138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	90	120
				85°C - Copper Conductor - Compact Round Strand						
500	8.125	562	524	530	480	502	444	1.9	2.3	2.7
750	6.125	714	658	659	591	614	539	2.9	3.6	4.4
1000	6.125	822	753	753	671	699	609	3.1	3.9	4.7
1250	8.125	928	841	853	749	793	679	3.0	3.9	4.7
				85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	885	804	815	717	758	651	3.0	3.8	4.6
1250	8.125	990	894	906	793	841	718	3.1	4.0	4.9
1500	8.125	1079	971	984	857	910	773	3.3	4.2	5.1
1750	8.125	1156	1035	1050	910	968	818	3.4	4.3	5.3
2000	8.125	1222	1090	1106	954	1017	856	3.5	4.5	5.5
2250	8.125	1275	1134	1150	990	1055	886	3.6	4.7	5.7
2500	8.125	1324	1174	1191	1022	1091	913	3.7	4.8	5.9
2750	8.125	1369	1209	1228	1050	1122	936	3.8	4.9	6.0
3000	8.125	1403	1237	1256	1071	1145	954	3.9	5.0	6.2

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138 kV Paper Insulated High Pressure Gas 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	8.125	29.3	25.6	26.2	21.7	23.6	18.7
750	6.125	33.7	28.9	28.9	23.6	25.3	19.9
1000	6.125	36.2	30.7	30.7	24.7	26.7	20.7
1250	8.125	41.0	34.0	34.9	27.4	30.5	22.8
	85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	40.1	33.4	34.3	26.9	29.9	22.5
1250	8.125	42.5	35.0	35.9	28.0	31.2	23.3
1500	8.125	44.6	36.5	37.4	28.9	32.3	23.9
1750	8.125	46.5	37.7	38.7	29.7	33.3	24.4
2000	8.125	48.2	38.8	39.9	30.3	34.1	24.8
2250	8.125	49.6	39.8	40.8	30.9	34.7	25.2
2500	8.125	51.0	40.6	41.7	31.4	35.4	25.6
2750	8.125	52.3	41.4	42.6	31.9	36.0	25.9
3000	8.125	53.4	42.1	43.3	32.2	36.4	26.1

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	27.25	1.009	1.098	3.82	0.00	0.96	0.10	2.41	3.95
750	6.125	2.358	0.53	18.84	1.017	1.115	2.45	0.00	1.19	0.13	2.78	4.31
1000	6.125	2.510	0.59	14.82	1.019	1.147	2.20	0.00	1.11	0.13	2.78	4.31
1250	8.125	2.635	0.63	12.55	1.024	1.206	2.03	0.00	1.06	0.10	2.41	3.95
						85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	2.590	0.62	13.69	1.023	1.188	2.09	0.00	1.08	0.10	2.41	3.95
1250	8.125	2.710	0.66	11.17	1.026	1.233	1.94	0.00	1.03	0.10	2.41	3.95
1500	8.125	2.825	0.70	9.53	1.029	1.276	1.82	0.00	0.99	0.10	2.41	3.95
1750	8.125	2.930	0.74	8.39	1.032	1.316	1.73	0.00	0.95	0.10	2.41	3.95
2000	8.125	3.020	0.78	7.56	1.034	1.353	1.65	0.00	0.92	0.10	2.41	3.95
2250	8.125	3.115	0.81	6.99	1.035	1.385	1.58	0.00	0.89	0.10	2.41	3.95
2500	8.125	3.190	0.84	6.50	1.036	1.417	1.53	0.00	0.87	0.10	2.41	3.95
2750	8.125	3.280	0.87	6.12	1.037	1.446	1.47	0.00	0.85	0.10	2.41	3.95
3000	8.125	3.360	0.90	5.84	1.037	1.470	1.42	0.00	0.82	0.10	2.41	3.95

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138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	90	120
				85°C - Copper Conductor - Compact Round Strand						
500	8.125	533	487	493	437	460	400	2.2	2.8	3.4
750	6.125	671	606	607	533	558	480	3.4	4.5	5.5
1000	6.125	768	689	691	602	631	540	3.7	4.8	6.0
1250	8.125	860	763	773	665	706	595	3.7	4.9	6.0
				85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	822	731	740	638	677	571	3.6	4.8	5.9
1250	8.125	915	809	819	703	747	627	3.8	5.0	6.3
1500	8.125	994	874	886	756	805	672	4.0	5.3	6.6
1750	8.125	1061	929	941	800	852	709	4.2	5.5	6.9
2000	8.125	1117	975	988	837	892	740	4.3	5.7	7.2
2250	8.125	1163	1012	1025	865	923	764	4.4	5.9	7.4
2500	8.125	1205	1045	1059	892	952	785	4.6	6.1	7.7
2750	8.125	1242	1074	1088	914	976	803	4.7	6.3	7.9
3000	8.125	1271	1096	1110	931	994	817	4.8	6.5	8.1

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138 kV Paper Insulated High Pressure Gas 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	8.125	53.0	44.6	45.6	36.3	40.0	30.7
750	6.125	59.9	49.4	49.6	39.0	42.4	32.2
1000	6.125	63.7	51.9	52.2	40.5	44.1	33.3
1250	8.125	71.0	56.7	58.1	44.0	49.1	36.0
85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	69.6	55.9	57.1	43.4	48.4	35.5
1250	8.125	73.1	58.0	59.4	44.8	50.1	36.4
1500	8.125	76.3	59.9	61.5	45.9	51.5	37.2
1750	8.125	79.0	61.6	63.1	46.9	52.5	37.8
2000	8.125	81.2	63.0	64.6	47.7	53.5	38.3
2250	8.125	83.4	64.3	65.9	48.3	54.3	38.8
2500	8.125	85.3	65.4	67.0	49.0	55.1	39.1
2750	8.125	87.1	66.4	68.1	49.6	55.8	39.5
3000	8.125	88.6	67.2	68.8	50.0	56.3	39.8

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	27.25	1.009	1.098	3.82	0.00	0.95	0.10	2.75	4.49
750	6.125	2.358	0.53	18.84	1.017	1.115	2.45	0.00	1.17	0.13	3.11	4.85
1000	6.125	2.510	0.59	14.82	1.019	1.147	2.20	0.00	1.10	0.13	3.11	4.85
1250	8.125	2.635	0.63	12.55	1.024	1.206	2.03	0.00	1.05	0.10	2.75	4.49
					85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	2.590	0.62	13.69	1.023	1.188	2.09	0.00	1.06	0.10	2.75	4.49
1250	8.125	2.710	0.66	11.17	1.026	1.233	1.94	0.00	1.01	0.10	2.75	4.49
1500	8.125	2.825	0.70	9.53	1.029	1.276	1.82	0.00	0.97	0.10	2.75	4.49
1750	8.125	2.930	0.74	8.39	1.032	1.316	1.73	0.00	0.94	0.10	2.75	4.49
2000	8.125	3.020	0.78	7.56	1.034	1.353	1.65	0.00	0.91	0.10	2.75	4.49
2250	8.125	3.115	0.81	6.99	1.035	1.385	1.58	0.00	0.88	0.10	2.75	4.49
2500	8.125	3.190	0.84	6.50	1.036	1.417	1.53	0.00	0.86	0.10	2.75	4.49
2750	8.125	3.280	0.87	6.12	1.037	1.446	1.47	0.00	0.83	0.10	2.75	4.49
3000	8.125	3.360	0.90	5.84	1.037	1.470	1.42	0.00	0.81	0.10	2.75	4.49

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138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	delta Td for .0030 pf & Rho 90	delta Td for .0030 pf & Rho 120
		85°C - Copper Conductor - Compact Round Strand								
500	8.125	541	497	503	449	472	412	2.1	2.7	3.2
750	6.125	683	620	621	549	573	496	3.3	4.2	5.2
1000	6.125	783	707	708	621	650	558	3.5	4.5	5.6
1250	8.125	879	785	795	688	730	617	3.5	4.6	5.6
		85°C - Copper Conductor - Compact Segmental Strand								
1000	8.125	840	751	761	659	699	593	3.5	4.5	5.5
1250	8.125	936	832	843	727	772	651	3.6	4.7	5.8
1500	8.125	1018	901	913	783	833	699	3.8	5.0	6.2
1750	8.125	1087	958	971	830	883	738	3.9	5.2	6.4
2000	8.125	1146	1006	1020	868	926	771	4.1	5.4	6.7
2250	8.125	1194	1045	1059	898	959	796	4.2	5.6	6.9
2500	8.125	1238	1080	1095	926	989	819	4.3	5.7	7.1
2750	8.125	1277	1110	1126	950	1015	838	4.4	5.9	7.4
3000	8.125	1307	1134	1150	968	1034	853	4.5	6.0	7.6

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138 kV Paper Insulated High Pressure Gas 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	8.125	54.5	46.3	47.4	38.2	42.0	32.5
750	6.125	62.0	51.6	51.8	41.2	44.5	34.2
1000	6.125	66.0	54.5	54.6	42.8	46.6	35.3
1250	8.125	74.0	59.8	61.2	46.8	52.2	38.4
	85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	72.6	58.7	60.2	46.1	51.4	38.0
1250	8.125	76.3	61.1	62.7	47.6	53.2	39.0
1500	8.125	79.8	63.4	65.0	48.9	54.8	39.9
1750	8.125	82.7	65.3	66.9	50.1	56.1	40.5
2000	8.125	85.3	66.8	68.5	50.9	57.3	41.1
2250	8.125	87.6	68.3	70.0	51.7	58.3	41.7
2500	8.125	89.7	69.5	71.3	52.4	59.1	42.1
2750	8.125	91.8	70.6	72.5	53.1	59.9	42.5
3000	8.125	93.3	71.6	73.5	53.6	60.4	42.9

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	27.25	1.009	1.098	3.82	0.00	0.95	0.10	2.65	4.32
750	6.125	2.358	0.53	18.84	1.017	1.115	2.45	0.00	1.18	0.13	3.01	4.69
1000	6.125	2.510	0.59	14.82	1.019	1.147	2.20	0.00	1.10	0.13	3.01	4.69
1250	8.125	2.635	0.63	12.55	1.024	1.206	2.03	0.00	1.05	0.10	2.65	4.32
					85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	2.590	0.62	13.69	1.023	1.188	2.09	0.00	1.07	0.10	2.65	4.32
1250	8.125	2.710	0.66	11.17	1.026	1.233	1.94	0.00	1.02	0.10	2.65	4.32
1500	8.125	2.825	0.70	9.53	1.029	1.276	1.82	0.00	0.97	0.10	2.65	4.32
1750	8.125	2.930	0.74	8.39	1.032	1.316	1.73	0.00	0.94	0.10	2.65	4.32
2000	8.125	3.020	0.78	7.56	1.034	1.353	1.65	0.00	0.91	0.10	2.65	4.32
2250	8.125	3.115	0.81	6.99	1.035	1.385	1.58	0.00	0.88	0.10	2.65	4.32
2500	8.125	3.190	0.84	6.50	1.036	1.417	1.53	0.00	0.86	0.10	2.65	4.32
2750	8.125	3.280	0.87	6.12	1.037	1.446	1.47	0.00	0.83	0.10	2.65	4.32
3000	8.125	3.360	0.90	5.84	1.037	1.470	1.42	0.00	0.81	0.10	2.65	4.32

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138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	delta Td for .0030 pf & Rho 90	delta Td for .0030 pf & Rho 120
				85°C - Aluminum Conductor - Compact Round Strand						
500	8.125	444	414	419	380	397	352	1.9	2.3	2.7
750	6.125	572	528	528	475	493	434	2.9	3.6	4.4
1000	6.125	669	614	615	549	571	499	3.1	3.9	4.7
1250	8.125	771	701	710	625	661	568	3.0	3.9	4.7
				85°C - Aluminum Conductor - Compact Segmental Strand						
1000	8.125	706	644	652	576	608	524	3.0	3.8	4.6
1250	8.125	797	723	733	644	681	584	3.1	4.0	4.9
1500	8.125	879	794	805	704	746	636	3.3	4.2	5.1
1750	8.125	953	857	869	756	803	682	3.4	4.3	5.3
2000	8.125	1019	913	926	803	853	722	3.5	4.5	5.5
2250	8.125	1075	960	974	842	896	756	3.6	4.7	5.7
2500	8.125	1129	1006	1020	879	936	788	3.7	4.8	5.9
2750	8.125	1180	1048	1063	913	974	816	3.8	4.9	6.0
3000	8.125	1221	1082	1097	941	1004	839	3.9	5.0	6.2
3250	10.25	1288	1129	1164	983	1069	878	3.8	4.9	6.0
3500	10.25	1330	1161	1198	1008	1098	899	3.9	5.0	6.2
3750	10.25	1365	1189	1227	1031	1123	918	3.9	5.1	6.3
4000	10.25	1398	1216	1255	1051	1146	935	4.0	5.2	6.4

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138 kV Paper Insulated High Pressure Gas 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	8.125	28.7	25.1	25.7	21.3	23.1	18.4
750	6.125	33.0	28.3	28.3	23.2	24.9	19.7
1000	6.125	35.3	30.0	30.1	24.3	26.2	20.4
1250	8.125	39.8	33.2	34.0	26.8	29.7	22.5
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	38.7	32.5	33.3	26.4	29.2	22.1
1250	8.125	40.8	33.9	34.8	27.3	30.3	22.8
1500	8.125	42.7	35.2	36.2	28.2	31.4	23.4
1750	8.125	44.5	36.4	37.4	28.8	32.3	23.9
2000	8.125	46.1	37.4	38.5	29.5	33.0	24.3
2250	8.125	47.5	38.4	39.4	30.1	33.7	24.7
2500	8.125	48.7	39.2	40.2	30.5	34.3	25.0
2750	8.125	50.1	40.1	41.2	31.0	35.0	25.3
3000	8.125	51.2	40.8	41.9	31.5	35.5	25.6
3250	10.25	56.3	43.9	46.5	33.9	39.6	27.6
3500	10.25	57.8	44.7	47.4	34.4	40.3	28.0
3750	10.25	58.9	45.4	48.2	34.9	40.8	28.3
4000	10.25	60.0	46.1	48.9	35.2	41.3	28.5

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	44.17	1.006	1.060	3.82	0.00	0.96	0.10	2.41	3.95
750	6.125	2.358	0.53	29.84	1.011	1.072	2.45	0.00	1.19	0.13	2.78	4.31
1000	6.125	2.510	0.59	22.78	1.013	1.096	2.20	0.00	1.11	0.13	2.78	4.31
1250	8.125	2.635	0.63	18.65	1.016	1.139	2.03	0.00	1.07	0.10	2.41	3.95
85°C - Aluminum Conductor - Compact Segmental Strand												
1000	8.125	2.590	0.62	22.07	1.014	1.117	2.09	0.00	1.08	0.10	2.41	3.95
1250	8.125	2.710	0.66	17.74	1.017	1.147	1.94	0.00	1.03	0.10	2.41	3.95
1500	8.125	2.825	0.70	14.89	1.019	1.176	1.82	0.00	0.99	0.10	2.41	3.95
1750	8.125	2.930	0.74	12.87	1.021	1.206	1.73	0.00	0.95	0.10	2.41	3.95
2000	8.125	3.020	0.78	11.37	1.022	1.235	1.65	0.00	0.92	0.10	2.41	3.95
2250	8.125	3.115	0.81	10.31	1.024	1.261	1.58	0.00	0.90	0.10	2.41	3.95
2500	8.125	3.190	0.84	9.38	1.025	1.288	1.53	0.00	0.87	0.10	2.41	3.95
2750	8.125	3.280	0.87	8.65	1.026	1.315	1.47	0.00	0.85	0.10	2.41	3.95
3000	8.125	3.360	0.90	8.10	1.026	1.339	1.42	0.00	0.83	0.10	2.41	3.95
3250	10.25	3.435	0.93	7.59	1.031	1.416	1.38	0.00	0.81	0.13	2.10	3.63
3500	10.25	3.535	0.97	7.16	1.031	1.444	1.32	0.00	0.79	0.13	2.10	3.63
3750	10.25	3.600	0.99	6.80	1.032	1.471	1.29	0.00	0.77	0.13	2.10	3.63
4000	10.25	3.675	1.02	6.49	1.033	1.497	1.26	0.00	0.76	0.13	2.10	3.63

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138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	delta Td for .0030 pf & Rho 90	delta Td for .0030 pf & Rho 120
		85°C - Aluminum Conductor - Compact Round Strand								
500	8.125	421	385	390	347	365	317	2.2	2.8	3.4
750	6.125	538	487	488	429	448	387	3.4	4.5	5.5
1000	6.125	626	563	564	494	517	443	3.7	4.8	6.0
1250	8.125	716	637	645	557	590	499	3.7	4.9	6.0
		85°C - Aluminum Conductor - Compact Segmental Strand								
1000	8.125	657	586	594	514	544	461	3.7	4.8	5.9
1250	8.125	739	656	664	572	607	511	3.8	5.1	6.3
1500	8.125	812	718	727	623	661	555	4.0	5.3	6.6
1750	8.125	877	772	781	667	709	593	4.2	5.5	6.9
2000	8.125	935	820	830	706	752	626	4.3	5.7	7.2
2250	8.125	984	860	871	739	786	653	4.5	5.9	7.4
2500	8.125	1031	898	909	769	820	679	4.6	6.1	7.7
2750	8.125	1074	934	945	797	850	703	4.7	6.3	7.9
3000	8.125	1110	962	974	820	874	721	4.8	6.5	8.1
3250	10.25	1161	996	1021	849	919	747	4.8	6.4	8.0
3500	10.25	1195	1022	1048	869	941	763	4.9	6.6	8.3
3750	10.25	1224	1045	1071	886	960	777	5.0	6.7	8.4
4000	10.25	1251	1066	1093	902	978	790	5.1	6.9	8.6

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138 kV Paper Insulated High Pressure Gas 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	8.125	51.8	43.6	44.7	35.8	39.4	30.2
750	6.125	58.7	48.7	48.9	38.5	41.7	31.9
1000	6.125	62.2	51.0	51.2	40.1	43.6	32.9
1250	8.125	69.1	55.5	56.8	43.3	48.2	35.5
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	67.5	54.5	55.9	42.8	47.5	35.1
1250	8.125	70.6	56.5	57.8	43.9	49.0	35.8
1500	8.125	73.5	58.4	59.8	45.0	50.1	36.6
1750	8.125	76.1	60.0	61.3	45.9	51.3	37.2
2000	8.125	78.3	61.3	62.7	46.7	52.3	37.7
2250	8.125	80.4	62.6	64.0	47.5	53.1	38.1
2500	8.125	82.1	63.5	65.0	47.9	53.8	38.5
2750	8.125	83.9	64.7	66.1	48.6	54.5	38.9
3000	8.125	85.6	65.6	67.2	49.2	55.1	39.2
3250	10.25	92.5	69.6	72.8	52.1	60.0	41.6
3500	10.25	94.4	70.6	74.0	52.7	60.8	41.9
3750	10.25	95.9	71.5	74.8	53.1	61.3	42.2
4000	10.25	97.3	72.3	75.7	53.5	61.8	42.5

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	44.17	1.006	1.060	3.82	0.00	0.95	0.10	2.75	4.49
750	6.125	2.358	0.53	29.84	1.011	1.072	2.45	0.00	1.17	0.13	3.11	4.85
1000	6.125	2.510	0.59	22.78	1.013	1.096	2.20	0.00	1.10	0.13	3.11	4.85
1250	8.125	2.635	0.63	18.65	1.016	1.139	2.03	0.00	1.05	0.10	2.75	4.49
85°C - Aluminum Conductor - Compact Segmental Strand												
1000	8.125	2.590	0.62	22.07	1.014	1.117	2.09	0.00	1.07	0.10	2.75	4.49
1250	8.125	2.710	0.66	17.74	1.017	1.147	1.94	0.00	1.02	0.10	2.75	4.49
1500	8.125	2.825	0.70	14.89	1.019	1.176	1.82	0.00	0.97	0.10	2.75	4.49
1750	8.125	2.930	0.74	12.87	1.021	1.206	1.73	0.00	0.94	0.10	2.75	4.49
2000	8.125	3.020	0.78	11.37	1.022	1.235	1.65	0.00	0.91	0.10	2.75	4.49
2250	8.125	3.115	0.81	10.31	1.024	1.261	1.58	0.00	0.88	0.10	2.75	4.49
2500	8.125	3.190	0.84	9.38	1.025	1.288	1.53	0.00	0.86	0.10	2.75	4.49
2750	8.125	3.280	0.87	8.65	1.026	1.315	1.47	0.00	0.83	0.10	2.75	4.49
3000	8.125	3.360	0.90	8.10	1.026	1.339	1.42	0.00	0.81	0.10	2.75	4.49
3250	10.25	3.435	0.93	7.59	1.031	1.416	1.38	0.00	0.80	0.13	2.43	4.17
3500	10.25	3.535	0.97	7.16	1.031	1.444	1.32	0.00	0.77	0.13	2.43	4.17
3750	10.25	3.600	0.99	6.80	1.032	1.471	1.29	0.00	0.76	0.13	2.43	4.17
4000	10.25	3.675	1.02	6.49	1.033	1.497	1.26	0.00	0.74	0.13	2.43	4.17

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138 kV Paper Insulated High Pressure Gas 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 .0030 pf & Rho 60	90	120
		85°C - Aluminum Conductor - Compact Round Strand								
500	8.125	428	393	398	356	374	327	2.1	2.7	3.2
750	6.125	548	498	499	441	461	399	3.3	4.2	5.2
1000	6.125	639	577	578	509	532	458	3.5	4.5	5.6
1250	8.125	731	655	663	575	610	517	3.5	4.6	5.6
		85°C - Aluminum Conductor - Compact Segmental Strand								
1000	8.125	671	602	610	530	562	478	3.5	4.5	5.5
1250	8.125	756	675	683	591	627	531	3.6	4.7	5.8
1500	8.125	831	739	748	645	684	577	3.8	5.0	6.2
1750	8.125	898	795	805	691	735	617	3.9	5.2	6.4
2000	8.125	958	845	856	732	779	652	4.1	5.4	6.7
2250	8.125	1009	887	899	766	816	680	4.2	5.6	6.9
2500	8.125	1058	928	940	799	851	708	4.3	5.7	7.1
2750	8.125	1104	965	977	828	883	733	4.4	5.9	7.4
3000	8.125	1141	994	1007	852	909	752	4.5	6.0	7.6
3250	10.25	1196	1032	1059	884	958	781	4.5	5.9	7.4
3500	10.25	1232	1059	1088	905	982	798	4.6	6.1	7.6
3750	10.25	1263	1084	1113	924	1003	814	4.7	6.2	7.8
4000	10.25	1291	1106	1136	941	1022	828	4.8	6.4	8.0

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138 kV Paper Insulated High Pressure Gas 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	8.125	53.5	45.4	46.5	37.6	41.3	32.0
750	6.125	60.8	50.8	51.0	40.5	44.0	33.7
1000	6.125	64.7	53.4	53.6	42.3	45.9	34.9
1250	8.125	71.9	58.5	59.8	45.9	51.2	37.9
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	70.3	57.3	58.7	45.2	50.4	37.5
1250	8.125	73.7	59.6	60.9	46.6	52.0	38.4
1500	8.125	76.8	61.6	63.0	47.9	53.4	39.2
1750	8.125	79.6	63.3	64.8	48.9	54.8	39.9
2000	8.125	82.0	64.8	66.4	49.8	55.8	40.5
2250	8.125	84.3	66.2	67.9	50.6	56.8	40.9
2500	8.125	86.2	67.5	69.1	51.3	57.6	41.4
2750	8.125	88.4	68.8	70.3	52.0	58.4	41.9
3000	8.125	90.1	69.7	71.4	52.7	59.2	42.2
3250	10.25	97.8	74.3	77.9	56.0	64.8	44.9
3500	10.25	100.0	75.4	79.3	56.6	65.6	45.3
3750	10.25	101.7	76.5	80.3	57.2	66.3	45.7
4000	10.25	103.2	77.4	81.3	57.7	67.0	46.1

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138 kV Paper Insulated High Pressure Gas 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	8.125	3.014	0.33	44.17	1.006	1.060	3.82	0.00	0.95	0.10	2.65	4.32
750	6.125	2.358	0.53	29.84	1.011	1.072	2.45	0.00	1.18	0.13	3.01	4.69
1000	6.125	2.510	0.59	22.78	1.013	1.096	2.20	0.00	1.10	0.13	3.01	4.69
1250	8.125	2.635	0.63	18.65	1.016	1.139	2.03	0.00	1.05	0.10	2.65	4.32
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	2.590	0.62	22.07	1.014	1.117	2.09	0.00	1.07	0.10	2.65	4.32
1250	8.125	2.710	0.66	17.74	1.017	1.147	1.94	0.00	1.02	0.10	2.65	4.32
1500	8.125	2.825	0.70	14.89	1.019	1.176	1.82	0.00	0.98	0.10	2.65	4.32
1750	8.125	2.930	0.74	12.87	1.021	1.206	1.73	0.00	0.94	0.10	2.65	4.32
2000	8.125	3.020	0.78	11.37	1.022	1.235	1.65	0.00	0.91	0.10	2.65	4.32
2250	8.125	3.115	0.81	10.31	1.024	1.261	1.58	0.00	0.88	0.10	2.65	4.32
2500	8.125	3.190	0.84	9.38	1.025	1.288	1.53	0.00	0.86	0.10	2.65	4.32
2750	8.125	3.280	0.87	8.65	1.026	1.315	1.47	0.00	0.84	0.10	2.65	4.32
3000	8.125	3.360	0.90	8.10	1.026	1.339	1.42	0.00	0.82	0.10	2.65	4.32
3250	10.25	3.435	0.93	7.59	1.031	1.416	1.38	0.00	0.80	0.13	2.33	4.01
3500	10.25	3.535	0.97	7.16	1.031	1.444	1.32	0.00	0.78	0.13	2.33	4.01
3750	10.25	3.600	0.99	6.80	1.032	1.471	1.29	0.00	0.76	0.13	2.33	4.01
4000	10.25	3.675	1.02	6.49	1.033	1.497	1.26	0.00	0.74	0.13	2.33	4.01

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