

ASTM Covered Aerial Medium Voltage Covered Conductor (Spacer Cable Or Tree Wire)

Spacer Cable Or Tree Wire Application

Covered Aerial MV Cable – Installed with other Covered Aerial MV cables and a supporting messenger through a series of space-maintaining devices (spacers). The resulting close-proximity configuration minimizes the amount of space and hardware required for line installation, particularly useful in congested areas.

Tree Wire – Used for spans where trees crowd the right-of-way, such as in wooded residential areas, when a minimum of interference with the environment is desired. Covering minimizes power outages due to conductor contact with tree limbs, reducing the need for frequent or severe trimming.

Spacer Cable – Installed with other spacer cables and a supporting messenger through a series of space-maintaining devices (spacers). The resulting close-proximity configuration minimizes the amount of space and hardware required for line installation; particularly useful in congested areas.

Spacer Cable Or Tree Wire Construction

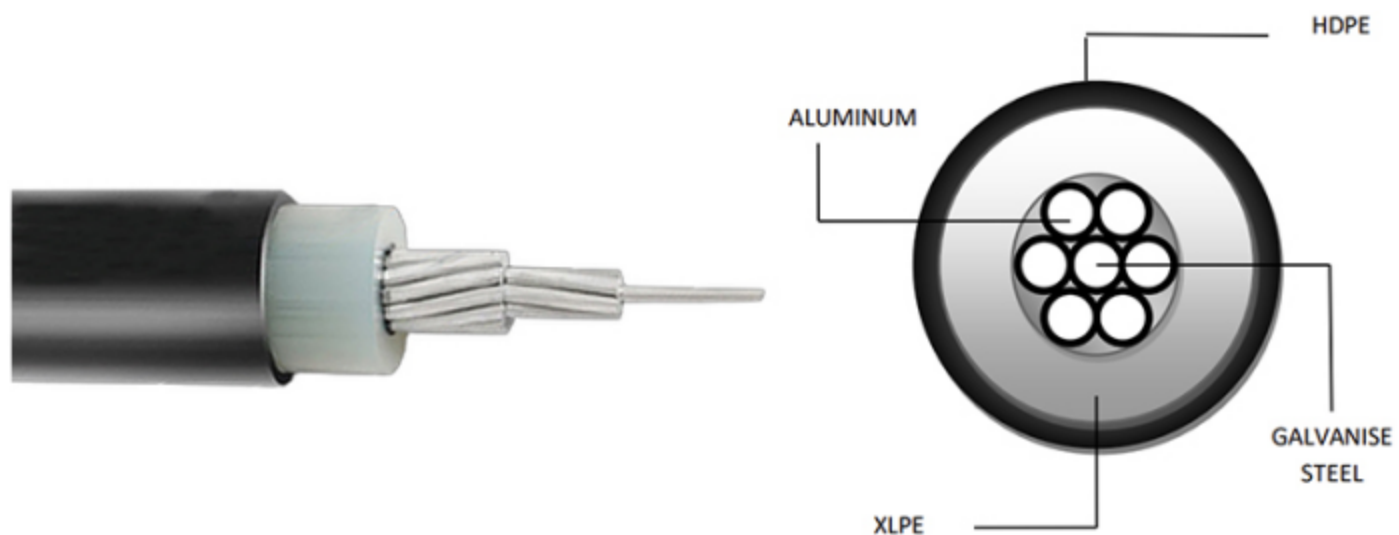
AAC, AAAC, ACSR Hard drawn Aluminum conductors & high die electric strength; Galvanise steel wire zinc coated & high impact/abrasion resistant

concentrically stranded insulated with Cross-linked polyethylene (XLPE)

Jacketed with weather, track & sunlight resistant High density polyethylene (HDPE)

Spacer Cable Or Tree Wire Sandards

- American Standard One Two Three Layer MV 5kv 15KV25KV 35KV Overhead Covered Conductor.
- ASTM B230 Standard Specification for Aluminum1350-H19 Wire for Electrical Purposes
- ASTM B231 Standard Specification for Concentric-Lay-Stranded Aluminum1350Conductors
- ASTM B232 Standard Specification for Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Reinforced(ACSR)
- ASTM B398 Standard Specification for Aluminum-Alloy 6201-T81 and 6201-T83 Wire for Electrical Purposes
- ASTM B399 Standard Specification for Concentric-Lay-Stranded Aluminum-Alloy 6201-T81Conductors
- ASTM B400 Standard Specification for CompactRound Concentric-Lay-Stranded Conductors
- ASTM D2656 Standard Specification for Cross-linked Polyethylene Insulation for Wire and Cable Rated 2001 to 35 000 V
- ASTM D1248 Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable
- ICEAS-70-547Standard Specification for Weather Resistant Polyethylene Covered Conductors
- The conductor shield shall be an extruded back semiconductor polymer meeting the physical requirements of ICEA S-61-402.
- Available with track-resistant high-density polyethylene(TR-HDPE)per ASTM D1248 or Track-Resistant Cross-linked Polyethylene(TK XLPE) covering per ASTM D2656 and ICEA S-66-524



15kV Tree Wire



0.075" black or gray high density polyethylene (0.080" for 795 kcmil)

0.075" natural linear low density polyethylene (0.080" for 795 kcmil)

0.015" black semiconducting polyethylene (0.020" for 477 kcmil and larger)

25kV Tree Wire



0.125" black or gray high density polyethylene

0.125" natural linear low density polyethylene

0.015" black semiconducting polyethylene (0.020" for 477 kcmil and larger)

35kV Tree Wire



0.125" black or gray high density polyethylene

0.175" natural linear low density polyethylene

0.015" black semiconducting polyethylene (0.020" for 477 kcmil and larger)

Aluminum, Aluminum Alloy or ACSR (copper, AWAC, ACAR conductors are also available)

One-Layer 5kv 15kv Tree Wire

One-Layer 5kv AAC Tree Wire (All-Aluminum Conductors)

Size (AWG or kcmil)	Stranding	Cover Thickness (mils)	Cable O.D.+ (mils)	Rated (lbs)	Strength	Weight per 1000 ft. (lbs)
						XLP
4	7	80	385	793		72
2	7	80	443	1210		102
1	19	80	482	1570		121
1/0	19	80	522	1940		146
2/0	19	80	565	2400		176
3/0	19	80	616	2980		215
4/0	19	80	672	3620		263
250	37	80	718	4420		300
266.8	19	80	734	4470		322
300	37	80	771	5300		353
336.4	37	80	807	5790		391
350	37	80	821	6080		406
477	37	80	931	7820		536
500	37	80	950	8200		560

One-Layer 5kv ACSR Tree Wire (Aluminum Conductor Steel Reinforced)

Size (AWG or kcmil)	Stranding	Cover Thickness (mils)	Cable O.D.+ (mils)	Rated (lbs)	Strength	Weight per 1000 ft. (lbs)
4	6/1	80	410	1770		94
2	6/1	80	476	2710		137
1	6/1	80	514	3370		166

1/0	6/1	80	558	4160	202
2/0	6/1	80	607	5040	247
3/0	6/1	80	662	6290	303
4/0	6/1	80	723	7930	374
266.8	18/1	80	769	6540	372
266.8	26/7	80	802	10700	449
336.4	18/1	80	844	8250	458
336.4	26/7	80	880	13400	555
397.5	18/1	80	903	9440	534
397.5	26/7	80	943	15500	647
477	18/1	80	974	11200	631
477	26/7	80	1018	185000	767
One-Layer 15kv AAC Tree Wire (All-Aluminum Conductors)					
4	7	150	525	793	114
2	7	150	583	1210	150
1	19	150	622	1570	172
1/0	19	150	662	1940	-
2/0	19	150	705	2400	236
3/0	19	150	756	2980	279
4/0	19	150	812	3620	333
266.8	19	150	874	4470	397
300	37	150	911	5300	432
336.4	37	150	947	5790	473
350	37	150	961	6080	489
477	37	150	1071	7820	631
500	37	150	1090	8200	656
One-Layer 15kv ACSR Tree Wire (Aluminum Conductor Steel Reinforced)					
4	6/1	150	550	1770	139
2	6/1	150	616	2710	188
1	6/1	150	654	3370	221
1/0	6/1	150	698	4160	261
2/0	6/1	150	747	5040	-
3/0	6/1	150	802	6290	372
4/0	6/1	150	863	7930	449
266.8	18/1	150	909	6540	451
266.8	26/7	150	942	10700	531
336.4	18/1	150	984	8250	545
336.4	26/7	150	1020	13400	645
397.5	18/1	150	1043	9440	626
397.5	26/7	150	1083	15500	743
477	18/1	150	1114	11200	730
477	26/7	150	1158	18500	870

2-Layer ACSR AAAC AAC 15kv Tree Wire

2-Layer 15kv ACSR Tree Wire					
4	6/1	250	75	75	

2	6/1	316	75	75
1/0	6/1	398	75	75
2/0	6/1	447	75	75
3/0	6/1	502	75	75
4/0	6/1	563	75	75
266.8	18/1	609	75	75
266.8	26/7	642	75	75
336.4	18/1	684	75	75
336.4	26/7	720	75	75
336.4	30/7	741	75	75
397.5	18/1	743	75	75
397.5	24/7	772	75	75
397.5	26/7	783	75	75
477	24/7	846	75	75
477	26/7	858	75	75
477	30/7	883	75	75
556.5	18/1	879	75	75
556.5	24/7	914	75	75
556.5	26/7	927	75	75
636	18/1	940	75	75
636	24/7	977	75	75
636	26/7	990	75	75
795	26/7	1108	80	80
795	45/7	1063	80	80
2-Layer 15kV AAAC Tree Wire				
48.69	4	7	250	75
77.47	2	7	316	75
123.3	1/0	7	398	75
155.4	2/0	7	447	75
195.7	3/0	7	502	75
246.9	4/0	7	563	75
312.8	266.8	19	642	75
394.5	336.4	19	720	75
465.4	397.5	19	782	75
559.5	477	19	858	75
652.4	556.5	19	927	75
740.8	636	37	990	80
2-Layer 15kV AAC Tree Wire				
1/0	7	336	75	75
2/0	7	376	75	75
3/0	7	423	75	75
4/0	7	475	75	75
266.8	19	537	75	75
336.4	19	603	75	75
397.5	19	659	75	75
477	19	722	75	75

556.5	37	780	75	75
636	37	835	75	75

3-Layer 15kV 25kV 35kV Tree Wire
3-Layer 15kV ACSR Tree Wire

Size (AWG or kcmil)	Stranding	Conductor (mils)	Diameter	Covering Thickness (mils)		Cable O.D. (mils)
				Conductor Shield	Inner Layer	
4	6/1	250		15		75
2	6/1	316		15		75
1/0	6/1	398		15		75
2/0	6/1	447		15		75
3/0	6/1	502		15		75
4/0	6/1	563		15		75
266.8	18/1	609		15		75
266.8	26/7	642		15		75
336.4	18/1	684		15		75
336.4	26/7	720		15		75
336.4	30/7	741		15		75
397.5	18/1	743		15		75
397.5	24/7	772		15		75
397.5	26/7	783		15		75
477	24/7	846		15		75
477	26/7	858		15		75
477	30/7	883		15		75
556.5	18/1	879		20		75
556.5	24/7	914		20		75
556.5	26/7	927		20		75
636	18/1	940		20		75
636	26/7	990		20		75

3-Layer 15kV AAAC Tree Wire

48.69	4	7		250		15
77.47	2	7		316		15
123.3	1/0	7		398		15
155.4	2/0	7		447		15
195.7	3/0	7		502		15
246.9	4/0	7		563		15
312.8	266.8	19		642		15
394.5	336.4	19		720		15
465.4	397.5	19		783		15
559.5	477	19		858		15
652.4	556.5	19		927		20
740.8	636	37		990		20

3-Layer 15kV AAC Tree Wire

1/0	7	336		15		75
2/0	7	376		15		75

3/0	7	423	15	75
4/0	7	475	15	75
266.8	19	537	15	75
336.4	19	603	15	75
397.5	19	659	15	75
477	19	722	15	75
556.5	37	780	20	75
636	37	835	20	80
795	37	932	20	80
3-Layer 25kV ACSR Tree Wire				
1/0	6/1	398	15	125
2/0	6/1	447	15	125
3/0	6/1	502	15	125
4/0	6/1	563	15	125
266.8	18/1	609	15	125
266.8	26/7	642	15	125
336.4	18/1	684	15	125
336.4	26/7	720	15	125
336.4	30/7	741	15	125
397.5	18/1	743	15	125
397.5	24/7	772	15	125
397.5	26/7	783	15	125
477	24/7	846	20	125
477	26/7	858	20	125
477	30/7	883	20	125
556.5	18/1	879	20	125
556.5	24/7	914	20	125
556.5	26/7	927	20	125
3-Layer 25kV AAAC Tree Wire				
48.69	4	7	250	15
77.47	2	7	316	15
123.3	1/0	7	398	15
155.4	2/0	7	447	15
195.7	3/0	7	502	15
246.9	4/0	7	563	15
312.8	266.8	19	642	15
394.5	336.4	19	720	15
465.4	397.5	19	783	15
559.5	477	19	858	20
652.4	556.5	19	927	20
740.8	636	37	990	20
927.2	795	37	1108	20
3-Layer 25kV AAC Tree Wire				
1/0	7	336	15	125
2/0	7	376	15	125

3/0	7	423	15	125
4/0	7	475	15	125
266.8	19	537	15	125
336.4	19	603	15	125
397.5	19	659	15	125
477	19	722	20	125
556.5	37	780	20	125
636	37	835	20	125
795	37	932	20	125
3-Layer 35kV ACSR Tree Wire				
1/0	6/1	398	15	175
2/0	6/1	447	15	175
4/0	6/1	563	15	175
266.8	18/1	609	15	175
266.8	26/7	642	15	175
336.4	18/1	684	15	175
336.4	26/7	720	15	175
336.4	30/7	741	15	175
397.5	18/1	743	15	175
397.5	24/7	772	15	175
397.5	26/7	783	15	175
477	24/7	846	20	175
477	26/7	858	20	175
477	30/7	883	20	175
556.5	18/1	879	20	175
556.5	24/7	914	20	175
556.5	26/7	927	20	175
636	18/1	940	20	175
636	26/7	990	20	175
795	26/7	1107	20	175
795	45/7	1063	20	175
3-Layer 35kV AAAC Tree Wire				
48.69	4	7	250	15
77.47	2	7	316	15
123.3	1/0	7	398	15
155.4	2/0	7	447	15
195.7	3/0	7	502	15
246.9	4/0	7	563	15
312.8	266.8	19	642	15
394.5	336.4	19	720	15
465.4	397.5	19	783	15
559.5	477	19	858	20
652.4	556.5	19	927	20
3-Layer 35kV AAC Tree Wire				
1/0	7	336	15	175

2/0	7	376	15	175
3/0	7	423	15	175
4/0	7	475	15	175
266.8	19	537	15	175
336.4	19	603	15	175
397.5	19	659	15	175
477	19	722	20	175
556.5	37	780	20	175
636	37	835	20	175
795	37	932	20	175

3-Layer 46kV Tree Wire

3-Layer 46kV Tree Wire

Conductor	Size		Stranding	Conductor Diameter (mils)	Covering Thickness (mils)			Cable O.D. (mils)	Rated Strength (lbs)	Weight per 1000 ft. (lbs)
	(AWG kcmil)	or /			Conductor Shield	Inner Layer	Outer Layer			
ACSR	1/0	6/1	398	15	225	175	1244	4161	2040	
	2/0	6/1	447	15	225	175	1293	5045	2257	
	4/0	6/1	563	15	225	175	1409	7933	2836	
	266.8	18/1	609	15	225	175	1455	6536	2914	
	266.8	26/7	642	15	225	175	1488	10735	3228	
	336.4	18/1	684	15	225	175	1530	8246	3306	
	336.4	26/7	720	15	225	175	1566	13395	3695	
	336.4	30/7	741	15	225	175	1587	16435	3941	
	397.5	18/1	743	15	225	175	1589	9443	3635	
	397.5	24/7	772	15	225	175	1618	13870	3953	
	397.5	26/7	783	15	225	175	1629	15485	4087	
	477	24/7	846	20	225	175	1692	16340	4123	
	477	26/7	858	20	225	175	1704	18525	4452	
	477	30/7	883	20	225	175	1729	22610	4635	
	556.5	18/1	879	20	225	175	1725	13015	4469	
	556.5	24/7	914	20	225	175	1760	18810	4897	
	556.5	26/7	927	20	225	175	1773	21470	5084	
	636	18/1	940	20	225	175	1786	14915	4870	
	636	26/7	990	20	225	175	1836	23940	5557	
	795	26/7	1107	20	225	175	1953	29925	6495	
795	45/7	1063	20	225	175	1909	20995	5769		
AAAC	48.69	7	250	15	225	175	1096	1584	1460	
	77.47	7	316	15	225	175	1162	2520	1677	
	123.3	7	398	15	225	175	1244	4014	1976	
	155.4	7	447	15	225	175	1293	4851	2169	
	195.7	7	502	15	225	175	1348	6111	2399	
	246.9	7	563	15	225	175	1409	7704	2674	
	312.8	19	642	15	225	175	1488	9900	3028	
	394.5	19	720	15	225	175	1566	11970	3428	

	465.4	19	720	15	225	175	1566	14040	3642
	559.5	19	858	20	225	175	1704	16920	4197
	652.4	19	927	20	225	175	1773	19710	4613
AAC	1/0	7	336	15	175	125	1182	1791	1801
	2/0	7	376	15	175	125	1222	2259	1963
	3/0	7	423	15	175	125	1269	2736	2160
	4/0	7	475	15	175	125	1321	3447	2394
	266.8	19	537	15	175	125	1383	4473	2683
	336.4	19	603	15	175	125	1449	5535	3023
	397.5	19	659	15	175	125	1505	6399	3317
	477	19	722	20	175	125	1568	7524	3681
	556.5	37	780	20	175	125	1626	8946	4035
	636	37	835	20	175	125	1681	10260	4383
	795	37	932	20	175	125	1778	12510	5054