7.1
All Aluminium Conductors (AAC)

Description: Hard drawn Aluminium wires, stranded in successive layers, in opposite direction to form the Aluminium stranded AAC conductors as per BS EN 50182 or IEC 61089.

Application: All Aluminium bare conductors are used for aerial distribution lines having relatively short spans, aerial feeders and bus bars of substations.

Nominal Cross Sectional Area	No. & Dia. of Wires	Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
mm²	x/mm	mm	kN	Ω/km	kg/km
16	7/1.70	5.10	3.02	1.7986	43.4
25	7/2.10	6.30	4.36	1.1787	66.3
35	7/2.50	7.50	6.01	0.8317	93.9
50	7/3.00	9.00	8.41	0.5776	135.2
50	19/1.80	9.00	8.94	0.5944	132.9
70	19/2.10	10.50	11.85	0.4367	180.9
95	19/2.50	12.50	16.32	0.3081	256.3
120	19/2.80	14.00	19.89	0.2456	321.5
150	37/2.25	15.80	26.48	0.1960	405.7
185	37/2.50	17.50	31.78	0.1588	500.9
240	61/2.25	20.30	43.66	0.1193	671.1
300	61/2.50	22.50	52.40	0.0966	828.5
400	61/2.89	26.00	68.02	0.0723	1107.1
500	61/3.23	29.10	82.47	0.0579	1382.9

Name	Nominal Cross Sectional Area	No. & Dia. of wires	Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
	mm²	x/mm	mm	kN	Ω/km	kg/km
MIDGE	23.3	7/2.06	6.18	4.20	1.2249	63.8
GNAT	26.9	7/2.21	6.63	4.83	1.0643	73.4
MOSQUITO	36.9	7/2.59	7.77	6.27	0.7749	100.8
LADYBIRD	42.8	7/2.79	8.37	7.28	0.6678	117.0
ANT	52.8	7/3.10	9.30	8.72	0.5409	144.4
FLY	63.6	7/3.40	10.2	10.49	0.4497	173.7
BLUEBOTTLE	73.6	7/3.66	11.0	11.78	0.3880	201.3
EARWIG	78.6	7/3.78	11.3	12.57	0.3638	214.7
GRASSHOPPEER	84.1	7/3.91	11.7	13.45	0.3400	229.7
CLEGG	95.6	7/4.17	12.5	15.30	0.2989	261.3
WASP	106.0	7/4.39	13.2	16.95	0.2697	289.6
BEETLE	106.4	19/2.67	13.4	18.08	0.2701	292.4
BEE	132.0	7/4.90	14.7	21.12	0.2165	360.8
HORNET	157.6	19/3.25	16.3	26.01	0.1823	433.2
CATERPILLAR	185.9	19/3.53	17.7	29.75	0.1546	511.1
CHAFER	213.2	19/3.78	18.9	34.12	0.1348	586.0
SPIDER	237.6	19/3.99	20.0	38.01	0.1210	652.9
COCKROACH	265.7	19/4.22	21.1	42.52	0.1081	730.4
BUTTERFLY	322.7	19/4.65	23.3	51.63	0.0891	886.8
MOTH	373.1	19/5.00	25.0	59.69	0.0770	1025.3
DRONE	372.4	37/3.58	25.1	59.59	0.0774	1027.1
CENTIPEDE	415.2	37/3.78	26.5	66.43	0.0695	1145.1
MAYBUG	486.1	37/4.09	28.6	77.78	0.0593	1340.6
SCORPION	529.8	37/4.27	29.9	84.77	0.0544	1461.2
CICADA	628.3	37/4.65	32.6	100.54	0.0459	1732.9

7. Overhead Conductors

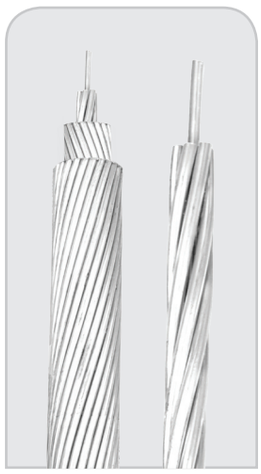
7.2

All Aluminium Alloy Conductors (AAAC)

Description: All Aluminium Alloy Conductors, stranded in successive layers to form the stranded AAAC conductor as per IEC 61089 or BS EN 50182 or ASTM B 399.

Application: AAACs are mainly used for overhead lines in transmission and distribution electrical networks, having relatively long spans. They are also used as a messenger to support overhead electrical cables.

Nominal Cross sectional area	No. & Dia. of wires	Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
mm²	x/mm	mm	kN	Ω/km	kg/km
16	7/1.70	5.10	4.69	2.0701	43.4
25	7/2.10	6.30	7.15	1.3566	66.2
35	7/2.50	7.50	10.14	0.9572	93.8
50	7/3.00	9.00	14.60	0.6647	135.1
50	19/1.80	9.00	14.26	0.6841	132.7
70	19/2.10	10.50	19.41	0.5026	180.7
95	19/2.50	12.50	27.51	0.3546	256.0
120	19/2.80	14.00	34.51	0.2827	321.2
150	37/2.25	15.80	43.40	0.2256	405.3
185	37/2.50	17.50	53.58	0.1827	500.3
240	61/2.25	20.30	71.55	0.1373	670.3
300	61/2.50	22.50	88.33	0.1112	827.5
400	61/2.89	26.00	118.04	0.0832	1105.9
500	61/3.23	29.10	147.45	0.0666	1381.4



Name	Nominal Cross Sectional Area	No. & Dia. of wires	Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
	mm²	x/mm	mm	kN	Ω/km	kg/km
BOX	18.8	7/1.85	5.55	5.55	1.7480	51.4
ACACIA	23.8	7/2.08	6.24	7.02	1.3828	64.9
ALMOND	30.1	7/2.34	7.02	8.88	1.0926	82.2
CEDAR	35.5	7/2.54	7.62	10.46	0.9273	96.8
DEODAR	42.2	7/2.77	8.31	12.44	0.7797	115.2
FIR	47.8	7/2.95	8.85	14.11	0.6875	130.6
HAZEL	59.9	7/3.30	9.90	17.66	0.5494	163.4
PINE	71.6	7/3.61	10.8	21.14	0.4591	195.6
HOLLY	84.1	7/3.91	11.7	24.79	0.3913	229.5
WILLOW	89.7	7/4.04	12.1	26.47	0.3665	245.0
OAK	118.9	7/4.65	14.0	35.07	0.2767	324.5
MULBERRY	150.9	19/3.18	15.9	44.52	0.2192	414.3
ASH	180.7	19/3.48	17.4	53.31	0.1830	496.1
ELM	211.0	19/3.76	18.8	62.24	0.1568	579.2
POPLAR	239.4	37/2.87	20.1	70.61	0.1387	659.4
SYCAMORE	303.2	37/3.23	22.6	89.40	0.1095	835.2
UPAS	362.1	37/3.53	24.7	106.82	0.0917	997.5
YEW	479.0	37/4.06	28.4	141.31	0.0693	1319.6
TOTARA	498.1	37/4.14	29.0	146.93	0.0666	1372.1
RUBUS	586.9	61/3.50	31.5	173.13	0.0567	1622.0
SORBUS	659.4	61/3.71	33.4	194.53	0.0505	1822.5
ARAUCARIA	821.1	61/4.14	37.3	242.24	0.0406	2269.4
REDWOOD	996.2	61/4.56	41.0	293.88	0.0334	2753.2

7.3
Aluminium Conductors Steel Reinforced (ACSR)

Description: An outer layer of Aluminium conductor concentrically stranded over the central core of galvanized solid or stranded steel wires to form Aluminium steel reinforced conductors as per BS EN 50182 or ASTM B 232 or IEC 61089.

Application: ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Nominal Cross Sectional Area	No. & Dia. of wires		Appro. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
	Aluminium	Steel				
mm^2	x/mm	x/mm	mm	kN	Ω/km	kg/km
16/2.5	6/1.80	1/1.80	5.4	5.80	1.8769	61.6
25/4	6/2.25	1/2.25	6.75	8.95	1.2012	96.3
35/6	6/2.70	1/2.70	8.1	12.37	0.8342	138.7
50/8	6/3.20	1/3.20	9.6	16.81	0.5939	194.8
70/12	26/1.85	7/1.44	11.7	26.27	0.4132	282.2
95/15	26/2.15	7/1.67	13.6	34.93	0.3060	380.6
120/20	26/2.44	7/1.90	15.5	44.50	0.2376	491.0
150/25	26/2.70	7/2.10	17.1	53.67	0.1940	600.8
185/30	26/3.00	7/2.33	19.0	65.27	0.1571	741.0
210/35	26/3.20	7/2.49	20.3	73.36	0.1381	844.1
240/40	26/3.45	7/2.68	21.8	85.12	0.1188	980.1
380/50	54/3.00	7/3.00	27.0	121.30	0.0758	1442.5
490/65	54/3.40	7/3.40	30.6	150.81	0.0590	1852.9

7. Overhead Conductors

7.3
Aluminium Conductors Steel Reinforced (ACSR)-(continued)

Name	Nominal Cross Sectional Area	No. & Dia. of wires		Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight
		Aluminium	Steel				
	mm^2	x/mm	x/mm	mm	kN	Ω/km	kg/km
MOLE	12.4	6/1.50	1/1.50	4.50	4.14	2.7027	42.8
SQUIRREL	24.5	6/2.11	1/2.11	6.33	7.87	1.3659	84.7
GOPHER	30.6	6/2.36	1/2.36	7.08	9.58	1.0919	106.0
WEASEL	36.9	6/2.59	1/2.59	7.77	11.38	0.9065	127.6
FOX	42.8	6/2.79	1/2.79	8.37	13.21	0.7812	148.1
FERRET	49.5	6/3.00	1/3.00	9.00	15.27	0.6757	171.2
RABBIT	61.7	6/3.35	1/3.35	10.1	18.42	0.5419	213.5
MINK	73.6	6/3.66	1/3.66	11.0	21.67	0.4540	254.9
SKUNK	100.1	12/2.59	7/2.59	13.0	52.79	0.4568	463.0
BEAVER	87.5	6/3.99	1/3.99	12.0	25.76	0.3820	302.9
HORSE	116.2	12/2.79	7/2.79	14.0	61.26	0.3936	537.3
RACOON	92.0	6/4.09	1/4.09	12.3	27.06	0.3635	318.3
OTTER	97.9	6/4.22	1/4.22	12.7	28.81	0.3415	338.8
CAT	111.3	6/4.50	1/4.50	13.5	32.76	0.3003	385.3
HARE	122.5	6/4.72	1/4.72	14.2	36.04	0.2730	423.8
DOG	118.5	6/4.72	7/1.57	14.2	32.65	0.2733	394.0
COYOTE	151.8	26/2.54	7/1.91	15.9	45.86	0.2192	520.7
COUGAR	138.8	18/3.05	1/3.05	15.3	29.74	0.2188	418.8
TIGER	161.9	30/2.36	7/2.36	16.5	57.87	0.2202	602.2
WOLF	194.9	30/2.59	7/2.59	18.1	68.91	0.1829	725.3
DINGO	167.5	18/3.35	1/3.35	16.8	35.87	0.1814	505.2
LYNX	226.2	30/2.79	7/2.79	19.5	79.97	0.1576	841.6
CARACAL	194.5	18/3.61	1/3.61	18.1	40.74	0.1562	586.7
PANTHER	261.5	30/3.00	7/3.00	21.0	92.46	0.1363	973.1
JAGUAR	222.3	18/3.86	1/3.86	19.3	46.57	0.1366	670.8
LION	293.9	30/3.18	7/3.18	22.3	100.47	0.1213	1093.4
BEAR	326.1	30/3.35	7/3.35	23.5	111.50	0.1093	1213.4
GOAT	400.0	30/3.71	7/3.71	26.0	135.13	0.0891	1488.2
SHEEP	462.6	30/3.99	7/3.99	27.9	156.30	0.0771	1721.3
ANTELOPE	422.6	54/2.97	7/2.97	26.7	118.88	0.0773	1413.8
BISON	431.2	54/3.00	7/3.00	27.0	121.30	0.0758	1442.5
DEER	529.8	30/4.27	7/4.27	29.9	179.00	0.0673	1971.4
ZEBRA	484.5	54/3.18	7/3.18	28.6	131.92	0.0674	1620.8
ELK	588.5	30/4.50	7/4.50	31.5	198.80	0.0606	2189.5
CAMEL	537.7	54/3.35	7/3.35	30.2	146.40	0.0608	1798.8
MOOSE	597.0	54/3.53	7/3.53	31.8	159.92	0.0547	1997.3

7.3
Aluminium Conductors Steel Reinforced (ACSR)-(continued)

Name	Nominal Cross Sectional Area	No. & Dia. of wires		Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight	
		Aluminium	Steel				Aluminium	Steel
	mm^2	x/mm	x/mm	mm	kN	Ω/km	kg/km	kg/km
GROUSE	40.5	8/2.54	1/4.24	9.3	23.1	0.7112	112	110
PETREL	51.6	12/2.34	7/2.34	11.7	46.2	0.5614	143	235
MINORCA	56.1	12/2.44	7/2.44	12.2	50.2	0.5163	156	256
LEGHORN	68.2	12/2.69	7/2.69	13.5	60.7	0.4248	189	311
GUINEA	80.4	12/2.92	7/2.92	14.6	71.1	0.3605	223	367
DOTTEREL	89.4	12/3.08	7/3.08	15.4	76.7	0.3240	248	409
DORKING	96.5	12/3.20	7/3.20	16.0	82.8	0.3002	268	441
BRAHMA	102.8	16/2.86	19/2.48	18.1	126.5	0.2819	285	722
COCHIN	107.1	12/3.37	7/3.37	16.9	91.8	0.2707	297	488
TURKEY	13.3	6/1.68	1/1.68	5.0	5.3	2.1570	36	17
SWAN	21.2	6/2.12	1/2.12	6.4	8.3	1.3545	58	27
SWANATE	21.1	7/1.96	1/2.61	6.5	10.5	1.3583	58	42
SPARROW	33.6	6/2.67	1/2.67	8.0	12.7	0.8530	92	44
SPARATE	33.5	7/2.47	1/3.30	8.3	16.1	0.8553	92	67
ROBIN	42.4	6/3.00	1/3.00	9.0	15.8	0.6764	117	55
RAVEN	53.5	6/3.37	1/3.37	10.1	19.5	0.5364	147	69
QUAIL	67.4	6/3.78	1/3.78	11.4	23.6	0.4255	185	87
PIGEON	85.1	6/4.25	1/4.25	12.7	29.5	0.3370	233	110
PENGUIN	107.2	6/4.77	1/4.77	14.3	37.1	0.2676	294	139
WAXWING	135.0	18/3.09	1/3.09	15.5	30.3	0.2133	373	59
PARTRIDGE	134.9	26/2.57	7/2.00	16.3	50.2	0.2142	373	172
OSTRICH	152.2	26/2.73	7/2.12	17.3	56.6	0.1906	421	193
MERLIN	170.2	18/3.47	1/3.47	17.4	38.2	0.1692	470	74
LINNET	170.6	26/2.89	7/2.25	18.3	62.8	0.1699	472	217
ORIOLE	170.5	30/2.69	7/2.69	18.8	77.4	0.1704	473	311
CHICKADEE	200.9	18/3.77	1/3.77	18.9	44.3	0.1432	555	87
BRANT	201.6	24/3.27	7/2.18	19.6	64.7	0.1437	558	204
IBIS	201.3	26/3.14	7/2.44	19.9	72.1	0.1438	558	256
LARK	200.9	30/2.92	7/2.92	20.5	88.7	0.1442	559	367
PELICAN	242.3	18/4.14	1/4.14	20.7	52.3	0.1193	667	105
FLICKLER	241.6	24/3.58	7/2.39	21.5	76.8	0.1199	670	245
HAWK	241.7	26/3.44	7/2.67	21.8	86.4	0.1199	670	308
HEN	241.3	30/3.20	7/3.20	22.4	105.9	0.1202	672	440
OSPREY	282.5	18/4.47	1/4.47	22.3	61.0	0.1022	777	122
PARAKEET	282.3	24/3.87	7/2.58	23.2	88.3	0.1026	782	285
DOVE	282.6	26/3.72	7/2.89	23.5	101.1	0.1025	781	359
EAGLE	282.1	30/3.46	7/3.46	24.2	122.9	0.1030	783	514
PEACOCK	306.1	24/4.03	7/2.69	24.2	95.9	0.0945	850	311
SQUAB	305.8	26/3.87	7/3.01	24.5	108.1	0.0945	849	390
WOOD DUCK	307.1	30/3.61	7/3.61	25.3	129.0	0.0947	851	559
TEAL	307.1	30/3.61	19/2.16	25.3	133.4	0.0947	851	547

7. Overhead Conductors

7.3
Aluminium Conductors Steel Reinforced (ACSR) - (Continued)

Name	Nominal Cross Sectional Area	No. & Dia. of wires		Approx. Overall Diameter	Rated Strength	Max. d.c. Resistance at 20 °C	Approx. Weight	
		Aluminium	Steel				Aluminium	Steel
	mm^2	x/mm	x/mm	mm	kN	Ω/km	kg/km	kg/km
SWIFT	323.0	36/3.38	1/3.38	23.7	60.7	0.0893	888	70
KINGBIRD	232.0	18/4.78	1/4.78	23.9	69.7	0.0894	889	139
ROOK	232.1	24/4.14	7/2.76	24.8	101.0	0.0899	893	326
GROSBEAK	321.8	26/3.97	7/3.09	25.2	111.9	0.0900	893	409
SCOTER	322.6	30/3.70	7/3.70	25.9	135.5	0.0900	895	588
EGRET	322.6	30/3.70	19/2.22	25.9	140.6	0.0900	895	575
FLAMINGO	337.3	24/4.23	7/2.82	25.4	105.5	0.0859	936	342
GANNET	338.3	26/4.07	7/3.16	25.8	117.3	0.0857	936	429
STILT	363.3	24/4.39	7/2.92	26.3	113.3	0.0798	1005	367
STARLING	361.9	26/4.21	7/3.28	26.7	126.0	0.0800	1004	461
REDWING	362.1	30/3.92	19/2.35	27.5	154.0	0.0801	1006	646
CUCKOO	402.3	24/4.62	7/3.08	27.7	124.5	0.0720	1116	408
DRAKE	402.6	26/4.44	7/3.45	28.1	139.7	0.0720	1117	511
TERN	403.8	45/3.38	7/2.25	27.0	97.5	0.0720	1115	217
COOT	401.9	36/3.77	1/3.77	26.4	74.7	0.0717	1111	87
CONDOR	402.3	54/3.08	7/3.08	27.7	124.3	0.0720	1115	407
MALLARD	403.8	30/4.14	19/2.48	29.0	171.2	0.0721	1119	718
RUDDY	455.5	45/3.59	7/2.40	28.7	109.4	0.0636	1263	246
CANARY	456.3	54/3.28	7/3.28	29.5	141.0	0.0635	1263	461
RAIL	483.8	45/3.70	7/2.47	29.6	116.1	0.0599	1339	261
CATBIRD	484.6	36/4.14	1/4.14	29.0	87.9	0.0595	1335	105
CARDINAL	484.5	54/3.38	7/3.38	30.4	149.7	0.0599	1338	490
ORTLAN	523.9	45/3.85	7/2.57	30.8	123.3	0.0553	1450	283
TANAGER	522.8	36/4.30	1/4.30	30.1	94.8	0.0551	1444	113
CURLEW	522.5	54/3.51	7/3.51	31.6	161.8	0.0553	1450	529
BLUEJAY	565.5	45/4.00	7/2.66	32.0	132.7	0.0513	1562	304
FINCH	565.0	54/3.65	19/2.19	32.8	174.6	0.0516	1571	558
BUNTING	605.8	45/4.14	7/2.76	33.1	142.4	0.0479	1674	326
GRACKLE	602.8	54/3.77	19/2.27	34.0	186.9	0.0483	1681	599
BITTERN	644.4	45/4.27	7/2.85	34.2	151.6	0.0450	1786	348
PHEASANT	645.1	54/3.90	19/2.34	35.1	194.1	0.0452	1795	639
SKYLARK	643.3	36/4.77	1/4.77	33.4	116.7	0.0448	1777	140
DIPPER	684.2	45/4.40	7/2.93	35.2	160.7	0.0423	1897	370
MARTIN	685.4	54/4.02	19/2.41	36.2	206.1	0.0425	1906	679
BOBOLINK	725.2	45/4.53	7/3.02	36.3	170.5	0.0399	2010	392
PLOVER	726.9	54/4.14	19/2.48	37.2	218.4	0.0401	2019	719
NUTHATCH	746.2	45/4.65	7/3.10	37.2	177.6	0.0379	2120	413
PARROT	766.1	54/4.25	19/2.55	38.2	230.5	0.0380	2129	758
LAPWING	807.5	45/4.77	7/3.18	38.2	187.4	0.0359	2232	435