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Rejuvenation Instructions Power Cables Cable Table

Extruded Conductor Shields Only

On the following pages, find the extruded conductor shield cable in the table, which most closely matches the cable to be injected. If the cable is not found in this table, contact Novinium Engineering at the phone number or email address listed above.

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- Ultrinium[™] sustained pressure injection method (U.S. Patent 7,615,247)
- Ultrinium[™] formulation optimization injection method (U.S. Patent 7,611,748)
- Injection Adaptor (U.S. Patent 7,195,504 and 7,538,274)
- Perfectium[™] single switch injection (U.S. Patent 7,353,601)
- Predicting performance of Electrical Power cables (patent pending)
- Formulation of Ultrinium[™] & Perficio[™] components (patents pending)
- N-Rex[™] submarine cable injection process (patent pending)
- N-Ter[™] injection or Novinium thermally enhanced rejuvenation (patent pending)
- Reticular Flash Preventer (RFP) provides safer operation of conventional injection elbows (patent pending)

Cable Table

Note: All nominal dimensions are at 20°C. Actual dimensions vary with temperature.

Cable Number	Design voltage & insulation level	Actual Insulation Thickness (mils)	Conductor-AWG, kcm, or mm ²	Stranding	Conductor Size (mm ²)	Number of Strands	Strand Diameter (mils)	Nominal Conductor or OD (mils)	Conductor or shield OD (mils)	Typical Insulation OD (mils)	Typical Shield OD (mils)	tailored injection pressure (psig)	Ultronium™ & Perficio™ fluid (cc/m)			2 or 3 liter Al tank only (mm/100 ft)			1.5 liter PE tank only (mm/100 ft)			3 liter PE tank only (mm/100 ft)		
													floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	floor	target	ceiling
AEIC Cables																								
1	15kV; 100%	180	2	Concentric	33.6	7	97.4	292	332	692	772	276	1.9	4.0	5.3	7.1	14.6	19.4	7.9	16.4	21.8	3.5	7.2	9.5
2	15kV; 100%	180	1	Concentric	42.4	19	66.4	332	374	734	814	246	6.7	8.3	10.0	24.5	30.6	36.6	27.5	34.3	41.1	12.0	15.0	17.9
3	15kV; 100%	180	1/0	Concentric	53.4	19	74.5	373	417	777	857	219	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
4	15kV; 100%	180	2/0	Concentric	67.4	19	83.7	418	464	824	904	195	11.2	17.1	20.5	41.0	62.5	74.9	46.0	70.2	84.1	20.1	30.6	36.7
5	15kV; 100%	180	3/0	Concentric	85.1	19	94.0	470	518	878	958	173	12.6	22.4	26.8	46.1	81.8	98.1	51.8	91.9	110.1	22.6	40.1	48.1
6	15kV; 100%	180	4/0	Concentric	107.2	19	105.5	528	578	938	1018	155	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
7	15kV; 100%	180	250	Concentric	126.7	37	82.2	575	625	985	1065	142	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
8	15kV; 100%	180	350	Concentric	177.5	37	97.3	681	731	1091	1191	120	18.3	34.9	39.8	66.8	127.7	145.8	75.0	143.3	163.7	32.7	62.6	71.5
9	15kV; 100%	180	500	Concentric	253.1	37	116.2	813	863	1223	1323	101	21.8	38.8	44.3									
10	15kV; 100%	180	600	Concentric	304.2	61	99.2	893	943	1303	1403	100	23.9	41.9	46.6									
11	15kV; 100%	180	700	Concentric	354.5	61	107.1	964	1016	1376	1476	100	25.8	47.0	52.2									
12	15kV; 100%	180	750	Concentric	380.1	61	110.9	998	1052	1412	1512	100	26.8	49.4	54.9									
13	15kV; 100%	180	800	Concentric	405.2	61	114.5	1031	1087	1447	1547	100	27.6	51.8	57.5									
14	15kV; 100%	180	900	Concentric	456.3	61	121.5	1094	1152	1512	1612	100	29.3	56.3	62.6									
15	15kV; 100%	180	1000	Concentric	506.4	61	128.0	1152	1212	1572	1702	100	30.9	60.5	67.2									
16	15kV; 133%	230	2	Concentric	33.6	7	97.4	292	332	792	872	297	1.9	4.0	5.3	7.1	14.6	19.4	7.9	16.4	21.8	3.5	7.2	9.5
17	15kV; 133%	230	1	Concentric	42.4	19	66.4	332	374	834	914	265	6.7	8.3	10.0	24.5	30.6	36.6	27.5	34.3	41.1	12.0	15.0	17.9
18	15kV; 133%	230	1/0	Concentric	53.4	19	74.5	373	417	877	957	236	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
19	15kV; 133%	230	2/0	Concentric	67.4	19	83.7	418	464	924	1004	210	11.2	17.1	20.5	41.0	62.5	74.9	46.0	70.2	84.1	20.1	30.6	36.7
20	15kV; 133%	230	3/0	Concentric	85.1	19	94.0	470	518	978	1058	187	12.6	22.4	26.8	46.1	81.8	98.1	51.8	91.9	110.1	22.6	40.1	48.1
21	15kV; 133%	230	4/0	Concentric	107.2	19	105.5	528	578	1038	1118	167	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
22	15kV; 133%	230	250	Concentric	126.7	37	82.2	575	625	1085	1185	153	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
23	15kV; 133%	230	350	Concentric	177.5	37	97.3	681	731	1191	1291	129	18.3	34.9	39.8									
24	15kV; 133%	230	500	Concentric	253.1	37	116.2	813	863	1323	1423	108	21.8	38.8	44.3									
25	15kV; 133%	230	600	Concentric	304.2	61	99.2	893	943	1403	1503	100	23.9	41.9	46.6									
26	15kV; 133%	230	700	Concentric	354.5	61	107.1	964	1016	1476	1576	100	25.8	47.0	52.2									
27	15kV; 133%	230	750	Concentric	380.1	61	110.9	998	1052	1512	1612	100	26.8	49.4	54.9									
28	15kV; 133%	230	800	Concentric	405.2	61	114.5	1031	1087	1547	1647	100	27.6	51.8	57.5									
29	15kV; 133%	230	900	Concentric	456.3	61	121.5	1094	1152	1612	1742	100	29.3	56.3	62.6									
30	15kV; 133%	230	1000	Concentric	506.4	61	128.0	1152	1212	1672	1802	100	30.9	60.5	67.2									
31	25kV; 100%	262	1	Concentric	42.4	19	66.4	332	374	898	978	277	6.7	8.3	10.0	24.5	30.6	36.6	27.5	34.3	41.1	12.0	15.0	17.9
32	25kV; 100%	262	1/0	Concentric	53.4	19	74.5	373	417	941	1021	247	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
33	25kV; 100%	262	2/0	Concentric	67.4	19	83.7	418	464	988	1068	220	11.2	17.1	20.5	41.0	62.5	74.9	46.0	70.2	84.1	20.1	30.6	36.7
34	25kV; 100%	262	3/0	Concentric	85.1	19	94.0	470	518	1042	1122	196	12.6	22.4	26.8	46.1	81.8	98.1	51.8	91.9	110.1	22.6	40.1	48.1
35	25kV; 100%	262	4/0	Concentric	107.2	19	105.5	528	578	1102	1202	174	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
36	25kV; 100%	262	250	Concentric	126.7	37	82.2	575	625	1149	1249	160	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
37	25kV; 100%	262	350	Concentric	177.5	37	97.3	681	731	1255	1355	135	18.3	34.9	39.8									
38	25kV; 100%	262	500	Concentric	253.1	37	116.2	813	863	1387	1487	113	21.8	38.8	44.3									
39	25kV; 100%	262	600	Concentric	304.2	61	99.2	893	943	1467	1567	103	23.9	41.9	46.6									
40	25kV; 100%	262	700	Concentric	354.5	61	107.1	964	1016	1540	1640	100	25.8	47.0	52.2									
41	25kV; 100%	262	750	Concentric	380.1	61	110.9	998	1052	1576	1706	100	26.8	49.4	54.9									
42	25kV; 100%	262	800	Concentric	405.2	61	114.5	1031	1087	1611	1741	100	27.6	51.8	57.5									
43	25kV; 100%	262	900	Concentric	456.3	61	121.5	1094	1152	1676	1806	100	29.3	56.3	62.6									
44	25kV; 100%	262	1000	Concentric	506.4	61	128.0	1152	1212	1736	1866	100	30.9	60.5	67.2									
45	35kV; 100%	347	1/0	Concentric	53.4	19	74.5	373	417	1111	1211	276	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
46	35kV; 100%	347	2/0	Concentric	67.4	19	83.7	418	464	1158	1258	246	11.2	17.1	20.5	41.0	62.5	74.9	46.0	70.2	84.1	20.1	30.6	36.7
47	35kV; 100%	347	3/0	Concentric	85.1	19	94.0	470	518	1212	1312	219	12.6	22.4	26.8	46.1	81.8	98.1	51.8	91.9	110.1	22.6	40.1	48.1

Cable Table

Note: All nominal dimensions are at 20°C. Actual dimensions vary with temperature.

Cable Number	Design voltage & insulation level	Actual Insulation Thickness (mils)	Conductor-AWG, kcm, or mm ²	Stranding	Conductor Size (mm ²)	Number of Strands	Strand Diameter (mils)	Nominal Conductor or OD (mils)	Conductor or shield OD (mils)	Typical Insulation OD (mils)	Typical Shield OD (mils)	tailored injection pressure (psig)	Ultronium™ & Perficio™ fluid (cc/m)			2 or 3 liter Al tank only (mm/100 ft)			1.5 liter PE tank only (mm/100 ft)			3 liter PE tank only (mm/100 ft)		
													floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	floor	target	ceiling
48	35kV; 100%	347	4/0	Concentric	107.2	19	105.5	528	578	1272	1372	195	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
49	35kV; 100%	347	250	Concentric	126.7	37	82.2	575	625	1319	1419	179	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
50	35kV; 100%	347	350	Concentric	177.5	37	97.3	681	731	1425	1525	151	18.3	34.9	39.8									
51	35kV; 100%	347	500	Concentric	253.1	37	116.2	813	863	1557	1687	127	21.8	38.8	44.3									
52	35kV; 100%	347	600	Concentric	304.2	61	99.2	893	943	1637	1767	116	23.9	41.9	46.6									
53	35kV; 100%	347	700	Concentric	354.5	61	107.1	964	1016	1710	1840	107	25.8	47.0	52.2									
54	35kV; 100%	347	750	Concentric	380.1	61	110.9	998	1052	1746	1876	103	26.8	49.4	54.9									
55	35kV; 100%	347	800	Concentric	405.2	61	114.5	1031	1087	1781	1911	100	27.6	51.8	57.5									
56	35kV; 100%	347	900	Concentric	456.3	61	121.5	1094	1152	1846	1976	100	29.3	56.3	62.6									
57	35kV; 100%	347	1000	Concentric	506.4	61	128.0	1152	1212	1906	2036	100	30.9	60.5	67.2									
58	15kV; 100%	180	2	Compressed	33.6	7	97.4	283	323	683	763	302	0.9	4.0	5.3	3.5	14.6	19.4	3.9	16.4	21.8	1.7	7.2	9.5
59	15kV; 100%	180	1	Compressed	42.4	19	66.4	322	364	724	804	269	5.6	7.3	8.8	20.6	26.8	32.2	23.1	30.1	36.1	10.1	13.2	15.8
60	15kV; 100%	180	1/0	Compressed	53.4	19	74.5	362	406	766	846	239	7.3	11.4	13.7	26.5	41.7	50.0	29.8	46.8	56.1	13.0	20.4	24.5
61	15kV; 100%	180	2/0	Compressed	67.4	19	83.7	406	452	812	892	213	9.0	15.9	19.0	32.8	58.0	69.6	36.9	65.2	78.1	16.1	28.4	34.1
62	15kV; 100%	180	3/0	Compressed	85.1	19	94.0	456	504	864	944	190	11.3	20.9	25.1	41.5	76.6	91.8	46.5	86.0	103.1	20.3	37.5	45.0
63	15kV; 100%	180	4/0	Compressed	107.2	19	105.5	512	562	922	1002	169	13.7	26.6	31.9	50.2	97.4	116.8	56.4	109.4	131.1	24.6	47.7	57.2
64	15kV; 100%	180	250	Compressed	126.7	37	82.2	558	608	968	1048	155	15.0	31.2	35.7	54.8	114.2	130.5	61.5	128.3	146.5	26.8	56.0	63.9
65	15kV; 100%	180	350	Compressed	177.5	37	97.3	661	711	1071	1171	131	17.7	34.3	39.2	64.9	125.5	143.3	72.8	140.9	160.9	31.8	61.5	70.2
66	15kV; 100%	180	500	Compressed	253.1	37	116.2	789	839	1199	1299	110	21.2	38.1	43.5	77.4	139.4	159.3	86.9	156.5	178.8	37.9	68.3	78.1
67	15kV; 100%	180	600	Compressed	304.2	61	99.2	866	916	1276	1376	100	23.2	40.0	44.4									
68	15kV; 100%	180	700	Compressed	354.5	61	107.1	935	987	1347	1447	100	25.1	44.9	49.9									
69	15kV; 100%	180	750	Compressed	380.1	61	110.9	968	1022	1382	1482	100	26.0	47.3	52.5									
70	15kV; 100%	180	800	Compressed	405.2	61	114.5	1000	1056	1416	1516	100	26.8	49.6	55.1									
71	15kV; 100%	180	900	Compressed	456.3	61	121.5	1061	1119	1479	1579	100	28.4	54.0	59.9									
72	15kV; 100%	180	1000	Compressed	506.4	61	128.0	1117	1177	1537	1637	100	29.9	58.0	64.4									
73	15kV; 133%	230	2	Compressed	33.6	7	97.4	283	323	783	863	323	0.9	4.0	5.3	3.5	14.6	19.4	3.9	16.4	21.8	1.7	7.2	9.5
74	15kV; 133%	230	1	Compressed	42.4	19	66.4	322	364	824	904	288	5.6	7.3	8.8	20.6	26.8	32.2	23.1	30.1	36.1	10.1	13.2	15.8
75	15kV; 133%	230	1/0	Compressed	53.4	19	74.5	362	406	866	946	257	7.3	11.4	13.7	26.5	41.7	50.0	29.8	46.8	56.1	13.0	20.4	24.5
76	15kV; 133%	230	2/0	Compressed	67.4	19	83.7	406	452	912	992	228	9.0	15.9	19.0	32.8	58.0	69.6	36.9	65.2	78.1	16.1	28.4	34.1
77	15kV; 133%	230	3/0	Compressed	85.1	19	94.0	456	504	964	1044	203	11.3	20.9	25.1	41.5	76.6	91.8	46.5	86.0	103.1	20.3	37.5	45.0
78	15kV; 133%	230	4/0	Compressed	107.2	19	105.5	512	562	1022	1102	181	13.7	26.6	31.9	50.2	97.4	116.8	56.4	109.4	131.1	24.6	47.7	57.2
79	15kV; 133%	230	250	Compressed	126.7	37	82.2	558	608	1068	1168	167	15.0	31.2	35.7	54.8	114.2	130.5	61.5	128.3	146.5	26.8	56.0	63.9
80	15kV; 133%	230	350	Compressed	177.5	37	97.3	661	711	1171	1271	141	17.7	34.3	39.2	64.9	125.5	143.3	72.8	140.9	160.9	31.8	61.5	70.2
81	15kV; 133%	230	500	Compressed	253.1	37	116.2	789	839	1299	1399	118	21.2	38.1	43.5									
82	15kV; 133%	230	600	Compressed	304.2	61	99.2	866	916	1376	1476	108	23.2	40.0	44.4									
83	15kV; 133%	230	700	Compressed	354.5	61	107.1	935	987	1447	1547	100	25.1	44.9	49.9									
84	15kV; 133%	230	750	Compressed	380.1	61	110.9	968	1022	1482	1582	100	26.0	47.3	52.5									
85	15kV; 133%	230	800	Compressed	405.2	61	114.5	1000	1056	1516	1616	100	26.8	49.6	55.1									
86	15kV; 133%	230	900	Compressed	456.3	61	121.5	1061	1119	1579	1709	100	28.4	54.0	59.9									
87	15kV; 133%	230	1000	Compressed	506.4	61	128.0	1117	1177	1637	1767	100	29.9	58.0	64.4									
88	25kV; 100%	262	1	Compressed	42.4	19	66.4	322	364	888	968	300	5.6	7.3	8.8	20.6	26.8	32.2	23.1	30.1	36.1	10.1	13.2	15.8
89	25kV; 100%	262	1/0	Compressed	53.4	19	74.5	362	406	930	1010	267	7.3	11.4	13.7	26.5	41.7	50.0	29.8	46.8	56.1	13.0	20.4	24.5
90	25kV; 100%	262	2/0	Compressed	67.4	19	83.7	406	452	976	1056	238	9.0	15.9	19.0	32.8	58.0	69.6	36.9	65.2	78.1	16.1	28.4	34.1
91	25kV; 100%	262	3/0	Compressed	85.1	19	94.0	456	504	1028	1098	212	11.3	20.9	25.1	41.5	76.6	91.8	46.5	86.0	103.1	20.3	37.5	45.0
92	25kV; 100%	262	4/0	Compressed	107.2	19	105.5	512	562	1086	1186	189	13.7	26.6	31.9	50.2	97.4	116.8	56.4	109.4	131.1	24.6	47.7	57.2
93	25kV; 100%	262	250	Compressed	126.7	37	82.2	558	608	1132	1232	174	15.0	31.2	35.7	54.8	114.2	130.5	61.5	128.3	146.5	26.8	56.0	63.9
94	25kV; 100%	262	350	Compressed	177.5	37	97.3	661	711	1235	1335	147	17.7	34.3	39.2									
95	25kV; 100%	262	500	Compressed	253.1	37	116.2	789	839	1363	1463	123	21.2	38.1	43.5									

Cable Table

Note: All nominal dimensions are at 20°C. Actual dimensions vary with temperature.

Cable Number	Design voltage & insulation level	Actual Insulation Thickness (mils)	Conductor-AWG, kcm, or Stranding	Conductor Size (mm ²)	Number of Strands	Strand Diameter (mils)	Nominal Conductor or OD (mils)	Conductor or shield OD (mils)	Typical Insulation OD (mils)	Typical Shield OD (mils)	tailored injection pressure (psig)	Ultronium™ & Perficio™ fluid (cc/m)			2 or 3 liter Al tank only (mm/100 ft)			1.5 liter PE tank only (mm/100 ft)			3 liter PE tank only (mm/100 ft)			
												floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	
96	25kV; 100%	262	600	Compressed	304.2	61	99.2	866	916	1440	1540	112	23.2	40.0	44.4									
97	25kV; 100%	262	700	Compressed	354.5	61	107.1	935	987	1511	1611	104	25.1	44.9	49.9									
98	25kV; 100%	262	750	Compressed	380.1	61	110.9	968	1022	1546	1646	100	26.0	47.3	52.5									
99	25kV; 100%	262	800	Compressed	405.2	61	114.5	1000	1056	1580	1710	100	26.8	49.6	55.1									
100	25kV; 100%	262	900	Compressed	456.3	61	121.5	1061	1119	1643	1773	100	28.4	54.0	59.9									
101	25kV; 100%	262	1000	Compressed	506.4	61	128.0	1117	1177	1701	1831	100	29.9	58.0	64.4									
102	35kV; 100%	347	1/0	Compressed	53.4	19	74.5	362	406	1100	1200	297	7.3	11.4	13.7	26.5	41.7	50.0	29.8	46.8	56.1	13.0	20.4	24.5
103	35kV; 100%	347	2/0	Compressed	67.4	19	83.7	406	452	1146	1246	264	9.0	15.9	19.0	32.8	58.0	69.6	36.9	65.2	78.1	16.1	28.4	34.1
104	35kV; 100%	347	3/0	Compressed	85.1	19	94.0	456	504	1198	1298	235	11.3	20.9	25.1	41.5	76.6	91.8	46.5	86.0	103.1	20.3	37.5	45.0
105	35kV; 100%	347	4/0	Compressed	107.2	19	105.5	512	562	1256	1356	209	13.7	26.6	31.9	50.2	97.4	116.8	56.4	109.4	131.1	24.6	47.7	57.2
106	35kV; 100%	347	250	Compressed	126.7	37	82.2	558	608	1302	1402	193	15.0	31.2	35.7	54.8	114.2	130.5	61.5	128.3	146.5	26.8	56.0	63.9
107	35kV; 100%	347	350	Compressed	177.5	37	97.3	661	711	1405	1505	163	17.7	34.3	39.2									
108	35kV; 100%	347	500	Compressed	253.1	37	116.2	789	839	1533	1633	136	21.2	38.1	43.5									
109	35kV; 100%	347	600	Compressed	304.2	61	99.2	866	916	1610	1740	124	23.2	40.0	44.4									
110	35kV; 100%	347	700	Compressed	354.5	61	107.1	935	987	1681	1811	115	25.1	44.9	49.9									
111	35kV; 100%	347	750	Compressed	380.1	61	110.9	968	1022	1716	1846	111	26.0	47.3	52.5									
112	35kV; 100%	347	800	Compressed	405.2	61	114.5	1000	1056	1750	1880	108	26.8	49.6	55.1									
113	35kV; 100%	347	900	Compressed	456.3	61	121.5	1061	1119	1813	1943	101	28.4	54.0	59.9									
114	35kV; 100%	347	1000	Compressed	506.4	61	128.0	1117	1177	1871	2001	100	29.9	58.0	64.4									
115	15kV; 100%	180	2	Compact	33.6	7	97.4	268	308	668	748	336	0.5	4.0	5.3	1.7	14.6	19.4	1.9	16.4	21.8	0.8	7.2	9.5
116	15kV; 100%	180	1	Compact	42.4	19	66.4	299	341	701	781	299	1.2	5.0	6.0	4.3	18.3	21.9	4.8	20.5	24.6	2.1	9.0	10.7
117	15kV; 100%	180	1/0	Compact	53.4	19	74.5	336	380	740	820	267	1.6	8.8	10.5	5.8	32.0	38.4	6.5	36.0	43.1	2.8	15.7	18.8
118	15kV; 100%	180	2/0	Compact	67.4	19	83.7	376	422	782	862	237	1.6	12.8	15.4	6.0	46.9	56.2	6.8	52.7	63.1	3.0	23.0	27.5
119	15kV; 100%	180	3/0	Compact	85.1	19	94.0	423	471	831	911	211	2.3	17.6	21.1	8.3	64.4	77.1	9.3	72.3	86.6	4.1	31.5	37.8
120	15kV; 100%	180	4/0	Compact	107.2	19	105.5	475	525	885	965	188	2.9	22.9	27.4	10.7	83.7	100.3	12.1	93.9	112.6	5.3	41.0	49.1
121	15kV; 100%	180	250	Compact	126.7	37	82.2	520	570	930	1010	173	6.7	30.1	34.4	24.4	110.1	125.8	27.4	123.6	141.2	11.9	53.9	61.6
122	15kV; 100%	180	350	Compact	177.5	37	97.3	616	666	1026	1106	146	9.5	32.9	37.6	35.0	120.6	137.7	39.2	135.4	154.6	17.1	59.1	67.5
123	15kV; 100%	180	500	Compact	253.1	37	116.2	736	786	1146	1246	123	13.8	36.5	41.7	50.5	133.7	152.7	56.7	150.1	171.4	24.8	65.5	74.8
124	15kV; 100%	180	600	Compact	304.2	61	99.2	813	863	1223	1323	112	21.8	36.2	40.2	79.8	132.6	147.3	89.6	148.8	165.3	39.1	65.0	72.2
125	15kV; 100%	180	700	Compact	354.5	61	107.1	877	929	1289	1389	104	23.5	40.8	45.3	86.1	149.3	165.9	96.6	167.6	186.2	42.2	73.2	81.3
126	15kV; 100%	180	750	Compact	380.1	61	110.9	908	962	1322	1422	100	24.3	43.0	47.8	89.1	157.4	174.9	100.0	176.7	196.3	43.7	77.1	85.7
127	15kV; 100%	180	800	Compact	405.2	61	114.5	938	994	1354	1454	100	25.1	45.2	50.2									
128	15kV; 100%	180	900	Compact	456.3	61	121.5	999	1057	1417	1517	100	26.8	49.5	55.0									
129	15kV; 100%	180	1000	Compact	506.4	61	128.0	1060	1120	1480	1580	100	28.4	53.9	59.9									
130	15kV; 133%	230	2	Compact	33.6	7	97.4	268	308	768	848	358	0.5	4.0	5.3	1.7	14.6	19.4	1.9	16.4	21.8	0.8	7.2	9.5
131	15kV; 133%	230	1	Compact	42.4	19	66.4	299	341	801	881	318	1.2	5.0	6.0	4.3	18.3	21.9	4.8	20.5	24.6	2.1	9.0	10.7
132	15kV; 133%	230	1/0	Compact	53.4	19	74.5	336	380	840	920	284	1.6	8.8	10.5	5.8	32.0	38.4	6.5	36.0	43.1	2.8	15.7	18.8
133	15kV; 133%	230	2/0	Compact	67.4	19	83.7	376	422	882	962	253	1.6	12.8	15.4	6.0	46.9	56.2	6.8	52.7	63.1	3.0	23.0	27.5
134	15kV; 133%	230	3/0	Compact	85.1	19	94.0	423	471	931	1011	225	2.3	17.6	21.1	8.3	64.4	77.1	9.3	72.3	86.6	4.1	31.5	37.8
135	15kV; 133%	230	4/0	Compact	107.2	19	105.5	475	525	985	1065	200	2.9	22.9	27.4	10.7	83.7	100.3	12.1	93.9	112.6	5.3	41.0	49.1
136	15kV; 133%	230	250	Compact	126.7	37	82.2	520	570	1030	1110	184	6.7	30.1	34.4	24.4	110.1	125.8	27.4	123.6	141.2	11.9	53.9	61.6
137	15kV; 133%	230	350	Compact	177.5	37	97.3	616	666	1126	1226	156	9.5	32.9	37.6	35.0	120.6	137.7	39.2	135.4	154.6	17.1	59.1	67.5
138	15kV; 133%	230	500	Compact	253.1	37	116.2	736	786	1246	1346	130	13.8	36.5	41.7	50.5	133.7	152.7	56.7	150.1	171.4	24.8	65.5	74.8
139	15kV; 133%	230	600	Compact	304.2	61	99.2	813	863	1323	1423	119	21.8	36.2	40.2	79.8	132.6	147.3	89.6	148.8	165.3	39.1	65.0	72.2
140	15kV; 133%	230	700	Compact	354.5	61	107.1	877	929	1389	1489	110	23.5	40.8	45.3	86.1	149.3	165.9	96.6	167.6	186.2	42.2	73.2	81.3
141	15kV; 133%	230	750	Compact	380.1	61	110.9	908	962	1422	1522	106	24.3	43.0	47.8	89.1	157.4	174.9	100.0	176.7	196.3	43.7	77.1	85.7
142	15kV; 133%	230	800	Compact	405.2	61	114.5	938	994	1454	1554	103	25.1	45.2	50.2									
143	15kV; 133%	230	900	Compact	456.3	61	121.5	999	1057	1517	1617	100	26.8	49.5	55.0									

Cable Table

Note: All nominal dimensions are at 20°C. Actual dimensions vary with temperature.

Cable Number	Design voltage & insulation level	Actual Insulation Thickness (mils)	Conductor-AWG, kcm, or mm ²	Stranding	Conductor Size (mm ²)	Number of Strands	Strand Diameter (mils)	Nominal Conductor or OD (mils)	Conductor or shield OD (mils)	Typical Insulation OD (mils)	Typical Shield OD (mils)	tailored injection pressure (psig)	Ultronium™ & Perficio™ fluid (cc/m)			2 or 3 liter Al tank only (mm/100 ft)			1.5 liter PE tank only (mm/100 ft)			3 liter PE tank only (mm/100 ft)		
													floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	floor	target	ceiling
													191	24kV '83-'98	217	70	Compact	70.0	19	84.3	390	437	870	917
192	24kV '83-'98	217	95	Compact	95.0	19	97.6	453	504	937	988	209	6.2	20.6	24.7	22.6	75.4	90.4	25.4	84.7	101.5	11.1	37.0	44.3
193	24kV '83-'98	217	120	Compact	120.0	19	111.4	516	563	996	1043	186	7.8	27.0	32.4	28.4	98.8	118.4	31.9	110.9	133.0	13.9	48.4	58.0
194	24kV '83-'98	217	150	Compact	150.0	19	123.6	571	622	1055	1106	167	9.1	32.6	39.1	33.1	119.3	143.0	37.2	133.9	160.5	16.2	58.5	70.1
195	24kV '83-'98	217	185	Compact	185.0	36	100.4	638	689	1122	1173	150	13.2	33.6	38.4	48.2	122.9	140.7	54.1	138.0	157.9	23.6	60.2	68.9
196	24kV '83-'98	217	240	Compact	240.0	36	115.4	732	783	1217	1268	132	19.6	36.4	41.7	71.9	133.3	152.5	80.7	149.6	171.2	35.2	65.3	74.7
197	24kV '83-'98	217	300	Compact	300.0	36	129.1	823	878	1311	1366	118	22.1	39.1	44.8	80.7	143.1	163.8	90.6	160.7	183.9	39.6	70.1	80.3
198	24kV '83-'98	217	400	Compact	400.0	58	115.0	929	1000	1433	1504	102	24.9	44.5	49.6									
199	24kV '83-'98	217	500	Compact	500.0	58	129.1	1043	1114	1547	1618	100	28.0	52.7	58.7									
200	24kV '83-'98	217	630	Compact	630.0	58	146.9	1177	1248	1681	1752	100	31.6	62.3	69.3									
201	24kV '83-'98	217	800	Compressed	800.0	58	166.1	1413	1488	1921	1996	100	37.9	79.1	88.1									
202	36 kV '83-'98	217	50	Compact	50.0	7	115.4	319	378	1008	1067	289	0.7	4.0	5.3	2.7	14.6	19.4	3.1	16.4	21.8	1.3	7.2	9.5
203	36 kV '83-'98	217	70	Compact	70.0	19	84.3	390	449	1079	1138	244	4.4	14.2	17.0	16.0	52.0	62.3	18.0	58.4	70.0	7.8	25.5	30.5
204	36 kV '83-'98	315	95	Compact	95.0	19	97.6	453	512	1142	1201	235	6.2	20.6	24.7	22.6	75.4	90.4	25.4	84.7	101.5	11.1	37.0	44.3
205	36 kV '83-'98	315	120	Compact	120.0	19	111.4	516	575	1205	1264	209	7.8	27.0	32.4	28.4	98.8	118.4	31.9	110.9	133.0	13.9	48.4	58.0
206	36 kV '83-'98	315	150	Compact	150.0	19	123.6	571	630	1260	1319	187	9.1	32.6	39.1	33.1	119.3	143.0	37.2	133.9	160.5	16.2	58.5	70.1
207	36 kV '83-'98	315	185	Compact	185.0	36	100.4	638	697	1327	1386	168	17.1	33.6	38.4	62.6	122.9	140.7	70.3	138.0	157.9	30.7	60.2	68.9
208	36 kV '83-'98	315	240	Compact	240.0	36	115.4	732	791	1421	1480	148	19.6	36.4	41.7	71.9	133.3	152.5	80.7	149.6	171.2	35.2	65.3	74.7
209	36 kV '83-'98	315	300	Compact	300.0	36	129.1	823	890	1520	1587	132	22.1	39.1	44.8	80.7	143.1	163.8	90.6	160.7	183.9	39.6	70.1	80.3
210	36 kV '83-'98	315	400	Compact	400.0	58	115.0	929	1012	1642	1724	114	24.9	44.5	49.6									
211	36 kV '83-'98	315	500	Compact	500.0	58	129.1	1043	1126	1756	1839	102	28.0	52.7	58.7									
212	36 kV '83-'98	315	630	Compact	630.0	58	146.9	1177	1256	1886	1965	100	31.6	62.3	69.3									
213	36 kV '83-'98	315	800	Compressed	800.0	58	166.1	1413	1496	2126	2209	100	37.9	79.1	88.1									
214	12kV Cu '83-'98	315	35	Compact	35.0	19	60.2	272	319	587	634	387	1.0	2.2	2.7	3.8	8.1	9.8	4.2	9.1	10.9	1.9	4.0	4.8
215	12kV Cu '83-'98	315	50	Compact	50.0	19	70.1	319	366	634	681	323	2.0	7.0	8.4	7.2	25.7	30.8	8.1	28.8	34.6	3.5	12.6	15.1
216	24kV Cu '83-'98	315	35	Compact	35.0	19	60.2	272	323	756	807	387	1.0	2.2	2.7	3.8	8.1	9.8	4.2	9.1	10.9	1.9	4.0	4.8
217	24kV Cu '83-'98	134	50	Compact	50.0	19	70.1	319	370	803	854	259	2.0	7.0	8.4	7.2	25.7	30.8	8.1	28.8	34.6	3.5	12.6	15.1
218	36kV Cu '83-'98	134	50	Compact	50.0	19	70.1	319	378	1008	1067	259	2.0	7.0	8.4	7.2	25.7	30.8	8.1	28.8	34.6	3.5	12.6	15.1
219	12kV '75-'82	134	16	Compressed	16.0	7	66.9	197	260	543	606	409	0.6	4.0	5.3	2.3	14.6	19.4	2.6	16.4	21.8	1.1	7.2	9.5
220	12kV '75-'82	134	25	Compressed	25.0	19	53.1	260	323	606	669	327	0.8	1.0	1.2	3.0	3.7	4.5	3.4	4.2	5.0	1.5	1.8	2.2
221	12kV '75-'82	134	35	Compressed	35.0	19	60.2	291	354	638	701	276	3.4	4.2	5.1	12.4	15.4	18.5	13.9	17.3	20.8	6.1	7.6	9.1
222	12kV '75-'82	134	50	Compressed	50.0	19	70.1	339	402	685	748	231	6.0	9.0	10.8	22.0	33.0	39.6	24.7	37.0	44.4	10.8	16.2	19.4
223	12kV '75-'82	134	70	Compressed	70.0	19	84.3	409	472	756	819	195	9.3	16.2	19.4	34.0	59.3	71.1	38.2	66.6	79.8	16.7	29.1	34.8
224	12kV '75-'82	134	95	Compressed	95.0	37	70.1	476	539	823	886	168	12.8	28.8	32.9	46.7	105.3	120.3	52.5	118.3	135.1	22.9	51.6	59.0
225	12kV '75-'82	134	120	Compressed	120.0	37	79.9	543	606	890	953	149	14.6	30.8	35.2	53.3	112.6	128.7	59.8	126.5	144.5	26.1	55.2	63.1
226	12kV '75-'82	134	150	Compressed	150.0	37	88.6	602	665	949	1012	133	16.1	32.5	37.2	59.1	119.1	136.0	66.4	133.7	152.7	29.0	58.4	66.7
227	12kV '75-'82	134	185	Compressed	185.0	37	99.2	673	736	1020	1083	120	18.0	34.6	39.6	66.1	126.8	144.9	74.2	142.4	162.6	32.4	62.1	71.0
228	12kV '75-'82	134	240	Compressed	240.0	61	88.6	772	835	1118	1181	106	20.7	37.9	43.2	75.7	138.7	158.0	85.0	155.8	177.4	37.1	68.0	77.4
229	12kV '75-'82	134	300	Compressed	300.0	61	99.2	866	929	1213	1276	100	23.2	40.0	44.5	85.0	146.5	162.7	95.4	164.4	182.7	41.6	71.8	79.7
230	12kV '75-'82	134	400	Compressed	400.0	61	112.2	980	1043	1327	1390	100	26.3	48.2	53.5									
231	12kV '75-'82	134	500	Compressed	500.0	61	126.0	1098	1161	1445	1508	100	29.4	56.6	62.9									
232	12kV '75-'82	134	630	Compressed	630.0	127	99.2	1252	1331	1614	1693	100	33.6	67.6	72.8									
233	12kV '75-'82	217	800	Compressed	800.0	127	112.2	1417	1496	1780	1858	100	38.0	79.4	85.5									
234	24kV '75-'82	217	35	Compressed	35.0	19	60.2	291	354	803	866	311	3.4	4.2	5.1	12.4	15.4	18.5	13.9	17.3	20.8	6.1	7.6	9.1
235	24kV '75-'82	217	50	Compressed	50.0	19	70.1	339	402	850	913	260	6.0	9.0	10.8	22.0	33.0	39.6	24.7	37.0	44.4	10.8	16.2	19.4
236	24kV '75-'82	217	70	Compressed	70.0	19	84.3	409	472	921	984	220	9.3	16.2	19.4	34.0	59.3	71.1	38.2	66.6	79.8	16.7	29.1	34.8
237	24kV '75-'82	217	95	Compressed	95.0	37	70.1	476	539	988	1051	189	12.8	28.8	32.9	46.7	105.3	120.3	52.5	118.3	135.1	22.9	51.6	59.0
238	24kV '75-'82	217	120	Compressed	120.0	37	79.9	543	606	1055	1118	168	14.6	30.8	35.2	53.3	112.6	128.7	59.8	126.5	144.5	26.1	55.2	63.1

Cable Table

Note: All nominal dimensions are at 20°C. Actual dimensions vary with temperature.

Cable Number	Design voltage & insulation level	Actual Insulation Thickness (mils)	Conductor-AWG, kcm, or Stranding	Conductor Size (mm ²)	Number of Strands	Strand Diameter (mils)	Nominal Conductor or OD (mils)	Conductor or shield OD (mils)	Typical Insulation OD (mils)	Typical Shield OD (mils)	tailored injection pressure (psig)	Ultronium™ & Perficio™ fluid (cc/m)			2 or 3 liter Al tank only (mm/100 ft)			1.5 liter PE tank only (mm/100 ft)			3 liter PE tank only (mm/100 ft)			
												floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	floor	target	ceiling	
												239	24kV '75-'82	217	150	Compressed	150.0	37	88.6	602	665	1114	1177	150
240	24kV '75-'82	217	185	Compressed	185.0	37	99.2	673	736	1185	1248	135	18.0	34.6	39.6									
241	24kV '75-'82	217	240	Compressed	240.0	61	88.6	772	835	1283	1346	119	20.7	37.9	43.2									
242	24kV '75-'82	217	300	Compressed	300.0	61	99.2	866	929	1378	1441	106	23.2	40.0	44.5									
243	24kV '75-'82	217	400	Compressed	400.0	61	112.2	980	1043	1492	1555	100	26.3	48.2	53.5									
244	24kV '75-'82	217	500	Compressed	500.0	61	126.0	1098	1161	1610	1673	100	29.4	56.6	62.9									
245	24kV '75-'82	217	630	Compressed	630.0	127	99.2	1252	1331	1780	1858	100	33.6	67.6	72.8									
246	24kV '75-'82	217	800	Compressed	800.0	127	112.2	1417	1496	1945	2024	100	38.0	79.4	85.5									
247	36 kV '75-'82	315	50	Compressed	50.0	19	70.1	339	402	1047	1110	295	6.0	9.0	10.8	22.0	33.0	39.6	24.7	37.0	44.4	10.8	16.2	19.4
248	36 kV '75-'82	315	70	Compressed	70.0	19	84.3	409	472	1118	1181	249	9.3	16.2	19.4	34.0	59.3	71.1	38.2	66.6	79.8	16.7	29.1	34.8
249	36 kV '75-'82	315	95	Compressed	95.0	37	70.1	476	539	1185	1248	214	12.8	28.8	32.9	46.7	105.3	120.3	52.5	118.3	135.1	22.9	51.6	59.0
250	36 kV '75-'82	315	120	Compressed	120.0	37	79.9	543	606	1252	1315	191	14.6	30.8	35.2	53.3	112.6	128.7	59.8	126.5	144.5	26.1	55.2	63.1
251	36 kV '75-'82	315	150	Compressed	150.0	37	88.6	602	665	1311	1374	170	16.1	32.5	37.2	59.1	119.1	136.0	66.4	133.7	152.7	29.0	58.4	66.7
252	36 kV '75-'82	315	185	Compressed	185.0	37	99.2	673	736	1382	1445	153	18.0	34.6	39.6							32.4	62.1	71.0
253	36 kV '75-'82	315	240	Compressed	240.0	61	88.6	772	835	1480	1543	135	20.7	37.9	43.2							37.1	68.0	77.4
254	36 kV '75-'82	315	300	Compressed	300.0	61	99.2	866	929	1575	1638	121	23.2	40.0	44.5							41.6	71.8	79.7
255	36 kV '75-'82	315	400	Compressed	400.0	61	112.2	980	1043	1689	1752	104	26.3	48.2	53.5							47.1	86.4	96.0
256	36 kV '75-'82	315	500	Compressed	500.0	61	126.0	1098	1161	1807	1870	100	29.4	56.6	62.9							52.8	101.6	112.8
257	36 kV '75-'82	315	630	Compressed	630.0	127	99.2	1252	1331	1976	2055	100	33.6	67.6	72.8							60.2	121.2	130.6
258	36 kV '75-'82	315	800	Compressed	800.0	127	112.2	1417	1496	2142	2220	100	38.0	79.4	85.5							68.1	142.4	153.4
Special Cables																								
259	15kV; 100%	195	1/0	Concentric	53.4	19	74.5	373	427	817	897	224	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
260	115kV	740	1500	Concentric	760.0	91	128.4	1385	1564	3042	3234	109	37.1	77.1	84.1							66.6	138.3	150.9
261	15kV; 100%	180	3/0	Compressed	95.4	7	164.0	441	494	854	934	179	11.8	12.0	15.9	43.3	43.9	58.3	48.6	49.3	65.4	21.2	21.5	28.6
262	5kV	90	250	Concentric	126.7	37	82.2	575	625	805	905	122	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
263	5kV	90	250	Compressed	126.7	37	82.2	530	580	760	820	125	14.2	30.4	34.7	52.0	111.2	127.0	58.4	124.8	142.6	25.5	54.5	62.2
264	5kV	90	250	Compact	126.7	37	82.2	520	570	750	850	130	13.9	30.1	34.4	51.0	110.1	125.8	57.3	123.6	141.2	25.0	53.9	61.6
265	5kV	120	4/0	Concentric	107.2	19	105.5	528	578	795	820	140	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
266	25kV; 100%	262	1/0	Compact	53.4	18	74.5	340	390	967	1047	295	7.0	8.8	10.5	25.7	32.0	38.4	28.8	36.0	43.1	12.6	15.7	18.8
267	5kV	90	4/0	Concentric	107.2	19	105.5	528	578	758	800	133	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
268	5kV	90	350	Concentric	177.5	37	97.3	681	731	911	985	110	18.3	34.9	39.8	66.8	127.7	145.8	75.0	143.3	163.7	32.7	62.6	71.5
269	5kV	90	500	Concentric	253.1	37	116.2	813	863	1043	1117	91	21.8	38.8	44.3									
270	5kV	90	1000	Concentric	506.4	61	128.0	1152	1212	1392	1466	81	30.9	60.5	67.2									
271	5kV	90	750	Compressed	380.1	61	110.9	968	1022	1202	1276	87	26.8	49.4	54.9									
272	5kV	90	2	Concentric	33.6	7	97.4	292	332	512	592	160	1.9	4.0	5.3	7.1	14.6	19.4	7.9	16.4	21.8	3.5	7.2	9.5
273	25kV	260	2	Concentric	33.6	7	97.4	292	332	852	932	306	1.9	4.0	5.3	7.1	14.6	19.4	7.9	16.4	21.8	3.5	7.2	9.5
274	28kV	300	500	Compressed	253.1	37	116.2	799	839	1449	1549	125	21.2	38.1	43.5							37.9	68.3	78.1
275	28kV	288	1	Compressed	42.4	19	66.4	322	364	940	968	305	5.6	7.3	8.8	20.6	26.8	32.2	23.1	30.1	36.1	10.1	13.2	15.8
276	600V	90	1/0	Concentric	53.4	19	74.5	373	427	817	897	99	9.7	12.5	15.0	35.4	45.8	54.9	39.7	51.4	61.6	17.3	22.4	26.9
277	600V	90	4/0	Concentric	107.2	19	105.5	528	578	708	758	90	14.2	28.2	33.9	51.8	103.4	123.9	58.2	116.0	139.1	25.4	50.6	60.7
278	600V	90	300	Concentric	118.1	37	89.8	628	628	808	858	80	15.4	31.7	36.2	56.4	116.1	132.6	63.3	130.3	148.9	27.6	56.9	65.0
279	600V	90	500	Concentric	253.1	37	116.2	813	813	993	1043	70	21.8	38.8	44.3	79.8	142.1	162.3	89.6	159.5	182.2	39.1	69.6	79.5
280	600V	90	2	Concentric	33.6	7	97.4	292	292	512	512	99	1.9	4.0	5.3	7.1	14.6	19.4	7.9	16.4	21.8	3.5	7.2	9.5
End of Cable Table																								