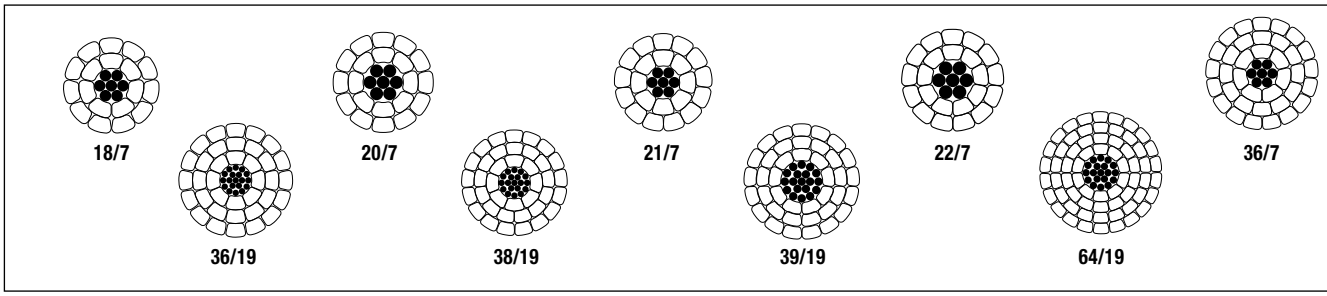
TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

TransPowr® ACSS/TW is a trapezoidal aluminum conductor steel-supported concentric-lay-stranded conductor. The aluminum strands are trapezoidal in shape.

The wedge-shaped aluminum strands enable a more compact alignment of the aluminum wires. Conductor designs that maintain the same circular mil cross-sectional area of aluminum as a conventional round conductor result in a TW conductor that is 10 to 15 percent smaller in overall diameter. Conductor designs that maintain the same overall diameter as a conventional round conductor result in a TW conductor that has 20 to 25 percent more aluminum cross-sectional area packed in.

The ACSS/TW conductors are manufactured in accordance with the requirements of the latest issue of ASTM B857.

The steel strands form the central core of the conductor, around which is stranded two, three or four layers of aluminum 1350 O temper (annealed) wires. The steel core may consist of a concentric stranded cable of 7, 19 or more wires. Numerous combinations of aluminum and steel strands and layers are possible. The sizes and constructions listed on the following pages are common examples used in overhead lines.

Standard ACSS/TW designs are manufactured with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2).

Features and Benefits:

TransPowr ACSS/TW conductors are similar to conventional ACSR/TW conductors but have some very important additional advantages. ACSS/TW conductors can operate continuously at high temperatures (up to 250°C) without damage. ACSS sags less than ACSR/TW under emergency electrical loadings, it has self-damping properties, and its final sags are not affected by long-term creep of the aluminum.

ACSS/TW conductors constructed of equivalent aluminum circular mil cross-sectional area provide a conductor that is smaller in overall diameter than the equivalent conventional round wire ACSS conductor. The reduced conductor diameter is advantageous in reducing the effects of ice and wind loading on the conductor.

ACSS/TW conductors constructed to be equivalent overall diameter enable a greater circular mil cross-sectional area of aluminum within the conductor, reducing power loss in the conductor for day-to-day operations as well as allowing a significant increase in conductor current-carrying capacity.

Applications:

Trapezoidal aluminum conductors steel-supported (ACSS/TW) are used for overhead transmission lines. They are especially useful in reconductoring applications requiring increased current with existing tensions and clearances; new line applications where structures can be economized due to reduced sag; new line applications requiring high emergency loadings; and lines where aeolian vibration is a problem.

Options:

- E3X® surface coating (/E3X)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)
- 250°C operating temperature rating utilizing either the zinc-5% aluminum mischmetal alloy-coated steel core wires or the aluminum-clad steel core wires
- Non-specular surface finish (/NS)

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded

ACSS/TW (MECHANICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIVALENT AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Oriole/ACSS/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	524.7	315.9	208.9	60.21%	39.81%	14800	16300	19100
Flicker/ACSS/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	612.6	448.1	164.6	73.15%	26.87%	13000	14200	16400
Hawk/ACSS/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	654.8	448.3	206.5	68.46%	31.54%	15600	17100	19800
Hen/ACSS/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	744.5	448.4	296.1	60.23%	39.77%	21000	22700	26700
Parakeet/ACSS/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	714.5	522.7	191.9	73.16%	26.86%	15200	16600	19100
Dove/ACSS/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	764.1	522.9	241.2	68.43%	31.57%	18200	19900	23100
Rook/ACSS/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	816.8	597.5	219.2	73.15%	26.84%	17300	19000	21900
Grosbeak/ACSS/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	872.9	597.5	275.4	68.45%	31.55%	20700	22400	26000
Tern/ACSS/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	892.2	745.3	146.8	83.54%	16.45%	14200	15300	17500
Puffin/ACSS/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	975.3	746.7	228.6	76.56%	23.44%	18900	20600	23700
Condor/ACSS/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	1021	747.0	274.0	73.16%	26.84%	21700	23300	26900
Drake/ACSS/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	1092	747.3	344.4	68.43%	31.54%	25900	28000	32600
Mallard/ACSS/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	1232	747.9	484.4	60.71%	39.32%	34300	37900	44300
Phoenix/ACSS/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	1029	899.0	130.5	87.37%	12.68%	14200	15200	17100
Rail/ACSS/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	1075	899.3	175.6	83.66%	16.33%	16700	18000	20400
Cardinal/ACSS/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	1224	895.2	328.9	73.14%	26.87%	26000	28000	32300
Snowbird/ACSS/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	1115	974.1	141.3	87.36%	12.67%	15400	16400	18500
Ortolan/ACSS/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	1165	974.9	190.0	83.68%	16.31%	18100	19500	22000
Curlew/ACSS/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	1327	970.5	356.2	73.13%	26.84%	28200	30300	35000
Avocet/ACSS/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	1201	1049	152.2	87.34%	12.67%	16300	17500	19500
Bluejay/ACSS/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	1254	1049	204.9	83.65%	16.34%	19500	21000	23800
Finch/ACSS/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	1422	1045	377.1	73.49%	26.52%	30400	33200	38700
Oxbird/ACSS/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	1287	1124	163.2	87.33%	12.68%	17500	18700	20900
Bunting/ACSS/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	1344	1125	219.6	83.71%	16.34%	20900	22600	25500
Grackle/ACSS/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	1529	1125	403.8	73.58%	26.41%	32600	35500	41500
Scissortail/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	18700	20000	22300
Bittern/ACSS/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	1433	1199	234.0	83.67%	16.33%	22300	24000	27100
Pheasant/ACSS/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	1631	1201	430.5	73.64%	26.39%	34100	37300	43000
Dipper/ACSS/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	1523	1275	248.4	83.72%	16.31%	23700	25500	28800
Martin/ACSS/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	1733	1276	457.0	73.63%	26.37%	36200	39600	45600
Bobolink/ACSS/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	1612	1349	263.3	83.68%	16.33%	25100	27000	30500
Plover/ACSS/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	1836	1352	484.4	73.64%	26.38%	38400	41900	48300
Lapwing/ACSS/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	1792	1499	292.4	83.65%	16.32%	27900	29600	33500
Falcon/ACSS/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	2038	1500	538.4	73.60%	26.42%	42600	46600	53700
Chukar/ACSS/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	2067	1680	387.7	81.28%	18.76%	35300	38200	43900
Bluebird/ACSS/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	2511	2043	468.7	81.36%	18.67%	42100	45500	51700

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.
Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded

ACSS/TW (ELECTRICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT				AMPACITY @ 75°C (4)		AMPACITY @ 200°C (4)		GEO. MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
								TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	AC @200°C	STD.	E3X®	STD.	E3X®			
Oriole/ACSS/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	0.0484	0.0495	0.0594	0.0843	535	595	940	1050	0.0241	0.0856	0.5554
Flicker/ACSS/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	0.0346	0.0355	0.0426	0.0605	650	730	1150	1285	0.0263	0.0836	0.5374
Hawk/ACSS/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	0.0345	0.0353	0.0424	0.0602	655	735	1160	1300	0.0270	0.0830	0.5348
Hen/ACSS/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	0.0342	0.0350	0.0420	0.0596	665	750	1180	1320	0.0285	0.0818	0.5286
Parakeet/ACSS/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	0.0297	0.0305	0.0366	0.0519	715	805	1275	1425	0.0283	0.0819	0.5260
Dove/ACSS/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	0.0296	0.0303	0.0364	0.0517	720	815	1285	1440	0.0291	0.0813	0.5229
Rook/ACSS/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	0.0260	0.0267	0.0321	0.0454	775	880	1390	1560	0.0302	0.0804	0.5160
Grosbeak/ACSS/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	0.0259	0.0266	0.0319	0.0452	780	885	1400	1575	0.0310	0.0798	0.5130
Tern/ACSS/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	0.0209	0.0217	0.0260	0.0367	880	1000	1580	1780	0.0318	0.0792	0.5045
Puffin/ACSS/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	0.0208	0.0215	0.0258	0.0365	885	1010	1595	1800	0.0330	0.0784	0.5010
Condor/ACSS/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	0.0208	0.0215	0.0257	0.0364	890	1015	1605	1810	0.0336	0.0780	0.4992
Drake/ACSS/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	0.0207	0.0214	0.0256	0.0362	895	1025	1620	1825	0.0346	0.0773	0.4962
Mallard/ACSS/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	0.0205	0.0211	0.0253	0.0359	910	1040	1645	1860	0.0365	0.0761	0.4906
Phoenix/ACSS/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	0.0176	0.0185	0.0228	0.0329	960	1095	1720	1935	0.0347	0.0772	0.4902
Rail/ACSS/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	0.0175	0.0184	0.0227	0.0329	965	1100	1725	1945	0.0354	0.0768	0.4883
Cardinal/ACSS/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	0.0173	0.0180	0.0215	0.0304	995	1140	1805	2045	0.0367	0.0760	0.4856
Snowbird/ACSS/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	0.0162	0.0171	0.0211	0.0304	1010	1155	1810	2040	0.0361	0.0763	0.4842
Ortolan/ACSS/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	0.0162	0.0171	0.0210	0.0303	1015	1160	1820	2055	0.0368	0.0759	0.4823
Curlew/ACSS/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	0.0160	0.0167	0.0199	0.0281	1045	1200	1905	2155	0.0382	0.0750	0.4790
Avocet/ACSS/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	0.0151	0.0160	0.0196	0.0282	1055	1210	1900	2145	0.0374	0.0755	0.4787
Bluejay/ACSS/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	0.0150	0.0159	0.0196	0.0282	1060	1215	1910	2160	0.0381	0.0751	0.4768
Finch/ACSS/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	0.0148	0.0155	0.0185	0.0261	1095	1260	1995	2265	0.0396	0.0742	0.4734
Oxbird/ACSS/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	0.0141	0.0150	0.0184	0.0264	1100	1265	1985	2250	0.0386	0.0748	0.4735
Bunting/ACSS/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	0.0140	0.0149	0.0183	0.0263	1105	1270	2000	2260	0.0394	0.0743	0.4716
Grackle/ACSS/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	0.0139	0.0147	0.0181	0.0261	1125	1290	2030	2300	0.0416	0.0731	0.4661
Scissortail/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0132	0.0141	0.0173	0.0247	1145	1315	2070	2345	0.0398	0.0741	0.4687
Bittern/ACSS/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	0.0132	0.0141	0.0172	0.0247	1150	1325	2085	2360	0.0406	0.0736	0.4668
Pheasant/ACSS/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	0.0131	0.0138	0.0170	0.0244	1170	1345	2120	2405	0.0429	0.0724	0.4612
Dipper/ACSS/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	0.0124	0.0133	0.0162	0.0232	1195	1375	2165	2460	0.0418	0.0730	0.4623
Martin/ACSS/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	0.0123	0.0131	0.0160	0.0230	1215	1400	2205	2505	0.0442	0.0717	0.4567
Bobolink/ACSS/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	0.0117	0.0126	0.0154	0.0220	1235	1425	2250	2555	0.0430	0.0723	0.4580
Plover/ACSS/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	0.0116	0.0124	0.0151	0.0217	1255	1455	2290	2605	0.0454	0.0711	0.4523
Lapwing/ACSS/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	0.0105	0.0115	0.0139	0.0198	1315	1520	2405	2740	0.0452	0.0712	0.4500
Falcon/ACSS/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	0.0105	0.0113	0.0137	0.0196	1340	1550	2450	2795	0.0478	0.0699	0.4442
Chukar/ACSS/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	0.00938	0.0103	0.0125	0.0177	1410	1640	2600	2970	0.0485	0.0695	0.4399
Bluebird/ACSS/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	0.00777	0.00877	0.0103	0.0141	1600	1880	3015	3470	0.0537	0.0672	0.4238

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
(3) Based on a conductivity of 63% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
(4) Based on a conductor temperature of 75°C or 200°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
(5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded

ACSS/TW (MECHANICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIVALENT AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Calumet/ACSS/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	775.7	531.1	244.6	68.47%	31.53%	18400	20200	23500
Mohawk/ACSS/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	734.4	536.9	197.6	73.11%	26.91%	15600	17100	19700
Oswego/ACSS/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	912.8	624.6	288.2	68.43%	31.57%	21700	23400	27200
Mystic/ACSS/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	855.7	625.8	229.9	73.13%	26.87%	18200	19900	22900
Wabash/ACSS/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	1047	716.9	329.9	68.47%	31.51%	24900	26800	31200
Maumee/ACSS/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	986.8	720.9	265.9	73.05%	26.95%	21000	23000	26500
Kettle/ACSS/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	1079	902.5	176.3	83.64%	16.34%	16800	18100	20400
Suwannee/ACSS/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	1317	902.0	415.1	68.49%	31.52%	30700	33100	38600
Columbia/ACSS/TW	966.2	13	18	93.9	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	1241	907.7	333.4	73.14%	26.87%	26400	28300	32800
Genesee/ACSS/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	1308	1092	216.4	83.49%	16.54%	20500	22100	25000
Hudson/ACSS/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	1494	1093	400.8	73.16%	26.83%	31100	33400	38800
Cheyenne/ACSS/TW	1168.1	5	30	92.3	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	1260	1101	159.7	87.38%	12.67%	17100	18300	20400
Yukon/ACSS/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	1585	1165	420.2	73.50%	26.51%	33200	36300	41900
Nelson/ACSS/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	1417	1186	231.5	83.70%	16.34%	22100	23800	26900
Catawba/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	18700	20000	22300
Thames/ACSS/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	1712	1260	452.2	73.60%	26.41%	35800	39100	45100
Mackenzie/ACSS/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	1533	1282	250.2	83.63%	16.32%	23900	25700	29000
Truckee/ACSS/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	1482	1294	187.7	87.31%	12.67%	20200	21500	24000
Merrimack/ACSS/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	1838	1353	485.4	73.61%	26.41%	38400	42000	48400
Miramichi/ACSS/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	1640	1372	268.2	83.66%	16.35%	25600	27100	30700
St. Croix/ACSS/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	1585	1384	201.8	87.32%	12.73%	21600	23100	25800
Rio Grande/ACSS/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	1967	1448	519.7	73.61%	26.42%	41200	45000	51900
Potomac/ACSS/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	1754	1467	286.8	83.64%	16.35%	27300	29000	32800
Platte/ACSS/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	1694	1479	214.8	87.31%	12.68%	23100	24600	27500
Pecos/ACSS/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	2105	1531	574.5	72.73%	27.29%	45000	49200	56800
Schuylkill/ACSS/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	1868	1563	305.1	83.67%	16.33%	29100	30900	34900
James/ACSS/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	2221	1634	586.5	73.57%	26.41%	46400	50800	58500
Pee Dee/ACSS/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	1982	1658	324.0	83.65%	16.35%	30900	32800	37100
Cumberland/ACSS/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	2470	1819	651.5	73.64%	26.38%	51600	56400	65000
Athabaska/ACSS/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	2199	1838	360.8	83.58%	16.41%	34300	36500	41300
Powder/ACSS/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	2509	2040	468.7	81.31%	18.68%	42100	45500	51700
Santee/ACSS/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	3061	2489	572.4	81.31%	18.70%	51300	55600	63100

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.
Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded

ACSS/TW (ELECTRICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT				AMPACITY @ 75°C (4)		AMPACITY @ 200°C (4)		GEO. MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/ KFT (5)
								TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	AC @200°C	STD.	E3X®	STD.	E3X®			
Calumet/ACSS/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	0.0291	0.0299	0.0359	0.0509	725	820	1295	1455	0.0293	0.0811	0.5218
Mohawk/ACSS/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	0.0289	0.0297	0.0356	0.0505	725	820	1295	1450	0.0287	0.0816	0.5240
Oswego/ACSS/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	0.0247	0.0255	0.0305	0.0433	805	910	1440	1620	0.0317	0.0793	0.5096
Mystic/ACSS/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	0.0248	0.0255	0.0306	0.0434	800	905	1430	1610	0.0309	0.0799	0.5125
Wabash/ACSS/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	0.0216	0.0222	0.0267	0.0377	875	995	1575	1775	0.0339	0.0778	0.4994
Maumee/ACSS/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	0.0215	0.0222	0.0266	0.0376	875	995	1570	1770	0.0331	0.0783	0.5014
Kettle/ACSS/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	0.0175	0.0184	0.0227	0.0327	965	1105	1730	1950	0.0354	0.0768	0.4880
Suwannee/ACSS/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	0.0171	0.0178	0.0213	0.0301	1010	1155	1830	2070	0.0379	0.0752	0.4817
Columbia/ACSS/TW	966.2	13	18	93.9	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	0.0171	0.0178	0.0213	0.0300	1005	1150	1820	2060	0.0370	0.0758	0.4844
Genesee/ACSS/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	0.0144	0.0153	0.0188	0.0271	1085	1245	1960	2215	0.0388	0.0747	0.4737
Hudson/ACSS/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	0.0143	0.0151	0.0186	0.0268	1105	1270	1995	2260	0.0410	0.0734	0.4681
Cheyenne/ACSS/TW	1168.1	5	30	92.3	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	0.0144	0.0153	0.0187	0.0269	1085	1245	1960	2215	0.0382	0.0750	0.4751
Yukon/ACSS/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	0.0135	0.0142	0.0175	0.0252	1145	1320	2075	2355	0.0423	0.0727	0.4635
Nelson/ACSS/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	0.0133	0.0142	0.0174	0.0249	1140	1315	2070	2345	0.0404	0.0737	0.4677
Catawba/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0132	0.0141	0.0173	0.0247	1145	1315	2070	2345	0.0398	0.0741	0.4687
Thames/ACSS/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	0.0124	0.0132	0.0162	0.0233	1205	1390	2185	2485	0.0439	0.0718	0.4576
Mackenzie/ACSS/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	0.0123	0.0132	0.0161	0.0231	1200	1380	2175	2470	0.0419	0.0729	0.4618
Truckee/ACSS/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	0.0122	0.0132	0.0161	0.0229	1200	1380	2175	2470	0.0413	0.0732	0.4630
Merrimack/ACSS/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	0.0116	0.0124	0.0151	0.0217	1255	1455	2290	2605	0.0454	0.0711	0.4522
Miramichi/ACSS/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	0.0115	0.0124	0.0151	0.0216	1245	1440	2275	2585	0.0433	0.0722	0.4567
St. Croix/ACSS/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	0.0114	0.0124	0.0151	0.0215	1245	1440	2275	2585	0.0427	0.0725	0.4579
Rio Grande/ACSS/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	0.0108	0.0116	0.0142	0.0203	1310	1515	2395	2725	0.0469	0.0703	0.4471
Potomac/ACSS/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	0.0107	0.0117	0.0142	0.0202	1300	1505	2380	2705	0.0448	0.0714	0.4513
Platte/ACSS/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	0.0107	0.0117	0.0142	0.0201	1295	1500	2375	2700	0.0441	0.0717	0.4528
Pecos/ACSS/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	0.0102	0.0110	0.0134	0.0192	1355	1575	2485	2835	0.0485	0.0695	0.4424
Schuylkill/ACSS/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	0.0101	0.0111	0.0134	0.0190	1345	1560	2475	2815	0.0461	0.0707	0.4469
James/ACSS/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	0.00959	0.0104	0.0127	0.0180	1410	1635	2590	2955	0.0498	0.0689	0.4380
Pee Dee/ACSS/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	0.00951	0.0105	0.0127	0.0180	1395	1620	2570	2930	0.0475	0.0700	0.4423
Cumberland/ACSS/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	0.00862	0.00949	0.0115	0.0162	1500	1750	2775	3175	0.0525	0.0677	0.4297
Athabaska/ACSS/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	0.00858	0.00962	0.0116	0.0163	1480	1725	2745	3140	0.0500	0.0688	0.4343
Powder/ACSS/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	0.00778	0.00877	0.0103	0.0141	1600	1875	3015	3465	0.0537	0.0672	0.4238
Santee/ACSS/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	0.00638	0.00749	0.00867	0.0118	1785	2105	3410	3935	0.0591	0.0650	0.4089

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
(3) Based on a conductivity of 63% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
(4) Based on a conductor temperature of 75°C or 200°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
(5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.