

# Installation Instructions

## Types RLA800-11-H and RLA800B-13 Hinged Spring and Rigid Hangers for 8-3/16" Transmission Line



### Description

Type RLA800B-13 rigid hanger is designed for mounting 8-3/16" ERI rigid transmission line with an outside diameter of 8.15 inches (207 mm). One hanger will anchor up to 1000 ft (300 m) of transmission line. One additional hanger should be used on the top section of the vertical run for every additional 1000 ft (300 m) of line or portion thereof.

Type RLA800-11-H hinged vertical spring hanger is used to support the weight and accommodate the differential expansion of 8-3/16" rigid transmission line.

### Rigid Hanger Installation

**Note:** If no holes are available, contact the tower manufacturer for applicable safety regulations regarding the drilling of any holes in tower sections.

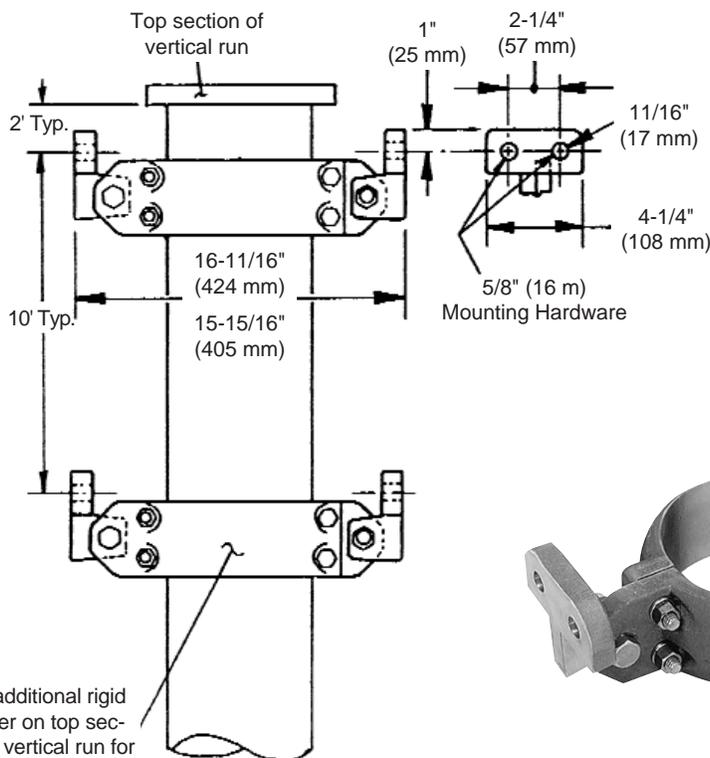
Transmission line installation may begin at either end of the proposed vertical run. Installations originating at the top (antenna end) of the vertical run will require at least one rigid hanger at the top (depending on the length) and will require proper positioning of the bottom miter elbow to allow for both expansion and contraction of the rigid line over the anticipated operational temperature range.

Installations originating at the bottom (transmitter end) of the vertical run must utilize one or more rigid hangers for support. Additional miter elbows and field flanged sections will probably be required to ensure alignment with the antenna input flange.

**Note:** Rigid hangers used at the bottom portion of the vertical run for increased support during installation must be removed after installation of top rigid hanger(s) to prevent serious damage to antenna and/or transmission line.

### Hardware Torque Specifications

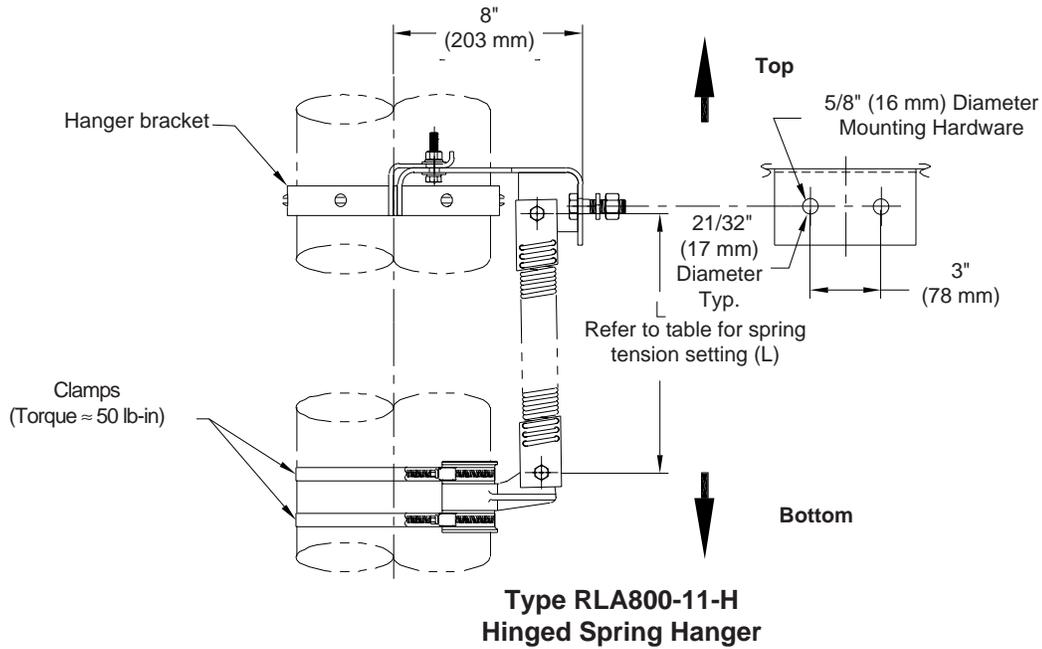
Hardware Size	Torque Value
3/8" (10 mm)	21 ft-lb (28 N-m)
1/2" (13 mm)	46 ft-lb (62 N-m)
5/8" (16 mm)	76 ft-lb (103 N-m)



Use additional rigid hanger on top section of vertical run for every additional 1000 ft (300 m) of line or portion thereof.



**Type RLA800B-13  
Rigid Hanger**



Hardware Torque Specifications	
Hardware Size	Torque Value
3/8" (10 mm)	21 lb-ft (28 N-m)
1/2" (13 mm)	46 lb-ft (62 N-m)
5/8" (16 mm)	76 lb-ft (103 N-m)

### Spring Hanger Installation

Install rigid hanger(s) followed by spring hangers. Mount spring hangers directly to tower members provided, at 10 ft (3 m) intervals, as follows:

1. Loosen captivated 3/8" nuts of all spring hangers and open jaws.
2. Bolt each hanger to tower using 5/8" (16 mm) bolts and torque to specifications.
3. Insert rigid line section, close spring hanger jaws on first hanger and torque bolt to specifications. Leave clamps open.
4. Repeat for each additional hanger.

After all spring hangers have been properly installed, set springs in accordance with Spring Settings table at right, and tighten clamps. To insure uniformity of settings, a setting guide may be made from a suitable material cut to the length specified in the Spring Settings table. The table gives the spring setting based on line length from the rigid hanger at the top of the transmission line and on the air temperature when the springs are set.

**Note:** To avoid large variations in tension, all spring hangers should be set within hours of each other.

### Vertical Spring Hanger Spring Settings - L, in (mm)

Line Length ft (m)	Ambient temperature, °F (°C)				
	0 to 20 (-18 to -7)	20 to 40 (-7 to 4)	40 to 60 (4 to 16)	60 to 80 (16 to 27)	80 to 100 (27 to 38)
0-200 (0-61)	29-11/16 (754)	29-3/4 (755)	29-13/16 (757)	29-7/8 (759)	29-15/16 (760)
200-400 (61-122)	29-3/8 (747)	29-5/8 (752)	29-13/16 (757)	30 (762)	30-3/16 (767)
400-600 (122-183)	29-1/8 (740)	29-1/2 (749)	29-13/16 (757)	30-1/8 (766)	30-1/2 (774)
600-800 (183-244)	28-7/8 (733)	29-5/16 (745)	29-13/16 (757)	30-1/4 (769)	30-3/4 (781)
800-1000 (244-305)	28-5/8 (726)	29-3/16 (742)	29-13/16 (757)	30-7/16 (772)	31 (788)
1000-1200 (305-366)	28-5/16 (720)	29-1/16 (738)	29-13/16 (757)	30-9/16 (776)	31-1/4 (795)
1200-1400 (366-427)	28-1/16 (713)	28-15/16 (735)	29-13/16 (757)	30-11/16 (779)	31-9/16 (801)
1400-1600 (427-488)	27-13/16 (706)	28-13/16 (731)	29-13/16 (757)	30-13/16 (783)	31-13/16 (808)
1600-1800 (488-549)	27-1/2 (699)	28-11/16 (728)	29-13/16 (757)	30-15/16 (786)	32-1/16 (815)
1800-2000 (549-610)	27-1/4 (692)	28-1/2 (725)	29-13/16 (757)	31-1/16 (789)	32-3/8 (822)



**Electronics Research, Inc.**

7777 Gardner Road, Chandler, Indiana 47610 USA

Tel: +1 (812) 825-6000 | Fax: +1 (812) 925-4030 | www.ERInc.com

Copyright © 2003 Electronics Research, Inc.

Printed in U.S.A. 20031222