



DISTRIBUTION PRODUCTS INDEX

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ALUMINUM AND BRONZE CONNECTORS

ALLOYS, CONNECTORS, HARDWARE & INSTALLATION

In over 100 years of serving the electrical industry, Anderson has earned a reputation for being a creative leader in the design and manufacture of electrical connectors, fittings and related accessories. The Anderson acceptance of these responsibilities is best exemplified through our wholly self-sufficient facilities. Design Engineering, Testing and Metallurgical Laboratories, and all facets of Manufacturing are geared for research, development and production of a full line of quality bronze, aluminum and ductile iron products.

The following information conveys helpful reference for material composition, installation, standardization and definitions applying to connectors and fittings as developed during our years of experience.

ALUMINUM CONNECTORS

Aluminum Alloys:

Connectors and fittings requiring high mechanical properties are cast from aluminum alloy 356. Sand cast 356 is heat treated to the T6 temper, and permanent mold castings are heat treated to the T61 temper. The 356 alloy is a 7 per cent silicon—0.3 per cent magnesium-aluminum alloy. The alloy is not susceptible to stress corrosion or season cracking. Its volume conductivity is approximately 39 per cent, I.A.C.S.

Cast compression connectors requiring a soft high conductivity aluminum are supplied from 99 plus per cent pure aluminum. Other aluminum compression connectors are made from commercially pure high conductivity wrought aluminum.

Installation Recommendations For Aluminum Connectors

Select type of connector from those listed below and follow the indicated procedure.

CONNECTOR TYPE	INSTALLATION PROCEDURE
Bolted	Procedure #1
Welded	Procedure #2
Compression	Procedure #3
Welded and Bolted	Procedure #2 followed by Procedure #1
Compression and Bolted	Procedure #3 followed by Procedure #1
Welded and Compression	Procedure #2 followed by Procedure #3

PROCEDURE #1—BOLTED CONNECTIONS

- A. For aluminum to aluminum connections and aluminum to copper connections without a copper lined contact.
 1. Vigorously clean all contact surfaces of the connector and conductor with a stiff stainless steel wire brush to remove oxides. A typically bright aluminum surface should be obtained. **Do Not Wire Brush Plated Contact Surfaces.**
 2. Immediately coat these contact areas with a liberal amount of contact sealant.
 3. Install fitting with bolts finger tight. If a generous bead

of compound does not appear, remove the conductor and add more sealant.

- 4. Alternately (criss-cross) and evenly tighten bolts with a torque wrench to the values shown on page 6.
- 5. Excess sealant squeezed out of joint can be left as is or can be lightly smoothed along contact line.
- 6. All excess sealant must be removed from EHV Connectors and entirely from cable insulation.
- B. For Aluminum connectors with a copper liner to copper connection.
 1. For maximum corrosion protection of the joint, the steps given in A-1 to A-5 should be followed.

PROCEDURE #2—WELDED CONNECTIONS

- A. For cable connections:
 1. Remove all oil, grease and water in vicinity of surfaces to be welded. Vigorously clean the conductor and connector welding areas with a stainless steel brush.
 2. Slide the conductor into the weldment cavity until it is within 1/8" to 3/16" of the rear of the welding barrel.
 3. Prior to welding the connection, a test bead should be made upon an aluminum casting to test the weld settings. (See our catalog Section G - Substation Connectors for detailed welding procedure).
 4. Begin welding by "burning into" the inner wall of the casting and proceeding toward the conductor center. Wire brush the original weld if more than one weld pass is required.
- B. For tubular connections:
 1. Remove all oil, grease and water in vicinity of surfaces to be welded. Vigorously clean the conductor and connector welding areas with a stainless steel brush.
 2. Align the tubular bus and connector groove. Begin welding by "burning into" the inner wall of the casting and proceeding toward the conductor center. Wire brush the original weld if more than one weld pass is required.
 3. Prior to welding the connection, a test bead should be made upon an aluminum casting to test the weld settings. (See our catalog Section G - Substation Connectors for detailed welding procedure).
 4. Due to the manufacturing tolerances on aluminum tubular bus, it is recommended that the tube be positioned in the weldment cavity and tack welded before starting final weld.



- C. For welded connectors with a copper lined contact:
1. Firmly bolt the copper lined contact section of connector to the mating contact surface or to a suitable heat sink prior to welding. This prevents damage to the bonded liner.
 2. Weld the aluminum connection in accordance with steps A or B above. If a heat sink is used, allow connector to cool before removing. The connector may be cooled by quenching in water.

PROCEDURE #3—COMPRESSION CONNECTIONS

1. Vigorously clean the conductor contact area with a stainless steel brush. Do not attempt to clean connector barrel. It is not necessary to apply sealant to the conductor. All connectors will have sealant applied at the factory.
2. Fully insert the conductor into the barrel and crimp. Crimping should begin nearest the center of sleeve type connectors. For closed barrel type connectors crimping should begin at the end and work toward the open end. Excess sealant squeezed out of the joint may be smoothed out around the mouth of the barrel. All excess sealant must be removed from EHV Connectors or any cable insulation.

Installation Recommendations for Aluminum to Copper Connections Using Aluminum Connectors

Connectors with contact sealant—Aluminum connectors can be used for making aluminum to copper connections if the proper installation care is observed. This includes the use of a sealant in accordance with practices outlined above. Use of a sealant protects the connection from oxide formation and electrolytic corrosion for as long as it remains present in the connection completely coating the surfaces and sealing out moisture.

Added protection in addition to sealants is available. Aluminum distribution connectors can be supplied with plating or with copper lined contacts.

Bi-Metallic Transition Plates—Aluminum to copper connections between flat NEMA drilled tongues and bars can be made using transition plates (Type TP). These plates are formed from sheets of 80% aluminum 20% copper which are molecularly bonded together. Best results are obtained by using contact sealant. Always position the aluminum conductor above the copper conductor.

Tin Plating—Tin plating can be furnished on certain connectors by adding suffix “-GP” to the catalog number, aluminum distribution.

Hardware—Anodized Aluminum Clamping Bolts are standard with most Aluminum Power Connectors and may be supplied at extra cost with other connectors. The bolts are fabricated 2024-T4 aluminum and are anodized. After anodizing, the coating is sealed with a dichromate solution which imparts a yellow-green finish.

Standard nuts furnished on aluminum bolts are 6061 T6 dry waxed coated.

Insulator attachment hardware for bus supports is galvanized steel.

BRONZE AND COPPER CONNECTORS

Copper Casting Alloys

Our modern, all electric furnaces provide copper alloy castings of the highest quality possible. The alloy used will vary according to the requirement of the component.

Connectors requiring high tensile strength and corrosion resistance in application are cast from Anderson Alloy 112 (ASTM B-30 Alloy No. C95500). The 112 alloy is a 10% aluminum, 4.5% nickel copper alloy with a minimum tensile strength of 90,000 PSI.

Connectors requiring current-carrying abilities and reasonable strength are cast from Anderson Alloy 123 (ASTM B-30 Alloy No. C84400). The 123 metal is a 81% copper—3% tin—7% lead—9% zinc alloy.

For heavy duty copper compression connectors CDA 110 copper is used. This 110 alloy is 99.9% pure copper.

Other copper compression connectors are made from commercially pure high conductivity wrought copper.

Conductivity is purposely omitted in the above descriptions because it is often confused with current-carrying capacity. While connector alloys may vary in conductivity, design parameters are applied in each case to assure adequate capacity. While connector alloys may vary in conductivity, design parameters are applied in each case to assure adequate capacity to meet the particular application.

Installation Recommendations for Bronze and Copper Connectors

Bronze Bolted Connectors—Contact sealants are not normally required in copper connections. However, the use of sealant is recommended in severe corrosive environments and direct burial applications such as ground grids.

Vigorously clean the conductor and connector contact surfaces with a stainless steel wire brush.

Alternately and evenly tighten bolts with a torque wrench to the values shown in Recommended Torque Values table.

Hardware—Silicon bronze hardware is normally supplied for all conductor clamping bronze components. Stainless steel hardware may be substituted where and when necessary.



Copper Compression Connections—Vigorously clean the conductor contact surfaces with a stainless steel wire brush. Do not attempt to clean connector barrel. In general it is not necessary to apply sealant to the conductor or connectors. Copper connectors requiring sealant have the sealant applied at the factory. The use of sealant is recommended in severe corrosive environments and direct burial applications such as ground grids. Sealants may be designated for a copper connector by adding the appropriate suffix to the basic catalog number.

Installation Recommendations for Copper to Aluminum Connectors Using Copper Connectors

When making copper to aluminum connections, using bronze or copper connectors, best results will be obtained by using the following methods.

1. Tin plate the copper base connection and use sealant between the aluminum and copper. (Tin plating may be specified by adding suffix “-TP” to bronze and copper connectors).
2. Copper pad connectors may be attached directly to an aluminum pad if sealant is freely used.
3. The use of an aluminum conductor in a standard copper base connector (plated or unplated), is not recommended.
4. An aluminum to copper cable transition may be made directly using an aluminum connector as covered in the preceding section on Aluminum Connectors.

*Note With Any Transition Method:
Do Not Position The Aluminum Member In Such A Way That Would Allow Water To Drain From The Copper Connector Over (Or Into) The Aluminum Connection Point.*

General Information on Bronze or Copper Connectors

In regard to bolted connectors; components to be in contact with cable and tube are supplied with “as cast” surfaces. Conductor grooves for cables are designed with ample radii to prevent conductor damage.

Connector Design—In all of our bronze and aluminum power connectors, the temperature rise of the connector shall not exceed the temperature rise of the conductor with which it is intended to be used. The temperature rise of an electric power connector which connects conductors of varying sizes shall not exceed the temperature rise of the conductor having the highest temperature rise. All temperatures are based on the conductor being rated at 30 degrees rise over a 40 degrees ambient, indoors, in still but unconfined air. Our bronze and aluminum connectors conform to one of the following as applicable:

NEMA Standard Publications No. CC-1-1993
CC-3-1973 (ANSI C119.4-1976)
U.L. 486

Contact Sealants—Various sealant formulations have been developed to provide improved electrical and mechanical performance as well as environmental protection to the contact area. Non-petroleum base sealants are provided for underground applications and other applications where natural or synthetic rubber goods might be adversely affected.

The use of sealants are recommended for aluminum to aluminum or aluminum to copper connections which are subjected to severe corrosive environments and when used in direct burial applications such as ground grids.

Non-gritted sealants are recommended for flat connections and as a groove sealant in bolted connectors.

Our gritted sealants are primarily used in compression connectors. Aluminum compression connectors have sealant applied at the factory.

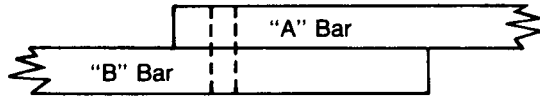
Aluminum stud connectors are supplied with factory applied sealant in the threaded portion. To obtain factory applied sealant in other connectors add the desired sealant suffix designation to the basic catalog number. Example: ACF-6-C-XB

“-XB” for petroleum based sealant



RECOMMENDED TYPES OF HARDWARE AND INSTALLATION MOUNTING

HARDWARE FOR JOINING LIKE OR UNLIKE METALS



If "A" BAR is	Cu	AL	AL	Galvanized Steel	Galvanized Steel
and "B" BAR is	Cu	Cu	AL	Cu	AL
Recommended Series of Hardware	(1) Si-Br (2) SS (3) GS	(1) SS or GS	(1) AL (2) SS or GS	(1) Si-Br (2) SS or GS	(1) AL (2) SS or GS

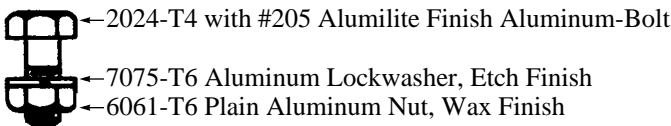
KEY:
 Si-Br—Silicon Bronze GS—Galvanized Steel
 SS—Stainless Steel AL—Aluminum

(1) denotes preferred hardware usage.

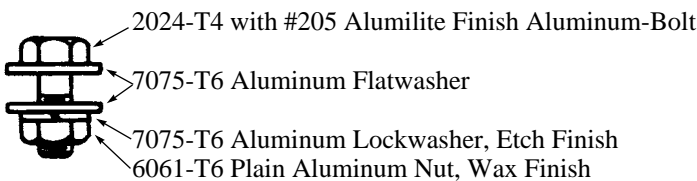
Note:
 Contact sealant should be used between Aluminum to Aluminum and Aluminum to Copper connections.

ALUMINUM CONNECTORS

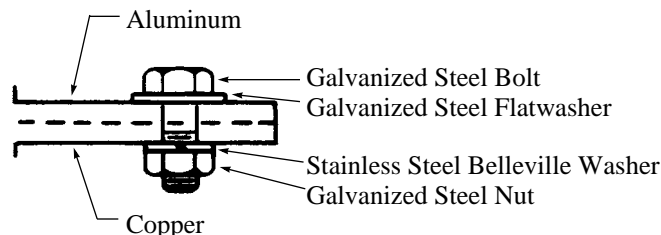
Aluminum Connector (Clamping Hardware)



Aluminum To Aluminum Assemblies (Tongue Mounting Hardware As Assembled At Factory)

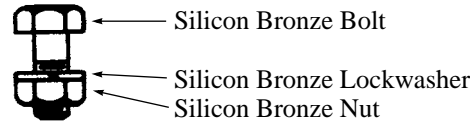


Aluminum To Copper Assemblies (Tongue Mounting Hardware)

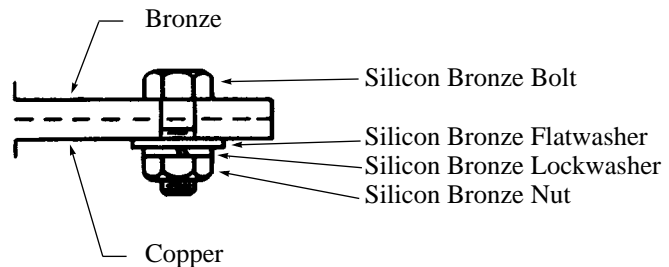


BRONZE CONNECTORS

Bronze Connector (Clamping Hardware)



Bronze To Copper Assemblies (Tongue Mounting Hardware)



RECOMMENDED TORQUE VALUES FOR BOLTED CONNECTORS

Tightening Force Applied to Hardware: Following are ANDERSON'S recommended torque values applying to all clamping hardware used in connectors and fittings.

Note:
 Care should be taken to prevent sealant from being applied to hardware since torque values will be affected if the hardware becomes lubricated with sealant.

BOLT DIA.	RECOMMENDED TORQUE NON-LUBRICATED STEEL & SILICON BRONZE HDWE. LB. INCHES	RECOMMENDED TORQUE LUBRICATED HDWE. & ALUMINUM HDWE. LB. INCHES*
5/16"	180	120
3/8"	240	168
1/2"	480	300
5/8"	660	480
3/4"	840	720

*Reduced torque limits apply when replacing aluminum clamping hardware with steel in bolted aluminum connectors.

NOTE: All eyestems have a recommended torque of 200 lb.—inches.



REFERENCE DATA

LETTER SUFFIX DESIGNATIONS TO STANDARD CATALOG NUMBER FOR SPECIAL FEATURES

A suffix added to a catalog number denotes that a change or modification is to be made to the standard catalog item. The suffixes listed below are for the convenience of our customers. The list does not include special modifications made for one customer only but those having general application.

Catalog No. Suffix	Description of Change or Modification
A	Aluminum loop will be supplied instead of copper loop.
AH	Advance handle only—VCF and VCF6 hot stick assemblies.
AS	Aluminum hardware will be supplied instead of the usual (or standard) hardware.
BNK	Bolt, nut and cotter key will be supplied instead of usual clevis pin.
BNN	Bolt, nut and jam nut will be supplied instead of usual clevis pin.
BW	Belleville washers will be supplied instead of usual washers.
C	A clevis fitting will be supplied with strain, suspension and dead end clamps.
CF	Center-formed tongue will be supplied on lugs where side formed tongues are standard on bronze and aluminum items.
CRF	Corona free strain clamp.
E	An eyestem will be supplied instead of the usual hex head bolt. (This applies generally to stirrup and cable clamps).
ED	Everdur (silicon bronze) hardware will be supplied instead of the usual hardware.
FTP	Flowed-tin plating will be supplied on bronze items. (.0001-.0003 thick and flowed)
FW	A flatwasher will be supplied instead of a lockwasher.
G	A guide will be supplied on expansion connectors.
GA	Galvanized hardware will be supplied instead of usual hardware.
GP	Tin plating will be supplied on aluminum items.
HP	Hexagon clevis pin furnished instead of standard clevis pin.

Catalog No. Suffix	Description of Change or Modification
HW	Hexagon head bolt with a flat washer under the head will be supplied instead of the usual bolts.
LW	A lockwasher will be supplied instead of a flatwasher.
N	Neither socket nor clevis fittings will be supplied with suspension, or dead end clamps.
NSB	No spacer bar on straight line dead end clamps.
S	A socket will be supplied with suspension and dead end clamps.
SE	A static eliminator spring will be supplied on bus supports.
SF	Side formed tongue will be supplied when a center formed tongue is standard.
Special	The catalog number specified is to be modified for particular requirements which the item will not otherwise fill.
TB	Electro-tin plate loop (bail) .0002”-.0004”.
TP	Tin plating will be supplied on bronze items, (Electro-tin .0002”-.0004” thick).
U	U-bolts may be supplied on these items.
UD	An undrilled tongue will be supplied on terminals or lugs.
XB	The connector will be supplied with the grooves coated with a petroleum base sealant and enclosed in a polyethylene bag.
XY	Contact surface finished on both sides of tongue.

*This suffix will appear on the connector or fitting as part of the catalog number. Other suffix designations above will not appear as part of the catalog number unless specifically specified in which case there may be an extra charge to cover the stamping or marking operation.

When more than one suffix is required to designate more than one special feature, they should be arranged in alphabetical order except when the suffix is published as part of the catalog number.



KEY SYMBOLS TO ANDERSON ELECTRICAL CONNECTORS CATALOG NUMBERS

Aluminum Connectors for Cable*

CONDUCTOR RANGE				
CATALOG NUMBER CODE	ALUMINUM COPPER AWG-MCM	ACSR AWG-MCM	DECIMAL RANGE INCHES	
6**	#4—1/0— 250—400	#4—1/0—4/0	.232—.398	
7		4/0—336.4	.368—.575	
9		350—600	336.4—477	.563—.744
11		600—900	556.5—795.5	.681—.893
13		900—1250	715.5—1113	.870—1.108
15		1250—1600	1113—1272	1.081—1.293
16		1500—2000	1272—1590	1.289—1.459
18		2000—2500		1.382—1.632
21		2500—3000		1.632—1.824
22		—	*Decimal Range	1.824—2.000
				2.000—2.200

**Multi-Range is accomplished by reversing the clamping cap.

*The Decimal Range is to be considered as the final criteria for application. The ACSR and Aluminum Cable Ranges will not necessarily fall within the Decimal Range for all standings.

Copper or Aluminum Flat Bar

CODE NO.	WIDTH IN INCHES*
10	1
14	1 1/2
20	2
24	2 1/2
30	3
34	3 1/2
40	4
50	5
60	6
80	8
100	10
120	12

*Bar thickness & spacing (if same) are added at end of completed catalog number as “-1/4,” “-1/2,” etc.

Copper or Aluminum IPS Tubing

CODE NO.	IPS DIAMETER
02	1/4
03	3/8
04	1/2
06	3/4
10	1
12	1 1/4
14	1 1/2
20	2
24	2 1/2
30	3
34	3 1/2
40	4
44	4 1/2
50	5
60	6

Bronze Connectors for Cable

VERS-A-GROOVE CAP NUMBER	CABLE RANGE				DECIMAL RANGE INCHES
	SMALL GROOVE		LARGE GROOVE		
	MIN.	MAX.	MIN.	MAX.	
022	#6	#2	#2	2/0	.162—.419
025	#4	1/0	2/0	250 MCM	.204—.575
050	1/0 Sol.	4/0 Str.	250	500 MCM	.325—.813
080	2/0 Sol.	500 MCM	500	800 MCM	.365—1.031
100	4/0 Str.	750 MCM	750	1000 MCM	.522—1.152
150	250	750 MCM	750	1500 MCM	.474—1.412
200	500	1500 MCM	1500	2000 MCM	.811—1.632



BRONZE REVERSIBLE CABLE CAPS

Unless otherwise indicated all bronze cable connectors have cable sections designed to accommodate a range of conductors. Their wide application flexibility offers the distinct advantages of reducing stock inventory, and possibility of errors of misapplication. There is no sacrifice of either electrical or mechanical efficiency when using reversible cable caps. This design is field proven by years of trouble free service in locations where severe operating conditions exist.

Our four bolt reversible cable cap design is adequate for high current capacity conductors, yet priced in line with standard duty connectors.

Copper or Aluminum Threaded Studs

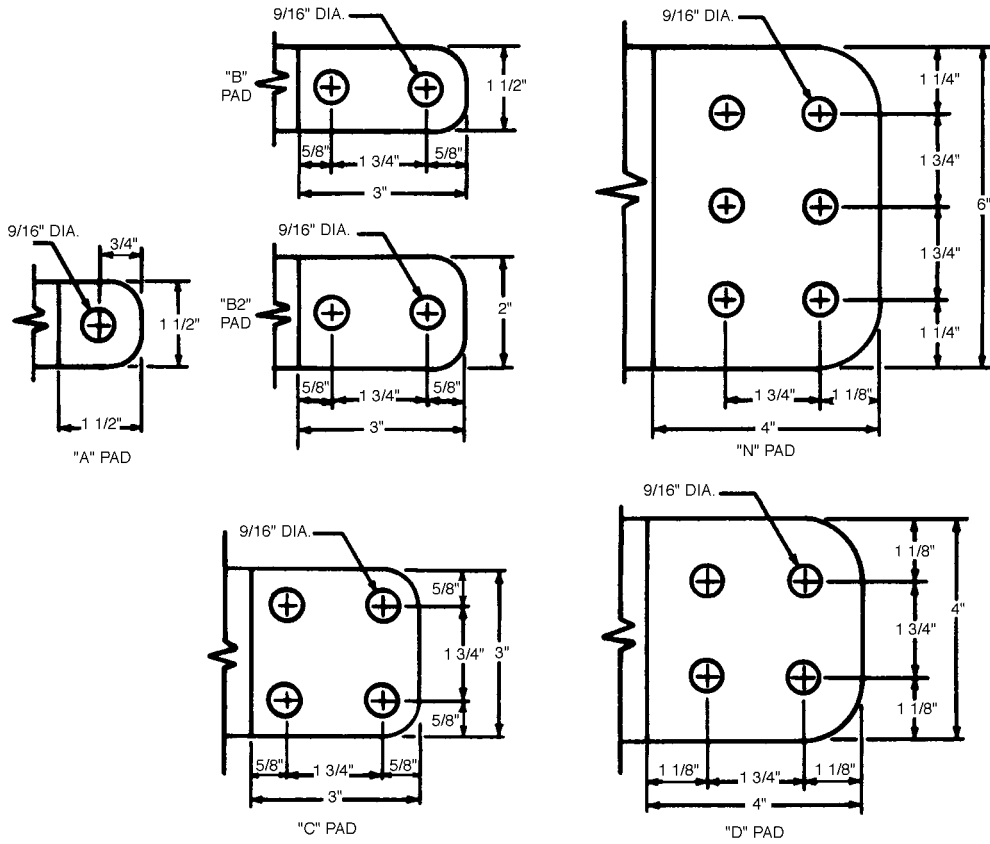
CODE NO.	DIAMETER IN INCHES*
01	1/8
02	1/4
03	3/8
04	1/2
05	5/8
06	3/4
07	7/8
10	1
11	1 1/8
12	1 1/4
13	1 3/8
14	1 1/2
15	1 5/8
16	1 3/4
17	1 7/8
20	2
21	2 1/8
22	2 1/4
23	2 3/8
24	2 1/2
26	2 3/4
30	3
32	3 1/4
34	3 1/2
36	3 3/4
40	4
50	5
60	6

*Threads per inch are added at the end of completed catalog number as “-12,” “-16,” etc. Smooth studs are specified by adding “-0.”



REFERENCE DATA

ANDERSON PAD DESIGNATIONS FOR NEMA STANDARD DRILLING





NEMA CONSTRUCTION STANDARDS ELECTRIC POWER CONNECTORS

CC 1-4.06 NUMBER AND DIAMETER OF BOLTS FOR CONNECTORS

Type of Conductor				For Copper Conductors				For Aluminum or ACSR Conductors					
Standard Pipe Size, Inches	Copper Cable, kcmil	Aluminum or ACSR Cable Outside Diameter, Inches	Stud Diameter, Inches	Single Size Standard Duty Bolts Per Conductor		Single Size Heavy Duty Bolts Per Conductor		Range Taking Bolts Per Conductor		Range Taking* Bolts Per Conductor		Single Size Bolts Per Conductor	
				Number	Dia. Inches	Number	Dia. Inches	Number	Dia. Inches	Number	Dia. Inches	Number	Dia. Inches
3/8	#4 thru 2/0	0.200 thru 0.399	1/2	2	3/8	3	3/8	4	3/8	2	1/2	2	1/2
1/2	3/0 thru 500	...	5/8 thru 1 1/8	3	3/8	3	3/8	4	3/8	4	1/2	4	1/2
3/4 thru 1	550 thru 800	...	...	3	3/8	4	3/8	4	3/8	4	1/2	4	1/2
1 1/4 thru 2	900 thru 2000	0.400 thru 1.412	1 1/4 thru 2 1/2	3	1/2	4	1/2	4	1/2	4	1/2	4	1/2
2 1/2	900 thru 2000	0.400 thru 1.412	...	3	1/2	4	1/2	4	1/2	4	1/2	4	1/2
3 thru 4	2250 thru 3000	1.413 thru 1.850	2 3/4 thru 5	3	5/8	4	5/8	4	5/8	4	5/8	4	5/8
4 1/2 thru 6	...	...	...	...	...	...	...	...	...	...	...	6	5/8

* Applies to cable only.

NOTE I—Each U bolt is counted as two bolts.

NOTE II—For shackle design (single casting wrap-around conductor), each bolt counts as two bolts.

NOTE III—When two different sizes of conductors are involved, the bolts specified for the smallest conductor may be used.

NOTE IV—When three bolts are specified, the following exceptions apply:

- a. Terminal lugs shall have a minimum of four bolts or the equivalent for a single conductor.
- b. Stud connectors shall have minimum of four bolts or the equivalent for the stud portion.

NOTE V—Bronze alloy bolts shall have a minimum tensile strength of 70,000 pounds per square inch and aluminum alloy bolts shall have a minimum tensile strength of 55,000 pounds per square inch.

NOTE VI—Nominal torque values shall be:

Diameter Of Bolts, Inches	Nominal Torque Values	
	Foot/Pound	Inch/Pound
3/8	20	240
1/2	40	480
5/8	55	660
3/8L	15	180
1/2L	25	300
5/8L	40	480

L—Lubricated

EXAMPLES ILLUSTRATING THE USE OF THE TABLE IN CC 1-4.06

EXAMPLE NO. 1—A straight coupler connector or a 90-degree elbow connector is used to connect a conductor of 1-1/2 inch pipe to another conductor of 1-1/2-inch pipe. After locating the proper line for the 1-1/2-inch pipe in the first column of the table, the total number of bolts required can be determined from the information given for the connectors, as follows:

For standard-duty connectors—

Three 1/2-inch-diameter bolts per conductor x 2 (number of conductors) = a total of six 1/2-inch-diameter bolts per fitting

For heavy-duty connectors—

Four 1/2-inch-diameter bolts per conductor x 2 (number of conductors) = a total of eight 1/2-inch-diameter bolts per fitting

**NEMA CONSTRUCTION STANDARDS ELECTRIC POWER CONNECTORS—continued**

EXAMPLE NO. 2—A single-size “T” connector is used to connect a 3-inch Schedule 40 aluminum main to a 397.5 kcmil ACSR tap (outside diameter = 0.743 inch).

After locating the proper line for the 3-inch pipe in the first column of the table, it will be seen that the connectors require four 5/8-inch-diameter bolts per conductor.

After locating the proper line for the 0.743-inch-outside diameter ACSR tap in the third column of the table, it will be seen that the connectors require four 1/2-inch-diameter bolts per conductor.

In this case and in accordance with Note III following the table, the manufacturer has the choice of using either four 1/2-inch-diameter bolts per conductor or four 5/8-inch-diameter bolts per conductor.

EXAMPLE NO.3—A copper stud connector having a 1-1/8”-12 thread is connected to copper cable ranging from 400 to 800 kcmil in size. Using the fourth column for the stud and the second column for the copper cable, it will be seen that the connectors require the following bolts:

1. Four 3/8-inch-diameter bolts per conductor for the stud.
2. Four 1/2-inch-diameter bolts per conductor for the cable.

In this case and in accordance with Note III following the table, the manufacturer has the choice of using either four 3/8-inch-diameter bolts per conductor or four 1/2-inch-diameter bolts per conductor.



CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia.
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
.102	—	—	—	—	—	—	—	—	—	—	—	—	10	Sol.	1590	10	Sol.	530	.102
.114	—	—	—	—	—	—	—	—	—	—	—	—	9	Sol.	2005	9	Sol.	661	.114
.128	—	—	—	—	—	—	—	—	—	—	—	—	8	Sol.	2529	8	Sol.	826	.128
.146	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	7	778	.146
.158	8	6/1	745	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.158
.162	—	—	—	—	—	—	—	—	—	—	—	—	6	Sol.	3608	6	Sol.	1280	.162
.169	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.169
.174	—	—	—	—	—	—	—	—	—	30,420	Sol.	777	—	—	—	—	—	—	.174
.182	—	—	—	—	—	—	—	—	—	—	—	—	5	Sol.	4290	—	—	—	.182
.184	—	—	—	6	7	555	—	—	—	—	—	—	—	—	—	6	7	1228	.184
.197	—	—	—	—	—	—	30,200	7	1069	—	—	—	—	—	—	—	—	—	.197
.198	6	6/1	1170	—	—	—	—	—	—	30,580	7	912	—	—	—	—	—	—	.198
.204	—	—	—	—	—	—	—	—	—	—	—	—	4	Sol.	5081	4	Sol.	1970	.204
.213	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.213
.220	—	—	—	—	—	—	—	—	—	48,370	Sol.	1,197	10	3	4532	—	—	—	.220
.221	—	—	—	—	—	—	38,090	7	1349	—	—	—	—	—	—	—	—	—	.221
.223	5	6/1	1460	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.223
.229	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.229
.232	—	—	—	4	7	870	—	—	—	—	—	—	—	—	—	4	7	1938	.232
.236	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.236
.242	—	—	—	—	—	—	—	—	—	—	—	—	12	7	6301	—	—	—	.242
.247	—	—	—	—	—	—	—	—	—	—	—	—	9	3	5715	—	—	—	.247
.248	—	—	—	—	—	—	48,040	7	1701	—	—	—	—	—	—	—	—	—	.248
.250	4	6/1	1830	—	—	—	—	—	—	48,690	7	1,415	—	—	—	—	—	—	.250
.257	4	7/1	2288	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.257
.258	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	Sol.	3002	.258
.260	—	—	—	3	7	1022	—	—	—	—	—	—	—	—	—	—	—	—	.260
.268	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.268
.272	—	—	—	—	—	—	—	—	—	—	—	—	11	7	7945	—	—	—	.272
.277	—	—	—	—	—	—	—	—	—	—	—	—	8	3	7206	—	—	—	.277
.279	—	—	—	—	—	—	60,560	7	2148	—	—	—	—	—	—	—	—	—	.279
.281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.281
.289	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	Sol.	3688	.289
.290	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.290
.292	—	—	—	2	7	1335	—	—	—	—	—	—	—	—	—	2	7	3045	.292
.298	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.298
.301	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.301
.306	—	—	—	—	—	—	—	—	—	—	—	—	10	7	10,020	—	—	—	.306
.311	—	—	—	—	—	—	—	—	—	—	—	—	7	3	8621	—	—	—	.311
.314	—	—	—	—	—	—	76,380	7	2707	—	—	—	—	—	—	—	—	—	.314
.316	2	6/1	2790	—	—	—	—	—	—	77,470	7	2,195	—	—	—	—	—	—	.316
.325	2	7/1	3525	—	—	—	—	—	—	—	—	—	—	—	—	0	Sol.	4518	.325
.326	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.326
.328	—	—	—	1	7	1625	—	—	—	—	—	—	—	—	—	1	7	3804	.328
.332	—	—	—	1	19	1685	—	—	—	—	—	—	—	—	—	1	19	3899	.332

DJ 10



REFERENCE DATA

CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
.338	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.338	
.340	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.340	
.343	—	—	—	—	—	—	—	—	—	—	—	9	7	12,630	—	—	—	.343	
.349	—	—	—	—	—	—	—	—	—	—	—	6	3	10,280	—	—	—	.349	
.352	—	—	—	—	—	—	96,320	7	3411	—	—	—	—	—	—	—	—	.352	
.355	1	6/1	3480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.355	
.365	—	—	—	—	—	—	—	—	—	—	—	—	—	—	00	Sol.	5519	.365	
.367	80,000	8/1	5200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.367	
.368	—	—	—	0	7	1970	—	—	—	—	—	—	—	—	0	7	4752	.368	
.373	—	—	—	0	19	2090	—	—	—	—	—	—	—	—	0	19	4901	.373	
.381	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.381	
.382	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.382	
.385	—	—	—	—	—	—	—	—	—	—	—	8	7	15,930	—	—	—	.385	
.392	—	—	—	—	—	—	—	—	—	—	—	5	3	12,230	—	—	—	.392	
.395	—	—	—	—	—	—	121,500	7	4304	—	—	—	—	—	—	—	—	.395	
.398	0	6/1	4280	—	—	—	—	—	—	123,300	7	3,405	—	—	—	—	—	.398	
.410	—	—	—	—	—	—	—	—	—	—	—	—	—	—	000	Sol.	6720	.410	
.414	—	—	—	00	7	2480	—	—	—	—	—	—	—	—	00	7	5926	.414	
.419	—	—	—	00	19	2586	—	—	—	—	—	—	—	—	00	19	6152	.419	
.426	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.426	
.428	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.428	
.433	—	—	—	—	—	—	—	—	—	—	—	7	7	19,060	—	—	—	.433	
.447	00	6/1	5345	—	—	—	—	—	—	155,400	7	4,235	—	—	—	—	—	.447	
.448	—	—	—	—	—	—	156,100	7	5301	—	—	—	—	—	—	—	—	.448	
.460	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0000	Sol.	8143	.460	
.461	101,800	12/7	9860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.461	
.464	—	—	—	000	7	3005	—	—	—	—	—	—	—	—	000	7	7366	.464	
.470	—	—	—	000	19	3200	—	—	—	—	—	—	—	—	000	19	7698	.470	
.480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.480	
.481	110,800	12/7	10,730	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.481	
.486	—	—	—	—	—	—	—	—	—	—	—	6	7	22,730	—	—	—	.486	
.502	000	6/1	6675	—	—	—	—	—	—	195,700	7	4,965	—	—	—	—	—	.502	
.503	—	—	—	—	—	—	196,800	7	6680	—	—	—	—	—	—	—	—	.503	
.509	—	—	—	—	—	—	—	—	—	—	—	10	19	27,190	—	—	—	.509	
.517	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.517	
.522	—	—	—	0000	7	3790	—	—	—	—	—	—	—	—	0000	7	9154	.522	
.523	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.523	
.528	—	—	—	0000	19	3890	—	—	—	—	—	—	—	—	0000	19	9617	.528	
.530	134,600	12/7	12,920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.530	
.541	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.541	
.546	—	—	—	—	—	—	—	—	—	—	—	5	7	27,030	—	—	—	.546	
.559	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.559	
.563	0000	6/1	8420	—	—	—	—	—	—	246,900	7	6,265	—	—	—	—	—	.563	
.565	—	—	—	—	—	—	248,200	7	8427	—	—	—	—	—	—	—	—	.565	
.572	—	—	—	—	—	—	—	—	—	—	—	9	19	34,290	—	—	—	.572	
.573	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.573	
.574	—	—	—	250,000	19	4510	—	—	—	—	—	—	—	—	250,000	19	11,360	.574	



CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
.575	—	—	—	250,000	37	4860	—	—	—	—	—	—	—	—	250,000	37	11,560	.575	
.576	159,000	12/7	15,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.576	
.586	—	—	—	266,800	7	4525	—	—	—	—	—	—	—	—	—	—	—	.586	
.593	—	—	—	266,800	19	4800	—	—	—	—	—	—	—	—	—	—	—	.593	
.607	176,900	12/7	16,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.607	
.609	266,800	18/1	6840	—	—	—	—	—	281,400	19	7,365	—	—	—	—	—	—	.609	
.618	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.618	
.628	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.628	
.629	—	—	—	300,000	37	5830	—	—	—	—	—	—	—	—	300,000	19	13,510	.629	
.630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	300,000	37	13,870	.630	
.631	190,800	12/7	17,730	300,000	61	5940	—	—	—	—	—	—	—	—	—	—	—	.631	
.633	266,800	6/7	9645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.633	
.636	—	—	—	—	—	—	307,100	19	10,420	—	—	—	—	—	—	—	—	.636	
.642	266,800	26/7	11,250	—	—	—	—	—	—	312,800	19	8,180	8	19	43,240	—	—	.642	
.646	300,000	18/1	7990	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.646	
.663	211,300	12/7	19,640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.663	
.666	—	—	—	336,400	19	5940	—	—	—	—	—	—	—	—	—	—	—	.666	
.677	336,400	36/1	7630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.677	
.679	—	—	—	350,000	19	6180	—	—	—	—	—	—	—	—	350,000	19	15,590	.679	
.680	300,000	26/7	12,650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.680	
.681	—	—	—	350,000	37	6680	—	—	—	—	—	—	—	—	350,000	37	16,060	.681	
.684	336,400	18/1	8625	—	—	—	—	—	—	355,100	19	9,285	—	—	—	—	—	.684	
.713	—	—	—	—	—	—	—	—	—	—	—	—	10	37	52,950	—	—	.713	
.714	203,200	16/19	27,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.714	
.721	336,400	26/7	14,050	—	—	—	394,600	19	12,830	394,500	19	10,180	7	19	51,730	—	—	.721	
.724	—	—	—	397,500	19	6880	—	—	—	—	—	—	—	—	—	—	—	.724	
.726	—	—	—	—	—	—	—	—	—	—	—	—	—	—	400,000	19	17,810	.726	
.728	—	—	—	400,000	37	7350	—	—	—	—	—	—	—	—	400,000	37	18,320	.728	
.736	397,500	36/1	8740	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.736	
.741	336,400	30/7	17,040	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.741	
.743	397,500	18/1	10,040	—	—	—	—	—	—	419,600	19	10,820	—	—	—	—	—	.743	
.772	397,500	24/7	14,690	450,000	37	8110	—	—	—	—	—	—	—	—	450,000	37	20,450	.772	
.783	397,500	26/7	16,190	—	—	—	—	—	—	465,400	37	11,840	—	—	—	—	—	.783	
.784	—	—	—	—	—	—	466,300	19	15,160	—	—	—	—	—	—	—	—	.784	
.793	—	—	—	477,000	19	8090	—	—	—	—	—	—	—	—	—	—	—	.793	
.795	—	—	—	477,000	37	8600	—	—	—	—	—	—	—	—	—	—	—	.795	
.801	—	—	—	—	—	—	—	—	—	—	—	—	9	37	66,770	—	—	.801	
.806	397,500	30/7	19,980	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.806	
.806	477,000	36/1	10,320	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.806	
.810	—	—	—	—	—	—	—	—	—	—	—	—	6	19	61,700	—	—	.810	
.811	—	—	—	500,000	19	8480	—	—	—	—	—	—	—	—	500,000	19	21,950	.811	
.813	—	—	—	500,000	37	9010	—	—	—	—	—	—	—	—	500,000	37	22,510	.813	
.814	477,000	18/1	11,870	—	—	—	—	—	—	503,600	19	12,100	—	—	—	—	—	.814	
.846	477,000	24/7	17,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.846	
.853	—	—	—	—	—	—	—	—	—	—	—	—	—	—	550,000	37	24,760	.853	
.855	—	—	—	550,000	61	10,490	—	—	—	—	—	—	—	—	550,000	61	25,230	.855	
.856	—	—	—	556,000	19	9440	—	—	—	—	—	—	—	—	—	—	—	.856	

DJ 12



REFERENCE DATA

CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
.858	477,000	26/7	19,430	556,500	37	9830	599,600	19	18,200	559,500	19	13,450	—	—	—	—	—	—	.858
.870	556,000	36/1	11,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.870
.879	556,000	18/1	13,850	—	—	—	—	—	—	597,200	19	14,120	—	—	—	—	—	—	.879
.883	477,000	30/7	23,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.883
.891	—	—	—	600,000	37	10,600	—	—	—	—	—	—	—	—	—	600,000	37	27,020	.891
.893	—	—	—	600,000	61	11,450	—	—	—	—	—	—	—	—	—	600,000	61	27,530	.893
.899	—	—	—	—	—	—	—	—	—	—	—	—	8	37	84,200	—	—	—	.899
.907	605,000	36/1	12,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.907
.910	—	—	—	—	—	—	—	—	—	—	—	—	5	19	73,350	—	—	—	.910
.914	556,600	24/7	19,850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.914
.918	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	636,000	37	11,240	.918
.927	556,500	26/7	22,600	650,000	37	29,130	652,800	19	21,230	652,400	19	15,680	—	—	—	—	—	—	.927
.929	—	—	—	650,000	61	29,770	—	—	—	—	—	—	—	—	—	650,000	61	11,940	.929
.930	636,000	36/1	13,450	—	—	—	—	—	—	—	—	—	—	—	—	650,000	91	12,630	.930
.940	636,000	18/1	15,830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.940
.953	556,500	30/7	27,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.953
.953	605,000	24/7	21,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.953
.953	653,900	18/3	14,850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.953
.953	666,600	36/1	14,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.953
.964	—	—	—	700,000	61	31,820	—	—	—	—	—	—	—	—	—	700,000	61	12,860	.964
.966	605,000	26/7	24,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.966
.974	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	715,500	37	12,640	.974
.975	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	715,500	61	13,150	.975
.977	636,000	24/7	22,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.977
.987	715,500	36/1	14,900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.987
.990	636,000	26/7	25,000	—	—	—	—	—	—	740,800	37	19,110	—	—	—	—	—	—	.990
.994	605,000	30/19	30,000	—	—	—	746,100	37	24,266	—	—	—	—	—	—	—	—	—	.994
.998	—	—	—	750,000	61	13,510	—	—	—	—	—	—	—	—	—	750,000	61	34,090	.998
1.000	666,600	24/7	23,700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.000
1.010	—	—	—	—	—	—	—	—	—	—	—	—	7	37	100,700	—	—	—	1.010
1.019	636,000	30/19	31,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.019
1.026	—	—	—	795,000	37	13,770	—	—	—	—	—	—	—	—	—	—	—	—	1.026
1.028	—	—	—	795,000	61	14,330	—	—	—	—	—	—	—	—	—	—	—	—	1.028
1.031	—	—	—	800,000	61	14,410	—	—	—	—	—	—	—	—	—	800,000	61	36,360	1.031
1.036	715,500	54/7	26,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.036
1.040	795,000	36/1	16,540	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.040
1.051	715,500	26/7	28,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.051
1.063	795,000	45/7	22,900	—	—	—	—	—	—	—	—	—	—	—	—	850,000	61	38,270	1.063
1.077	—	—	—	874,500	37	14,830	—	—	—	—	—	—	—	—	—	—	—	—	1.077
1.078	—	—	—	874,500	61	15,760	—	—	—	—	—	—	—	—	—	—	—	—	1.078
1.081	715,500	30/19	34,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.081
1.092	795,000	24/7	27,900	900,000	37	15,270	—	—	—	—	—	—	—	—	—	900,000	37	39,510	1.092
1.093	795,000	54/7	28,500	900,000	91	17,180	—	—	—	—	—	—	—	—	—	—	—	—	1.093
1.094	—	—	—	900,000	61	15,900	—	—	—	—	—	—	—	—	—	900,000	61	40,520	1.094
1.108	795,000	26/7	31,200	—	—	—	—	—	—	927,200	37	23,590	—	—	—	—	—	—	1.108
1.112	—	—	—	—	—	—	932,600	37	30,300	—	—	—	—	—	—	—	—	—	1.112
1.124	—	—	—	954,000	37	16,180	—	—	—	—	—	—	—	—	—	—	—	—	1.124



CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
1.126	—	—	—	954,000	61	16,860	—	—	—	—	—	—	—	—	—	—	—	—	1.126
1.131	900,000	45/7	25,400	—	—	—	—	—	—	—	—	—	6	37	120,200	—	—	—	1.131
1.140	795,000	30/19	38,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.140
1.140	954,000	36/1	19,520	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.140
1.146	874,500	54/7	31,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.146
1.152	—	—	—	1,000,000	61	17,670	—	—	—	—	—	—	—	—	—	1,000,000	61	45,030	1.152
1.162	900,000	54/7	32,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.162
1.165	954,000	45/7	26,900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.165
1.170	—	—	—	1,033,500	37	17,530	—	—	—	—	—	—	—	—	—	—	—	—	1.170
1.172	—	—	—	1,033,500	61	18,260	—	—	—	—	—	—	—	—	—	—	—	—	1.172
1.186	1,033,500	36/1	21,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.186
1.196	954,000	54/7	34,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.196
1.209	—	—	—	1,100,000	91	20,210	—	—	—	—	—	—	—	—	—	—	—	—	1.209
1.213	1,033,500	45/7	28,900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.213
1.216	—	—	—	1,113,000	61	19,660	—	—	—	—	—	—	—	—	—	—	—	—	1.216
1.246	1,033,500	54/7	37,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.246
1.258	—	—	—	1,192,500	61	21,000	—	—	—	—	—	—	—	—	—	—	—	—	1.258
1.259	1,113,000	45/7	30,900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.259
1.263	—	—	—	1,200,000	91	21,630	—	—	—	—	—	—	—	—	—	—	—	—	1.263
1.270	—	—	—	—	—	—	—	—	—	—	—	—	5	37	142,800	—	—	—	1.270
1.288	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,250,000	61	55,670	1.288
1.289	—	—	—	1,250,000	91	22,530	—	—	—	—	—	—	—	—	—	1,250,000	91	56,280	1.289
1.293	1,113,000	54/9	40,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.293
1.300	—	—	—	1,272,000	61	22,000	—	—	—	—	—	—	—	—	—	—	—	—	1.300
1.302	1,192,500	45/7	33,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.302
1.314	—	—	—	1,300,000	91	23,430	—	—	—	—	—	—	—	—	—	—	—	—	1.314
1.333	1,192,500	54/19	43,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.333
1.340	—	—	—	1,351,500	61	23,400	—	—	—	—	—	—	—	—	—	—	—	—	1.340
1.345	1,272,000	45/7	35,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.345
1.364	—	—	—	1,400,000	91	24,750	—	—	—	—	—	—	—	—	—	—	—	—	1.364
1.379	—	—	—	1,431,000	61	24,300	—	—	—	—	—	—	—	—	—	—	—	—	1.379
1.382	1,272,000	54/19	44,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.382
1.385	1,351,500	45/7	37,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.385
1.386	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.386
1.411	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,500,000	61	65,840	1.411
1.412	—	—	—	1,500,000	91	26,500	—	—	—	—	—	—	—	—	—	1,500,000	91	67,540	1.412
1.417	—	—	—	1,510,500	61	25,600	—	—	—	—	—	—	—	—	—	—	—	—	1.417
1.424	1,351,500	54/19	47,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.424
1.427	1,431,000	45/7	39,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.427
1.454	—	—	—	1,590,000	61 91	27,000 28,100	—	—	—	—	—	—	—	—	—	—	—	—	1.454
1.459	—	—	—	1,600,000	127	28,840	—	—	—	—	—	—	—	—	—	—	—	—	1.459
1.465	1,431,000	54/19	50,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.465
1.466	1,510,500	45/7	41,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.466
1.502	1,590,000	45/7	43,800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.502
1.504	—	—	—	1,700,000	127	30,630	—	—	—	—	—	—	—	—	—	—	—	—	1.504
1.506	1,510,500	54/19	53,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.506
1.526	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,750,000	91	77,930	1.526

DJ
14



REFERENCE DATA

CONDUCTOR QUICK REFERENCE CHART

Conductor Dia	ACSR			ALL ALUMINUM			HIGH STRENGTH ALL ALUMINUM (6201 ALLOY)			HIGH STRENGTH ALL ALUMINUM (5005 ALLOY)			ALUMOWELD			COPPER			Conductor Dia
	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	Cable Size A.W.G.	No. of Strs.	Rated Ultimate	Cable Size A.W.G. or C.M.	No. of Strs.	Rated Ultimate	
1.526	—	—	—	1,750,000	127	31,530	—	—	—	—	—	—	—	—	—	1,750,000	127	78,800	1.526
1.545	1,590,000	54/19	56,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.545
1.548	—	—	—	1,800,000	127	32,450	—	—	—	—	—	—	—	—	—	—	—	—	1.548
1.590	—	—	—	1,900,000	127	33,570	—	—	—	—	—	—	—	—	—	—	—	—	1.590
1.602	1,780,000	84/19	53,600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.602
1.630	—	—	—	2,000,000	91	34,600	—	—	—	—	—	—	—	—	—	2,000,000	91	87,790	1.630
1.632	—	—	—	2,000,000	127	35,340	—	—	—	—	—	—	—	—	—	2,000,000	127	90,050	1.632
1.737	2,167,000	72/7	50,900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.737
1.762	2,156,000	84/19	63,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.762
1.823	—	—	—	2,500,000	91	42,000	—	—	—	—	—	—	—	—	—	2,500,000	91	109,600	1.823
1.824	—	—	—	2,500,000	127	43,300	—	—	—	—	—	—	—	—	—	2,500,000	127	111,300	1.824
1.996	—	—	—	3,000,000	127	50,800	—	—	—	—	—	—	—	—	—	—	—	—	1.996
1.998	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3,000,000	127	131,700	1.998
1.998	—	—	—	3,000,000	169	53,010	—	—	—	—	—	—	—	—	—	3,000,000	169	134,400	1.998
2.158	—	—	—	3,500,000	127	59,400	—	—	—	—	—	—	—	—	—	3,500,000	127	153,400	2.158



**ALUMINUM CONDUCTOR STEEL REINFORCED
ACSR**

CODE WORD	GIR MILS OR AWG	STRANDING	DIAMETER (INCHES)				ULTIMATE STRENGTH	WT/1000 FT.
			BARE	FORMED	TAPERED	FORMED LINE GUARDS		
Turkey	6	6/1	.198	.440	—	.440	1170	36.1
Swan	4	6/1	.250	.542	—	.492	1830	57.4
Swanate	4	7/1	.257	.549	—	.499	2288	67.1
Sparrow	2	6/1	.316	.588	—	.588	2790	91.3
Sparate	2	7/1	.325	.597	—	.567	3525	106.7
Robin	1	6/1	.355	.647	—	.597	3480	115.2
Raven	1/0	6/1	.398	.732	—	.630	4280	145.2
Quail	2/0	6/1	.447	.781	.835	.689	5345	183.1
Pigeon	3/0	6/1	.502	.836	.938	.744	6675	230.9
Penguin	4/0	6/1	.563	.927	1.051	.805	8420	291.1
Waxwing	266800	18/1	.609	.973	1.125	.901	6840	289.7
Owl	266800	6/7	.633	.997	1.179	.925	9645	343.3
Partridge	266800	26/7	.642	1.006	1.188	.934	11250	367.3
Ostrich	300000	26/7	.680	1.088	1.258	.972	12650	412.9
Merlin	336400	18/1	.684	1.092	1.262	.976	8625	365.3
Linnet	336400	26/7	.721	1.129	1.349	1.013	14050	463.0
Oriole	336400	30/7	.741	1.149	1.369	1.033	17040	527.1
Chickadee	397500	18/1	.743	1.151	1.371	1.035	10040	431.0
Brandt	397500	24/7	.772	1.180	—	1.064	14690	512.1
Ibis	397500	26/7	.783	1.283	1.447	1.075	16190	547.2
Lark	397500	30/7	.806	1.306	1.490	1.098	19980	622.8
Pelican	477000	18/1	.814	1.314	1.518	1.106	11870	518.0
Flicker	477000	24/7	.846	1.346	1.570	1.138	17200	614.5
Hawk	477000	26/7	.858	1.358	1.602	1.150	19430	656.6
Hen	477000	30/7	.883	1.383	1.649	1.175	23300	747.3
Osprey	556500	18/1	.879	1.379	1.623	1.213	13850	604.0
Parakeet	556500	24/7	.914	1.414	1.702	1.248	19850	717.0
Dove	556500	26/7	.927	1.427	1.715	1.261	22400	766.0
Eagle	556500	30/7	.953	1.453	1.763	1.287	27200	872.0
Peacock	605000	24/7	.953	1.453	1.763	1.287	21500	779.0
Duck	605000	54/7	.953	1.453	—	1.287	22500	779.0
Squab	605000	26/7	.966	1.466	1.798	1.330	24100	833.0
Teal	605000	30/19	.994	1.614	1.850	1.358	30000	939.0
Swift	636000	36/1	.930	1.430	1.718	1.264	13450	644.0
Kingbird	636000	18/1	.940	1.440	—	1.274	15830	691.0
Rook	636000	24/7	.977	1.597	1.809	1.341	22600	819.0
Grosbeak	636000	26/7	.990	1.610	1.846	1.354	25000	875.0
Egret	636000	30/19	1.019	1.639	1.901	1.383	31500	988.0
Flamingo	666000	24/7	1.000	1.620	1.856	1.364	23700	859.0
Gannet	666000	26/7	1.014	1.634	—	1.378	26200	918.0



REFERENCE DATA

ALUMINUM CONDUCTOR STEEL REINFORCED ACSR (CONTINUED)

CODE WORD	CIR MILS OR AWG	STRANDING	DIAMETER (INCHES)				ULTIMATE STRENGTH	WT/1000 FT.
			BARE	FORMED	TAPERED	FORMED LINE GUARDS		
Crow	715500	54/7	1.036	1.656	1.918	1.400	26300	921.0
Stilt	715500	24/7	1.036	1.656	1.918	1.400	25500	921.0
Starling	715500	26/7	1.051	1.671	1.959	1.459	28100	985.0
Redwing	715500	30/19	1.081	1.701	2.013	1.489	34600	1111.0
Coot	795000	36/1	1.040	1.660	1.922	1.448	16550	885.0
Tern	795000	45/7	1.063	1.683	1.971	1.471	22900	896.0
Cuckoo	795000	24/7	1.092	1.712	—	1.500	27900	1024.0
Condor	795000	54/7	1.093	1.713	2.025	1.501	28500	1024.0
Drake	795000	26/7	1.108	1.728	2.040	1.608	31200	1094.0
Mallard	795000	30/19	1.140	1.760	2.128	1.640	38400	1235.0
Ruddy	900000	45/7	1.131	1.766	2.153	1.631	25400	1015.0
Canary	900000	54/7	1.162	1.782	2.150	1.662	32300	1159.0
Catbird	954000	36/1	1.140	1.760	—	1.640	19520	966.0
Rail	954000	45/7	1.165	1.785	2.153	1.665	26900	1075.0
Cardinal	954000	54/7	1.196	1.816	1.984	1.696	34200	1229.0
Tanager	1033500	36/1	1.140	1.760	—	1.640	21100	1046.0
Ortolan	1033500	45/7	1.213	1.943	2.023	1.713	28900	1165.0
Curlew	1033500	54/7	1.246	1.976	2.078	1.746	37100	1331.0
Bluejay	1113000	45/7	1.259	1.989	2.091	1.759	30900	1255.0
Finch	1113000	54/19	1.293	2.023	2.149	1.793	40200	1431.0
Bunting	1192500	45/7	1.302	2.032	2.158	1.802	33200	1344.0
Grackle	1192500	54/19	1.338	2.068	2.220	1.833	43100	1533.0
Skylark	1272000	36/1	1.316	2.046	2.198	1.816	—	1434.0
Bittern	1272000	45/7	1.345	2.075	2.227	1.845	35400	1434.0
Pheasant	1272000	54/19	1.382	2.112	2.290	1.882	44800	1635.0
Dipper	1351500	45/7	1.385	2.115	2.152	1.886	37600	1523.0
Martin	1351500	54/19	1.424	2.296	2.190	2.044	47600	1737.0
Bobolink	1431000	45/7	1.427	2.229	2.215	2.047	39800	1613.0
Plover	1431000	54/19	1.465	2.337	2.253	2.085	50400	1840.0
Nuthatch	1510500	45/7	1.466	2.338	2.276	2.086	41600	1702.0
Parrot	1510500	54/19	1.506	2.378	2.316	2.126	53200	1942.0
Lapwing	1590000	45/7	1.502	2.374	2.312	2.122	43800	1792.0
Falcon	1590000	54/19	1.545	2.417	2.377	—	56000	2044.0
Chukar	1780000	84/19	1.602	2.474	2.472	—	53600	2074.0
Bluebird	2156000	84/19	1.762	2.634	2.462	—	63400	2511.0
Kiwi	2167000	72/7	1.737	2.609	2.437	—	50900	2303.0
Thrasher	2312000	76/19	1.802	2.786	—	—	56700	2.526
Joree	2515000	76/19	1.802	2.786	—	—	61700	2.749

REFERENCE DATA



ALL-ALUMINUM CONDUCTOR

CODE WORD	GIR MILS OR AWG	STRANDING	DIAMETER (INCHES)				ULTIMATE STRENGTH	WT/1000 FT.
			BARE	FORMED	TAPERED	FORMED LINE GUARDS		
Peachbell	6	7	.184	.426	—	.388	528	24.6
Rose	4	7	.232	.474	—	.474	826	39.2
Iris	2	7	.292	.584	—	.534	1266	62.3
Pansy	1	7	.328	.620	—	.570	1537	78.5
Poppy	1/0	7	.368	.660	—	.610	1865	99.1
Aster	2/0	7	.414	.706	—	.656	2350	124.9
Phlox	3/0	7	.464	.798	.864	.706	2845	157.5
Oxlip	4/0	7	.522	.856	.970	.764	3590	198.6
Daisy	266800	7	.586	.950	1.095	.828	4525	250.4
Laurel	266800	19	.593	.957	1.095	.885	4800	250.4
Peony	300000	19	.629	.993	1.153	.921	5301	281.6
Tulip	336400	19	.666	1.030	1.228	.958	5940	315.8
Canna	397500	19	.724	1.132	1.352	1.016	6880	373.2
Comos	477000	19	.793	1.293	1.479	1.085	8090	447.8
Syringa	477000	37	.795	1.295	1.479	1.087	8600	447.8
Zinnia	500000	19	.812	1.312	—	1.104	8482	469.4
Dahlia	556500	19	.856	1.356	1.600	1.148	9440	522.4
Mistletoe	556500	37	.858	1.358	1.600	1.150	9830	522.4
Orchid	636000	37	.918	1.418	1.706	1.252	11240	597.0
Violet	715500	37	.974	1.474	1.807	1.338	12640	671.6
Nasturtium	715500	61	.975	1.475	1.807	1.339	13150	671.6
Petunia	750000	37	.997	1.617	—	1.361	12440	704.0
Cattail	750000	61	.998	1.618	—	1.362	13510	704.0
Arbutus	795000	37	1.026	1.646	1.910	1.390	13770	746.3
Lilac	795000	61	1.028	1.648	1.910	1.392	14330	746.3
Anemone	874500	37	1.077	1.697	2.010	1.485	14830	821.0
Crocus	874500	61	1.078	1.698	2.010	1.486	15760	821.0
Magnolia	954000	37	1.124	1.744	2.058	1.624	16180	895.5
Goldenrod	954000	61	1.126	1.746	2.058	1.626	16860	895.5
Bluebell	1033500	37	1.170	1.790	1.960	1.670	17530	970.1
Larkspur	1033500	61	1.172	1.792	1.960	1.672	18260	970.1
Marigold	1113000	61	1.216	1.946	2.026	1.716	19660	1045.0
Narcissus	1272000	61	1.300	2.030	2.156	1.800	22000	1193.0
Carnation	1431000	61	1.379	2.109	2.287	1.879	24300	1343.0
Coreopsis	1590000	61	1.454	2.184	2.242	2.073	27000	1493.0
Dogwood	1590000	91	1.454	—	2.242	2.073	28100	1493.0



REFERENCE DATA

SELF-DAMPING ALUMINUM CONDUCTOR STEEL REINFORCED ACSR/SD

CODE WORD	TYPE	KCMIL	DIAMETER INCHES		Rated Strength Pounds	Reel Designation	Footage Per Reel	WEIGHT POUNDS						PERCENT OF TOTAL WT.	
			Complete Conductor	Steel Core				PER 1,000 FEET			PER MILE			ALUM.	STEEL
								TOTAL	ALUM.	STEEL	TOTAL	ALUM.	STEEL		
Titmouse/SD	5	266.8	0.593	0.117	6920	RM 66.32	14,000	286.9	250.6	36.3	1515	1323	192	87.3	12.7
Eider/SD	7	266.8	0.601	0.136	7610	RM 66.32	14,000	299.4	250.6	48.8	1581	1323	258	83.7	16.3
Spoonbill/SD	10	266.8	0.610	0.162	8450	RM 66.32	14,000	320.0	250.6	69.4	1689	1323	366	78.3	21.7
Partridge/SD	16	266.8	0.645	0.236	11350	RM 66.32	13,000	367.0	251.4	115.6	1937	1327	610	68.5	31.5
Cowbird/SD	5	336.4	0.667	0.132	8500	RM 66.32	12,000	361.9	316.1	45.8	1911	1669	242	87.3	12.7
Hummingbird/SD	7	336.4	0.664	0.153	9130	RM 66.32	12,000	377.7	316.1	61.6	1994	1669	325	83.7	16.3
Woodcock/SD	10	336.4	0.688	0.206	11000	RM 66.32	11,000	404.5	316.7	87.8	2136	1672	464	78.3	21.7
Linnet/SD	16	336.4	0.716	0.265	14300	RM 68.38	13,000	462.4	317.0	145.4	2442	1674	768	68.5	31.5
Erne/SD	5	397.5	0.717	0.143	9740	RM 66.32	10,000	427.7	373.5	54.2	2258	1972	286	87.3	12.7
Longspur/SD	7	397.5	0.725	0.166	10600	RM 68.38	13,000	446.1	373.4	72.7	2355	1972	383	83.7	16.3
Stork/SD	10	397.5	0.750	0.224	12900	RM 68.38	12,000	477.9	374.0	103.9	2523	1975	548	78.3	21.7
Ibis/SD	16	397.5	0.771	0.288	16400	RM 68.38	12,000	546.5	374.6	171.9	2886	1978	908	68.5	31.5
Kestrel/SD	5	477	0.787	0.157	11700	RM 68.38	11,000	513.3	448.4	64.9	2710	2367	343	87.3	12.7
Jackdaw/SD	7	477	0.798	0.182	12800	RM 68.38	11,000	535.9	448.6	87.3	2830	2369	461	83.7	16.3
Toucan/SD	10	477	0.824	0.245	15300	RM 68.38	10,000	573.4	448.9	124.5	3027	2370	657	78.3	21.7
Flicker/SD	13	477	0.843	0.282	17200	RMT 84.36	12,000	613.5	449.0	164.5	3240	2371	869	73.2	26.8
Hawk/SD	16	477	0.860	0.316	19500	RMT 84.36	11,000	655.8	449.4	206.4	3463	2373	1090	68.5	31.5
Blackbird/SD	5	556.5	0.843	0.169	13600	RM 68.38	10,000	599	523	76	3163	2761	402	87.3	12.7
Sunbird/SD	7	556.5	0.863	0.222	15500	RMT 84.36	11,000	625	523	102	3300	2761	539	83.7	16.3
Sapsucker/SD	10	556.5	0.882	0.265	17800	RMT 84.36	11,000	669	524	145	3532	2767	765	78.3	21.7
Parakeet/SD	13	556.5	0.901	0.305	20000	RMT 84.36	10,000	716	524	192	3781	2767	1014	73.2	26.8
Dove/SD	16	556.5	0.919	0.341	22600	RMT 84.36	10,000	765	524	241	4039	2767	1272	68.5	31.5
Pipit/SD	5	636	0.894	0.181	15600	RMT 84.36	11,000	685	598	87	3617	3157	460	87.3	12.7
Killdeer/SD	7	636	0.917	0.238	17700	RMT 84.36	10,000	715	598	117	3775	3157	618	83.6	16.4
Goldfinch/SD	10	636	0.935	0.284	20100	RMT 84.36	10,000	765	599	166	4039	3163	876	78.3	21.7
Rook/SD	13	636	0.955	0.326	22900	RMT 84.36	9,000	818	599	219	4319	3163	1156	73.2	26.8
Grosbeak/SD	16	636	0.975	0.365	25400	RMT 84.36	9,000	874	599	275	4615	3163	1452	68.5	31.5
Macaw/SD	5	795	0.999	0.229	19800	EMR 90.45	14,000	856	747	109	4520	3944	576	87.3	12.7
Tern/SD	7	795	1.013	0.266	21900	RMT 90.45	13,000	893	747	146	4715	3944	771	83.6	16.4
Puffin/SD	10	795	1.034	0.317	25100	RMT 90.45	13,000	956	748	208	5048	3950	1098	78.3	21.7
Condor/SD	13	795	1.055	0.364	28200	RMT 90.45	12,000	1023	749	274	5401	3954	1447	73.2	26.8
Drake/SD	16	795	1.077	0.408	31800	RMT 90.45	11,000	1093	749	344	5771	3955	1816	68.5	31.5
Phoenix/SD	5	954	1.088	0.251	23700	RMT 90.45	11,000	1027	897	130	5423	4736	687	87.3	12.7
Rail/SD	7	954	1.103	0.291	26100	RMT 90.45	11,000	1073	897	176	5665	4736	929	83.6	16.4
Cardinal/SD	13	954	1.147	0.399	33500	RMT 90.45	10,000	1227	898	329	6478	4741	1737	73.2	26.8
Snowbird/SD	5	1033.5	1.185	0.261	25900	RMT 90.45	10,000	1115	974	141	5887	5143	744	87.3	12.7
Ortolan/SD	7	1033.5	1.145	0.303	28100	RMT 90.45	10,000	1161	971	190	6130	5127	1003	83.6	16.4
Curlew/SD	13	1033.5	1.191	0.415	36300	RMT 90.45	9,000	1329	973	356	7017	5137	1880	73.2	26.8
Avocet/SD	5	1113	1.226	0.271	27500	RMT 90.45	9,000	1200	1048	152	6336	5533	803	87.3	12.7
Bluejay/SD	7	1113	1.242	0.315	30300	RMT 90.45	9,000	1254	1049	205	6621	5539	1082	83.7	16.3
Finch/SD	3	1113	1.233	0.431	39100	RMT 90.45	9,000	1424	1048	376	7519	5533	1985	73.6	26.4
Oxbird/SD	5	1192.5	1.266	0.281	29500	RMT 90.45	9,000	1286	1123	163	6790	5929	861	87.3	12.7



**SELF-DAMPING
ALUMINUM CONDUCTOR STEEL REINFORCED
ACSR/SD (CONTINUED)**

CODE WORD	TYPE	KCMIL	DIAMETER INCHES		Rated Strength Pounds	Reel Designation	Footage Per Reel	WEIGHT POUNDS						PERCENT OF TOTAL WT.	
			Complete Conductor	Steel Core				PER 1,000 FEET			PER MILE			ALUM.	STEEL
								TOTAL	ALUM.	STEEL	TOTAL	ALUM.	STEEL		
Bunting/SD	7	1192.5	1.284	0.326	32400	RMT 90.45	8,000	1343	1124	219	7091	5935	1156	83.7	16.3
Grackle/SD	13	1192.5	1.274	0.446	41900	RMT 90.45	8,000	1526	1123	403	8057	5929	2128	73.6	26.4
Scissortail/SD	5	1272	1.305	0.290	31400	RMT 96.60	12,000	1372	1198	174	7244	6325	919	87.3	12.7
Bittern/SD	7	1272	1.323	0.336	34600	RMT 96.60	12,000	1433	1199	234	7567	6331	1236	83.7	16.3
Pheasant/SD	13	1272	1.378	0.461	44100	RMT 96.60	12,000	1631	1202	429	8611	6347	2265	73.7	26.3
Ringdove/SD	5	1351.5	1.344	0.299	33400	RMT 96.60	12,000	1458	1273	185	7698	6721	977	87.3	12.7
Dipper/SD	7	1351.5	1.361	0.347	36700	RMT 96.60	12,000	1522	1274	248	8036	6727	1309	83.7	16.3
Frigate/SD	10	1351.5	1.389	0.413	41700	RMT 96.60	11,000	1629	1276	353	8601	6737	1864	78.3	21.7
Martin/SD	13	1351.5	1.417	0.475	46800	RMT 96.60	11,000	1733	1277	456	9150	6742	2408	73.7	26.3
Popinjay/SD	5	1431	1.381	0.308	35300	RMT 96.60	11,000	1544	1348	196	8152	7117	1035	87.3	12.7
Bobolink/SD	7	1431	1.398	0.357	38900	RMT 96.60	11,000	1612	1349	263	8511	7122	1389	83.7	16.3
Plover/SD	13	1431	1.448	0.489	49600	RMT 96.60	11,000	1835	1352	483	9689	7139	2550	73.7	26.3
Ratite/SD	5	1590	1.463	0.325	39100	RMT 96.60	10,000	716	1498	218	9060	7909	1151	87.3	12.7
Lapwing/SD	7	1590	1.468	0.376	42600	RMT 96.60	10,000	1791	1499	292	9456	7914	1542	83.7	16.3
Falcon/SD	13	1590	1.521	0.515	55100	RMT 96.60	9,000	2039	1502	537	10766	7931	2835	73.7	26.3
Smew/SD	5	1780	1.531	0.343	43600	RMT 96.60	9,000	1921	1677	244	10143	8855	1288	87.3	12.7
Chukar/SD	8	1780	1.565	0.437	51100	RMT 96.60	9,000	2068	1681	387	10919	8876	2043	81.3	18.7
Cockatoo/SD	5	2156	1.731	0.378	52500	RMT 96.60	7,500	2331	2036	295	12308	10750	1558	87.3	12.7
Bluebird/SD	8	2156	1.716	0.481	60700	RMT 96.60	7,500	2504	2036	468	13221	10750	2471	81.3	18.7
Kiwi/SD	4	2167	1.725	0.347	50700	RMT 96.60	7,000	2296	2047	249	12123	10808	1315	89.2	10.8

Meets latest revision of ASTM B232 where applicable, and ASTM B498



REFERENCE DATA

ALUMINUM CONDUCTOR ALLOY REINFORCED ACAR

CIR MILS OR AWG	STRANDING	DIAMETER (INCHES)		ULTIMATE STRENGTH	WT/1000 FT.
		BARE	FORMED ROD		
355,000	15/4	0.684	1.572	8,095	333.3
355,000	12/7	0.684	1.572	8,940	333.3
503,600	15/4	0.814	1.878	11,200	472.7
503,600	12/7	0.814	1.878	12,430	472.7
653,100	15/4	0.927	2.104	14,500	613.1
653,800	12/7	0.927	2.104	16,100	613.1
739,800	33/4	0.990	2.290	14,850	694.5
739,800	30/7	0.990	2.290	16,400	694.5
739,800	24/13	0.990	2.290	18,250	694.5
739,800	18/19	0.990	2.290	20,100	694.5
819,200	30/7	1.042	2.394	18,150	768.9
840,200	24/13	1.055	2.420	20,500	788.7
853,700	30/7	1.063	2.436	18,650	801.4
853,700	24/13	1.063	2.436	20,840	801.4
853,700	18/19	1.063	2.436	23,030	801.4
862,700	18/19	1.069	2.448	23,300	809.7
927,200	30/7	1.108	2.526	20,300	870.4
927,200	24/13	1.108	2.526	22,600	870.4
927,200	18/19	1.108	2.526	25,000	870.4
983,100	30/7	1.141	2.592	21,450	922.8
1,012,200	24/13	1.158	2.626	24,700	950.2
1,024,500	30/7	1.165	2.640	22,381	961.6
1,024,500	24/13	1.165	2.640	25,010	961.6
1,024,500	18/19	1.165	2.640	27,700	961.6
1,081,000	30/7	1.196	2.702	23,620	1015.0
1,081,000	24/13	1.196	2.702	26,330	1015.0
1,081,000	18/19	1.196	2.702	29,160	1015.0
1,109,000	30/7	1.212	2.789	24,200	1041.0
1,109,000	24/13	1.212	2.789	27,050	1041.0
1,109,000	18/19	1.212	2.789	29,900	1041.0
1,172,000	33/4	1.246	2.857	23,100	1100.0
1,172,000	30/7	1.246	2.857	25,600	1100.0
1,172,000	24/13	1.246	2.857	28,600	1100.0
1,172,000	18/19	1.246	2.857	31,630	1100.0
1,198,000	30/7	1.259	2.883	26,180	1124.0
1,198,000	24/13	1.259	2.883	29,250	1124.0
1,198,000	18/19	1.259	2.883	32,320	1124.0
1,280,000	30/7	1.302	2.969	27,960	1201.0
1,280,000	24/13	1.302	2.969	31,250	1201.0
1,280,000	18/19	1.302	2.969	34,530	1201.0

REFERENCE DATA

ALUMINUM CONDUCTOR ALLOY REINFORCED
ACAR (CONTINUED)

CIR MILS OR AWG	STRANDING	DIAMETER (INCHES)		ULTIMATE STRENGTH	WT/1000 FT.
		BARE	FORMED ROD		
1,361,000	54/7	1.345	3.055	27,450	1278.0
1,361,000	42/19	1.345	3.055	32,750	1278.0
1,703,000	54/7	1.504	3.444	35,220	1599.0
1,703,000	48/13	1.504	3.444	37,860	1599.0
1,703,000	42/19	1.504	3.444	40,520	1599.0
1,933,000	54/7	1.602	3.640	39,900	1814.0
1,933,000	48/13	1.602	3.640	42,960	1814.0
1,933,000	42/19	1.602	3.640	45,970	1814.0
2,267,000	54/7	1.735	3.906	44,750	2127.0
2,267,000	48/13	1.735	3.906	50,000	2127.0
2,267,000	42/19	1.735	3.906	53,350	2127.0
2,338,000	54/7	1.762	3.960	46,140	2194.0
2,338,000	48/13	1.762	3.960	51,600	2194.0
2,338,000	42/19	1.762	3.960	55,000	2194.0
2,493,000	72/19	1.821	4.078	55,200	2341.0
2,493,000	63/28	1.821	4.078	59,100	2341.0
2,493,000	54/37	1.821	4.078	63,000	2341.0



REFERENCE DATA

ALUMOWELD CONDUCTOR

NO. AND SIZE OF WIRES	CIR. MILS	DIAMETER (INCHES)		ULTIMATE STRENGTH POUNDS	WT/1000 FT.
		BARE	FORMED ROD		
Solid Wire					
12	6,530	.08081	—	1,000	14.65
11	8,234	.09074	—	1,261	18.47
10	10,380	.1019	—	1,590	23.29
9	13,090	.1144	—	2,005	29.37
8	16,510	.1285	—	2,529	37.03
7	20,820	.1443	—	3,025	46.69
6	26,250	.1620	—	3,608	58.88
5	33,100	.1819	—	4,290	74.25
4	41,740	.2043	—	5,081	93.63
Strand					
3 No. 10	31,150	.220	.424	4,532	70.43
3 No. 9	39,280	.247	.451	5,715	88.81
3 No. 8	49,530	.277	.505	7,206	112.0
3 No. 7	62,450	.311	.539	8,621	141.2
3 No. 6	78,750	.349	.577	10,280	178.1
3 No. 5	99,310	.392	.648	12,230	224.5
7 No. 12	45,710	.242	.446	6,301	103.6
7 No. 11	57,640	.272	.500	7,945	130.6
7 No. 10	72,680	.306	.534	10,020	164.7
7 No. 9	91,650	.343	.571	12,630	207.6
7 No. 8	115,600	.385	.641	15,930	261.8
7 No. 7	145,700	.433	.689	19,060	330.0
7 No. 6	183,800	.486	.774	22,730	416.3
7 No. 5	231,700	.546	.870	27,030	524.9
19 No. 10	197,300	.509	—	27,190	448.7
19 No. 9	248,800	.572	—	34,290	565.8
19 No. 8	313,700	.642	—	43,240	713.5
19 No. 7	395,500	.721	—	51,730	899.5
19 No. 6	498,800	.810	—	61,700	1134.0
19 No. 5	628,900	.910	—	73,350	1430.0
37 No. 10	384,200	.713	—	52,950	879.0
37 No. 9	484,400	.801	—	66,770	1108.0
37 No. 8	610,900	.899	—	84,200	1398.0
37 No. 7	770,300	1.01	—	100,700	1762.0
37 No. 6	971,300	1.13	—	120,200	2222.0
37 No. 5	1,225,000	1.27	—	142,800	2802.0

REFERENCE DATA



GALVANIZED STEEL GUY WIRE

CONDUCTOR SIZE	NUMBER OF STRANDS	DIAMETER (INCHES)		ULTIMATE STRENGTH POUNDS					WT/1000 FT.
		BARE	FORMED ROD	COMMON GRADE	SIEMENS-MARTIN GRADE	HIGH-STRENGTH GRADE	EXTRA HIGH STRENGTH GRADE	UTILITIES GRADE	
1/8	7	.123	—	540	910	1330	1830	—	31.8
5/32	7	.156	—	870	1470	2140	2940	—	51.3
3/16	7	.186	—	1150 —	1900 —	2850 —	3990 —	— 2400	72.9 80.3
7/32	7	.216	—	1540	2560	3850	5400	—	98.3
1/4	3	.259	.431	—	—	—	—	3150	116.7
	3	.259	.431	—	—	—	—	4500	116.7
	7	.240	.412	1900	3150	4750	6650	—	121.0
9/32	7	.279	—	2570	4250	6400	8950	4600	164.0
5/16	3	.312	.512	—	—	—	—	6500	170.6
	7	.312	.512	3200	5350	8000	11200	—	205.0
	7	.327	.527	—	—	—	—	6000	225.0
3/8	3	.356	.556	—	—	—	—	8500	220.3
	7	.360	.560	4250	6950	10800	15400	11500	273.0
7/16	7	.435	.733	5700	9350	14500	20800	18000	399.0
1/2	7	.495	.771	7400	12100	18800	26900	25000	517.0
	19	.500	.776	7620	12700	19100	26700	—	504.0
9/16	7	.564	—	9600	15700	24500	35000	—	671.0
	19	.565	—	7620	12700	19100	26700	—	504.0
5/8	7	.621	—	11600	19100	29600	42400	—	813.0
	19	.625	—	11000	18100	28100	40200	—	796.0
3/4	19	.750	—	16000	26200	40800	58300	—	1155.0
7/8	19	.885	—	21900	35900	55800	79700	—	1581.0
1	19	1.000	—	28700	47000	73200	104500	—	2073.0
	37	1.001	—	28300	46200	71900	102700	—	2057.0
1-1/8	37	1.127	—	3600	58900	91600	130800	—	2691.0
1-1/4	37	1.253	—	44600	73000	113600	162200	—	3248.0