All Aluminium Alloy Conductor (AAAC)

Construction： **AAAC** is stranded concentrically by aluminium alloy wires.

Application： AAAC is suitable for overhead line for long span at medium voltage, high voltage and extra-high voltage, such as used in the area of mountain, hill, or the place where snow is heavy.

Operating Temperature: Max permissible continuous operating temperature of conductor shall not exceed 90°C.

Standard： ASTM B399, BS3242, DIN 48201, IEC61089, GB/T1179, or other standards required by customers.

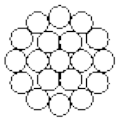
Packing: steel/wooden reel, wooden reel or steel reel.

Mechanical Property of AAAC

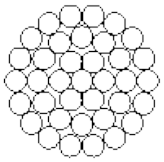
Composition	Final modulus of elasticity Mpa	Coefficient of linear expansion /°C	Composition	Final modulus of elasticity Mpa	Coefficient of linear expansion /°C
7	62000	$23X10^{-6}$	61	54000	$23X10^{-6}$
19	60000	$23X10^{-6}$	91	52000	$23X10^{-6}$
37	57000	$23X10^{-6}$	127	50500	$23X10^{-6}$

Construction of AAAC

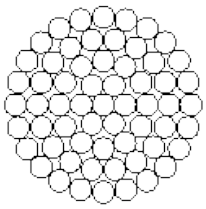
7Strand



19Strand



37Strand



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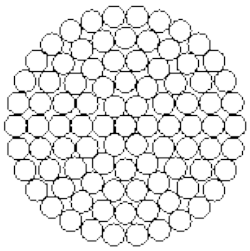
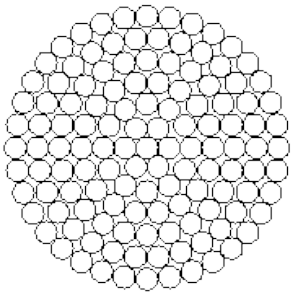


91Strand



127Strand

AAAC American Standard ASTM B399

Code Word	Size	Stranding No./Diameter	Code Word	Size	Stranding No./Diameter
	AWG or kcmil	No./mm		AWG or kcmil	No./mm
Alton	48.69 (4)	7/2.12	Canton	394.5	19/3.66
Ames	77.47 (2)	7/2.67	Cairo	465.4	19/3.98
Azusa	123.3 (1/0)	7/3.37	Darien	559.5	19/4.36
Anaheim	155.4 (2/0)	7/3.78	Elgin	652.4	19/4.71
Amherst	195.7 (3/0)	7/4.25	Flint	740.8	37/3.59
Alliance	246.9 (4/0)	7/4.77	Greeley	927.2	37/4.02
Butte	312.8	19/3.26			

AAAC British Standard BS 3242

Code Word	Size	Stranding No./Diameter	Code Word	Size	Stranding No./Diameter
	AWG or kcmil	No./mm		AWG or kcmil	No./mm
Box	15	7/1.85	Ash	150	19/3.48
Acacia	20	7/2.08	Elm	175	19/3.76
Almond	25	7/2.34	Poplar	200	37/2.87
Cedar	30	7/2.54	Sycamore	250	37/3.22
Fir	40	7/2.95	Upas	300	37/3.53
Hazel	50	7/3.30	Walnut	350	37/3.81
Pine	60	7/3.61	Yew	400	37/4.06
Willow	75	7/4.04	Totara	425	37/4.14
Oak	100	7/4.65	Rubus	500	61/3.50
Mulberry	125	19/3.18	Araucaria	700	61/4.14

Technical Characteristics of AAAC German Standard DIN 48201

Size	Stranding No./Diameter	Size	Stranding No./Diameter	Size	Stranding No./Diameter
sq. mm	No./mm	sq. mm	No./mm	sq. mm	No./mm
16	7/1.70	95	19/2.50	400	61/2.89
25	7/2.10	120	19/2.80	500	61/3.23
35	7/2.50	150	37/2.25	625	91/2.96
50	7/3.00	185	37/2.50	800	91/3.35
50	19/1.80	240	61/2.25	1000	91/3.74
70	19/2.10	300	61/2.50		

AAAC (A2 Conductors) International Standard IEC 61089

Size	Stranding No./Diameter	Size	Stranding No./Diameter	Size	Stranding No./Diameter
sq. mm	No./mm	sq. mm	No./mm	sq. mm	No./mm
16	7/1.83	200	19/3.93	630	61/3.89
25	7/2.29	250	19/4.39	710	61/4.13
40	7/2.89	315	37/3.53	800	61/4.38
63	7/3.36	400	37/3.98	900	91/3.81
100	19/2.78	450	37/4.22	1000	91/4.01
125	19/3.10	500	37/4.45	1120	91/4.25
160	19/3.51	560	61/3.67	1250	91/4.49

AAAC Chinese Standard GB/T 1179

Size	Stranding No./Diameter	Size	Stranding No./Diameter	Size	Stranding No./Diameter
sq. mm	No./mm	sq. mm	No./mm	sq. mm	No./mm
35	7/2.52	150	19/3.17	400	37/3.71
50	7/3.02	185	19/3.52	500	37/4.15
70	7/3.57	210	19/3.75	630	61/3.63
95	7/4.16	240	19/4.01	800	61/4.09
120	19/2.84	300	37/3.21	1000	61/4.57