AAC/TW

All Aluminum Conductor. Trapezoidal Shaped Aluminum Strands. Bare

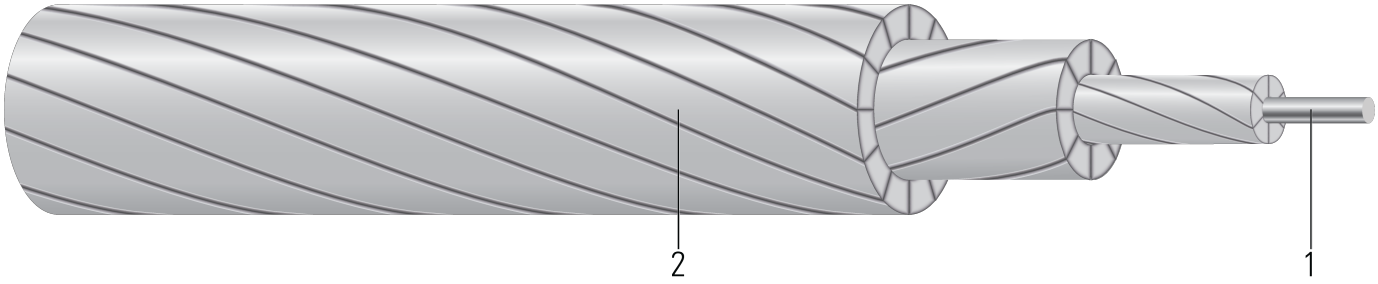

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Aluminum 1350-H19 trapezoidal shaped wires, concentrically stranded.

APPLICATIONS AND FEATURES:

Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductor (AAC/TW) is designed for use as a bare overhead conductor. There are two designs of AAC/TW. One design gives an equal area of aluminum when compared to the standard AAC conductor sizes. The other design is conductor with overall outside diameters that are in fixed-increments. Use of this conductor in the equal area design allows comparable ampacity in a smaller diameter conductor when compared with standard AAC conductor. Use of this conductor in the fixed-increment diameter design allows more ampacity in an equal diameter conductor when compared with standard AAC conductor.

SPECIFICATIONS:

- ASTM B230 Aluminum, 1350-H19 Wire for Electrical Purposes
- ASTM B778 Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors (AAC/TW)

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Area Equal to Standard AAC Sizes - Weights and Measurements

Stock Number	Code Name	Size	No. of Wires	No. of Layers	Overall OD	Overall Weight
		(AWG or kcmil)			inch	lbs/1,000'
	Tulip/TW	336.4	17	2	0.612	315.2
	Canna/TW	397.5	17	2	0.661	372.4
	Cosmos/TW	477	17	2	0.72	446.9
	Zinnia/TW	500	17	2	0.736	468.4
	Mistletoe/TW	556.5	17	2	0.775	521.3
	Meadowsweet/TW	600	17	2	0.803	652.1
	Orchid/TW	636	17	2	0.825	595.8
	Verbena/TW	700	17	2	0.864	655.7
	Nasturtium/TW	750	17	2	0.893	702.6
	Arbutus/TW	795	17	2	0.919	744.7
	Cockscomb/TW	900	17	3	0.99	846.6
	Magnolia/TW	954	31	3	1.018	897.4
	Hawkweed/TW	1000	31	3	1.041	940.6
	Bluebell/TW	1033.5	31	3	1.057	972.2
	Marigold/TW	1113	31	3	1.095	1047
	Hawthorn/TW	1192.5	31	3	1.132	1122
	Narcissus/TW	1272	31	3	1.168	1196
	Columbine/TW	1351.5	31	3	1.202	1271
	Carnation/TW	1431	31	3	1.236	1346
	Coreopsis/TW	1590	49	4	1.315	1503
	Jessamine/TW	1750	49	4	1.377	1654
	Cowslip/TW	2000	49	4	1.468	1890
	Lupine/TW	2500	71	5	1.648	2369
	Trillium/TW	3000	71	5	1.799	2843

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Area Equal to Standard AAC Sizes - Electrical and Engineering Data

Stock Number	Code Name	Size	Rated Strength	DC Resistance @ 25°C	AC Resistance @ 75°C	Allowable Ampacities+
		(AWG or kcmil)	lbs	Ohms/1,000'	Ohms/1,000'	Amps
	Tulip/TW	336.4	6220	0.0514	0.063	502
	Canna/TW	397.5	7230	0.0435	0.0534	557
	Cosmos/TW	477	8530	0.0363	0.0445	623
	Zinnia/TW	500	8940	0.0346	0.0425	641
	Mistletoe/TW	556.5	9950	0.0311	0.0383	685
	Meadowsweet/TW	600	10700	0.0288	0.0355	718
	Orchid/TW	636	11400	0.0272	0.0335	744
	Verbena/TW	700	12500	0.0247	0.0305	789
	Nasturtium/TW	750	13400	0.023	0.0286	823
	Arbutus/TW	795	13900	0.0217	0.027	853
	Cockscomb/TW	900	15800	0.0192	0.0239	924
	Magnolia/TW	954	16700	0.0181	0.0226	957
	Hawkweed/TW	1000	17500	0.0173	0.0216	984
	Bluebell/TW	1033.5	18100	0.0167	0.021	1004
	Marigold/TW	1113	19500	0.0155	0.0195	1049
	Hawthorn/TW	1192.5	20900	0.0145	0.0183	1094
	Narcissus/TW	1272	22300	0.0136	0.0173	1136
	Columbine/TW	1351.5	23700	0.0128	0.0163	1177
	Carnation/TW	1431	24600	0.0121	0.0155	1218
	Coreopsis/TW	1590	27300	0.0109	0.0141	1298
	Jessamine/TW	1750	30000	0.0099	0.0129	1371
	Cowslip/TW	2000	34500	0.0086	0.0115	1477
	Lupine/TW	2500	42400	0.007	0.0097	1661
	Trillium/TW	3000	50900	0.0058	0.0084	1822

+Ampacity calculated assuming: ambient 25°C, conductor 75°C wind 2 ft./sec., sun.

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Fixed Diameter Increments - Weights and Measurements

Stock Number	Code Name	Size	No. of Wires	No. of Layers	Overall OD	Overall Weight
		(AWG or kcmil)			inch	lbs/1,000'
	Logan/TW	322.5	17	2	0.6	302.1
	Wheeler/TW	449.4	17	2	0.7	421
	Robson/TW	595.8	17	2	0.8	558.2
	McKinley/TW	761.5	17	2	0.9	713.3
	Rainier/TW	918.8	31	3	1	864.3
	Helens/TW	1123.1	31	3	1.1	1056
	Baker/TW	1346.8	31	3	1.2	1267
	Hood/TW	1583.2	34	3	1.3	1489
	Whitney/TW	1812.7	49	4	1.4	1713
	Powell/TW	2093.6	49	4	1.5	1978
	Jefferson/TW	2388.1	52	4	1.6	2256
	Shasta/TW	2667.2	71	5	1.7	2528
	Adams/TW	3006.2	71	5	1.8	2848

Fixed Diameter Increments - Electrical and Engineering Data

Stock Number	Code Name	Size	Rated Strength	DC Resistance @ 25°C	AC Resistance @ 75°C	Allowable Ampacities+
		(AWG or kcmil)	lbs	Ohms/1,000'	Ohms/1,000'	Amps
	Logan/TW	322.5	5960	0.0536	0.0657	489
	Wheeler/TW	449.4	8030	0.0385	0.0472	601
	Robson/TW	595.8	10700	0.029	0.0358	715
	McKinley/TW	761.5	13400	0.0227	0.0281	831
	Rainier/TW	918.8	16100	0.0188	0.0235	935
	Helens/TW	1123.1	19700	0.0154	0.0194	1055
	Baker/TW	1346.8	23600	0.0128	0.0164	1175
	Hood/TW	1583.2	27200	0.0109	0.0141	1292
	Whitney/TW	1812.7	31100	0.0095	0.0125	1398
	Powell/TW	2093.6	35900	0.0083	0.0112	1508
	Jefferson/TW	2388.1	40100	0.0073	0.01	1618
	Shasta/TW	2667.2	45200	0.0065	0.0092	1718
	Adams/TW	3006.2	51000	0.0059	0.0085	1818

+Ampacity calculated assuming: ambient 25°C, conductor 75°C wind 2 ft./sec., sun.

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