

## Aluminium Alloy Conductor Steel Reinforced (AACSR)



**Construction :** AACSR is stranded concentrically by aluminium alloy wires with galvanized steel wire(s) in center for reinforcement.



**Application:** AACSR 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. The AACSR has a much higher strength and its usage is ideal on long spans or under very severe mechanical conditions.



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



**Standard:** ASTM B711, DIN48206, IEC1089, GB/T1179, or other standards required by customers.



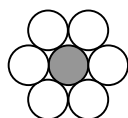
**Packing:** steel/wooden reel, wooden reel or steel reel.



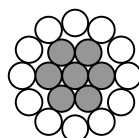
### Mechanical Property of AACSR

Composition	Final modulus of elasticity Mpa	Coefficient of linear expansion /°C	Composition	Final modulus of elasticity Mpa	Coefficient of linear expansion /°C
6+1	80000	19.1X10 <sup>-6</sup>	30+7	84000	18.0X10 <sup>-6</sup>
9+3	93000	17.0X10 <sup>-6</sup>	42+19	96500	16.3X10 <sup>-6</sup>
12+7	108000	15.3X10 <sup>-6</sup>	54+7	70000	18.0X10 <sup>-6</sup>
18+19	124000	14.2X10 <sup>-6</sup>	24+37	130000	13.5X10 <sup>-6</sup>

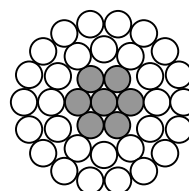
### Construction of AACSR



6AA/1ST



12AA/7ST



30AA/7ST

**AACSR American Standard ASTM B711**

Size Total Area	Stranding No./Diameter		Size Total Area	Stranding No./Diameter	
	Al Alloy	Steel		Al Alloy	Steel
sq. mm	No./mm	No./mm	sq. mm	No./mm	No./mm
163	26/2.62	7/2.04	387	30/3.66	19/2.20
173	30/2.44	7/2.44	413	26/4.17	7/3.24
186	26/2.80	7/2.18	436	30/3.88	19/2.33
198	30/2.61	7/2.61	465	26/4.43	7/3.45
209	26/2.97	7/2.31	491	30/4.12	19/2.47
222	30/2.76	7/2.76	509	54/3.26	19/1.98
232	26/3.13	7/2.43	563	54/3.43	19/2.06
247	30/2.91	7/2.91	631	54/3.63	19/2.18
260	26/3.31	7/2.57	710	54/3.85	19/2.31
276	30/3.08	7/3.08	800	54/4.09	19/2.45
291	26/3.50	7/2.72	901	54/4.34	19/2.60
308	30/3.26	7/3.26	973	84/3.69	19/2.21
326	26/3.70	7/2.88	1081	84/3.89	19/2.33
345	30/3.45	7/3.45	1211	84/4.12	19/2.47
367	26/3.93	7/3.06	1352	84/4.35	19/2.61

**AACSR German Standard DIN 48206**

Size AA/S	Stranding No./Diameter		Size AA/S	Stranding No./Diameter	
	Al Alloy	Steel		Al Alloy	Steel
sq. mm	No./mm	No./mm	sq. mm	No./mm	No./mm
16/2.5	6/1.80	1/1.80	210/35	26/3.20	7/2.49
25/4	6/2.25	1/2.25	210/50	30/3.00	7/3.00
35/6	6/2.70	1/2.70	230/30	24/3.50	7/2.33
44/32	14/2.00	7/2.40	240/40	26/3.45	7/2.68
50/8	6/3.20	1/3.20	265/35	24/3.74	7/2.49
50/30	12/2.33	7/2.33	300/50	26/3.86	7/3.00
70/12	26/1.85	7/1.44	305/40	54/2.68	7/2.68
95/15	26/2.15	7/1.67	340/30	48/3.00	7/2.33
95/55	12/3.20	7/3.20	380/50	54/3.00	7/3.00
105/75	14/3.10	19/2.25	385/35	48/3.20	7/2.49
120/20	26/2.44	7/1.90	435/55	54/3.20	7/3.20
120/70	12/3.60	7/3.60	450/40	48/3.45	7/2.68
125/30	30/2.33	7/2.33	490/65	54/3.40	7/3.40
150/25	26/2.70	7/2.10	550/70	54/3.60	7/3.60
170/40	30/2.70	7/2.70	560/50	48/3.86	7/3.00
185/30	26/3.00	7/2.33	680/85	54/4.00	19/2.40

**AACSR (A2/S1A conductors) International Standard IEC 61089**

Code No	Stranding No./Diameter		Code No	Stranding No./Diameter	
	Al Alloy	Steel		Al Alloy	Steel
	No./mm	No./mm		No./mm	No./mm
16	6/1.98	1/1.98	450	45/3.83	7/2.55
25	6/2.47	1/2.47	450	54/3.49	7/3.49
40	6/3.13	1/3.13	500	45/4.04	7/2.69
63	6/3.92	1/3.92	500	54/3.68	7/3.68
100	18/2.85	1/2.85	560	45/4.27	7/2.85
125	18/3.19	1/3.19	560	54/3.90	19/2.34
125	26/2.65	7/2.06	630	72/3.58	7/2.39
160	18/3.61	1/3.61	630	54/4.13	19/2.48
160	26/3.00	7/2.34	710	72/3.80	7/2.53
200	18/4.04	1/4.04	710	54/4.39	19/2.63
200	26/3.36	7/2.61	800	72/4.04	7/2.69
250	22/4.08	7/2.27	800	84/3.74	7/3.74
250	26/3.75	7/2.92	900	72/4.28	7/4.85
315	45/3.20	7/2.14	900	84/3.96	7/3.96
315	26/4.21	7/3.28	1000	84/4.18	19/2.51
400	45/3.61	7/2.41	1120	84/4.42	19/2.65
400	54/3.29	7/3.29	---	---	---

**Technical Characteristics of AACSR Chinese Standard GB/T 1179**

Size	Stranding No./Diameter		Size	Stranding No./Diameter	
	Al Alloy	Steel		Al Alloy	Steel
	No./mm	No./mm		No./mm	No./mm
50/8	6/3.2	1/3.20	300/20	45/2.93	7/1.95
70/10	6/3.80	1/3.80	300/50	26/3.83	7/2.98
70/40	12/2.72	7/2.72	300/70	30/3.60	7/3.60
95/55	12/3.20	7/3.20	400/25	45/3.33	7/2.22
120/7	18/2.90	1/2.90	400/50	54/3.07	7/3.07
120/70	12/3.60	7/3.60	400/95	30/4.16	19/2.50
150/8	18/3.20	1/3.20	500/35	45/3.75	7/2.50
150/25	26/2.70	7/2.10	500/65	54/3.44	7/3.44
185/10	18/3.60	1/3.60	630/45	45/4.20	7/2.80
185/30	26/2.98	7/2.32	630/80	54/3.87	19/2.32
210/10	18/3.80	1/3.80	800/55	45/4.80	7/3.20
210/35	26/3.22	7/2.50	800/100	54/4.33	19/2.60
240/30	24/3.60	7/2.40	1000/45	72/4.21	7/2.80
240/40	26/3.42	7/2.66	1000/125	54/4.84	19/2.90