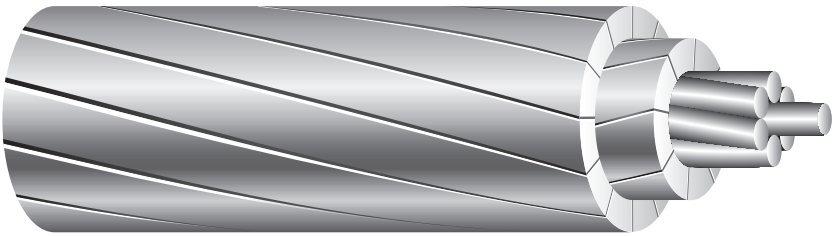
ACSR/TW

Aluminum Conductor. Steel Reinforced.
Trapezoidal Shaped Aluminum Strands.



Images not to scale. See Table for Dimensions

CONSTRUCTION:

- Aluminum 1350-H19 trapezoidal-shaped wires, concentrically stranded about a steel core. Standard core wire coating for ACSR is Class A galvanized (GA2).
- Also available in zinc-5% aluminum-mischmetal alloy coating or aluminum-clad (AW)
- Additional corrosion protection is available through the application of grease to the core or complete conductor.
- Also available in non-specular.

APPLICATIONS AND FEATURES:

- Used for bare overhead transmission, and primary and secondary distribution.
- Two design offerings: Equal Area or Equal Diameter when compared to standard round ACSR
- Equal area designs allow comparable ampacity in a smaller diameter conductor when compared to a standard round ACSR.
- Equal diameter designs allow more ampacity and strength in an equal diameter conductor when compared to a standard round ACSR.

SPECIFICATIONS:

- ASTM B230 Aluminum 1350-H19 Wire for Electrical Purposes
- ASTM B498 Zinc-Coated (Galvanized) Steel Core Wire for Use in Overhead Electrical Conductors
- ASTM B500 Metallic Coated or Aluminum Clad Stranded Steel Core for Use in Overhead Electrical Conductors
- ASTM B779 Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Steel-Reinforced (ACSR/TW)

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ACSR/TW

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Area Equal to Standard ACSR Sizes																
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in^2)		Stranding			Diameter (in)		Weight (lb/1000 ft)			Rated Breaking Strength (lb)	Resistance (Ω/mi)		Ampacity (AMP)+
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Conductor	Alum.	Steel	Total	Standard Strength	DC @ 20°C	AC @ 75°C	@ 75°C
Partridge/TW	266.8	16	0.2094	0.2435	2	14	7 x 0.0788	0.2364	0.595	250	116	366	11200	0.3356	0.4103	449
Linnet/TW	336.4	16	0.2642	0.3073	2	16	7 x 0.0885	0.2655	0.667	316	146	462	14000	0.2662	0.3255	519
Oriole/TW	336.4	23	0.2642	0.3259	2	16	7 x 0.1059	0.3177	0.693	317	209	526	17100	0.265	0.3239	525
Merlin/TW	336.4	6	0.2642	0.2788	2	14	1 x 0.1367	0.1367	0.630	315	50	365	8560	0.2693	0.3298	508
Flicker/TW	477	13	0.3747	0.4233	2	18	7 x 0.0940	0.2820	0.776	448	165	613	17200	0.1884	0.2308	641
Hawk/TW	477	16	0.3746	0.4356	2	18	7 x 0.1053	0.3159	0.789	449	206	655	19400	0.1877	0.2299	645
Hen/TW	477	23	0.3745	0.4619	2	20	7 x 0.1261	0.3783	0.820	450	296	746	23600	0.1869	0.2287	653
Parakeet/TW	556.5	13	0.4371	0.4937	2	18	7 x 0.1015	0.3045	0.835	523	192	715	20000	0.1615	0.1980	707
Dove/TW	556.5	16	0.4371	0.5083	2	20	7 x 0.1138	0.3414	0.852	524	241	765	22600	0.1609	0.1973	711
Swift/TW	636	3	0.4995	0.5133	3	27	1 x 0.1329	0.1329	0.850	599	47	646	13500	0.1435	0.1821	740
Rook/TW	636	13	0.4995	0.5643	2	20	7 x 0.1085	0.3255	0.890	597	219	816	22900	0.1413	0.1735	767
Scoter/TW	636	23	0.4994	0.6159	2	22	7 x 0.1456	0.4368	0.942	600	395	995	30400	0.1398	0.1714	783
Grosbeak/TW	636	16	0.4995	0.5808	2	20	7 x 0.1216	0.3648	0.908	599	275	873	25400	0.1408	0.1728	772
Tern/TW	795	7	0.6244	0.6675	2	17	7 x 0.0886	0.2658	0.960	746	146	892	21000	0.1138	0.1405	869
Puffin/TW	795	10	0.6244	0.6919	2	18	7 x 0.1108	0.3324	0.980	747	228	975	25900	0.1133	0.1397	876
Condor/TW	795	13	0.6244	0.7053	2	20	7 x 0.1213	0.3639	0.993	747	274	1021	28200	0.1130	0.1392	880
Drake/TW	795	16	0.6244	0.7261	2	20	7 x 0.1360	0.4080	1.010	748	344	1092	31800	0.1126	0.1386	886
Phoenix/TW	954	5	0.7493	0.7876	3	30	7 x 0.0837	0.2511	1.044	898	131	1029	23700	0.0954	0.1217	956
Rail/TW	954	7	0.7493	0.8011	3	32	7 x 0.0971	0.2913	1.061	900	175	1075	25900	0.0953	0.1214	960
Cardinal/TW	954	13	0.7493	0.8464	2	20	7 x 0.1329	0.3987	1.084	897	329	1226	33500	0.0942	0.1164	985

+Ampacity based on 25°C ambient temperature, 2 ft/sec perpendicular wind, in sun, emmisivity of 0.5, solar absorption of 0.5, at sea level.

Southwire®

ACSR/TW

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Area Equal to Standard ACSR Sizes																
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in^2)		Stranding			Diameter (in)		Weight (lb/1000 ft)			Rated Breaking Strength (lb)	Resistance (Ω/mi)		Ampacity (AMP)+
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Conductor	Alum.	Steel	Total	Standard Strength	DC @ 20°C	AC @ 75°C	@ 75°C
Snowbird/TW	1033.5	5	0.8117	0.8534	3	30	7 x 0.0871	0.2613	1.089	974	141	1115	25700	0.0880	0.1126	1004
Ortolan/TW	1033.5	7	0.8117	0.8678	3	32	7 x 0.1010	0.3030	1.102	975	190	1165	28100	0.0879	0.1123	1008
Curlew/TW	1033.5	13	0.8117	0.9169	2	22	7 x 0.1383	0.4149	1.129	971	356	1327	36300	0.0869	0.1077	1035
Avocet/TW	1113	5	0.8742	0.9191	3	30	7 x 0.0904	0.2712	1.129	1049	152	1201	27500	0.0818	0.1048	1050
Bluejay/TW	1113	7	0.8742	0.9347	3	33	7 x 0.1049	0.3147	1.143	1049	205	1254	30300	0.0816	0.1045	1055
Finch/TW	1113	13	0.8742	0.9851	3	38	19 x 0.0862	0.4310	1.185	1053	376	1429	39100	0.0812	0.1035	1071
Oxbird/TW	1192.5	5	0.9366	0.9848	3	30	7 x 0.0936	0.2808	1.167	1123	163	1286	29500	0.0763	0.0981	1095
Bunting/TW	1192.5	7	0.9366	1.0013	3	34	7 x 0.1085	0.3255	1.181	1124	219	1343	32400	0.0762	0.0978	1100
Grackel/TW	1192.5	13	0.9366	1.0554	3	38	19 x 0.0892	0.4460	1.225	1127	403	1530	41900	0.0758	0.0968	1117
Scissortail/TW	1272	5	0.9991	1.0505	3	30	7 x 0.0967	0.2901	1.203	1198	174	1372	31400	0.0715	0.0922	1139
Bittern/TW	1272	7	0.9990	1.0681	3	38	7 x 0.1121	0.3363	1.220	1198	235	1433	34600	0.0714	0.0919	1145
Pheasant/TW	1272	13	0.9990	1.1256	3	39	19 x 0.0921	0.4605	1.264	1202	430	1632	44100	0.0711	0.0909	1162
Dipper/TW	1351.5	7	1.0615	1.1348	3	35	7 x 0.1155	0.3465	1.256	1274	248	1522	36700	0.0672	0.0868	1187
Martin/TW	1351.5	13	1.0615	1.1959	3	42	19 x 0.0949	0.4745	1.300	1278	456	1734	46800	0.0669	0.0858	1205
Bobolink/TW	1431	7	1.1236	1.2017	3	36	7 x 0.1189	0.3567	1.291	1350	263	1613	38900	0.0635	0.0822	1229
Plover/TW	1431	13	1.1239	1.2664	3	39	19 x 0.0977	0.4885	1.337	1353	483	1836	49600	0.0632	0.0812	1248
Lapwing/TW	1590	7	1.2488	1.3351	3	36	7 x 0.1253	0.3759	1.358	1500	292	1792	42200	0.0572	0.0745	1308
Falcon/TW	1590	13	1.2488	1.4071	3	42	19 x 0.1030	0.5150	1.408	1503	537	2040	55100	0.0569	0.0735	1330
Chukar/TW	1780	8	1.3986	1.5120	3	38	19 x 0.0874	0.4370	1.445	1676	387	2063	50700	0.0509	0.0667	1405
Bluebird/TW	2156	8	1.0934	1.8312	4	64	19 x 0.0961	0.4805	1.608	2047	468	2515	61100	0.0424	0.0554	1585

+Ampacity based on 25°C ambient temperature, 2 ft/sec perpendicular wind, in sun, emmisivity of 0.5, solar absorption of 0.5, at sea level.

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Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW)																
Diameters Equal to Standard ACSR Sizes																
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in^2)		Stranding			Diameter (in)		Weight (lb/1000 ft)			Rated Breaking Strength (lb)	Resistance (Ω/mi)		Ampacity (AMP)+
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Conductor	Alum.	Steel	Total	Standard Strength	DC @ 20°C	AC @ 75°C	@ 75°C
Monongahela/TW	405.1	6	0.3181	0.3362	2	14	1 x 0.1520	0.1520	0.680	380	61	441	10200	0.2236	0.2741	568
Mohawk/TW	571.7	13	0.4490	0.5074	2	18	7 x 0.1030	0.3090	0.846	537	198	735	20600	0.1572	0.1928	717
Calumet/TW	565.3	16	0.4439	0.5165	2	20	7 x 0.1147	0.3441	0.858	531	245	776	22900	0.1584	0.1942	717
Mystic/TW	666.6	13	0.5236	0.5914	2	20	7 x 0.1111	0.3333	0.913	626	230	856	24000	0.1348	0.1656	790
Oswego/TW	664.8	16	0.5221	0.6072	2	20	7 x 0.1244	0.3732	0.927	625	288	913	26600	0.1347	0.1654	793
Nechako/TW	768.9	3	0.6039	0.6220	3	27	1 x 0.1520	0.1520	0.930	724	61	785	16400	0.1187	0.1510	832
Maumee/TW	768.2	13	0.6034	0.6819	2	20	7 x 0.1195	0.3585	0.977	722	266	988	27700	0.1170	0.1440	862
Wabash/TW	762.8	16	0.5992	0.6966	2	20	7 x 0.1331	0.3993	0.990	717	330	1047	30500	0.1174	0.1446	863
Kettle/TW	957.2	7	0.7518	0.8038	3	32	7 x 0.0973	0.2919	1.060	903	176	1079	26000	0.0949	0.1210	962
Fraser/TW	946.7	10	0.7436	0.8168	3	35	7 x 0.1154	0.3462	1.077	894	248	1142	29600	0.0957	0.1217	963
Columbia/TW	966.2	13	0.7589	0.8573	2	21	7 x 0.1338	0.4014	1.092	908	333	1241	34000	0.0930	0.1150	993
Suwannee/TW	959.6	16	0.7537	0.8762	2	22	7 x 0.1493	0.4479	1.108	903	415	1318	37000	0.0933	0.1152	996
Cheyenne/TW	1168.1	5	0.9175	0.9646	3	30	7 x 0.0926	0.2778	1.155	1100	160	1260	28900	0.0779	0.1001	1081
Genesee/TW	1158	7	0.9095	0.9733	3	34	7 x 0.1078	0.3234	1.165	1092	216	1308	31600	0.0785	0.1005	1081
Hudson/TW	1158.4	13	0.9098	1.0281	2	24	7 x 0.1467	0.4401	1.196	1089	400	1489	39600	0.0776	0.0964	1111
Catawba/TW	1272	5	0.9991	1.0505	3	30	7 x 0.0967	0.2901	1.203	1198	174	1372	31400	0.0715	0.0922	1139
Nelson/TW	1257.1	7	0.9874	1.0557	3	35	7 x 0.1115	0.3345	1.213	1186	231	1417	34200	0.0723	0.0930	1137
Yukon/TW	1233.6	13	0.9689	1.0925	3	38	19 x 0.0910	0.4550	1.245	1167	419	1586	42900	0.0733	0.0937	1140
Truckee/TW	1372.5	5	1.0780	1.1334	3	30	7 x 0.1004	0.3012	1.248	1293	188	1481	33400	0.0663	0.0858	1192

+Ampacity based on 25°C ambient temperature, 2 ft/sec perpendicular wind, in sun, emmisivity of 0.5, solar absorption of 0.5, at sea level.

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Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW)																
Diameters Equal to Standard ACSR Sizes																
Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in^2)		Stranding			Diameter (in)		Weight (lb/1000 ft)			Rated Breaking Strength (lb)	Resistance (Ω/mi)		Ampacity (AMP)+
			Alum.	Total	No of Layers of Alum.	No. of Alum. Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Conductor	Alum.	Steel	Total	Standard Strength	DC @ 20°C	AC @ 75°C	@ 75°C
Mackenzie/TW	1359.7	7	1.0679	1.1418	3	36	7 x 0.1159	0.3477	1.259	1280	250	1530	36900	0.0668	0.0863	1192
Thames/TW	1334.6	13	1.3480	1.1809	3	38	19 x 0.0944	0.4720	1.290	1262	451	1713	46300	0.0677	0.0868	1195
St. Croix/TW	1467.8	5	1.1529	1.2124	3	33	7 x 0.1041	0.3123	1.292	1383	202	1585	35800	0.0620	0.0806	1241
Miramichi/TW	1455.3	7	1.1430	1.2222	3	36	7 x 0.1200	0.3600	1.302	1372	268	1640	39200	0.0624	0.0809	1241
Merrimack/TW	1433.6	13	1.1250	1.2677	3	39	19 x 0.0978	0.4890	1.340	1356	484	1840	49700	0.0631	0.0811	1250
Platte/TW	1569	5	1.2323	1.2957	3	33	7 x 0.1074	0.3222	1.334	1478	215	1693	38200	0.0580	0.0758	1291
Potomac/TW	1557.4	7	1.2232	1.3079	3	36	7 x 0.1241	0.3723	1.345	1468	287	1755	41900	0.0583	0.0759	1292
Rio Grande/TW	1533.3	13	1.2043	1.3571	3	38	19 x 0.1012	0.5060	1.382	1449	519	1968	53200	0.0590	0.0760	1301
Schuylkill/TW	1657.4	7	1.3020	1.3920	3	36	7 x 0.1280	0.3840	1.386	1563	305	1868	44000	0.0548	0.0717	1341
Pecos/TW	1622	13	1.2739	1.4429	3	39	19 x 0.1064	0.5320	1.424	1533	574	2107	57500	0.0557	0.0720	1347
Pee Dee/TW	1758.6	7	1.3810	1.4770	3	38	7 x 0.1319	0.3957	1.427	1658	324	1982	46700	0.0517	0.0679	1389
James/TW	1730.6	13	1.3590	1.5314	3	34	19 x 0.1075	0.5375	1.470	1636	585	2221	59400	0.0522	0.0679	1400
Athabaska/TW	1949.6	7	1.5312	1.6377	3	44	7 x 0.1392	0.4176	1.504	1838	361	2199	51900	0.0466	0.0608	1488
Cumberland/TW	1926.9	13	1.5134	1.7049	3	42	19 x 0.1133	0.5665	1.545	1821	650	2471	65300	0.0469	0.0614	1491
Powder/TW	2153.8	8	1.6912	1.8290	4	64	19 x 0.0961	0.4805	1.602	2030	468	2498	61100	0.0424	0.0554	1583
Santee/TW	2627.3	8	2.0630	2.2268	4	64	19 x 0.1062	0.5310	1.762	2477	571	3048	74500	0.0348	0.0468	1768

+Ampacity based on 25°C ambient temperature, 2 ft/sec perpendicular wind, in sun, emmisivity of 0.5, solar absorption of 0.5, at sea level.

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