weight (Lbs)	Page Number
109101	2,299.0	11
109102	1,619.0	11
109103	1,954.0	11
109104	2,301.0	11
109105	1,315.0	11
109106	2,258.0	11
109107	1,287.0	11
109108	2,194.0	11
109109	1,269.0	11
109110	85.0	98
109179	67.0	13
109180	100.0	13
109181	107.0	13
109182	119.0	13
109183	126.0	13
109184	140.0	13
109185	159.0	13
109186	186.0	13
109187	205.0	13
109188	212.0	13
109289	134.0	51
109380	338.0	49
109388	286.0	49
109389	310.0	49
109429	259.0	26
109430	364.0	26
109431	376.0	26
109432	388.0	26
109433	399.0	26
109434	415.0	26
109435	431.0	26
109436	270.0	26
109437	375.0	26
109438	387.0	26
109439	399.0	26
109440	410.0	26
109441	426.0	26
109442	442.0	26
109443	292.0	26
109444	397.0	26
109445	409.0	26
109446	421.0	26
109447	432.0	26
109448	448.0	26
109449	464.0	26
109450	272.0	27
109451	377.0	27
109452	389.0	27
109453	401.0	27
109454	412.0	27
109455	428.0	27
109456	444.0	27
109457	283.0	27
109458	388.0	27
109459	400.0	27
109460	412.0	27
109461	423.0	27
109462	439.0	27
109463	455.0	27
109464	305.0	27
109465	410.0	27
109466	422.0	27
109467	434.0	27
109468	445.0	27
109469	461.0	27
109470	477.0	27

Part Number	Weight (Lbs)	Page Number
109642	178.0	51
109738	67.0	108
109739	43.0	108
109743	500.0	177
109744	500.0	177
109745	1,500.0	177
109746	1,500.0	177
109747	400.0	177
109748	400.0	177
109749	400.0	177
109750	400.0	177
109751	770.0	177
109752	770.0	177
109849	1.1	77
109850	1.5	77
109859	1,453.0	44
109860	1,525.0	44
109861	1,555.0	44
109862	1,651.0	44
109863	1,181.0	44
109864	1,487.0	44
109865	1,559.0	44
109866	1,589.0	44
109867	1,685.0	44
109868	1,580.0	44
109869	1,652.0	44
109870	1,682.0	44
109871	1,778.0	44
109872	1,226.0	44
109873	1,532.0	44
109874	1,604.0	44
109875	1,634.0	44
109876	1,730.0	44
109894	9.0	178
109895	15.0	178
109896	10.0	178
109897	1.0	178
109898	1.0	178
109899	102.0	50
109900	49.0	50
109907	68.0	50
110001	1.0	180
110002	8.0	180
110003	30.0	180
110272	405.0	28
110273	443.0	28
110274	484.0	29
110275	523.0	29
NSX11	1,261.0	5
NSX12.5	1,468.0	5
NSX3.5	635.0	5
NSX5	648.0	5
NSX6.5	776.0	5
NSX8	799.0	5
NSX9.5	1,089.0	5



N E L L O
CORPORATION

TERMS AND CONDITIONS OF SALE AND CREDIT

Nello Corporation
P.O. Box 376
Nappanee, IN 46550

Phone: (574) 773-4827
Fax: (574) 773-5840

Buyer: _____

Ship to Address: _____

Bill to Address: _____

Phone: _____ Fax: _____

Tax ID #: _____ D&B DUNS#: _____

Years in Business: _____ Number of Employees: _____ Annual Sales: _____

Check One: Corporation LLC Partnership Limited Partnership Proprietorship

Accounts Payable Contact: _____ Tax Exempt? _____

Phone: _____ Fax: _____ Email: _____

Bank Name: _____ Account #: _____

Mailing Address: _____ Zip: _____

Contact Name: _____ Phone: _____ Fax: _____

Trade Reference: _____ Address: _____

Phone: _____ Fax: _____ Account #: _____

Trade Reference: _____ Address: _____

Phone: _____ Fax: _____ Account #: _____

Trade Reference: _____ Address: _____

Phone: _____ Fax: _____ Account #: _____

THE ABOVE INFORMATION is provided for the purpose of obtaining credit by Buyer from Seller and is warranted to be true and correct. Buyer hereby authorizes Nello Corporation (hereinafter "Seller") and its representatives and successors to contact the persons above identified and such other persons as Seller deems necessary to obtain credit and financial information concerning Buyer. Buyer further authorizes all persons contacted by Seller for the purposes of determining Buyer's credit worthiness to disclose to Seller any credit and financial information concerning Buyer possessed by such person. All sales of Product (*defined on the reverse side hereof*) by Seller to Buyer, whether on credit or otherwise, shall be subject to the terms and conditions set forth herein and on the reverse side hereof.

SEE THE REVERSE SIDE FOR ADDITIONAL TERMS OF AGREEMENT.

The person executing this agreement on behalf Buyer represents and warrants that he or she is lawfully entitled so to do and that execution hereof by the undersigned will bind Buyer to the terms hereof.

Signature of Owner or Officer: _____ Date: _____

Print Name: _____ Title: _____

To induce Seller to agree to extend credit to Buyer or to otherwise sell Products to Buyer, the undersigned guarantor (hereinafter "Guarantor") hereby absolutely unconditionally guarantees payment of all sums owed by Buyer to Seller. Notice of acceptance of this guarantee, of non-payment, of nonperformance or the amount of indebtedness outstanding at any time, of protest, demand, or other remedy is expressly waived. The liability of Guarantor shall not be affected by any extension, modification, indulgence, compromise, settlement or variation of any term hereof or by the discharge or release of the obligation of the Buyer. Guarantor agrees to be bound to each and every term contained herein and on the reverse side hereof as if Guarantor and Buyer were the same person and further agrees to pay all costs of collection against Guarantor, including attorney fees, without relief from valuation and appraisal laws.

Signature of Guarantor: _____ Date: _____

Print Name: _____

Terms and Conditions of Sales and Credit

1. Sales: Seller agrees to sell to Buyer such products and services as Seller may determine to sell, deal in, and provide in the ordinary course of its business subject to the terms set forth in this Agreement (hereinafter "Products"). Such sales shall be exclusively for Buyer's business use. Buyer represents and warrants that no purchase hereunder will be made for the personal, family or household use of Buyer. This Agreement is not intended to require Buyer to purchase any products or services from Seller nor is it intended to require Seller to: a. maintain or continue to maintain an inventory of any particular type of product; b. deal in or continue to deal in any particular type of product; or c. provide or continue to provide any particular type of service. Seller may refuse to sell Products to Buyer at any time without cause or prior notice.

2. Pricing: Price quotations and terms shall remain in effect for thirty (30) days from date of issuance. Seller reserves the right to change published pricing at any time.

3. Credit Limits: Credit limits shall be determined and modified at the sole discretion of the Seller. In the event that Buyer is delinquent in payment or has exceeded the credit limit established by Seller, Seller may refuse to sell Products to Buyer, suspend any shipment or delivery or refuse to manufacture any Products or provide any services until the indebtedness of Buyer to Seller has been reduced, or all past due amounts, including finance charges, have been paid in full, as Seller determines necessary.

4. Taxes: Purchaser is responsible for all sales, use and similar taxes unless Seller agrees in writing to pay the same.

5. Payment Terms: Buyer shall pay sums owed Seller within thirty (30) calendar days of the date of Seller's invoice. Buyer further agrees that the purchase price shall be increased for any purchase for which payment in full has not been timely made, such increase to be interest on the unpaid balance due of each such invoice equal to the lesser of the maximum rate of interest permitted by law or two percent (2%) per month. Buyer agrees to pay, in addition, all costs of collection, including attorney fees, court costs, and other expenses incurred by Seller to enforce the terms of the Agreement. Seller does not hereby agree to payment after the due date and may demand payment in full any time. Buyer waives all claims for relief under valuation and appraisal laws.

6. Buyer's Agents: Buyer agrees to have only individuals who are authorized agents of Buyer execute documents on Buyer's behalf for purchases or deliveries. Buyer agrees that any person in Buyer's employ may accept or acknowledge delivery of products or services to Buyer.

7. Buyer's Inspection: Buyer or its designated representative shall inspect all Products within seven (7) calendar days after delivery of Products (hereinafter "Inspection Period") and Buyer shall notify Seller of any defects, shortages, overshipments, or nonconformance in any of the Products within the Inspection Period. Any Products not rejected by Buyer within the Inspection Period shall be deemed to have been accepted by Buyer.

8. Shipping Terms: Shipping terms for shipments within the United States are F.O.B. Seller's Point of Shipment. Shipping terms for international shipments are EXW Seller's Point of Shipment (Incoterms 2000). In the event that Buyer specifies in writing the shipping carrier, type of service, and payment method (collectively hereinafter "Mode of Shipment"), freight costs shall be charged in a manner consistent with Buyer's specification. In the event that Buyer has not specified a Mode of Shipment in writing, at the sole discretion of Seller, such charges may be prepaid by Seller and added to Seller's invoice to Buyer. All claims for transportation damage shall be filed and processed by the Buyer. Buyer agrees to pay for all Products purchased without regard to whether the same are damaged during shipment.

9. Title and Risk of Loss: Title to and risk of loss and damage to the Products shall pass to Buyer immediately upon delivery of the Products to a common carrier, or to an employee or other agent of Buyer, at Seller's facility.

10. Warranty: Seller warrants that the Products will conform to the description contained on the invoice therefor and (b) will be free from defects in material and workmanship, under normal use and service when correctly installed and maintained for a period of two (2) years from tender of delivery. Seller shall not be deemed or held to be obligated or accountable upon or under any warranties or guarantees expressed, or implied, statutory, by operation of law, or otherwise, in any manner or form, beyond the foregoing express warranty. Seller's liability under any warranty is limited solely to replacing, repairing or issuing credit for Products subject to warranty, as Seller shall elect. In the event any Products is determined to be defective during the warranty period, Buyer shall (i) notify Seller promptly in writing of any warranty claim, and (ii) provide Seller with an opportunity to inspect and test Products claimed to be defective. In no event shall Seller be liable for any defective products if examination discloses that the defective condition of such products was caused by the design or other criteria supplied by Buyer to Seller or was caused by misuse, abuse, improper installation or application, improper maintenance or repair, alteration, accident or negligence in use, improper temperature, humidity or other environmental condition, storage, transportation or handling. Seller makes no other warranty either expressed or implied with respect to any Products.

11. Manufacturer's Warranties: Some of the Products are manufactured by others and warranties by some manufacturers of the Products provide remedies greater than those provided hereunder by Seller. Buyer agrees to make no claim against Seller under the manufacturer's warranty or to make any claim against Seller except under the warranties hereunder provided. Seller shall not be liable for any damages for breach of any warranty other than those damages expressly agreed to by Seller.

12. Patents and Copyrights: No representation is made that the products or their use or sale do not infringe any patents, trademarks or trade names or other rights of third parties.

13. Buyer's Indemnity: Buyer agrees to indemnify and hold Seller harmless for any claim, damage, loss or other expense paid by or claimed against Seller and all costs of defending the same (including, without limiting the generality of the foregoing, the fees of attorneys, expert witnesses and investigators and travel expenses) arising, in whole or in part, from through or in any manner related to Products manufactured by Seller at Buyer's specific request pursuant to Buyer's design or other criteria ("Custom Products"), except when such claim arises exclusively as a result of Seller's negligence or breach of Seller's warranty above set forth.

14. Cancellation: All requests for cancellation or changes to an order for Products must be submitted in writing by Buyer. In the event that Buyer cancels or changes an order for Products, Buyer agrees to pay a restocking fee of not

less than 35% for standard Products and 100% for Custom Products of the cost of the Products to which such cancellation or change is applicable.

15. No products may be returned to Seller without Seller's prior consent. All requests by Buyer for authorization to return Products must be submitted in writing to Seller utilizing Seller's Return Request Form. Seller may, at its sole discretion, issue Buyer written authorization to return Product to Seller (hereinafter "Return Authorization") for inspection and refund. All shipping costs for the return of Products are the responsibility of the Buyer. In the event that, upon inspection, Seller determines that the Products are subject to the terms of Seller's warranty Seller shall waive any restocking fees and shall issue a credit to Buyer for any shipping costs for the shipment of warranted Products back to Seller. Seller shall have no obligation to consider return requests received later than ninety (90) calendar days after shipment of Products to Buyer.

16. Seller's Inspection: Upon receipt of Products returned for warranty claims or pursuant to a Return Authorization, Seller shall inspect the Products and, at its sole discretion, accept or deny the return of such Products. In the event that Seller accepts the return of Products from Buyer pursuant to a Return Authorization, Seller shall issue a credit to Buyer in the amount of the original invoice amount for the Products less a restocking charge of not less than 35% for standard Products and 100% for Custom Products. In the event that Seller denies the return of Products from Buyer, Seller shall ship Products back to Buyer at Buyer's sole expense.

17. Force Majeure: Seller shall not be liable for failure to perform any of its obligations under this Agreement to the extent such failure is caused by fire; flood; explosion; war; riot; embargo; labor disputes; compliance with any laws, regulations, orders, acts or requirements from the government, civil or military authorities; acts of God or the public enemy; or any act or event of any nature beyond Seller's reasonable control. In no event shall Seller be liable to Buyer for any special, incidental or consequential damages as a result of delay in performance or failure to perform hereunder.

18. Conflict of Forms: In the event of conflict between this Agreement and the terms printed on the face or reverse side of Buyer's order form, the terms and conditions of this Agreement shall control. If this Agreement is silent as to a particular matter, the terms which appear on the reverse side of Seller's invoice shall control, and Seller's acceptance is conditional upon Buyer's assent to the terms which appear on the reverse side of Seller's invoice. This agreement may be modified by either separate written modification hereof or by the addition of terms in Seller's invoice.

19. Notices: A notice to Buyer or Seller shall be valid if it is in writing and if delivered via any method, public or private, which requires the recipient to acknowledge delivery of the notice. If failure to send a notice before the end of a time period waives a right, the notice is effective when sent. All other notices are effective upon receipt unless recipient refuses delivery. If delivery is refused, the notice is effective when sent.

20. Limitations on Time and Damages: Any claim that either Seller or Buyer may have against the other shall be barred if demand therefor is not made within 180 days of the date of the occurrence of the event giving rise thereto and a demand for arbitration is not made within 180 days of the date of the aforementioned demand. Notwithstanding the foregoing, the limitation on time provided in this paragraph shall not apply to the recovery by Seller of any sum owed by Buyer to Seller. Neither party shall be liable for special, incidental, indirect or consequential damages, including, without limiting the generality of the foregoing, lost profits, whether or not caused by breach of warranty or resulting from negligence or any other cause. In the event that a defective Product causes damages or injuries to the Product, to Buyer's business, to the end-user's business, to other equipment, to a factory or place of business, or to employees or other persons, Seller's liability to Buyer shall be limited (except as provided by law) to the remedies provided above under paragraph 10 if the warranty period described in such paragraph 10 has not expired. If such warranty period has expired, Seller shall not be liable for such damages or injuries, provided, however, that if a court of competent jurisdiction shall find as a matter of law that any clause of this paragraph is unlawful, it is agreed that Seller's liability shall be limited solely to a U.S. dollar amount equal to the cost of the defective Product to Buyer. The remedies provided in this paragraph shall be exclusive and shall be Buyer's sole remedies.

21. Governing Law: This Agreement shall be construed under and in accordance with the laws of the State of Indiana except for those principals of conflicts of law which may have the effect rejecting venue as consented to hereinafter.

22. WAIVER OF JURY TRIAL: BUYER AND SELLER HEREBY WAIVE, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT THEY OR EITHER OF THEM MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT.

23. CONSENT TO VENUE: ALL LITIGATION BETWEEN THE PARTIES SHALL BE COMMENCED AND MAINTAINED IN EITHER THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF INDIANA OR ANY INDIANA STATE COURT SITTING IN ST. JOSEPH COUNTY, INDIANA. BUYER AND SELLER CONSENT TO VENUE IN AND THE JURISDICTION OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF INDIANA AND TO VENUE IN AND THE JURISDICTION OF ANY INDIANA STATE COURT SITTING IN ST. JOSEPH COUNTY, INDIANA FOR ALL LITIGATION WHICH MAY BE BROUGHT TO ENFORCE A JUDGEMENT OF THE ARBITRATION PANEL PURSUANT TO SECTION 24 OR FOR ANY OTHER PURPOSE ARISING FROM, THROUGH OR IN ANY MANNER RELATED TO THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF BUYER AND SELLER HEREUNDER. NOTWITHSTANDING THE FOREGOING, EACH PARTY SHALL HAVE THE RIGHT TO BRING AN ACTION TO ENFORCE A JUDGMENT OR THE AWARD OF ARBITRATORS IN ANY COURT HAVING JURISDICTION OVER THE PARTY OR THE PROPERTY OF THE PARTY AGAINST WHOM SUCH AWARD OR JUDGMENT WAS ENTERED. THIS PROVISION IS NOT A WAIVER OF THE REQUIREMENT OF ARBITRATION.

24. Arbitration: Any dispute between Buyer and Seller shall be settled by binding arbitration in accordance with the Rules of the American Arbitration Association ("AAA"). The expedited rules of the AAA shall apply and judgment upon the decision of the arbitrators may be entered in any court having jurisdiction thereof. The arbitration shall be conducted in St. Joseph County, Indiana. Any arbitration award must be accompanied by a written statement of the arbitrator giving an explanation as to the basis for the determination of the award. Each Party shall pay one-half (½) of the charge for the arbitrators and one-half (½) of any other charge imposed by AAA. Notwithstanding the foregoing, Seller may, but need not, submit to arbitration any action to collect any sum owed by Buyer to Seller. In the event Seller elects to seek a judgment against Buyer or other relief as provided herein without arbitration, Buyer agrees that any counter-claim against Seller shall be, nonetheless, submitted to arbitration.

Seller makes no warranties, expressed or implied, except as otherwise specifically herein provided. No implied warranty of merchantability is made; and, no warranty of fitness is made. Seller shall have no obligation to Buyer for special, incidental, indirect or consequential damages of any kind, including lost profits.



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