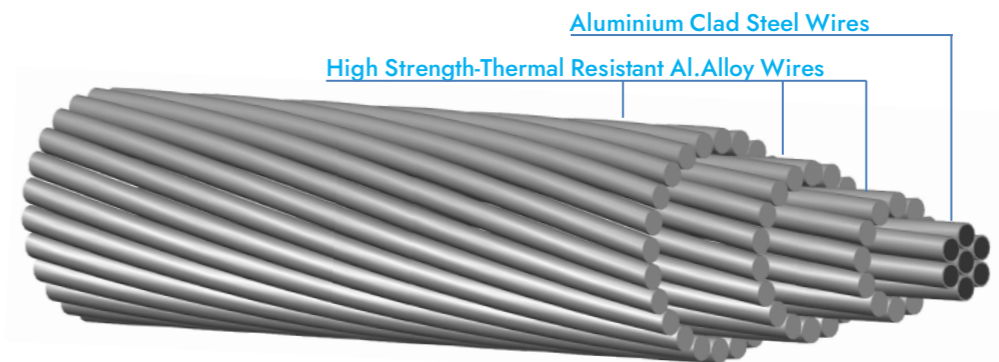
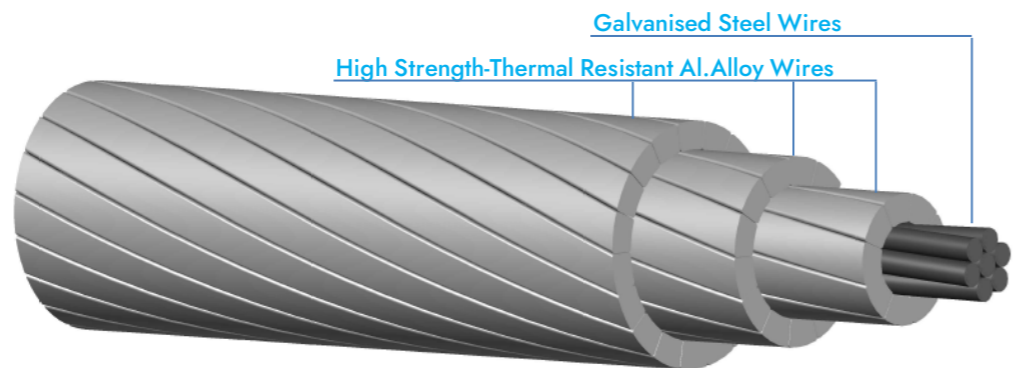


HIGH STRENGTH - THERMAL RESISTANT ALUMINIUM ALLOY CONDUCTOR STEEL REINFORCED (KTACSR & KTACSR/AW)

High Temperature Thermal Resistant Alloy Conductor : These are high ampacity conductors with inner core composed of Galvanized steel or Aluminum clad Steel & outer layer composed of high Strength - thermal resistant aluminium alloy with round or trapezoidal shaped.

Construction

Aluminium-Zirconium wires (Type-AT2), concentrically stranded over a steel core.



Values based on following Specifications:

- High Strength - Thermal resistant aluminium alloy wires (Type-AT2) for overhead line conductor as per IEC 62004
- Concentric lay overhead electrical stranded conductors IEC 61089, IEC 62219 or ASTM B779
- Zinc-coated steel wires for stranded conductors IEC 888, ASTM B957 & more
- Aluminium Clad Steel Wires, IEC 61232, ASTM B415, EN 50540 & More

Features:

- These can operate upto 150°C with specified strength loss,
- Can carry 50 % to 80 % more current as that of ACSR of the same size.
- For large-crossing sections with reduced wind load of the tower.

Available with Non-Specular (Dull) Surface Finish and Color Coated as per customized requirements.

HIGH STRENGTH-THERMAL RESISTANT ALUMINIUM ALLOY CONDUCTOR STEEL REINFORCED - (KTACSR)

Conductor Size (mm ²)	Stranding				Cross-Sectional Area			Diameter of Complete Conductor (mm)	Weight			Rated Strength				DC Resistance @ 20°C (Ω/Km)	Current Capacity	
	No. of Wires		Wire diameter		KTAL	Steel	Total		KTAL	Steel	Total	Regular Strength	HS	EHS	UHS		@ 85°C	@ 150°C
	KTAL	Steel	KTAL	Steel														
58	6	1	3.50	3.50	57.73	9.62	67.35	10.50	158.42	74.84	233.26	25.84	27.19	28.15	28.49	0.5512	190	316
80	6	1	4.20	4.20	83.13	13.85	96.98	12.60	228.12	107.75	335.87	34.91	37.26	38.79	39.20	0.3828	238	399
80	15	4	2.60	2.60	79.64	21.24	100.88	13.00	219.14	168.22	387.36	46.94	49.70	51.93	52.67	0.4007	234	394
95	6	1	4.50	4.50	95.43	15.90	111.33	13.50	261.87	123.70	385.57	40.07	42.78	44.53	45.00	0.3335	258	436
100	15	4	2.90	2.90	99.08	26.42	125.50	14.50	272.63	209.25	481.88	58.09	61.53	64.30	65.23	0.3221	267	453
120	15	4	3.20	3.20	120.64	32.17	152.81	16.00	331.96	254.79	586.75	68.97	73.47	76.69	77.81	0.2645	301	514
120	30	7	2.30	2.30	124.64	29.08	153.72	16.10	343.77	227.22	570.99	67.26	71.04	74.09	75.11	0.2566	327	559
160	30	7	2.60	2.60	159.28	37.17	196.45	18.20	439.32	290.43	729.75	87.08	91.91	95.81	97.11	0.2008	380	655
200	30	7	2.90	2.90	198.16	46.24	244.40	20.30	546.55	361.29	907.84	107.74	113.75	118.60	120.22	0.1614	433	753
240	30	7	3.20	3.20	241.27	56.30	297.57	22.40	665.46	439.90	1105.36	127.96	135.84	141.47	143.44	0.1326	488	855
330	26	7	4.00	3.10	326.73	52.83	379.56	25.30	902.23	412.78	1315.01	143.27	150.67	155.95	157.80	0.0980	581	1029
410	26	7	4.50	3.50	413.51	67.35	480.86	28.50	1141.86	526.24	1668.10	176.55	185.98	192.72	195.08	0.0774	669	1199
480	45	7	3.70	2.47	483.85	33.54	517.39	29.61	1337.01	262.06	1599.07	162.93	167.29	170.81	171.98	0.0662	718	1292
520	54	7	3.50	3.50	519.54	67.35	586.89	31.50	1437.04	526.24	1963.28	208.72	218.15	224.89	227.24	0.0617	753	1363
560	54	19	3.63	2.18	558.85	70.92	629.77	32.68	1545.77	556.01	2101.78	227.59	237.52	244.61	246.74	0.0574	786	1428
610	54	7	3.80	3.80	612.42	79.39	691.81	34.20	1693.94	620.31	2314.25	240.48	253.98	262.71	265.09	0.0524	829	1513
630	54	19	3.85	2.31	628.65	79.63	708.28	34.65	1738.83	624.29	2363.12	251.55	261.90	270.26	273.05	0.0510	842	1540
680	45	7	4.40	2.90	684.24	46.24	730.48	35.10	1890.74	361.29	2252.03	213.14	219.15	224.01	225.63	0.0468	879	1610
680	54	7	4.00	4.00	678.59	87.96	766.55	36.00	1876.97	687.27	2564.24	264.42	279.37	289.05	291.69	0.0473	880	1616
710	54	19	4.09	2.45	709.47	89.57	799.04	36.79	1962.38	702.22	2664.60	274.28	285.92	295.33	298.46	0.0452	904	1663
800	54	19	4.34	2.61	798.85	101.65	900.50	39.09	2209.60	796.93	3006.53	309.85	323.07	333.74	337.30	0.0402	968	1793
810	45	7	4.80	3.20	814.30	56.30	870.60	38.40	2250.14	439.90	2690.04	244.89	252.77	258.40	260.37	0.0394	972	1798
1120	72	19	4.45	1.78	1119.81	47.28	1167.09	44.50	3097.07	370.67	3467.74	313.89	320.51	325.24	326.66	0.0286	1172	2214
1160	84	7	4.20	4.20	1163.77	96.98	1260.75	46.20	3221.17	757.75	3978.92	375.31	391.80	402.47	405.38	0.0276	1203	2283
1250	84	19	4.35	2.61	1248.39	101.65	1350.04	47.85	3455.38	796.93	4252.31	411.00	424.21	434.89	438.45	0.0257	1251	2385
1520	84	7	4.80	4.80	1520.03	126.67	1646.70	52.80	4207.25	989.73	5196.98	475.01	487.68	510.48	514.28	0.0211	1387	2687

NOTE :
 Current capacity based on referenced conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmissivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation
 Customized conductor sizes based on customer's requirement can also be designed.

HIGH STRENGTH-THERMAL RESISTANT ALUMINIUM ALLOY CONDUCTOR, ALUMINUM CLAD STEEL REINFORCED - (KTACSR/AW)

Conductor Size (mm ²)	Stranding				Cross-Sectional Area			Diameter of Complete Conductor (mm)	Weight			Rated Strength		DC Resistance @ 20°C (Ω/Km)	Current Capacity	
	No. of Wires		Wire diameter		KTAL (mm ²)	Steel (mm ²)	Total (mm ²)		KTAL (Kg/Km)	Steel (Kg/Km)	Total (Kg/Km)	High Strength (KN)	Extra High Strength (KN)		@ 85°C (Ampere)	@ 150°C (Ampere)
	KTAL (No.)	Steel (No.)	KTAL (mm)	Steel (mm)												
58	6	1	3.50	3.50	57.73	9.62	67.35	10.50	158.42	63.39	221.81	24.88	26.71	0.5380	192.57	320.32
80	6	1	4.20	4.20	83.13	13.85	96.98	12.60	228.12	91.27	319.39	33.53	36.71	0.3737	240.40	404.22
80	15	4	2.60	2.60	79.64	21.24	100.88	13.00	219.14	142.49	361.63	45.24	48.64	0.3647	245.01	412.77
95	6	1	4.50	4.50	95.43	15.90	111.33	13.50	261.87	104.78	366.65	37.85	42.14	0.3255	261.45	441.51
100	15	4	2.90	2.90	99.08	26.42	125.50	14.50	272.63	177.24	449.87	55.98	60.21	0.2932	279.75	474.62
120	15	4	3.20	3.20	120.64	32.17	152.81	16.00	331.96	215.82	547.78	67.68	71.86	0.2408	315.24	538.43
120	30	7	2.30	2.30	124.64	29.08	153.72	16.10	343.77	192.47	536.24	64.93	69.58	0.2363	341.17	582.97
160	30	7	2.60	2.60	159.28	37.17	196.45	18.20	439.32	246.01	685.33	84.10	90.05	0.1849	395.76	682.28
200	30	7	2.90	2.90	198.16	46.24	244.40	20.30	546.55	306.03	852.58	104.03	111.43	0.1486	451.57	785.07
240	30	7	3.20	3.20	241.27	56.30	297.57	22.40	665.46	372.61	1038.07	125.71	133.02	0.1220	508.49	891.13
330	26	7	4.00	3.10	326.73	52.83	379.56	25.30	902.23	349.64	1251.87	141.16	148.02	0.0925	598.14	1059.45
410	26	7	4.50	3.50	413.51	67.35	480.86	28.50	1141.86	445.75	1587.61	169.82	182.61	0.0730	688.93	1233.87
480	45	7	3.70	2.47	483.85	33.54	517.39	29.61	1337.01	221.98	1558.99	156.85	162.22	0.0646	726.87	1307.22
520	54	7	3.50	3.50	519.54	67.35	586.89	31.50	1437.04	445.75	1882.79	201.98	214.78	0.0589	770.64	1394.24
560	54	19	3.63	2.18	558.85	70.92	629.77	32.68	1545.77	470.96	2016.73	219.79	233.26	0.0548	804.18	1460.53
610	54	7	3.80	3.80	612.42	79.39	691.81	34.20	1693.94	525.43	2219.37	234.92	250.80	0.0500	848.50	1548.62
630	54	19	3.85	2.31	628.65	79.63	708.28	34.65	1738.83	528.80	2267.63	245.17	257.91	0.0487	861.64	1574.88
680	45	7	4.40	2.90	684.24	46.24	730.48	35.10	1890.74	306.03	2196.77	209.44	216.84	0.0457	889.44	1629.05
680	54	7	4.00	4.00	678.59	87.96	766.55	36.00	1876.97	582.15	2459.12	258.26	275.85	0.0451	901.03	1653.98
710	54	19	4.09	2.45	709.47	89.57	799.04	36.79	1962.38	594.81	2557.19	267.12	281.45	0.0432	923.84	1700.10
800	54	19	4.34	2.61	798.85	101.65	900.50	39.09	2209.60	675.03	2884.63	301.72	317.98	0.0384	989.12	1833.39
810	45	7	4.80	3.20	814.30	56.30	870.60	38.40	2250.14	372.61	2622.75	242.63	249.95	0.0384	983.55	1820.68
1120	72	19	4.45	1.78	1119.81	47.28	1167.09	44.50	3097.07	313.97	3411.04	308.70	317.68	0.0282	1179.57	2228.93
1160	84	7	4.20	4.20	1163.77	96.98	1260.75	46.20	3221.17	641.85	3863.02	365.62	387.92	0.0268	1219.59	2314.31
1250	84	19	4.35	2.61	1248.39	101.65	1350.04	47.85	3455.38	675.03	4130.41	402.86	419.13	0.0250	1266.16	2415.49
1520	84	7	4.80	4.80	1520.03	126.67	1646.70	52.80	4207.25	838.34	5045.59	453.47	491.48	0.0205	1403.81	2722.06

NOTE :

 Current capacity based on referenced conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmissivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation

Customized conductor sizes based on customer's requirement can also be designed.

HIGH STRENGTH - THERMAL RESISTANT ALUMINIUM ALLOY CONDUCTOR STEEL REINFORCED - (KTACSR/TW)

Conductor Size	Cross-Sectional Area			Stranding				Diameter of Complete Conductor	Weight			Rated Strength				DC Resistance @ 20°C	Current Capacity	
	KTAL	Steel	Total	No. of KTAL Wires	No. of KTAL Layers	No. of Steel Wires	Dia. of Steel Wires		KTAL	Steel	Total	Regular Strength	HS	EHS	UHS		@ 85°C	@ 150°C
(mm ²)	(mm ²)	(mm ²)	(mm ²)	(No.)	(No.)	(No.)	(mm)	(mm)	(Kg/Km)	(Kg/Km)	(Kg/Km)	(KN)	(KN)	(KN)	(KN)	(Ω/Km)	(Ampere)	(Ampere)
170	170.45	9.46	179.91	14	2	1	3.47	15.60	469.95	73.57	543.52	52.30	53.62	54.57	54.90	0.1876	380	648
205	205.26	11.70	216.97	14	2	1	3.86	17.12	565.93	91.04	656.97	59.88	61.87	63.16	63.51	0.1558	425	730
240	241.7	39.19	280.89	18	2	7	2.67	19.44	666.37	306.23	972.60	104.55	109.64	113.76	115.13	0.1323	474	822
280	281.98	45.92	327.90	20	2	7	2.89	21.00	777.43	358.78	1136.21	122.22	128.19	133.01	134.62	0.1133	521	908
290	289.68	37.74	327.42	18	2	7	2.62	21.00	798.67	294.87	1093.54	110.59	115.49	119.46	120.78	0.1104	527	919
320	322.26	52.49	374.75	20	2	7	3.09	20.45	888.49	410.16	1298.65	134.38	141.72	146.97	148.81	0.0993	553	962
340	336.85	54.90	391.75	20	2	7	3.16	22.94	928.73	428.95	1357.68	140.50	148.18	153.67	155.59	0.0949	579	1017
390	389.25	50.81	440.06	20	2	7	3.04	24.35	1073.18	396.99	1470.17	146.69	153.80	160.66	162.44	0.0821	630	1112
405	402.83	52.15	454.98	20	2	7	3.08	24.75	1110.62	407.51	1518.13	151.28	158.58	163.80	165.62	0.0794	642	1136
480	479.69	47.20	526.89	35	3	7	2.93	26.64	1329.03	368.78	1697.81	168.34	174.48	179.44	181.09	0.0670	692	1224
490	489.57	63.55	553.13	24	2	7	3.40	27.28	1349.78	496.58	1846.36	184.06	192.96	199.32	201.54	0.0653	705	1249
525	523.67	26.85	550.53	30	3	7	2.21	27.28	1450.88	209.81	1660.69	147.76	151.52	154.21	155.01	0.0613	726	1287
590	586.76	41.28	628.03	33	3	7	2.74	29.10	1625.66	322.50	1948.16	178.99	184.36	188.69	190.13	0.0548	778	1387
625	625.07	79.63	704.69	38	3	19	2.31	30.80	1731.79	624.28	2356.07	236.31	246.67	255.03	257.81	0.0514	812	1457
640	636.97	44.03	681.00	35	3	7	2.83	30.30	1764.78	344.04	2108.82	193.31	199.03	203.66	205.20	0.0504	816	1462
680	676.24	85.95	762.20	39	3	19	2.40	32.02	1873.58	673.87	2547.45	255.41	266.58	275.61	278.62	0.0476	850	1530
690	688.96	47.52	736.48	36	3	7	2.94	31.52	1908.82	371.30	2280.12	208.95	215.13	220.12	221.78	0.0467	854	1536
725	725.09	91.78	816.87	39	3	19	2.48	33.15	2008.91	719.55	2728.46	273.37	285.30	294.94	298.15	0.0443	886	1602
730	726.41	91.78	818.19	39	3	19	2.48	33.18	2012.56	719.55	2732.11	273.65	285.58	295.22	298.43	0.0442	887	1604
740	737.4	51.14	788.54	36	3	7	3.05	32.60	2043.02	399.61	2442.63	221.96	229.12	234.24	236.03	0.0435	890	1606
780	776.92	98.56	875.49	39	3	19	2.57	34.30	2152.52	772.72	2925.24	293.20	306.02	316.36	319.81	0.0413	923	1675
790	789.13	54.55	843.69	36	3	7	3.15	33.74	2186.36	426.24	2612.60	237.31	244.95	250.41	252.31	0.0407	925	1676
820	821.87	108.79	930.65	39	3	19	2.70	35.40	2277.05	852.87	3129.92	315.95	330.09	341.51	345.32	0.0391	954	1736
840	839.8	58.07	897.88	36	3	7	3.25	34.80	2326.74	453.73	2780.47	252.57	260.70	266.50	268.54	0.0383	958	1742
880	876.9	111.22	988.11	42	3	19	2.73	36.45	2429.50	871.93	3301.43	330.89	345.34	357.02	360.91	0.0367	989	1806
890	891.08	61.70	952.78	42	3	7	3.35	35.86	2468.81	482.08	2950.89	268.09	276.73	282.90	285.06	0.0361	991	1808
900	901.93	73.54	975.47	42	3	19	2.22	36.28	2498.85	576.58	3075.43	290.26	300.55	307.91	310.11	0.0357	999	1825
980	976.36	123.77	1100.13	42	3	19	2.88	38.48	2705.08	970.38	3675.46	368.35	384.44	397.43	401.77	0.0329	1053	1936
990	987.86	68.90	1056.76	42	3	7	3.54	37.76	2736.95	538.32	3275.27	293.00	304.72	314.36	316.77	0.0325	1051	1932
1090	1092.4	88.84	1181.29	64	4	19	2.44	39.91	3041.47	696.52	3737.99	348.59	360.14	369.47	372.58	0.0296	1136	2116
1330	1331.3	108.79	1440.04	64	4	19	2.70	44.07	3706.33	852.87	4559.20	425.47	439.61	451.03	454.84	0.0242	1268	2396

NOTE :

Current capacity based on referenced conductor temperature, 0.56 m/s wind, 0 m Elevation, 0.45 Emmissivity, 0.80 absorptivity, 45°C Ambient temperature, 1045 W/m² Solar radiation
 Customized conductor sizes based on customer's requirement can also be designed.