138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	90	120
				85°C - Copper Conductor - Compact Round Strand						
500	5.047	622	573	572	513	533	468	1.1	1.4	1.6
750	5.047	767	702	702	624	650	566	1.2	1.5	1.9
1000	5.047	885	804	802	709	739	640	1.4	1.8	2.2
1250	5.047	969	877	875	770	803	692	1.5	1.9	2.4
				85°C - Copper Conductor - Compact Segmental Strand						
1000	5.047	931	844	842	742	774	668	1.4	1.9	2.3
1250	6.125	1055	948	953	831	876	747	1.5	1.9	2.4
1500	6.125	1145	1024	1030	894	944	801	1.6	2.0	2.5
1750	6.125	1221	1088	1094	946	1000	846	1.6	2.2	2.7
2000	6.125	1284	1141	1147	989	1047	883	1.7	2.3	2.8
2250	6.125	1335	1183	1189	1022	1083	911	1.8	2.3	2.9
2500	8.125	1422	1244	1272	1075	1161	958	1.7	2.3	2.8
2750	8.125	1465	1277	1306	1101	1191	980	1.8	2.3	2.9
3000	8.125	1498	1303	1333	1121	1213	996	1.8	2.4	3.0

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
	85°C - Copper Conductor - Compact Round Strand						
500	5.047	34.6	29.4	29.3	23.7	25.5	19.8
750	5.047	37.6	31.6	31.6	25.1	27.2	20.8
1000	5.047	40.8	33.8	33.7	26.5	28.7	21.8
1250	5.047	42.7	35.1	35.0	27.3	29.6	22.2
	85°C - Copper Conductor - Compact Segmental Strand						
1000	5.047	41.9	34.6	34.5	27.0	29.3	22.0
1250	6.125	46.1	37.4	37.8	29.0	32.1	23.6
1500	6.125	48.1	38.7	39.1	29.7	33.0	24.1
1750	6.125	49.7	39.7	40.1	30.3	33.7	24.4
2000	6.125	51.0	40.5	40.9	30.7	34.3	24.7
2250	6.125	52.3	41.3	41.7	31.2	34.8	25.0
2500	8.125	58.8	45.3	47.3	34.1	39.6	27.4
2750	8.125	60.1	46.0	48.1	34.6	40.2	27.7
3000	8.125	61.3	46.7	48.8	34.9	40.6	27.9

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Compact Round Strand							
500	5.047	1.616	0.20	27.41	1.017	1.068	1.98	0.00	1.14	0.16	3.02	4.55
750	5.047	1.788	0.23	19.03	1.022	1.099	1.69	0.00	1.04	0.16	3.02	4.55
1000	5.047	1.880	0.28	15.12	1.026	1.125	1.39	0.00	0.99	0.16	3.02	4.55
1250	5.047	2.005	0.31	12.92	1.028	1.147	1.27	0.00	0.94	0.16	3.02	4.55
					85°C - Copper Conductor - Compact Segmental Strand							
1000	5.047	1.960	0.30	13.89	1.027	1.136	1.31	0.00	0.96	0.16	3.02	4.55
1250	6.125	2.080	0.33	11.40	1.033	1.186	1.20	0.00	0.92	0.13	2.78	4.31
1500	6.125	2.195	0.35	9.82	1.036	1.218	1.12	0.00	0.87	0.13	2.78	4.31
1750	6.125	2.300	0.37	8.71	1.038	1.247	1.05	0.00	0.84	0.13	2.78	4.31
2000	6.125	2.390	0.39	7.92	1.039	1.273	1.00	0.00	0.81	0.13	2.78	4.31
2250	6.125	2.485	0.41	7.37	1.040	1.295	0.95	0.00	0.78	0.13	2.78	4.31
2500	8.125	2.560	0.43	6.91	1.045	1.372	0.91	0.00	0.77	0.10	2.41	3.95
2750	8.125	2.650	0.45	6.55	1.046	1.395	0.88	0.00	0.74	0.10	2.41	3.95
3000	8.125	2.730	0.46	6.29	1.046	1.414	0.84	0.00	0.72	0.10	2.41	3.95

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2964

138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	90	120
		85°C - Copper Conductor - Compact Round Strand								
500	5.047	586	529	530	466	488	420	1.3	1.7	2.1
750	5.047	719	644	646	563	591	505	1.4	1.9	2.4
1000	5.047	825	733	735	636	668	567	1.7	2.3	2.8
1250	5.047	901	797	798	687	723	612	1.8	2.4	3.1
		85°C - Copper Conductor - Compact Segmental Strand								
1000	5.047	867	768	770	664	698	591	1.8	2.4	3.0
1250	6.125	975	856	864	738	783	656	1.8	2.5	3.1
1500	6.125	1055	922	930	791	841	702	1.9	2.6	3.3
1750	6.125	1121	976	985	835	888	739	2.0	2.8	3.5
2000	6.125	1176	1021	1030	871	927	770	2.1	2.9	3.6
2250	6.125	1219	1056	1065	899	957	793	2.2	3.0	3.8
2500	8.125	1286	1100	1126	936	1012	825	2.1	2.9	3.7
2750	8.125	1322	1128	1153	957	1036	842	2.2	3.0	3.9
3000	8.125	1349	1149	1175	973	1053	855	2.3	3.1	4.0

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Copper Conductor - Compact Round Strand							
500	5.047	61.5	50.3	50.5	39.3	43.0	32.2
750	5.047	66.2	53.4	53.7	41.2	45.2	33.4
1000	5.047	71.2	56.5	56.8	43.0	47.2	34.5
1250	5.047	74.1	58.3	58.5	43.8	48.3	35.2
85°C - Copper Conductor - Compact Segmental Strand							
1000	5.047	73.0	57.6	57.9	43.5	47.9	34.9
1250	6.125	79.1	61.4	62.5	46.1	51.7	36.9
1500	6.125	81.9	63.1	64.1	47.0	52.8	37.5
1750	6.125	84.2	64.3	65.5	47.7	53.6	37.8
2000	6.125	86.0	65.4	66.5	48.2	54.3	38.2
2250	6.125	87.6	66.4	67.5	48.8	54.9	38.5
2500	8.125	96.6	71.4	74.7	52.4	60.8	41.3
2750	8.125	98.4	72.4	75.5	52.9	61.5	41.5
3000	8.125	99.9	73.2	76.5	53.3	61.9	41.8

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2966

138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Compact Round Strand							
500	5.047	1.616	0.20	27.41	1.017	1.068	1.98	0.00	1.10	0.16	3.36	5.09
750	5.047	1.788	0.23	19.03	1.022	1.099	1.69	0.00	1.01	0.16	3.36	5.09
1000	5.047	1.880	0.28	15.12	1.026	1.125	1.39	0.00	0.96	0.16	3.36	5.09
1250	5.047	2.005	0.31	12.92	1.028	1.147	1.27	0.00	0.91	0.16	3.36	5.09
					85°C - Copper Conductor - Compact Segmental Strand							
1000	5.047	1.960	0.30	13.89	1.027	1.136	1.31	0.00	0.93	0.16	3.36	5.09
1250	6.125	2.080	0.33	11.40	1.033	1.186	1.20	0.00	0.88	0.13	3.11	4.85
1500	6.125	2.195	0.35	9.82	1.036	1.218	1.12	0.00	0.84	0.13	3.11	4.85
1750	6.125	2.300	0.37	8.71	1.038	1.247	1.05	0.00	0.81	0.13	3.11	4.85
2000	6.125	2.390	0.39	7.92	1.039	1.273	1.00	0.00	0.78	0.13	3.11	4.85
2250	6.125	2.485	0.41	7.37	1.040	1.295	0.95	0.00	0.75	0.13	3.11	4.85
2500	8.125	2.560	0.43	6.91	1.045	1.372	0.91	0.00	0.74	0.10	2.75	4.49
2750	8.125	2.650	0.45	6.55	1.046	1.395	0.88	0.00	0.71	0.10	2.75	4.49
3000	8.125	2.730	0.46	6.29	1.046	1.414	0.84	0.00	0.70	0.10	2.75	4.49

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	delta Td for .0010 pf & Rho 90	delta Td for .0010 pf & Rho 120
		85°C - Copper Conductor - Compact Round Strand								
500	5.047	596	541	542	479	500	433	1.2	1.6	1.9
750	5.047	733	661	662	580	607	521	1.4	1.8	2.2
1000	5.047	842	753	754	655	688	587	1.6	2.1	2.6
1250	5.047	920	819	820	710	745	633	1.7	2.3	2.9
		85°C - Copper Conductor - Compact Segmental Strand								
1000	5.047	885	789	790	685	719	612	1.7	2.2	2.8
1250	6.125	998	881	889	762	808	680	1.7	2.3	2.9
1500	6.125	1080	950	958	819	869	728	1.8	2.4	3.1
1750	6.125	1149	1006	1015	865	918	767	1.9	2.6	3.2
2000	6.125	1206	1054	1062	902	959	800	2.0	2.7	3.4
2250	6.125	1251	1090	1099	932	991	824	2.1	2.8	3.5
2500	8.125	1324	1139	1165	972	1052	860	2.0	2.7	3.4
2750	8.125	1361	1168	1195	994	1077	878	2.1	2.8	3.6
3000	8.125	1390	1189	1217	1011	1095	892	2.1	2.9	3.7

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
	85°C - Copper Conductor - Compact Round Strand						
500	5.047	63.6	52.6	52.8	41.5	45.1	34.1
750	5.047	68.8	56.2	56.4	43.6	47.6	35.4
1000	5.047	74.1	59.6	59.7	45.5	50.0	36.9
1250	5.047	77.1	61.5	61.7	46.7	51.2	37.5
	85°C - Copper Conductor - Compact Segmental Strand						
1000	5.047	75.9	60.7	60.9	46.2	50.7	37.3
1250	6.125	82.8	64.9	66.1	49.1	54.9	39.5
1500	6.125	85.8	66.8	67.9	50.2	56.3	40.1
1750	6.125	88.3	68.2	69.4	51.0	57.2	40.6
2000	6.125	90.3	69.5	70.5	51.5	58.0	41.0
2250	6.125	92.1	70.5	71.7	52.2	58.7	41.4
2500	8.125	102.3	76.4	79.8	56.3	65.5	44.6
2750	8.125	104.2	77.4	80.9	56.8	66.2	44.9
3000	8.125	105.9	78.2	81.8	57.3	66.8	45.2

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
85°C - Copper Conductor - Compact Round Strand												
500	5.047	1.616	0.20	27.41	1.017	1.068	1.98	0.00	1.11	0.16	3.25	4.93
750	5.047	1.788	0.23	19.03	1.022	1.099	1.69	0.00	1.02	0.16	3.25	4.93
1000	5.047	1.880	0.28	15.12	1.026	1.125	1.39	0.00	0.97	0.16	3.25	4.93
1250	5.047	2.005	0.31	12.92	1.028	1.147	1.27	0.00	0.91	0.16	3.25	4.93
85°C - Copper Conductor - Compact Segmental Strand												
1000	5.047	1.960	0.30	13.89	1.027	1.136	1.31	0.00	0.93	0.16	3.25	4.93
1250	6.125	2.080	0.33	11.40	1.033	1.186	1.20	0.00	0.89	0.13	3.01	4.69
1500	6.125	2.195	0.35	9.82	1.036	1.218	1.12	0.00	0.85	0.13	3.01	4.69
1750	6.125	2.300	0.37	8.71	1.038	1.247	1.05	0.00	0.81	0.13	3.01	4.69
2000	6.125	2.390	0.39	7.92	1.039	1.273	1.00	0.00	0.79	0.13	3.01	4.69
2250	6.125	2.485	0.41	7.37	1.040	1.295	0.95	0.00	0.76	0.13	3.01	4.69
2500	8.125	2.560	0.43	6.91	1.045	1.372	0.91	0.00	0.74	0.10	2.65	4.32
2750	8.125	2.650	0.45	6.55	1.046	1.395	0.88	0.00	0.72	0.10	2.65	4.32
3000	8.125	2.730	0.46	6.29	1.046	1.414	0.84	0.00	0.70	0.10	2.65	4.32

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2970

138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	90	120
				85°C - Aluminum Conductor - Compact Round Strand						
500	5.047	492	454	453	407	423	372	1.1	1.4	1.6
750	5.047	617	566	565	503	524	457	1.2	1.5	1.9
1000	5.047	726	661	659	584	608	527	1.4	1.8	2.2
1250	5.047	812	736	734	647	675	583	1.5	1.9	2.4
				85°C - Aluminum Conductor - Compact Segmental Strand						
1000	5.047	747	678	677	597	623	539	1.4	1.9	2.3
1250	6.125	857	772	776	679	715	611	1.5	1.9	2.4
1500	6.125	942	846	850	740	781	664	1.6	2.1	2.5
1750	6.125	1018	911	916	794	839	711	1.6	2.2	2.7
2000	6.125	1086	968	973	842	890	753	1.7	2.3	2.8
2250	6.125	1144	1016	1022	881	932	786	1.8	2.3	2.9
2500	8.125	1236	1086	1109	942	1015	840	1.7	2.3	2.8
2750	8.125	1289	1128	1153	976	1054	870	1.8	2.3	2.9
3000	8.125	1331	1163	1189	1003	1084	893	1.8	2.4	3.0
3250	8.125	1374	1197	1224	1031	1115	916	1.8	2.5	3.1
3500	8.125	1413	1229	1257	1056	1143	937	1,9	2.6	3.2
3750	8.125	1448	1257	1286	1078	1168	956	1.9	2.6	3.3
4000	8.125	1481	1282	1312	1098	1190	972	2.0	2.7	3.4

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Aluminum Conductor - Compact Round Strand							
500	5.047	34.1	29.1	29.0	23.5	25.3	19.7
750	5.047	37.0	31.3	31.2	24.8	26.9	20.6
1000	5.047	40.1	33.4	33.2	26.2	28.4	21.5
1250	5.047	41.9	34.6	34.4	27.0	29.3	22.1
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	5.047	41.1	34.0	33.9	26.6	28.9	21.8
1250	6.125	45.0	36.7	37.1	28.6	31.6	23.3
1500	6.125	46.6	37.8	38.2	29.2	32.4	23.7
1750	6.125	48.2	38.8	39.2	29.8	33.1	24.1
2000	6.125	49.6	39.6	40.0	30.3	33.7	24.5
2250	6.125	50.9	40.4	40.9	30.7	34.2	24.7
2500	8.125	57.0	44.3	46.1	33.6	38.8	27.0
2750	8.125	58.4	45.0	47.0	34.1	39.5	27.3
3000	8.125	59.5	45.7	47.7	34.4	39.9	27.5
3250	8.125	60.6	46.4	48.4	34.8	40.4	27.7
3500	8.125	61.8	47.1	49.2	35.2	40.9	28.0
3750	8.125	62.7	47.6	49.8	35.4	41.3	28.2
4000	8.125	63.7	48.1	50.3	35.7	41.7	28.3

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2972

138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Aluminum Conductor - Compact Round Strand							
500	5.047	1.616	0.20	44.26	1.011	1.042	1.98	0.00	1.14	0.16	3.02	4.55
750	5.047	1.788	0.23	29.93	1.014	1.063	1.69	0.00	1.05	0.16	3.02	4.55
1000	5.047	1.880	0.28	22.92	1.017	1.082	1.39	0.00	0.99	0.16	3.02	4.55
1250	5.047	2.005	0.31	18.82	1.019	1.101	1.27	0.00	0.94	0.16	3.02	4.55
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	5.047	1.960	0.30	22.13	1.017	1.085	1.31	0.00	0.96	0.16	3.02	4.55
1250	6.125	2.080	0.33	17.85	1.021	1.119	1.20	0.00	0.92	0.13	2.78	4.31
1500	6.125	2.195	0.35	15.00	1.023	1.142	1.12	0.00	0.88	0.13	2.78	4.31
1750	6.125	2.300	0.37	13.00	1.025	1.165	1.05	0.00	0.84	0.13	2.78	4.31
2000	6.125	2.390	0.39	11.52	1.027	1.188	1.00	0.00	0.81	0.13	2.78	4.31
2250	6.125	2.485	0.41	10.48	1.028	1.208	0.95	0.00	0.79	0.13	2.78	4.31
2500	8.125	2.560	0.43	9.57	1.033	1.269	0.91	0.00	0.77	0.10	2.41	3.95
2750	8.125	2.650	0.45	8.86	1.034	1.293	0.88	0.00	0.75	0.10	2.41	3.95
3000	8.125	2.730	0.46	8.32	1.035	1.313	0.84	0.00	0.73	0.10	2.41	3.95
3250	8.125	2.805	0.48	7.83	1.036	1.335	0.82	0.00	0.71	0.10	2.41	3.95
3500	8.125	2.905	0.50	7.42	1.036	1.356	0.78	0.00	0.68	0.10	2.41	3.95
3750	8.125	2.970	0.51	7.06	1.037	1.376	0.76	0.00	0.67	0.10	2.41	3.95
4000	8.125	3.045	0.53	6.77	1.037	1.395	0.74	0.00	0.65	0.10	2.41	3.95

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	90	120
85°C - Aluminum Conductor - Compact Round Strand										
500	5.047	464	419	420	370	387	334	1.3	1.7	2.1
750	5.047	579	519	521	454	477	408	1.4	1.9	2.4
1000	5.047	678	603	605	524	550	468	1.7	2.3	2.8
1250	5.047	756	670	671	579	609	516	1.8	2.4	3.1
85°C - Aluminum Conductor - Compact Segmental Strand										
1000	5.047	696	618	619	535	563	477	1.8	2.4	3.0
1250	6.125	794	699	705	603	640	537	1.8	2.5	3.1
1500	6.125	870	763	770	656	697	583	1.9	2.6	3.3
1750	6.125	938	819	827	702	746	623	2.0	2.8	3.5
2000	6.125	997	869	877	743	790	658	2.1	2.9	3.6
2250	6.125	1047	910	918	776	826	686	2.2	3.0	3.8
2500	8.125	1122	963	985	821	887	725	2.1	2.9	3.7
2750	8.125	1167	999	1021	850	919	749	2.2	3.0	3.9
3000	8.125	1202	1027	1050	872	943	768	2.3	3.1	4.0
3250	8.125	1238	1056	1079	895	968	787	2.4	3.2	4.1
3500	8.125	1272	1082	1106	915	990	804	2.4	3.3	4.3
3750	8.125	1301	1104	1129	933	1010	819	2.5	3.4	4.4
4000	8.125	1328	1125	1151	949	1028	832	2.6	3.5	4.5

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Aluminum Conductor - Compact Round Strand							
500	5.047	60.8	49.8	50.0	39.1	42.6	32.0
750	5.047	65.4	52.8	53.2	40.7	44.8	33.2
1000	5.047	70.1	55.8	56.2	42.6	46.7	34.3
1250	5.047	72.9	57.7	57.8	43.5	48.0	35.0
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	5.047	71.6	56.8	57.0	43.0	47.5	34.6
1250	6.125	77.5	60.5	61.5	45.5	51.0	36.5
1500	6.125	79.9	61.9	63.0	46.3	52.0	37.0
1750	6.125	82.2	63.2	64.4	47.0	52.8	37.5
2000	6.125	84.0	64.4	65.5	47.7	53.6	37.9
2250	6.125	85.7	65.3	66.4	48.2	54.3	38.2
2500	8.125	94.3	70.2	73.3	51.7	59.9	40.9
2750	8.125	96.2	71.2	74.3	52.3	60.7	41.2
3000	8.125	97.5	71.9	75.1	52.6	61.1	41.4
3250	8.125	99.0	72.8	75.9	53.1	61.6	41.7
3500	8.125	100.7	73.7	76.8	53.5	62.2	42.0
3750	8.125	101.8	74.2	77.4	53.8	62.6	42.2
4000	8.125	103.1	74.9	78.2	54.2	63.0	42.4

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Aluminum Conductor - Compact Round Strand							
500	5.047	1.616	0.20	44.26	1.011	1.042	1.98	0.00	1.10	0.16	3.36	5.09
750	5.047	1.788	0.23	29.93	1.014	1.063	1.69	0.00	1.02	0.16	3.36	5.09
1000	5.047	1.880	0.28	22.92	1.017	1.082	1.39	0.00	0.96	0.16	3.36	5.09
1250	5.047	2.005	0.31	18.82	1.019	1.101	1.27	0.00	0.91	0.16	3.36	5.09
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	5.047	1.960	0.30	22.13	1.017	1.085	1.31	0.00	0.93	0.16	3.36	5.09
1250	6.125	2.080	0.33	17.85	1.021	1.119	1.20	0.00	0.89	0.13	3.11	4.85
1500	6.125	2.195	0.35	15.00	1.023	1.142	1.12	0.00	0.85	0.13	3.11	4.85
1750	6.125	2.300	0.37	13.00	1.025	1.165	1.05	0.00	0.81	0.13	3.11	4.85
2000	6.125	2.390	0.39	11.52	1.027	1.188	1.00	0.00	0.78	0.13	3.11	4.85
2250	6.125	2.485	0.41	10.48	1.028	1.208	0.95	0.00	0.76	0.13	3.11	4.85
2500	8.125	2.560	0.43	9.57	1.033	1.269	0.91	0.00	0.74	0.10	2.75	4.49
2750	8.125	2.650	0.45	8.86	1.034	1.293	0.88	0.00	0.72	0.10	2.75	4.49
3000	8.125	2.730	0.46	8.32	1.035	1.313	0.84	0.00	0.70	0.10	2.75	4.49
3250	8.125	2.805	0.48	7.83	1.036	1.335	0.82	0.00	0.68	0.10	2.75	4.49
3500	8.125	2.905	0.50	7.42	1.036	1.356	0.78	0.00	0.66	0.10	2.75	4.49
3750	8.125	2.970	0.51	7.06	1.037	1.376	0.76	0.00	0.65	0.10	2.75	4.49
4000	8.125	3.045	0.53	6.77	1.037	1.395	0.74	0.00	0.63	0.10	2.75	4.49

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2976

138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0010 pf & Rho 60	90	120
85°C - Aluminum Conductor - Compact Round Strand										
500	5.047	472	429	430	380	397	344	1.2	1.6	1.9
750	5.047	590	532	533	468	490	421	1.4	1.8	2.2
1000	5.047	692	620	620	540	567	484	1.6	2.1	2.6
1250	5.047	772	688	689	597	627	534	1.7	2.3	2.9
85°C - Aluminum Conductor - Compact Segmental Strand										
1000	5.047	711	635	635	552	579	494	1.7	2.2	2.8
1250	6.125	812	719	725	623	660	557	1.7	2.3	2.9
1500	6.125	890	786	792	679	720	604	1.8	2.4	3.1
1750	6.125	960	844	851	727	771	646	1.9	2.6	3.2
2000	6.125	1022	896	903	769	817	683	2.0	2.7	3.4
2250	6.125	1074	939	946	804	855	713	2.1	2.8	3.5
2500	8.125	1154	996	1019	853	921	755	2.0	2.7	3.4
2750	8.125	1200	1034	1057	883	954	781	2.1	2.8	3.6
3000	8.125	1238	1064	1088	906	981	801	2.1	2.9	3.7
3250	8.125	1276	1093	1118	930	1007	821	2.2	3.0	3.8
3500	8.125	1311	1121	1147	951	1031	838	2.3	3.1	3.9
3750	8.125	1342	1145	1172	970	1052	854	2.3	3.2	4.0
4000	8.125	1370	1167	1194	988	1070	868	2.4	3.3	4.2

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Aluminum Conductor - Compact Round Strand							
500	5.047	62.8	52.1	52.3	41.1	44.8	33.9
750	5.047	67.8	55.4	55.6	43.2	47.2	35.2
1000	5.047	73.0	58.9	58.9	45.1	49.5	36.6
1250	5.047	76.0	60.7	60.9	46.2	50.7	37.3
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	5.047	74.6	59.9	59.9	45.7	50.1	37.0
1250	6.125	81.0	63.9	64.9	48.5	54.2	39.1
1500	6.125	83.5	65.6	66.6	49.5	55.4	39.6
1750	6.125	86.0	67.0	68.0	50.3	56.3	40.2
2000	6.125	88.1	68.3	69.3	50.9	57.2	40.6
2250	6.125	90.0	69.4	70.4	51.5	58.0	41.1
2500	8.125	99.6	74.9	78.3	55.6	64.4	44.1
2750	8.125	101.6	76.1	79.4	56.2	65.2	44.6
3000	8.125	103.3	77.0	80.4	56.6	65.9	44.8
3250	8.125	105.0	77.8	81.3	57.1	66.5	45.1
3500	8.125	106.7	78.8	82.4	57.6	67.2	45.4
3750	8.125	108.1	79.5	83.2	58.0	67.6	45.6
4000	8.125	109.5	80.3	83.9	58.5	68.0	45.8

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138 kV LPP Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
85°C - Aluminum Conductor - Compact Round Strand												
500	5.047	1.616	0.20	44.26	1.011	1.042	1.98	0.00	1.11	0.16	3.25	4.93
750	5.047	1.788	0.23	29.93	1.014	1.063	1.69	0.00	1.02	0.16	3.25	4.93
1000	5.047	1.880	0.28	22.92	1.017	1.082	1.39	0.00	0.97	0.16	3.25	4.93
1250	5.047	2.005	0.31	18.82	1.019	1.101	1.27	0.00	0.92	0.16	3.25	4.93
85°C - Aluminum Conductor - Compact Segmental Strand												
1000	5.047	1.960	0.30	22.13	1.017	1.085	1.31	0.00	0.94	0.16	3.25	4.93
1250	6.125	2.080	0.33	17.85	1.021	1.119	1.20	0.00	0.90	0.13	3.01	4.69
1500	6.125	2.195	0.35	15.00	1.023	1.142	1.12	0.00	0.85	0.13	3.01	4.69
1750	6.125	2.300	0.37	13.00	1.025	1.165	1.05	0.00	0.82	0.13	3.01	4.69
2000	6.125	2.390	0.39	11.52	1.027	1.188	1.00	0.00	0.79	0.13	3.01	4.69
2250	6.125	2.485	0.41	10.48	1.028	1.208	0.95	0.00	0.76	0.13	3.01	4.69
2500	8.125	2.560	0.43	9.57	1.033	1.269	0.91	0.00	0.75	0.10	2.65	4.32
2750	8.125	2.650	0.45	8.86	1.034	1.293	0.88	0.00	0.73	0.10	2.65	4.32
3000	8.125	2.730	0.46	8.32	1.035	1.313	0.84	0.00	0.71	0.10	2.65	4.32
3250	8.125	2.805	0.48	7.83	1.036	1.335	0.82	0.00	0.69	0.10	2.65	4.32
3500	8.125	2.905	0.50	7.42	1.036	1.356	0.78	0.00	0.67	0.10	2.65	4.32
3750	8.125	2.970	0.51	7.06	1.037	1.376	0.76	0.00	0.65	0.10	2.65	4.32
4000	8.125	3.045	0.53	6.77	1.037	1.395	0.74	0.00	0.63	0.10	2.65	4.32

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