GUYED TOWERS · RW-45G SERIES

RW-45G

Guyed lattice tower

A multi-purpose triangular lattice tower for radio, microwave, cellular, broadband and SCADA links. Engineered for guyed installations up to 300 ft (91.4 m) and supplied as complete, ready-to-erect packages.



ANSI/TIA-222-G | Hot-dip galvanized | 90 · 110 · 130 mph designs

300 ft	16¾ in	10 ft
Maximum guyed height (91.4 m)	Equilateral face width (425 mm)	Standard section length (3.05 m)

OVERVIEW

One tower, many jobs

The RW-45G is the workhorse of the Rongwell guyed range. Its welded triangular sections combine heavy tubular legs with continuous solid-rod bracing, giving a stiff, light structure that is quick to stack and easy to climb.

Every standard design is delivered as one part number that includes sections, top section, base plate, guy assemblies, guy strand, hardware, anchors and grounding kits, sized for the selected height and wind class.

FEATURES

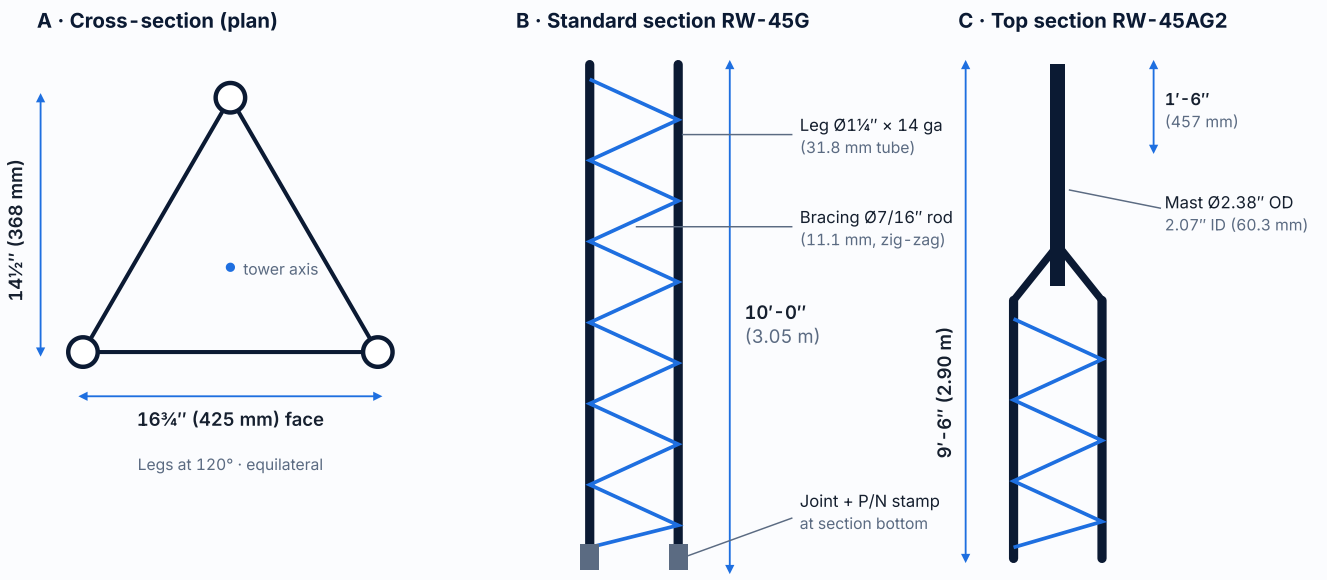
- Hot-dip galvanized after fabrication, inside and out
- 16¾ in (425 mm) equilateral triangle cross-section
- High-strength Ø1¼ in tubular legs with zig-zag solid-rod bracing
- Each section ships with its own joint bolt kit
- Part number stamped at the bottom of every section
- Standard designs from 40 ft to 300 ft in 10 ft steps
- Compatible top sections, base plates, mounts and accessories

Use genuine RW-45G components only

Mixing RW-45G sections with copies or with sections from other manufacturers voids all Rongwell engineering data and warranty, and may cause tower failure, injury or death. Any structure taller than 10 ft (3 m) requires a climber safety device.

SECTION GEOMETRY

Sections and top section



Drawings not to scale. Dimensions in inches/feet with metric equivalents. Third leg hidden in elevation views.

Specifications

Structure type	Guyed triangular lattice tower
Face width	16¾ in (425 mm), equilateral
Legs	Ø1¼ in OD × 14 ga steel tube (31.8 mm)
Bracing	Ø7/16 in continuous solid rod, zig-zag (11.1 mm)
Standard section	10 ft (3.05 m), welded, with joint bolt kit
Finish	Hot-dip galvanized after fabrication
Maximum height	300 ft (91.4 m), guyed
Design standard	ANSI/TIA-222-G and -F, Class I, Topographic Category 1
Wind classes	90, 110 and 130 mph, 3-second gust (Rev. G)
Steel length tolerance	+1% / −½%

Main components

Part no.	Description
RW-45G	Standard section, 10 ft, HDG
RW-45JBK	Joint bolt kit (one per section, included)
RW-45AG2	Top section, 9 ft 6 in, with Ø2.38 in mast
RW-APL45	Top plate for beacon or lightning rod
RW-BPC45	Base plate for concrete pier
RW-PP34	Pier pin ¾ × 12 in, cast into the base pier
RW-GA45	Guy bracket assembly, one per guy level
RW-AGK1	Anchor grounding kit, one per anchor
RW-BGK3	Base grounding kit with three ground rods

Guy bracket RW-GA45: maximum vertical pull 3.91 kips (17.4 kN) under Rev. G, or 3.40 kips (15.1 kN) under Rev. F. Maximum guy strand ¼ in EHS.

SELECTION GUIDE

90 mph standard designs, 40 to 300 ft

90 mph 3-second gust (TIA-222-G) · 70 mph fastest mile (TIA-222-F) · no ice · level ground

Height ft (m)	Std sections	Guy levels	Max EPA Exp. B ft² (m²)	Max EPA Exp. C ft² (m²)	Max EPA Rev. F ft²	Anchor radius ft (m)	Base pier RW-	Anchor blocks RW-	Part number
40 (12.2)	3	1	31.3 (2.91)	23.0 (2.14)	22.6	32 (9.8)	CB1	AB2	RW45G-090-040
50 (15.2)	4	1	29.7 (2.76)	23.0 (2.14)	21.2	40 (12.2)	CB1	AB2	RW45G-090-050
60 (18.3)	5	1	28.2 (2.62)	21.2 (1.97)	20.0	48 (14.6)	CB1	AB2	RW45G-090-060
70 (21.3)	6	2	26.9 (2.50)	20.4 (1.90)	19.0	56 (17.1)	CB1	AB2	RW45G-090-070
80 (24.4)	7	2	25.9 (2.41)	19.9 (1.85)	18.2	64 (19.5)	CB1	AB2	RW45G-090-080
90 (27.4)	8	2	25.0 (2.32)	19.4 (1.80)	17.6	72 (21.9)	CB1	AB2	RW45G-090-090
100 (30.5)	9	2	24.3 (2.26)	18.9 (1.76)	17.0	80 (24.4)	CB1	AB2	RW45G-090-100
110 (33.5)	10	3	23.6 (2.19)	18.6 (1.73)	16.4	88 (26.8)	CB1	AB2	RW45G-090-110
120 (36.6)	11	3	23.0 (2.14)	18.2 (1.69)	16.0	96 (29.3)	CB1	AB2	RW45G-090-120
130 (39.6)	12	3	22.5 (2.09)	17.9 (1.66)	15.6	104 (31.7)	CB1	AB2	RW45G-090-130
140 (42.7)	13	3	22.0 (2.04)	17.6 (1.64)	15.2	112 (34.1)	CB1	AB2	RW45G-090-140
150 (45.7)	14	4	21.6 (2.01)	17.4 (1.62)	14.8	120 (36.6)	CB1	AB2	RW45G-090-150
160 (48.8)	15	4	21.2 (1.97)	17.1 (1.59)	14.4	128 (39.0)	CB1	AB2	RW45G-090-160
170 (51.8)	16	4	20.8 (1.93)	16.9 (1.57)	14.2	136 (41.5)	CB1	AB2	RW45G-090-170
180 (54.9)	17	4	20.5 (1.90)	16.7 (1.55)	14.0	144 (43.9)	CB1	AB2	RW45G-090-180
190 (57.9)	18	5	20.2 (1.88)	16.5 (1.53)	13.6	152 (46.3)	CB1	AB2	RW45G-090-190
200 (61.0)	20	5	19.8 (1.84)	16.3 (1.51)	11.4	160 (48.8)	CB1	AB2	RW45G-090-200
210 (64.0)	21	5	19.5 (1.81)	16.1 (1.50)	11.2	168 (51.2)	CB2	AB2 / AB2	RW45G-090-210
220 (67.1)	22	5	19.3 (1.79)	16.0 (1.49)	11.0	176 (53.6)	CB2	AB1 / AB2	RW45G-090-220
230 (70.1)	23	6	19.1 (1.77)	15.8 (1.47)	10.6	184 (56.1)	CB2	AB1 / AB2	RW45G-090-230
240 (73.2)	24	6	18.9 (1.76)	15.7 (1.46)	10.4	192 (58.5)	CB2	AB1 / AB2	RW45G-090-240
250 (76.2)	25	6	18.6 (1.73)	15.6 (1.45)	10.4	200 (61.0)	CB2	AB1 / AB2	RW45G-090-250
260 (79.2)	26	6	18.4 (1.71)	15.5 (1.44)	10.2	208 (63.4)	CB3	AB2 / AB2	RW45G-090-260
270 (82.3)	27	7	18.2 (1.69)	15.4 (1.43)	10.0	216 (65.8)	CB3	AB2 / AB2	RW45G-090-270
280 (85.3)	28	7	18.0 (1.67)	15.2 (1.41)	9.8	224 (68.3)	CB3	AB2 / AB2	RW45G-090-280
290 (88.4)	29	7	17.8 (1.65)	15.1 (1.40)	9.6	232 (70.7)	CB3	AB2 / AB2	RW45G-090-290
300 (91.4)	30	7	17.6 (1.64)	15.0 (1.39)	9.6	240 (73.2)	CB3	AB2 / AB2	RW45G-090-300

EPA = maximum effective projected area of antennas and mounts at the tower top. Designs from 200 ft use a top plate (RW-APL45) instead of the RW-45AG2 top section. Where two anchor blocks are listed, the first is the inner anchor and the second the outer anchor.

Design notes

- Designs follow ANSI/TIA-222-F and -G for Class I structures, Topographic Category 1.
- Towers are assumed on level ground. Roof-top sites and unusual terrain get lower EPA values.
- Two ½ in (13 mm) transmission lines are assumed on each tower face.
- Antennas and mounts are assumed symmetrically placed at the tower top.
- Anchor radius is measured from the tower base to where the anchor rod enters the ground (80% of tower height).

What each package includes

- Standard sections, top section or top plate, and base plate
- Guy brackets, EHS guy strand, thimbles, turnbuckles and safety cable clips
- Anchor rods, base and anchor grounding kits
- Guy strand is cut for level ground plus 6% for sag and connections
- Assembly drawings and a safety warning plate

110 mph and 130 mph packages are available. Ask our telecommunication sales team for the matching tables.

ACCESSORIES

Bases, mounts and add-ons

Part no.	Bases and top
RW-BPC45	Base plate for concrete pier, used with RW-PP34 pier pin*
RW-BPH45	Hinged base plate on ⅝ × 12 in base bolts; lets the tower tilt up during erection*
RW-SB45	5 ft short base for direct embedment in concrete
RW-FR45	Flat-roof mount that bolts to the roof surface*
RW-TG45	Tapered base, for use with a base insulator or pier pin*
RW-APL45	Top plate for a beacon or lightning rod
RW-BPL45	Bearing plate; turns a standard section into a top section for 2 in and 3 in thrust bearings
RW-LRC5	Lightning rod, 5 ft copper-clad, mounts on RW-APL45

Part no.	Mounts and add-ons
RW-TDM45	Top mount, with or without mast (2⅜ to 4½ in OD); 7 ft mounting tube
RW-DM45	Face mount with 5 ft mast, 2⅜ in or 4½ in OD
RW-DSH45	Dish mount with 5 ft mast tube, 2⅜ in or 4½ in OD
RW-TA45	Torque-arm stabilizer; anti-twist six-way guying at antenna level
RW-HB45	Heavy-duty house bracket, 18 to 36 in from the wall
RW-AS45	Accessory shelf for antenna rotors
RW-GP45	Gin-pole assembly tool for stacking sections
RW-CSD	Climber safety device (required above 10 ft)

* Towers on these bases must be guyed or bracketed at all times. Temporary steel guys may be needed during erection and dismantling.

FOUNDATIONS

Concrete anchor blocks

Block	A × B × C × D	Horizontal bars	Stirrups	Concrete per block	Uplift capacity	Lateral capacity
RW-AB1	3′-0″ × 1′-0″ × 3′-0″ × 4′-0″	(8) #5	#3 @ 12″	0.44 yd³ (0.34 m³)	4,800 lb (21.4 kN)	2,150 lb (9.6 kN)
RW-AB2	4′-0″ × 1′-6″ × 4′-0″ × 6′-0″	(10) #6	#3 @ 12″	1.33 yd³ (1.02 m³)	12,600 lb (56.0 kN)	6,480 lb (28.8 kN)
RW-AB3	6′-0″ × 1′-6″ × 3′-0″ × 6′-0″	(8) #6	#3 @ 12″	1.00 yd³ (0.76 m³)	18,700 lb (83.2 kN)	10,500 lb (46.7 kN)
RW-AB4	6′-0″ × 1′-6″ × 4′-0″ × 9′-0″	(10) #6	#4 @ 12″	2.00 yd³ (1.53 m³)	32,500 lb (144.6 kN)	15,800 lb (70.3 kN)
RW-AB5	8′-0″ × 2′-0″ × 3′-0″ × 10′-0″	(10) #7, +1 each side	#4 @ 12″	2.22 yd³ (1.70 m³)	43,000 lb (191.3 kN)	21,000 lb (93.4 kN)
RW-AB6	8′-0″ × 2′-0″ × 4′-0″ × 10′-0″	(12) #7, +1 each side	#4 @ 12″	2.96 yd³ (2.26 m³)	52,000 lb (231.3 kN)	26,500 lb (117.9 kN)

Capacities for ANSI/TIA-222-G presumptive clay soil. The purchaser must confirm that site soil meets or exceeds these parameters and that the foundation depth suits local frost and moisture conditions. Dimensions A to D are defined on the anchor block detail drawing supplied with each tower.

How to order

Standard designs use one part number:

RW45G-090-120

Model · wind speed in mph (090, 110, 130) · height in ft (040 to 300)

Contact

Telecommunication sales
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rongwell-towers.pages.dev

Tower and foundation installation must be carried out by qualified, experienced personnel using the assembly drawings supplied with each tower. See the RW-45G Installation Guide. Specifications may change without notice.