

Installation Instructions

Types RLA400-11-H, RLA400-13 and RLA400-13L

Hinged Spring and Rigid Hangers

for 4-1/16" Rigid Transmission Line



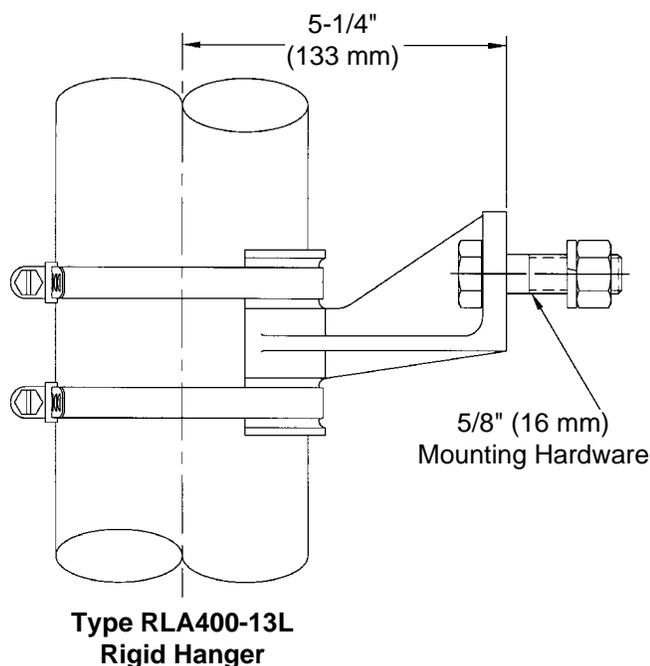
Description

Type RLA400-13 rigid hanger is designed for mounting 4-1/16" ERI rigid transmission line with an outside diameter of 4.13 inches (105 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 RLA400-13L rigid hanger is designed for mounting 4-1/16" rigid transmission line. One hanger will anchor up to 500 ft (150 m) of transmission line. One additional hanger should be used on the top section of the vertical run for every additional 500 ft (150 m) of line or portion thereof.

Type RLA400-11-H hinged vertical spring hanger is used to support the weight and accommodate the differential expansion of 4-1/16" rigid 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)



Type RLA400-13L Rigid Hanger

Use additional rigid hanger on top section of vertical run for every additional 500 ft (150 m) of line or portion thereof.

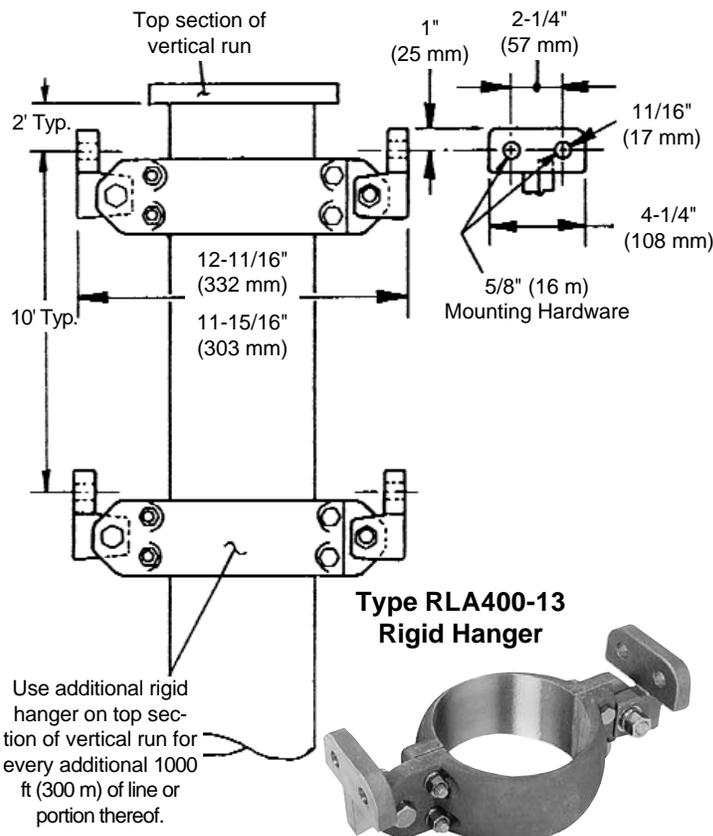
Rigid Hanger Installation

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.

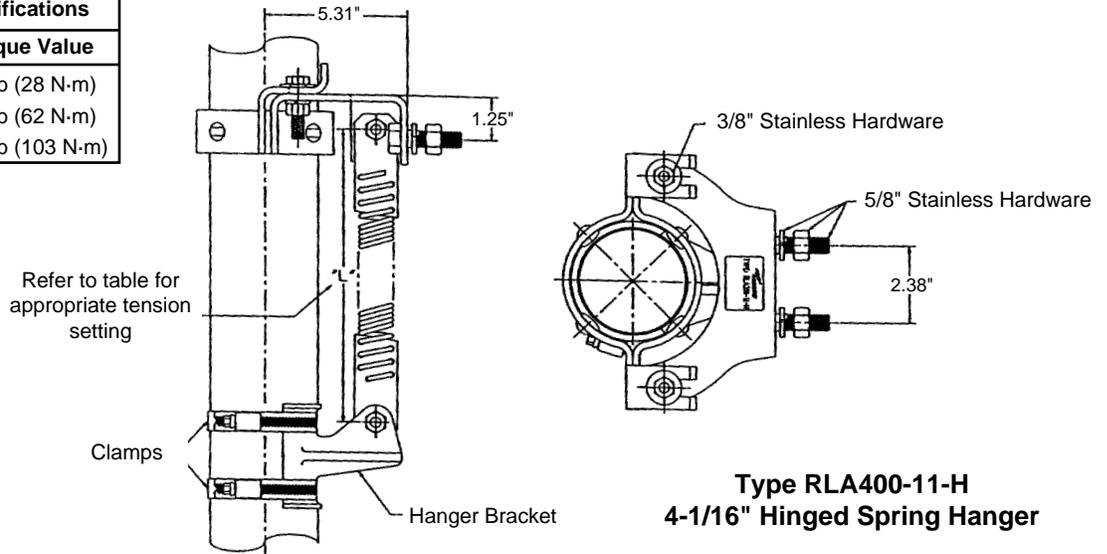
Installations originating at the bottom (transmitter end) of the vertical run must utilize one or more rigid hangers for support. Additional miter elbows and field flanged sections will probably be required to ensure alignment with the antenna input flange.

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.



Type RLA400-13 Rigid Hanger

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)



Spring Hanger Installation

Install rigid hanger(s) followed by spring hangers. Mount spring hangers directly to tower member 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 below and tighten clamps. The table gives the spring setting based on both the line length from the rigid hanger at the top of the transmission line and on the air temperature, when the springs are set. To insure uniform settings, a setting guide may be made from a suitable material cut to the lengths specified in the table.

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)	22 (559)	22-1/16 (561)	22-1/8 (563)	22-1/4 (564)	22-5/16 (566)
200-400 (61-122)	21-3/4 (552)	21-15/16 (558)	22-1/8 (563)	22-3/8 (568)	22-9/16 (573)
400-600 (122-183)	21-1/2 (546)	21-13/16 (554)	22-1/8 (563)	22-1/2 (571)	22-13/16 (580)
600-800 (183-244)	21-3/16 (539)	21-11/16 (551)	22-1/8 (563)	22-5/8 (575)	23-1/16 (587)
800-1000 (244-305)	20-15/16 (532)	21-9/16 (547)	22-1/8 (563)	22-3/4 (578)	23-3/8 (593)
1000-1200 (305-366)	20-11/16 (525)	21-7/16 (544)	22-1/8 (563)	22-7/8 (581)	23-5/8 (600)
1200-1400 (366-427)	20-7/16 (518)	21-1/4 (540)	22-1/8 (563)	23 (585)	23-7/8 (607)
1400-1600 (427-488)	20-1/8 (511)	21-1/8 (537)	22-1/8 (563)	23-3/16 (588)	24-3/16 (614)
1600-1800 (488-549)	19-7/8 (505)	21 (534)	22-1/8 (563)	23-5/16 (592)	24-7/16 (621)
1800-2000 (549-610)	19-5/8 (498)	20-7/8 (530)	22-1/8 (563)	23-7/16 (595)	24-11/16 (628)

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



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