HARDWARE DATA

RECOMMENDED
TIGHTENING TORQUE

The hardware used in connectors must be compatible with the connector material, have high mechanical strength and be corrosion resistant.

Copper alloy connectors have hardware made of silicon bronze alloy ASTMB99. This material is used in outdoor construction, and today, is the standard throughout the industry.

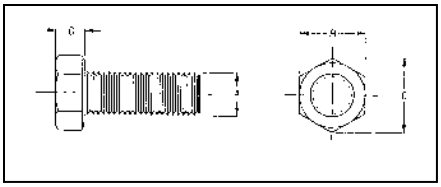
Aluminum connectors generally have aluminum alloy hardware. The bolts are 2024T4 and anodized to resist corrosion. The nuts are 6061T6, which is resistant to corrosion and does not require anodizing. Bolts are lubricated to eliminate galling and to provide consistent clamping forces.

Steel Hardware	
Bolt Size	**Recommended Torque (Inch Pounds)**
1/4 – 20	80
5/16 – 18	180
3/8 – 16	240
1/2 – 13	480
5/8 – 11	660
3/4 – 10	1050
Aluminum Hardware	
Bolt Size	**Recommended Torque (Inch Pounds)**
1/2 – 13	300
5/8 – 11	480
3/4 – 10	650

The size material for clamping hardware are selected to provide the required force when tightened to the recommended torque. To reduce or greatly exceed the recommended torque can adversely affect the performance of the connector.

SILICON BRONZE

HEX BOLT DATA



"A" (BOLT SIZE)	"B"	"C"	"D"	RECOMMENDED TORQUE (in-lb)	MIN. BREAKING FORCE (lb)	MIN. SHEARING FORCE (lb)
1/4 – 20 UNC	7/16	.50	.16	80	1,780	990
5/16 – 18 UNC	1/2	.56	.21	180	2,930	1,640
3/8 – 16 UNC	9/16	.65	.24	240	4,350	2,430
1/2 – 13 UNC	3/4	.87	.32	480	7,950	4,460
5/8 – 11 UNC	15/16	1.08	.40	660	12,700	7,100
3/4 – 10 UNC	1-1/8	1.30	.48	1050	17,510	10,540

RECOMMENDED TERMINATION HARDWARE