

# Supported Miter Elbows

## For ERI Standard and MACXLine® Coaxial Transmission Lines

Types ACX050-10SE, ACX150-10SE, ACX350-10SE, ACX350-9SE, ACX350-10SU, ACX450-10SE, ACX450-10SU, ACX450-9SE, ACX650B-10SE, ACX650B-10SU, ACX675B-10SU-(\*), ACX775-10SE-(\*), ACX775-9SE-(\*), and ACX875B-10ASE

### Notice

The installation, maintenance, or removal of antenna systems requires qualified, experienced personnel. ERI installation instructions are written for such personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment. ERI disclaims any liability or responsibility for the results of improper installation practices.

Use clean cotton gloves when handling inner connector or inner conductor.

### 1. Inner Connector Installation

For unequal leg elbows, the system layout may require transfer of the inner connector to the other leg. Otherwise, skip the remainder of this Section and go to Section 2.

Loosen the bolt in the inner connector several turns. Lightly tap the bolt to loosen the locking device and withdraw the inner connector. Fully insert the inner connector into the inner conductor of the other leg. Ensure that the insulator is properly seated with only half its thickness protruding. If the inner connector is the captivated type, use a small wrench to tighten the bolt. Do not over tighten the bolt. **The inner connector fingers should not bulge the inner tube.** The bolt torque should be 3 lb-in or less. If the inner tube is held in one hand and the exposed inner connector is held in the other hand, it should be extremely difficult, if not impossible, to pull them apart.

### 2. O-Ring Installation

Seat the O-ring gasket in the flange gasket groove on one of the elbow flanges. Be sure both the gasket and groove are clean. Any foreign matter may prevent the assembly from being pressure tight. A thin coating of silicone grease on the gasket will help to hold the gasket in place during assembly. **Electrical contact surface must be free of silicone grease.**

### 3. Elbow Installation

Join the elbow to the transmission line by engaging the inner connector (extending from the elbow) with the transmission line inner conductor. Push the assembly together making certain the gasket remains in place and the inner connector insulator seats properly in the flanges. Rotate the swivel flange so the alignment pins are opposite the alignment holes, then unite the flanges. Add the connecting hardware and make the nuts finger tight. Alternately snug the hardware at 180° intervals while maintaining a uniform gap between the flanges.

Attach the next section of transmission line, with the nuts finger tight. When the transmission lines are properly aligned, fully tighten the nuts. Perform the final tightening sequence in the size pattern table (Table 1) and to the torque specification in the table 2. The gap between the flanges must be uniform. Do not over-tighten.

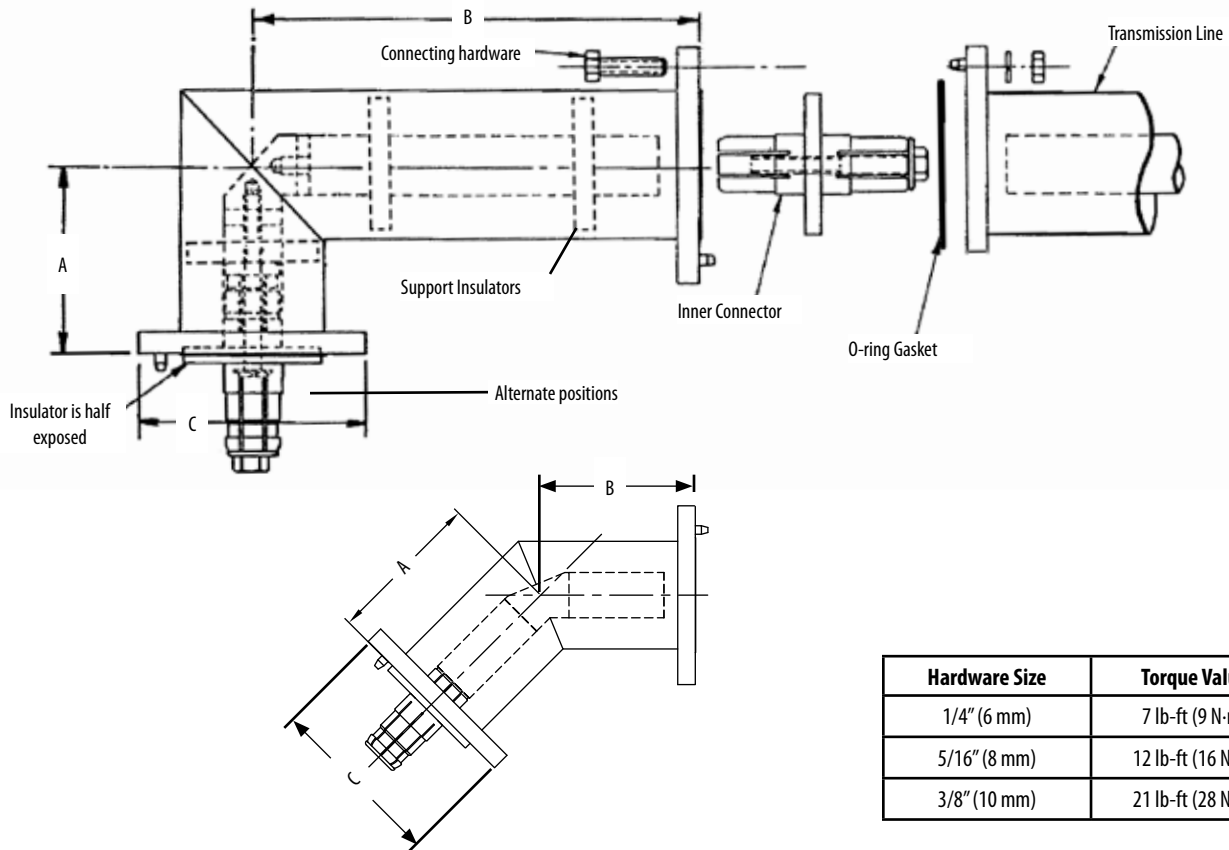
Holes	Nut Tightening sequence
4	1, 3, 2, 4
6	1, 4, 2, 5, 3, 6
8	1, 5, 3, 7, 2, 6, 4, 8
12	1, 5, 9, 3, 7, 11, 2, 6, 10, 4, 8, 12
14	1, 8, 4, 11, 3, 10, 5, 12, 7, 14, 9, 2, 6, 13
16	1, 9, 5, 13, 3, 11, 7, 15, 2, 10, 6, 14, 4, 12, 8, 16

Table 1

Type Number	Line Size, in.	Bend, degrees	Impedance, ohms	A dimension,		B dimension,		C dimension,		Hardware Size, in.	Torque, lbf-ft (N·m)
				in	(mm)	in	(mm)	in	(mm)		
ACX050-10SE	7/8	90	50	2.44	(62)	3.08	(78)	2-1/4	(57)	1/4	7 (9)
ACX150-10SE	1-5/8	90	50	2.89	(73)	2.89	(73)	3-1/2	(89)	5/16	12 (16)
ACX350-10SE	3-1/8	90	50	4.19	(106)	4.19	(106)	5-3/16	(132)	3/8	21 (28)
ACX350-10SU	3-1/8	90	50	4.19	(106)	Variable		5-3/16	(132)	3/8	21 (28)
ACX350-9SE	3-1/8	45	50	4.50	(114)	4.50	(114)	5-3/16	(132)	3/8	21 (28)
ACX450-10SE	4-1/16	90	50	6.00	(152)	6.00	(152)	6-3/16	(157)	3/8	21 (28)
ACX450-10SU	4-1/16	90	50	6.00	(152)	12.00	(305)	6-3/16	(157)	3/8	21 (28)
ACX450-9SE	4-1/16	45	50	6.00	(152)	6.00	(152)	6-3/16	(157)	3/8	21 (28)
ACX650B-10SE	6-1/8	90	50	5.50	(140)	5.50	(140)	8-1/8	(206)	3/8	21 (28)
ACX650B-10SU	6-1/8	90	50	7.00	(178)	14.00	(356)	8-1/8	(206)	3/8	21 (28)
ACX675B-10SU-(*)	6-1/8	90	75	7.00	(178)	14.00	(356)	8-1/8	(206)	3/8	21 (28)
ACX775-10SE-(*)	7-3/16	90	75	12.00	(305)	12.00	(305)	9-1/2	(241)	3/8	21 (28)
ACX775-9SE-(*)	7-3/16	45	75	9.00	(229)	9.00	(229)	9-1/2	(241)	3/8	21 (28)
ACX875B-10ASE	8-3/16	90	75	12.00	(305)	12.00	(305)	11	(279)	3/8	21 (28)

\* Channel Number.

Table 2



Hardware Size	Torque Value
1/4" (6 mm)	7 lb-ft (9 N·m)
5/16" (8 mm)	12 lb-ft (16 N·m)
3/8" (10 mm)	21 lb-ft (28 N·m)

For Technical Support call 877 ERI-LINE or +1 812 925-6000, or visit our website at [www.eriinc.com](http://www.eriinc.com)

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