

ANEXO B: Tablas de cálculo mecánico cables desnudos

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ANEXO B1: Clima cálido



ANEXO B1.1: Zona 1 (Velocidad de viento máxima 60 km/h)

PENGUIN ACSR 4/0 AWG																		
Clima Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 60 Velocidad del viento promedio (km/h): 40																		
Propiedades físicas del conductor: Tensión de rotura (daN): 3714.26 Peso (daN/m): 0.4243																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 13.5%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	816.00	22%	0.01	655.00	18%	0.01	620.00	17%	0.01	618.00	17%	0.01	473.00	12.7%	0.01	122.00	3%	0.04
20	816.00	22%	0.03	654.00	18%	0.03	620.00	17%	0.04	619.00	17%	0.04	477.00	12.8%	0.04	150.00	4%	0.14
30	816.00	22%	0.06	653.00	18%	0.07	624.00	17%	0.09	619.00	17%	0.08	483.00	13.0%	0.10	176.00	5%	0.27
40	816.00	22%	0.10	652.00	18%	0.13	628.00	17%	0.16	620.00	17%	0.14	490.00	13.2%	0.17	201.00	5%	0.42
50	816.00	22%	0.16	651.00	18%	0.20	631.00	17%	0.24	621.00	17%	0.22	488.00	13.4%	0.27	224.00	6%	0.59
60	806.00	22%	0.24	643.00	17%	0.30	629.00	17%	0.35	617.00	17%	0.32	501.00	13.5%	0.38	243.00	7%	0.79
70	789.00	21%	0.33	633.00	17%	0.41	625.00	17%	0.47	608.00	16%	0.44	501.00	13.5%	0.52	260.00	7%	1.00
80	772.00	21%	0.44	621.00	17%	0.55	619.00	17%	0.62	599.00	16%	0.58	500.00	13.5%	0.68	275.00	7%	1.23
90	754.00	20%	0.57	609.00	16%	0.71	614.00	17%	0.79	591.00	16%	0.75	501.00	13.5%	0.86	289.00	8%	1.49
100	736.00	20%	0.72	598.00	16%	0.89	609.00	16%	0.99	584.00	16%	0.93	501.00	13.5%	1.06	302.00	8%	1.75
110	716.00	19%	0.90	589.00	16%	1.09	605.00	16%	1.20	571.00	16%	1.14	501.00	13.5%	1.28	314.00	8%	2.04
120	698.00	19%	1.09	579.00	16%	1.32	601.00	16%	1.44	571.00	15%	1.37	501.00	13.5%	1.53	325.00	9%	2.36
130	680.00	18%	1.32	571.00	15%	1.57	597.00	16%	1.69	564.00	15%	1.63	500.00	13.5%	1.79	335.00	9%	2.67
140	664.00	18%	1.57	564.00	15%	1.84	593.00	16%	1.97	559.00	15%	1.91	500.00	13.5%	2.08	345.00	9%	3.02
150	648.00	17%	1.84	557.00	15%	2.14	590.00	16%	2.28	554.00	15%	2.21	500.00	13.5%	2.39	354.00	10%	3.38
160	635.00	17%	2.14	552.00	15%	2.46	586.00	16%	2.60	550.00	15%	2.53	500.00	13.5%	2.72	362.00	10%	3.76
170	623.00	17%	2.46	547.00	15%	2.80	583.00	16%	2.95	547.00	15%	2.87	500.00	13.5%	3.07	369.00	10%	4.16
180	611.00	16%	2.81	543.00	15%	3.17	581.00	16%	3.32	543.00	15%	3.24	500.00	13.5%	3.44	376.00	10%	4.57
190	600.00	16%	3.19	538.00	14%	3.56	578.00	16%	3.71	540.00	15%	3.63	500.00	13.5%	3.83	383.00	10%	5.01
200	592.00	16%	3.59	535.00	14%	3.97	576.00	16%	4.12	537.00	14%	4.05	499.00	13.4%	4.25	389.00	10%	5.47
210	584.00	16%	4.01	532.00	14%	4.40	574.00	15%	4.55	535.00	14%	4.48	499.00	13.4%	4.69	394.00	11%	5.94
220	576.00	16%	4.46	529.00	14%	4.86	572.00	15%	5.01	533.00	14%	4.94	499.00	13.4%	5.15	399.00	11%	6.44
230	570.00	15%	4.92	526.00	14%	5.33	570.00	15%	5.49	531.00	14%	5.41	499.00	13.4%	5.63	404.00	11%	6.95
240	564.00	15%	5.42	524.00	14%	5.83	568.00	15%	5.99	529.00	14%	5.92	499.00	13.4%	6.13	409.00	11%	7.48
250	559.00	15%	5.93	522.00	14%	6.36	567.00	15%	6.51	527.00	14%	6.44	499.00	13.4%	6.44	414.00	11%	8.02
260	554.00	15%	6.47	520.00	14%	6.90	566.00	15%	7.05	526.00	14%	6.98	498.00	13.4%	7.20	418.00	11%	8.58
270	550.00	15%	7.02	518.00	14%	7.47	564.00	15%	7.62	525.00	14%	7.55	498.00	13.4%	7.77	423.00	11%	9.16
280	546.00	15%	7.62	517.00	14%	8.06	563.00	15%	8.21	523.00	14%	8.14	498.00	13.3%	8.36	428.00	11%	9.77
290	543.00	15%	8.23	515.00	14%	8.67	561.00	15%	8.82	522.00	14%	8.75	498.00	13.4%	8.98	430.00	12%	10.40
300	538.00	15%	8.86	514.00	14%	9.30	560.00	15%	9.46	521.00	14%	9.38	497.00	13.4%	9.61	433.00	12%	11.05
310	536.00	14%	9.51	513.00	14%	9.96	559.00	15%	10.11	520.00	14%	10.04	497.00	13.4%	10.27	436.00	12%	11.71
320	534.00	14%	10.19	511.00	14%	10.64	558.00	15%	10.79	519.00	14%	10.72	497.00	13.4%	10.95	439.00	12%	12.41
330	531.00	14%	10.89	510.00	14%	11.34	557.00	15%	11.50	518.00	14%	11.42	496.00	13.4%	11.65	441.00	12%	13.12
340	529.00	14%	11.61	509.00	14%	12.07	556.00	15%	12.22	517.00	14%	12.15	496.00	13.4%	12.38	444.00	12%	13.85
350	527.00	14%	12.36	508.00	14%	12.81	555.00	15%	12.97	516.00	14%	12.90	496.00	13.4%	13.13	446.00	12%	14.61
360	525.00	14%	13.13	507.00	14%	13.58	554.00	15%	13.74	515.00	14%	13.67	495.00	13.3%	13.90	448.00	12%	15.39
370	523.00	14%	13.92	506.00	14%	14.38	553.00	15%	14.33	514.00	14%	14.46	495.00	13.3%	14.70	450.00	12%	16.19
380	521.00	14%	14.74	505.00	14%	15.19	552.00	15%	15.35	513.00	14%	15.27	495.00	13.3%	15.51	451.00	12%	17.01
390	519.00	14%	15.58	504.00	14%	16.03	551.00	15%	16.19	512.00	14%	16.11	494.00	13.3%	16.35	453.00	12%	17.86
400	517.00	14%	16.44	503.00	14%	16.90	550.00	15%	17.05	511.00	14%	16.98	494.00	13.3%	17.22	454.00	12%	18.73
410	516.00	14%	17.32	503.00	14%	17.78	549.00	15%	17.93	511.00	14%	17.86	494.00	13.3%	18.10	456.00	12%	19.62
420	514.00	14%	18.24	502.00	14%	18.70	548.00	15%	18.85	510.00	14%	18.78	493.00	13.3%	19.02	457.00	12%	20.54
430	513.00	14%	19.17	501.00	13%	19.63	548.00	15%	19.78	508.00	14%	19.71	493.00	13.3%	19.85	458.00	12%	21.48
440	512.00	14%	20.13	500.00	13%	20.59	547.00	15%	20.74	508.00	14%	20.67	493.00	13.3%	20.91	459.00	12%	22.44
450	510.00	14%	21.11	499.00	13%	21.57	546.00	15%	21.72	508.00	14%	21.65	492.00	13.2%	21.89	460.00	12%	23.43
460	509.00	14%	22.12	499.00	13%	22.58	545.00	15%	22.73	507.00	14%	22.66	492.00	13.2%	22.90	461.00	12%	24.45
470	508.00	14%	23.15	498.00	13%	23.61	544.00	15%	23.76	506.00	14%	23.69	491.00	13.2%	23.93	462.00	12%	25.48
480	507.00	14%	24.20	497.00	13%	24.67	543.00	15%	24.82	506.00	14%	24.75	491.00	13.2%	24.99	462.00	12%	26.54
490	506.00	14%	25.28	496.00	13%	25.74	542.00	15%	25.90	505.00	14%	25.83	490.00	13.2%	26.07	463.00	12%	27.62
500	504.00	14%	26.39	496.00	13%	26.85	542.00	15%	27.00	504.00	14%	26.93	490.00	13.2%	27.17	464.00	12%	28.73
510	503.00	14%	27.52	495.00	13%	27.97	541.00	15%	28.13	504.00	14%	28.06	489.00	13.2%	28.30	464.00	12%	29.86
520	502.00	14%	28.67	494.00	13%	29.14	540.00	15%	29.29	503.00	14%	29.22	489.00	13.2%	29.46	465.00	13%	31.02
530	501.00	13%	29.85	494.00	13%	30.32	539.00	15%	30.47	502.00	14%	30.40	488.00	13.1%	30.64	465.00	13%	32.21
540	500.00	13%	31.06	493.00	13%	31.52	538.00	14%	31.67	501.00	13%	31.60	488.00	13.1%	31.84	465.00	13%	33.41
550	499.00	13%	32.29	492.00	13%	32.75	537.00	14%	32.90	501.00	13%	32.83	487.00	13.1%	33.08	465.00	13%	34.65
560	498.00	13%	33.54	491.00	13%	34.01	537.00	14%	34.16	500.00	13%	34.09	487.00	13.1%	34.33	466.00	13%	35.90
570	497.00	13%	34.83	491.00	13%	35.29	536.00	14%	35.44	499.00	13%	35.37	486.00	13.1%	35.62	466.00	13%	37.19
580	496.00	13%	36.14	490.00	13%	36.61	535.00	14%	36.75	499.00	13%	36.69	486.00	13.1%	36.93	466.00	13%	38.51
590	495.00	13%	37.48	489.00	13%	37.94	534.00	14%	38.09	498.00	13%	38.02	485.00	13.1%	38.27	466.00	13%	39.84
600	494.00	13%	38.84	489.00	13%	39.30	533.00	14%	39.45	497.00	13%	39.39	485.00	13.1%	39.63	466.00	13%	41.20

LINNET ACSR 336.4 KCML															
Clima Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 60 Velocidad del viento promedio (km/h): 40															
Propiedades físicas del conductor: Tensión de rotura (daN): 6271.99 Peso (daN/m): 0.6741															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 12%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1190.00	19.0%	0.01	952.00	15%	0.01	896.00	14.3%	0.01	896.00	14.3%	0.01	876.00	10.8%	0.01
20	1190.00	19.0%	0.03	949.00	15%	0.04	896.00	14.3%	0.04	896.00	14.3%	0.04	882.00	10.9%	0.05
30	1190.00	19.0%	0.06	944.00	15%	0.08	900.00	14.3%	0.09	894.00	14.3%	0.09	692.00	11.0%	0.11
40	1190.00	19.0%	0.11	944.00	15%	0.14	902.00	14.4%	0.16	895.00	14.3%	0.15	705.00	11.2%	0.19
50	1190.00	19.0%	0.18	941.00	15%	0.22	908.00	14.5%	0.25	895.00	14.3%	0.24	719.00	11.5%	0.29
60	1190.00	19.0%	0.25	940.00	15%	0.32	915.00	14.6%	0.36	899.00	14.3%	0.34	734.00	11.7%	0.41
70	1190.00	19.0%	0.35	940.00	15%	0.44	921.00	14.7%	0.49	903.00	14.4%	0.47	750.00	12.0%	0.55
80	1163.00	18.5%	0.46	922.00	15%	0.59	913.00	14.6%	0.65	892.00	14.2%	0.62	752.00	12.0%	0.72
90	1131.00	18.0%	0.60	905.00	14%	0.75	903.00	14.4%	0.82	878.00	14.0%	0.79	751.00	12.0%	0.91
100	1100.00	17.5%	0.77	888.00	14%	0.95	894.00	14.3%	1.03	865.00	13.8%	0.99	751.00	12.0%	1.12
110	1069.00	17.0%	0.96	874.00	14%	1.17	885.00	14.1%	1.25	854.00	13.6%	1.22	751.00	12.0%	1.36
120	1039.00	16.6%	1.17	860.00	14%	1.41	878.00	14.0%	1.50	845.00	13.5%	1.46	751.00	12.0%	1.62
130	1011.00	16.1%	1.41	848.00	14%	1.68	870.00	13.9%	1.78	836.00	13.3%	1.73	751.00	12.0%	1.90
140	985.00	15.7%	1.68	838.00	13%	1.97	864.00	13.8%	2.07	829.00	13.2%	2.03	751.00	12.0%	2.20
150	961.00	15.3%	1.97	829.00	13%	2.29	858.00	13.7%	2.39	821.00	13.1%	2.35	750.00	12.0%	2.53
160	940.00	15.0%	2.30	820.00	13%	2.63	852.00	13.6%	2.74	815.00	13.0%	2.69	750.00	12.0%	2.88
170	922.00	14.7%	2.64	814.00	13%	2.99	848.00	13.5%	3.10	810.00	12.9%	3.06	750.00	12.0%	3.25
180	906.00	14.4%	3.02	807.00	13%	3.38	844.00	13.5%	3.49	805.00	12.8%	3.45	750.00	12.0%	3.64
190	889.00	14.2%	3.42	802.00	13%	3.80	840.00	13.4%	3.91	800.00	12.8%	3.86	749.00	11.9%	4.06
200	877.00	14.0%	3.85	797.00	13%	4.23	836.00	13.3%	4.35	797.00	12.7%	4.30	749.00	11.9%	4.50
210	866.00	13.8%	4.30	793.00	13%	4.69	833.00	13.3%	4.81	794.00	12.7%	4.76	749.00	11.9%	4.87
220	855.00	13.6%	4.77	789.00	13%	5.17	830.00	13.2%	5.29	791.00	12.6%	5.24	749.00	11.9%	5.45
230	846.00	13.5%	5.27	785.00	13%	5.68	828.00	13.2%	5.80	788.00	12.6%	5.75	748.00	11.9%	5.96
240	838.00	13.4%	5.80	782.00	12%	6.21	825.00	13.2%	6.33	785.00	12.5%	6.28	748.00	11.9%	6.49
250	830.00	13.2%	6.35	779.00	12%	6.77	823.00	13.1%	6.88	783.00	12.5%	6.84	748.00	11.9%	7.05
260	824.00	13.1%	6.92	776.00	12%	7.34	821.00	13.1%	7.46	781.00	12.5%	7.41	747.00	11.9%	7.63
270	818.00	13.0%	7.52	774.00	12%	7.95	819.00	13.1%	8.06	779.00	12.4%	8.01	747.00	11.9%	8.23
280	812.00	12.9%	8.14	772.00	12%	8.57	817.00	13.0%	8.69	777.00	12.4%	8.64	747.00	11.9%	8.86
290	807.00	12.9%	8.79	770.00	12%	9.22	815.00	13.0%	9.34	775.00	12.4%	9.29	746.00	11.9%	9.51
300	803.00	12.8%	9.46	768.00	12%	9.89	813.00	13.0%	10.01	773.00	12.3%	9.97	746.00	11.9%	10.19
310	799.00	12.7%	10.16	766.00	12%	10.59	811.00	12.9%	10.71	772.00	12.3%	10.66	745.00	11.8%	10.89
320	795.00	12.7%	10.87	764.00	12%	11.31	810.00	12.9%	11.43	770.00	12.3%	11.38	745.00	11.9%	11.61
330	791.00	12.6%	11.62	763.00	12%	12.05	808.00	12.9%	12.17	769.00	12.3%	12.13	744.00	11.9%	12.35
340	788.00	12.6%	12.39	761.00	12%	12.83	807.00	12.9%	12.94	768.00	12.2%	12.90	744.00	11.9%	13.12
350	785.00	12.5%	13.18	759.00	12%	13.62	805.00	12.8%	13.74	766.00	12.2%	13.69	743.00	11.8%	13.92
360	782.00	12.5%	14.00	758.00	12%	14.44	804.00	12.8%	14.56	765.00	12.2%	14.51	743.00	11.8%	14.74
370	778.00	12.4%	14.84	757.00	12%	15.28	803.00	12.8%	15.40	763.00	12.2%	15.36	742.00	11.8%	15.59
380	776.00	12.4%	15.71	755.00	12%	16.15	801.00	12.8%	16.27	762.00	12.1%	16.22	741.00	11.8%	16.45
390	774.00	12.3%	16.60	754.00	12%	17.04	800.00	12.8%	17.16	761.00	12.1%	17.12	741.00	11.8%	17.39
400	772.00	12.3%	17.52	753.00	12%	17.96	799.00	12.7%	18.08	760.00	12.1%	18.04	740.00	11.8%	18.67
410	769.00	12.3%	18.46	751.00	12%	18.91	797.00	12.7%	19.02	759.00	12.1%	18.98	740.00	11.8%	19.21
420	767.00	12.2%	19.43	750.00	12%	19.89	796.00	12.7%	19.99	758.00	12.1%	19.95	739.00	11.8%	20.18
430	765.00	12.2%	20.42	748.00	12%	20.87	795.00	12.7%	20.99	757.00	12.1%	20.94	738.00	11.8%	21.17
440	763.00	12.2%	21.44	748.00	12%	21.89	793.00	12.6%	22.00	755.00	12.0%	21.96	738.00	11.8%	22.19
450	761.00	12.1%	22.49	747.00	12%	22.93	792.00	12.6%	23.05	754.00	12.0%	23.01	737.00	11.8%	23.24
460	759.00	12.1%	23.55	745.00	12%	24.01	791.00	12.6%	24.12	753.00	12.0%	24.08	736.00	11.7%	24.51
470	758.00	12.1%	24.66	744.00	12%	25.11	790.00	12.6%	25.22	752.00	12.0%	25.18	735.00	11.7%	25.41
480	756.00	12.1%	25.78	743.00	12%	26.23	788.00	12.6%	26.35	751.00	12.0%	26.30	735.00	11.7%	26.53
490	754.00	12.0%	26.93	742.00	12%	27.38	787.00	12.5%	27.49	750.00	12.0%	27.46	734.00	11.7%	27.69
500	753.00	12.0%	28.11	741.00	12%	28.56	786.00	12.5%	28.67	749.00	11.9%	28.63	733.00	11.7%	28.86
510	751.00	12.0%	29.32	740.00	12%	29.77	785.00	12.5%	29.88	748.00	11.9%	29.84	732.00	11.7%	30.07
520	749.00	11.9%	30.55	739.00	12%	31.00	783.00	12.5%	31.11	747.00	11.9%	31.07	732.00	11.7%	31.30
530	748.00	11.9%	31.81	737.00	12%	32.26	782.00	12.5%	32.37	745.00	11.9%	32.33	731.00	11.7%	32.56
540	746.00	11.9%	33.09	736.00	12%	33.54	781.00	12.5%	33.65	744.00	11.9%	33.62	730.00	11.6%	33.85
550	745.00	11.9%	34.41	735.00	12%	34.86	780.00	12.4%	34.97	743.00	11.8%	34.93	729.00	11.6%	35.08
560	743.00	11.8%	35.76	734.00	12%	36.20	778.00	12.4%	36.32	742.00	11.8%	36.28	728.00	11.6%	36.51
570	742.00	11.8%	37.13	733.00	12%	37.58	777.00	12.4%	37.69	741.00	11.8%	37.65	727.00	11.6%	37.88
580	740.00	11.8%	38.53	732.00	12%	38.97	776.00	12.4%	39.09	740.00	11.8%	39.05	726.00	11.6%	39.28
590	739.00	11.8%	39.96	731.00	12%	40.40	775.00	12.4%	40.52	739.00	11.8%	40.47	725.00	11.6%	40.71
600	737.00	11.8%	41.42	729.00	12%	41.86	773.00	12.3%	41.97	737.00	11.8%	41.93	724.00	11.5%	42.17

AMES AAAC 77.47 KCMIL																								
Clima Cálido																								
Altitud: 0 msnm - 1000 msnm																								
Temperatura máxima (°C): 40																								
Temperatura media (°C): 26																								
Temperatura mínima (°C): 16																								
Temperatura coincidente (°C): 18																								
Velocidad del viento máxima (km/h): 60																								
Velocidad del viento promedio (km/h): 40																								
Propiedades físicas del conductor:																								
Tensión de rotura (daN): 1245.5																								
Peso (daN/m): 0.1060																								
Condición de tensionado: (% límite de tensión de rotura)																								
Temperatura mínima: 23.5%																								
Operación diaria (EDS): 14%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha	
	daN	UTS			daN	UTS			daN	UTS			daN	UTS			daN	UTS			daN	UTS		
10	292.00	23.4%	0.00	221.00	17.7%	0.01		210.00	16.9%	0.01		209.00	16.8%	0.01		164.00	13.2%	0.01		10.00	0.8%	0.14		
20	292.00	23.4%	0.02	220.00	17.7%	0.02		211.00	16.9%	0.04		209.00	16.8%	0.03		164.00	13.2%	0.03		19.00	1.5%	0.29		
30	292.00	23.4%	0.04	220.00	17.7%	0.05		213.00	17.1%	0.09		210.00	16.9%	0.07		165.00	13.2%	0.07		27.00	2.2%	0.44		
40	292.00	23.4%	0.07	220.00	17.7%	0.10		216.00	17.3%	0.16		211.00	16.9%	0.12		166.00	13.3%	0.13		35.00	2.8%	0.61		
50	292.00	23.4%	0.11	220.00	17.7%	0.15		219.00	17.6%	0.24		211.00	16.9%	0.18		167.00	13.4%	0.20		42.00	3.4%	0.76		
60	292.00	23.4%	0.16	220.00	17.7%	0.22		222.00	17.8%	0.34		212.00	17.0%	0.26		169.00	13.6%	0.28		49.00	3.9%	0.97		
70	292.00	23.4%	0.22	220.00	17.7%	0.30		225.00	18.1%	0.46		213.00	17.1%	0.35		171.00	13.7%	0.38		56.00	4.5%	1.17		
80	292.00	23.4%	0.29	220.00	17.7%	0.39		228.00	18.3%	0.59		214.00	17.2%	0.45		173.00	13.9%	0.49		62.00	5.0%	1.37		
90	291.00	23.4%	0.37	220.00	17.7%	0.49		232.00	18.6%	0.73		215.00	17.3%	0.57		174.00	14.0%	0.62		68.00	5.5%	1.58		
100	288.00	23.1%	0.46	218.00	17.5%	0.61		233.00	18.7%	0.89		214.00	17.2%	0.70		174.00	14.0%	0.76		73.00	5.9%	1.81		
110	284.00	22.8%	0.56	215.00	17.3%	0.75		235.00	18.9%	1.06		213.00	17.1%	0.85		174.00	14.0%	0.92		78.00	6.3%	2.05		
120	281.00	22.6%	0.68	213.00	17.1%	0.90		236.00	18.9%	1.25		212.00	17.0%	1.02		174.00	14.0%	1.10		83.00	6.7%	2.30		
130	277.00	22.2%	0.81	211.00	16.9%	1.06		237.00	19.0%	1.45		211.00	16.9%	1.20		174.00	14.0%	1.29		87.00	7.0%	2.57		
140	273.00	21.9%	0.95	209.00	16.8%	1.25		239.00	19.2%	1.67		210.00	16.9%	1.39		174.00	14.0%	1.49		91.00	7.3%	2.84		
150	268.00	21.5%	1.12	206.00	16.5%	1.45		239.00	19.2%	1.90		209.00	16.8%	1.60		174.00	14.0%	1.71		95.00	7.6%	3.13		
160	263.00	21.1%	1.29	204.00	16.4%	1.66		240.00	19.3%	2.15		208.00	16.7%	1.83		174.00	14.0%	1.95		99.00	7.9%	3.43		
170	259.00	20.8%	1.48	202.00	16.2%	1.90		241.00	19.3%	2.41		207.00	16.6%	2.08		174.00	14.0%	2.20		102.00	8.2%	3.74		
180	254.00	20.4%	1.69	200.00	16.1%	2.15		242.00	19.4%	2.69		206.00	16.5%	2.33		174.00	14.0%	2.47		106.00	8.5%	4.06		
190	251.00	20.2%	1.91	199.00	16.0%	2.41		242.00	19.4%	2.97		205.00	16.5%	2.61		174.00	14.0%	2.75		109.00	8.8%	4.40		
200	246.00	19.8%	2.15	197.00	15.8%	2.69		243.00	19.5%	3.28		205.00	16.5%	2.90		174.00	14.0%	3.05		112.00	9.0%	4.74		
210	242.00	19.4%	2.41	196.00	15.7%	2.99		243.00	19.5%	3.60		204.00	16.4%	3.20		174.00	14.0%	3.36		115.00	9.2%	5.11		
220	238.00	19.1%	2.70	194.00	15.6%	3.31		244.00	19.6%	3.93		203.00	16.3%	3.53		174.00	14.0%	3.69		117.00	9.4%	5.48		
230	234.00	18.8%	2.99	193.00	15.5%	3.64		244.00	19.6%	4.28		202.00	16.2%	3.86		174.00	14.0%	4.04		120.00	9.6%	5.87		
240	231.00	18.5%	3.31	192.00	15.4%	3.99		245.00	19.7%	4.64		202.00	16.2%	4.22		174.00	14.0%	4.40		122.00	9.8%	6.27		
250	228.00	18.3%	3.64	191.00	15.3%	4.35		245.00	19.7%	5.02		201.00	16.1%	4.58		174.00	14.0%	4.77		124.00	10.0%	6.68		
260	225.00	18.1%	3.99	190.00	15.3%	4.73		245.00	19.7%	5.41		201.00	16.1%	4.97		174.00	14.0%	5.16		126.00	10.1%	7.11		
270	221.00	17.7%	4.37	188.00	15.1%	5.13		245.00	19.7%	5.82		200.00	16.1%	5.37		174.00	14.0%	5.57		129.00	10.3%	7.55		
280	219.00	17.6%	4.76	188.00	15.1%	5.55		245.00	19.7%	6.25		199.00	16.0%	5.79		174.00	14.0%	5.99		130.00	10.4%	8.00		
290	216.00	17.3%	5.17	187.00	15.0%	5.97		245.00	19.7%	6.69		199.00	16.0%	6.22		174.00	14.0%	6.43		132.00	10.6%	8.47		
300	214.00	17.2%	5.59	186.00	14.9%	6.42		246.00	19.8%	7.14		198.00	15.9%	6.67		174.00	14.0%	6.88		133.00	10.7%	8.95		
310	211.00	16.9%	6.03	185.00	14.8%	6.88		246.00	19.8%	7.61		198.00	15.9%	7.13		174.00	14.0%	7.35		135.00	10.8%	9.45		
320	209.00	16.8%	6.49	185.00	14.9%	7.36		246.00	19.8%	8.10		197.00	15.8%	7.62		173.00	13.9%	7.83		136.00	10.9%	9.96		
330	207.00	16.6%	6.97	184.00	14.8%	7.86		246.00	19.8%	8.60		197.00	15.8%	8.11		173.00	13.9%	8.34		139.00	11.1%	10.49		
340	205.00	16.5%	7.47	183.00	14.7%	8.37		245.00	19.7%	9.11		197.00	15.8%	8.62		173.00	13.9%	8.85		139.00	11.2%	11.03		
350	204.00	16.4%	7.98	183.00	14.7%	8.89		245.00	19.7%	9.64		196.00	15.7%	9.15		173.00	13.9%	9.38		140.00	11.2%	11.58		
360	202.00	16.2%	8.52	182.00	14.6%	9.44		245.00	19.7%	10.19		196.00	15.7%	9.70		173.00	13.9%	9.93		142.00	11.4%	12.15		
370	201.00	16.1%	9.06	182.00	14.6%	10.00		245.00	19.7%	10.75		196.00	15.7%	10.26		173.00	13.9%	10.49		143.00	11.5%	12.73		
380	199.00	16.0%	9.63	181.00	14.5%	10.57		245.00	19.7%	11.34		195.00	15.7%	10.84		173.00	13.9%	11.07		144.00	11.6%	13.34		
390	198.00	15.9%	10.20	181.00	14.5%	11.17		245.00	19.7%	11.93		195.00	15.7%	11.43		173.00	13.9%	11.67		145.00	11.6%	13.95		
400	197.00	15.8%	10.81	180.00	14.5%	11.77		245.00	19.7%	12.54		195.00	15.7%	12.03		173.00	13.9%	12.28		146.00	11.7%	14.58		
410	195.00	15.7%	11.42	180.00	14.5%	12.40		245.00	19.7%	13.16		194.00	15.6%	12.66		173.00	13.9%	12.90		147.00	11.8%	15.22		
420	194.00	15.6%	12.06	180.00	14.5%	13.04		245.00	19.7%	13.81		194.00	15.6%	13.30		173.00	13.9%	13.55		148.00	11.9%	15.88		
430	193.00	15.5%	12.71	179.00	14.4%	13.70		244.00	19.6%	14.47		194.00	15.6%	13.96		173.00	13.9%	14.21		149.00	11.9%	16.56		
440	192.00	15.4%	13.37	179.00	14.4%	14.37		244.00	19.6%	15.14		193.00	15.5%	14.63		173.00	13.9%	14.88		149.00	12.0%	17.24		
450	191.00	15.3%	14.06	179.00	14.4%	15.06		244.00	19.6%	15.83		193.00	15.5%	15.32		173.00	13.9%	15.58		150.00	12.0%	17.95		
460	190.00	15.2%	14.76	178.00	14.3%	15.77		244.00	19.6%	16.55		193.00	15.5%	16.03		173.00	13.9%	16.29		151.00	12.1%	18.67		
470	190.00	15.3%	15.47	178.00	14.3%	16.49		244.00	19.6%	17.26		193.00	15.5%	16.75		173.00	13.9%	17.01		151.00	12.1%	19.41		
480	189.00	15.2%	16.21	178.00	14.3%	17.22		244.00	19.6%	18.00		192.00	15.4%	17.49		172.00	13.8%	17.75		152.00	12.2%	20.16		
490	188.00	15.1%	16.96	177.00	14.2%	17.98		243.00	19.5%	18.76		192.00	15.4%	18.25		172.00	13.8%	18.51		152.00	12.2%	20.93		
500	187.00	15.0%	17.73	177.00	14.2%	18.75		243.00	19.5%	19.53		192.00	15.4%	19.02		172.00	13.8%	19.28		153.00	12.3%	21.71		
510	187.00	15.0%	18.51	177.00	14.2%	19.54		243.00	19.5%	20.32		192.00	15.4%	19.81		172.00	13.8%	20.07		154.00	12.4%	22.52		
520	186.00	14.9%	19.31	177.00	14.2%	20.35		243.00	19.5%	21.13		191.00	15.3%	20.61		172.00	13.8%	20.88		154.00	12.4%	23.33		
530	185.00	14.8%	20.14	176.00	14.1%	21.15		242.00	19.4%	21.96		191.00	15.3%	21.44		172.00	13.8%	21.15		155.00	12.5%	24.14		
540	185.00	14.9%	20.97	176.00	14.1%	22.01		242.00	19.4%	22.79		191.00	15.3%	22.27		172.00	13.8%	22.54		155.00	12.4%	25.01		
550	184.00	14.8%	21.82	176.00	14.1%	22.87		242.00	19.4%	23.65		191.00	15.3%	23.13		172.00	13.8%	23.40		155.00	12.4%	25.88		
560	184.00	14.9%	22.67	176.00	14.1%	23.74		242.00	19.4%	24.52		190.00	15.2%	23.99		172.00	13.8%	24.17</						

ALLIANCE AAAC 246.9 KCMIL

Clima Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907,68
 Peso (daN/m): 0,3382
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12,5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837,00	22,0%	0,01	637,00	17%	0,01	602,00	16%	0,01	601,00	16%	0,01	457,00	12,0%	0,01	28,00	1%	0,15
20	837,00	22,0%	0,02	637,00	17%	0,03	603,00	16%	0,03	602,00	16%	0,03	459,00	12,1%	0,04	55,00	1%	0,31
30	837,00	22,0%	0,05	636,00	17%	0,06	606,00	16%	0,08	602,00	16%	0,07	462,00	12,1%	0,08	80,00	2%	0,47
40	837,00	22,0%	0,08	635,00	17%	0,11	609,00	16%	0,14	602,00	16%	0,12	466,00	12,2%	0,15	104,00	3%	0,85
50	837,00	22,0%	0,13	634,00	17%	0,17	611,00	16%	0,21	603,00	16%	0,18	471,00	12,4%	0,22	124,00	3%	0,84
60	835,00	21,9%	0,18	631,00	17%	0,24	615,00	16%	0,30	602,00	16%	0,26	476,00	12,5%	0,32	147,00	4%	1,03
70	824,00	21,6%	0,25	624,00	16%	0,33	612,00	16%	0,41	596,00	16%	0,36	476,00	12,5%	0,44	167,00	4%	1,24
80	811,00	21,3%	0,33	615,00	16%	0,44	610,00	16%	0,54	590,00	15%	0,48	476,00	12,5%	0,57	185,00	5%	1,47
90	797,00	20,9%	0,43	607,00	16%	0,56	607,00	16%	0,68	584,00	15%	0,61	476,00	12,5%	0,72	201,00	5%	1,70
100	783,00	20,6%	0,54	597,00	16%	0,71	604,00	16%	0,84	577,00	15%	0,77	475,00	12,5%	0,89	217,00	6%	1,95
110	767,00	20,1%	0,67	587,00	15%	0,87	600,00	16%	1,02	571,00	15%	0,93	475,00	12,5%	1,08	231,00	6%	2,21
120	751,00	19,7%	0,81	579,00	15%	1,05	598,00	16%	1,22	565,00	15%	1,12	475,00	12,5%	1,28	245,00	6%	2,49
130	736,00	19,3%	0,97	570,00	15%	1,25	595,00	16%	1,44	559,00	15%	1,33	475,00	12,5%	1,51	258,00	7%	2,77
140	720,00	18,9%	1,15	563,00	15%	1,47	593,00	16%	1,67	554,00	15%	1,56	475,00	12,5%	1,74	270,00	7%	3,07
150	705,00	18,5%	1,35	556,00	15%	1,71	590,00	15%	1,92	549,00	14%	1,80	475,00	12,5%	2,00	281,00	7%	3,39
160	689,00	18,1%	1,57	550,00	14%	1,97	587,00	15%	2,19	545,00	14%	2,07	475,00	12,5%	2,28	291,00	8%	3,72
170	675,00	17,7%	1,81	544,00	14%	2,25	585,00	15%	2,48	541,00	14%	2,35	475,00	12,5%	2,57	301,00	8%	4,06
180	661,00	17,4%	2,07	538,00	14%	2,55	583,00	15%	2,78	536,00	14%	2,65	475,00	12,5%	2,89	310,00	8%	4,42
190	647,00	17,0%	2,36	533,00	14%	2,87	580,00	15%	3,11	533,00	14%	2,98	475,00	12,5%	3,22	318,00	8%	4,80
200	635,00	16,7%	2,67	528,00	14%	3,20	578,00	15%	3,45	530,00	14%	3,32	475,00	12,5%	3,57	326,00	9%	5,19
210	623,00	16,4%	2,99	524,00	14%	3,56	575,00	15%	3,81	527,00	14%	3,67	474,00	12,4%	3,93	334,00	9%	5,59
220	612,00	16,1%	3,34	520,00	14%	3,94	574,00	15%	4,19	524,00	14%	4,06	474,00	12,4%	4,32	341,00	9%	6,01
230	603,00	15,8%	3,71	517,00	14%	4,33	573,00	15%	4,59	522,00	14%	4,45	474,00	12,4%	4,72	347,00	9%	6,45
240	593,00	15,6%	4,11	514,00	13%	4,74	571,00	15%	5,01	519,00	14%	4,86	474,00	12,4%	5,14	353,00	9%	6,90
250	584,00	15,3%	4,52	511,00	13%	5,18	569,00	15%	5,45	517,00	14%	5,30	474,00	12,4%	5,58	359,00	9%	7,37
260	577,00	15,2%	4,96	508,00	13%	5,63	568,00	15%	5,90	515,00	14%	5,75	474,00	12,4%	6,04	364,00	10%	7,86
270	570,00	15,0%	5,41	506,00	13%	6,10	566,00	15%	6,37	513,00	13%	6,22	474,00	12,4%	6,51	369,00	10%	8,36
280	563,00	14,8%	5,89	504,00	13%	6,59	565,00	15%	6,86	512,00	13%	6,71	473,00	12,4%	7,01	374,00	10%	8,88
290	558,00	14,7%	6,38	501,00	13%	7,10	564,00	15%	7,37	510,00	13%	7,22	473,00	12,4%	7,52	378,00	10%	9,41
300	552,00	14,5%	6,90	499,00	13%	7,63	562,00	15%	7,90	508,00	13%	7,75	473,00	12,4%	8,05	382,00	10%	9,97
310	547,00	14,4%	7,44	498,00	13%	8,17	561,00	15%	8,45	507,00	13%	8,30	473,00	12,4%	8,60	386,00	10%	10,53
320	542,00	14,2%	7,99	496,00	13%	8,73	560,00	15%	9,01	506,00	13%	8,86	473,00	12,4%	9,17	390,00	10%	11,12
330	538,00	14,1%	8,57	495,00	13%	9,32	559,00	15%	9,60	505,00	13%	9,45	473,00	12,4%	9,75	393,00	10%	11,73
340	534,00	14,0%	9,16	493,00	13%	9,92	558,00	15%	10,20	503,00	13%	10,05	472,00	12,4%	10,36	396,00	10%	12,35
350	530,00	13,9%	9,78	492,00	13%	10,54	556,00	15%	10,83	502,00	13%	10,68	472,00	12,4%	10,99	399,00	10%	12,99
360	527,00	13,8%	10,41	491,00	13%	11,18	556,00	15%	11,46	502,00	13%	11,31	472,00	12,4%	11,63	402,00	11%	13,65
370	524,00	13,8%	11,07	489,00	13%	11,84	555,00	15%	12,12	500,00	13%	11,97	472,00	12,4%	12,29	405,00	11%	14,33
380	521,00	13,7%	11,74	488,00	13%	12,56	554,00	15%	12,80	499,00	13%	12,65	472,00	12,4%	12,97	407,00	11%	15,02
390	518,00	13,6%	12,44	487,00	13%	13,22	553,00	15%	13,50	499,00	13%	13,35	471,00	12,4%	13,67	410,00	11%	15,73
400	515,00	13,5%	13,15	486,00	13%	13,93	552,00	14%	14,21	498,00	13%	14,07	471,00	12,4%	14,39	412,00	11%	16,46
410	513,00	13,5%	13,88	485,00	13%	14,67	551,00	14%	14,95	497,00	13%	14,80	471,00	12,4%	15,12	414,00	11%	17,21
420	511,00	13,4%	14,63	484,00	13%	15,43	550,00	14%	15,71	496,00	13%	15,56	471,00	12,4%	15,88	416,00	11%	17,98
430	508,00	13,4%	15,40	484,00	13%	16,20	549,00	14%	16,48	495,00	13%	16,33	470,00	12,3%	16,66	418,00	11%	18,76
440	506,00	13,3%	16,19	483,00	13%	17,00	548,00	14%	17,28	494,00	13%	17,13	470,00	12,3%	17,45	419,00	11%	19,57
450	504,00	13,2%	17,01	482,00	13%	17,81	548,00	14%	18,09	494,00	13%	17,94	470,00	12,3%	18,27	421,00	11%	20,39
460	503,00	13,2%	17,83	481,00	13%	18,64	547,00	14%	18,92	493,00	13%	18,78	469,00	12,3%	19,10	422,00	11%	21,24
470	501,00	13,2%	18,69	480,00	13%	19,49	546,00	14%	19,77	492,00	13%	19,63	469,00	12,3%	19,96	424,00	11%	22,10
480	499,00	13,1%	19,56	480,00	13%	20,37	545,00	14%	20,65	492,00	13%	20,50	469,00	12,3%	20,83	425,00	11%	22,98
490	498,00	13,1%	20,45	479,00	13%	21,26	544,00	14%	21,54	491,00	13%	21,40	469,00	12,3%	21,73	426,00	11%	23,88
500	496,00	13,0%	21,36	478,00	13%	22,18	544,00	14%	22,45	490,00	13%	22,31	468,00	12,3%	22,64	428,00	11%	24,80
510	495,00	13,0%	22,29	477,00	13%	23,11	543,00	14%	23,38	490,00	13%	23,24	468,00	12,3%	23,57	429,00	11%	25,74
520	493,00	12,9%	23,24	477,00	13%	24,05	542,00	14%	24,33	489,00	13%	24,19	468,00	12,3%	24,52	430,00	11%	26,70
530	492,00	12,9%	24,21	476,00	13%	25,03	541,00	14%	25,30	488,00	13%	25,16	467,00	12,3%	25,49	431,00	11%	27,68
540	491,00	12,9%	25,20	475,00	12%	26,02	541,00	14%	26,30	488,00	13%	26,16	467,00	12,3%	26,49	432,00	11%	28,68
550	489,00	12,8%	26,22	475,00	12%	27,04	540,00	14%	27,32	487,00	13%	27,17	466,00	12,3%	27,51	432,00	11%	29,70
560	488,00	12,8%	27,25	474,00	12%	28,07	539,00	14%	28,35	486,00	13%	28,21	466,00	12,2%	28,54	433,00	11%	30,74
570	487,00	12,8%	28,30	473,00	12%	29,13	538,00	14%	29,40	486,00	13%	29,26	466,00	12,2%	29,59	434,00	11%	31,80
580	486,00	12,8%	29,38	473,00	12%	30,20	538,00	14%	30,47	485,00	13%	30,33	466,00	12,2%	30,67	435,00	11%	32,88
590	485,00	12,7%	30,47	472,00	12%	31,29	537,00	14%	31,57	485,00	13%	31,43	465,00	12,2%	31,76	436,00	11%	33,97
600	484,00	12,7%	31,59	471,00	12%	32,42	536,00	14%	32,69	484,00	13%	32,54	465,00	12,2%	32,88	436,00	11%	35,10

CANTON AAAC 336.4 KCML

Clima Cálido

Altitud: 0 msnm - 1000 msnm

Temperatura máxima (°C): 40

Temperatura media (°C): 26

Temperatura mínima (°C): 16

Temperatura coincidente (°C): 18

Velocidad del viento máxima (km/h): 60

Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:

Tensión de rotura (daN): 5916.13

Peso (daN/m): 0.5404

Condición de tensionado: (% límite de tensión de rotura)

Temperatura mínima: 19%

Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1123.00	19.0%	0.01	892.00	15%	0.01	836.00	14%	0.01	836.00	14%	0.01	616.00	10.4%	0.01	43.00	1%	0.16
20	1123.00	19.0%	0.02	899.00	15%	0.02	838.00	14%	0.04	836.00	14%	0.03	619.00	10.5%	0.04	83.00	1%	0.32
30	1123.00	19.0%	0.05	888.00	15%	0.07	840.00	14%	0.08	834.00	14%	0.08	627.00	10.6%	0.10	127.00	2%	0.50
40	1123.00	19.0%	0.10	885.00	15%	0.12	845.00	14%	0.15	835.00	14%	0.13	635.00	10.7%	0.17	158.00	3%	0.89
50	1123.00	19.0%	0.15	884.00	15%	0.19	849.00	14%	0.23	838.00	14%	0.21	646.00	10.9%	0.26	192.00	3%	0.88
60	1111.00	18.8%	0.22	873.00	15%	0.28	844.00	14%	0.33	829.00	14%	0.30	650.00	11.0%	0.37	223.00	4%	1.09
70	1088.00	18.4%	0.30	856.00	14%	0.39	836.00	14%	0.45	817.00	14%	0.42	650.00	11.0%	0.51	252.00	4%	1.32
80	1066.00	18.0%	0.41	839.00	14%	0.52	829.00	14%	0.59	804.00	14%	0.55	650.00	11.0%	0.67	278.00	5%	1.56
90	1041.00	17.6%	0.53	823.00	14%	0.67	820.00	14%	0.76	793.00	13%	0.71	650.00	11.0%	0.84	303.00	5%	1.81
100	1014.00	17.1%	0.67	806.00	14%	0.84	812.00	14%	0.94	781.00	13%	0.89	650.00	11.0%	1.04	325.00	5%	2.08
110	989.00	16.7%	0.83	791.00	13%	1.03	804.00	14%	1.15	769.00	13%	1.09	650.00	11.0%	1.26	346.00	6%	2.36
120	962.00	16.3%	1.01	777.00	13%	1.25	787.00	13%	1.38	758.00	13%	1.32	649.00	11.0%	1.50	366.00	6%	2.66
130	936.00	15.8%	1.22	765.00	13%	1.49	790.00	13%	1.63	750.00	13%	1.56	649.00	11.0%	1.76	384.00	6%	2.98
140	912.00	15.4%	1.45	752.00	13%	1.76	784.00	13%	1.90	741.00	13%	1.83	649.00	11.0%	2.04	400.00	7%	3.31
150	889.00	15.0%	1.71	743.00	13%	2.05	773.00	13%	2.20	734.00	12%	2.12	649.00	11.0%	2.34	415.00	7%	3.66
160	867.00	14.7%	1.99	734.00	12%	2.36	773.00	13%	2.51	727.00	12%	2.44	649.00	11.0%	2.66	429.00	7%	4.03
170	848.00	14.3%	2.30	726.00	12%	2.69	769.00	13%	2.85	722.00	12%	2.78	649.00	11.0%	3.01	443.00	7%	4.42
180	831.00	14.0%	2.64	719.00	12%	3.05	765.00	13%	3.21	716.00	12%	3.13	649.00	11.0%	3.27	455.00	8%	4.82
190	814.00	13.8%	3.00	712.00	12%	3.42	761.00	13%	3.59	711.00	12%	3.52	649.00	11.0%	3.76	466.00	8%	5.24
200	800.00	13.5%	3.38	707.00	12%	3.83	757.00	13%	4.00	707.00	12%	3.92	648.00	11.0%	4.17	476.00	8%	5.68
210	787.00	13.3%	3.79	701.00	12%	4.25	753.00	13%	4.42	703.00	12%	4.34	648.00	11.0%	4.60	486.00	8%	6.14
220	776.00	13.1%	4.22	697.00	12%	4.69	751.00	13%	4.87	700.00	12%	4.79	648.00	11.0%	5.05	495.00	8%	6.62
230	765.00	12.9%	4.67	693.00	12%	5.16	747.00	13%	5.34	696.00	12%	5.26	648.00	11.0%	5.52	503.00	9%	7.12
240	755.00	12.8%	5.15	689.00	12%	5.65	745.00	13%	5.83	694.00	12%	5.75	647.00	10.9%	6.02	510.00	9%	7.63
250	747.00	12.6%	5.66	686.00	12%	6.16	743.00	13%	6.34	691.00	12%	6.26	647.00	10.9%	6.53	517.00	9%	8.17
260	740.00	12.5%	6.18	683.00	12%	6.69	740.00	13%	6.87	689.00	12%	6.79	647.00	10.9%	7.07	524.00	9%	8.73
270	732.00	12.4%	6.72	680.00	11%	7.25	738.00	12%	7.43	686.00	12%	7.35	647.00	10.9%	7.63	530.00	9%	9.31
280	726.00	12.3%	7.30	677.00	11%	7.83	736.00	12%	8.01	684.00	12%	7.93	646.00	10.9%	8.21	538.00	9%	9.91
290	721.00	12.2%	7.89	675.00	11%	8.43	734.00	12%	8.60	682.00	12%	8.52	646.00	10.9%	8.81	541.00	9%	10.52
300	716.00	12.1%	8.51	673.00	11%	9.05	732.00	12%	9.22	681.00	12%	9.14	646.00	10.9%	9.43	546.00	9%	11.16
310	710.00	12.0%	9.15	671.00	11%	9.69	731.00	12%	9.87	679.00	12%	9.79	645.00	10.9%	10.08	550.00	9%	11.82
320	706.00	11.9%	9.81	669.00	11%	10.35	729.00	12%	10.53	677.00	11%	10.45	645.00	10.9%	10.74	554.00	9%	12.50
330	702.00	11.9%	10.50	667.00	11%	11.04	727.00	12%	11.22	676.00	11%	11.14	644.00	10.9%	11.43	558.00	9%	13.20
340	698.00	11.8%	11.20	665.00	11%	11.75	726.00	12%	11.93	675.00	11%	11.85	644.00	10.9%	12.14	562.00	9%	13.93
350	694.00	11.7%	11.93	664.00	11%	12.49	724.00	12%	12.67	673.00	11%	12.59	644.00	10.9%	12.88	565.00	10%	14.67
360	691.00	11.7%	12.68	662.00	11%	13.24	723.00	12%	13.42	672.00	11%	13.34	643.00	10.9%	13.63	568.00	10%	15.44
370	688.00	11.6%	13.46	661.00	11%	14.02	721.00	12%	14.20	671.00	11%	14.12	643.00	10.9%	14.41	571.00	10%	16.23
380	685.00	11.6%	14.26	660.00	11%	14.82	720.00	12%	15.00	669.00	11%	14.92	642.00	10.9%	15.22	574.00	10%	17.04
390	683.00	11.5%	15.08	658.00	11%	15.64	719.00	12%	15.82	668.00	11%	15.74	642.00	10.9%	16.04	577.00	10%	17.87
400	680.00	11.5%	15.93	657.00	11%	16.48	718.00	12%	16.67	667.00	11%	16.59	642.00	10.9%	16.89	579.00	10%	18.73
410	678.00	11.5%	16.79	656.00	11%	17.36	716.00	12%	17.53	666.00	11%	17.46	641.00	10.8%	17.76	581.00	10%	19.60
420	675.00	11.4%	17.68	655.00	11%	18.25	715.00	12%	18.43	665.00	11%	18.35	641.00	10.8%	18.65	583.00	10%	20.50
430	673.00	11.4%	18.60	653.00	11%	19.17	714.00	12%	19.34	664.00	11%	19.27	640.00	10.8%	19.57	586.00	10%	21.43
440	671.00	11.3%	19.54	652.00	11%	20.11	713.00	12%	20.28	663.00	11%	20.20	640.00	10.8%	20.51	587.00	10%	22.37
450	669.00	11.3%	20.50	651.00	11%	21.07	711.00	12%	21.24	662.00	11%	21.17	639.00	10.8%	21.47	588.00	10%	23.34
460	667.00	11.3%	21.48	650.00	11%	22.05	710.00	12%	22.23	661.00	11%	22.15	639.00	10.8%	22.45	590.00	10%	24.33
470	665.00	11.2%	22.49	649.00	11%	23.06	709.00	12%	23.24	660.00	11%	23.16	638.00	10.8%	23.46	591.00	10%	25.35
480	664.00	11.2%	23.53	648.00	11%	24.10	708.00	12%	24.27	659.00	11%	24.20	637.00	10.8%	24.50	592.00	10%	26.39
490	662.00	11.2%	24.59	647.00	11%	25.15	707.00	12%	25.33	658.00	11%	25.25	637.00	10.8%	25.56	593.00	10%	27.45
500	660.00	11.2%	25.67	646.00	11%	26.24	706.00	12%	26.41	657.00	11%	26.34	636.00	10.8%	26.64	594.00	10%	28.54
510	659.00	11.1%	26.77	645.00	11%	27.34	705.00	12%	27.52	656.00	11%	27.44	636.00	10.8%	27.75	595.00	10%	29.65
520	657.00	11.1%	27.90	644.00	11%	28.40	704.00	12%	28.65	655.00	11%	28.57	635.00	10.7%	28.88	596.00	10%	30.79
530	656.00	11.1%	29.08	643.00	11%	29.63	702.00	12%	29.81	654.00	11%	29.73	634.00	10.7%	30.03	597.00	10%	31.94
540	654.00	11.1%	30.24	642.00	11%	30.81	701.00	12%	30.98	653.00	11%	30.91	634.00	10.7%	31.21	598.00	10%	33.13
550	653.00	11.0%	31.45	641.00	11%	32.02	700.00	12%	32.19	652.00	11%	32.11	633.00	10.7%	32.42	599.00	10%	34.33
560	651.00	11.0%	32.67	640.00	11%	33.24	699.00	12%	33.42	651.00	11%	33.34	633.00	10.7%	33.65	599.00	10%	35.57
570	650.00	11.0%	33.93	639.00	11%	34.50	698.00	12%	34.68	650.00	11%	34.60	632.00	10.7%	34.91	599.00	10%	36.83
580	649.00	11.0%	35.21	638.00	11%	35.78	697.00	12%	35.95	649.00	11%	35.88	631.00	10.7%	36.19	600.00	10%	38.12
590	647.00	10.9%	36.52	637.00	11%	37.09	696.00	12%	37.26	648.00	11%	37.19	630.00	10.6%	37.50	600.00	10%	39.42
600	646.00	10.9%	37.85	636.00	11%	38.42	695.00	12%	38.60	647.00	11%	38.53	630.00	10.6%	38.83	600.00	10%	40.76



ANEXO B1.2: Zona 2 (Velocidad de viento máxima 80 km/h)

RAVEN ACSR 110 AWG																		
Clima: Cálido																		
Altitud 0 msnm - 1000 msnm																		
Temperatura máxima (°C): 40																		
Temperatura media (°C): 26																		
Temperatura mínima (°C): 16																		
Temperatura coincidente (°C): 18																		
Velocidad del viento máxima (km/h): 80																		
Velocidad del viento promedio (km/h): 50																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1948.32																		
Peso (daN/m): 0.2118																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 22.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	438.00	22.5%	0.01	350.00	18.0%	0.01	334.00	17.1%	0.01	332.00	17.0%	0.01	259.00	13.3%	0.01	72.00	3.7%	0.04
20	438.00	22.5%	0.02	350.00	18.0%	0.03	338.00	17.3%	0.06	333.00	17.1%	0.04	261.00	13.4%	0.04	84.00	4.3%	0.13
30	438.00	22.5%	0.05	349.00	17.9%	0.07	346.00	17.8%	0.12	334.00	17.2%	0.08	263.00	13.5%	0.09	96.00	4.9%	0.26
40	438.00	22.5%	0.10	348.00	17.9%	0.12	354.00	18.2%	0.21	335.00	17.3%	0.15	266.00	13.7%	0.16	108.00	5.5%	0.39
50	438.00	22.5%	0.15	349.00	17.9%	0.19	363.00	18.6%	0.32	337.00	17.5%	0.22	269.00	13.8%	0.25	119.00	6.1%	0.56
60	436.00	22.4%	0.22	347.00	17.8%	0.28	371.00	19.0%	0.44	339.00	17.4%	0.32	272.00	14.0%	0.35	129.00	6.6%	0.74
70	429.00	22.0%	0.30	343.00	17.6%	0.38	377.00	19.4%	0.59	337.00	17.3%	0.44	272.00	14.0%	0.48	137.00	7.0%	0.95
80	422.00	21.7%	0.40	338.00	17.3%	0.50	381.00	19.6%	0.75	334.00	17.1%	0.58	272.00	14.0%	0.62	145.00	7.4%	1.17
90	414.00	21.2%	0.52	332.00	17.0%	0.65	386.00	19.8%	0.94	332.00	17.0%	0.73	272.00	14.0%	0.79	152.00	7.8%	1.41
100	406.00	20.8%	0.65	327.00	16.8%	0.81	390.00	20.0%	1.14	330.00	16.9%	0.91	273.00	14.0%	0.97	159.00	8.2%	1.67
110	397.00	20.4%	0.81	322.00	16.5%	0.99	393.00	20.2%	1.36	328.00	16.8%	1.10	272.00	14.0%	1.18	165.00	8.5%	1.94
120	388.00	19.8%	0.98	318.00	16.3%	1.20	396.00	20.3%	1.59	326.00	16.7%	1.32	272.00	14.0%	1.40	171.00	8.8%	2.23
130	379.00	19.5%	1.18	314.00	16.1%	1.43	399.00	20.5%	1.85	324.00	16.6%	1.55	272.00	14.0%	1.64	176.00	9.0%	2.54
140	372.00	19.1%	1.40	310.00	15.9%	1.68	401.00	20.6%	2.12	322.00	16.5%	1.81	272.00	14.0%	1.91	181.00	9.3%	2.87
150	363.00	18.6%	1.64	307.00	15.8%	1.94	403.00	20.7%	2.41	320.00	16.4%	2.09	272.00	14.0%	2.19	186.00	9.5%	3.21
160	356.00	18.3%	1.91	303.00	15.6%	2.24	405.00	20.8%	2.72	318.00	16.3%	2.38	272.00	14.0%	2.49	190.00	9.8%	3.57
170	349.00	17.9%	2.19	301.00	15.4%	2.55	407.00	20.9%	3.05	317.00	16.3%	2.70	272.00	14.0%	2.81	194.00	10.0%	3.95
180	343.00	17.6%	2.50	298.00	15.3%	2.88	408.00	20.9%	3.40	316.00	16.2%	3.04	272.00	14.0%	3.16	199.00	10.2%	4.34
190	337.00	17.3%	2.84	296.00	15.2%	3.24	408.00	20.9%	3.77	314.00	16.1%	3.39	272.00	14.0%	3.52	201.00	10.3%	4.75
200	332.00	17.0%	3.19	294.00	15.1%	3.61	409.00	21.0%	4.15	313.00	16.1%	3.77	272.00	14.0%	3.90	205.00	10.5%	5.18
210	327.00	16.8%	3.57	292.00	15.0%	4.00	410.00	21.0%	4.56	312.00	16.0%	4.16	272.00	14.0%	4.30	208.00	10.7%	5.62
220	322.00	16.5%	3.98	290.00	14.9%	4.42	411.00	21.1%	4.98	311.00	16.0%	4.58	272.00	14.0%	4.72	211.00	10.8%	6.08
230	319.00	16.4%	4.40	289.00	14.8%	4.85	411.00	21.1%	5.42	310.00	15.9%	5.02	272.00	14.0%	5.16	214.00	11.0%	6.55
240	315.00	16.2%	4.85	287.00	14.7%	5.31	411.00	21.1%	5.89	309.00	15.9%	5.48	272.00	14.0%	5.62	217.00	11.1%	7.04
250	312.00	16.0%	5.32	286.00	14.7%	5.79	412.00	21.1%	6.37	308.00	15.8%	5.96	271.00	13.9%	6.10	220.00	11.3%	7.54
260	308.00	15.8%	5.81	285.00	14.6%	6.29	412.00	21.1%	6.87	308.00	15.8%	6.46	271.00	13.9%	6.61	222.00	11.4%	8.06
270	306.00	15.7%	6.31	284.00	14.6%	6.80	412.00	21.1%	7.39	307.00	15.8%	6.97	271.00	13.9%	7.13	225.00	11.5%	8.60
280	303.00	15.6%	6.85	283.00	14.5%	7.34	411.00	21.1%	7.94	306.00	15.7%	7.51	271.00	13.9%	7.67	227.00	11.7%	9.18
290	301.00	15.4%	7.40	282.00	14.5%	7.90	411.00	21.1%	8.50	305.00	15.7%	8.07	271.00	13.9%	8.23	229.00	11.8%	9.73
300	299.00	15.3%	7.98	281.00	14.4%	8.48	411.00	21.1%	9.08	305.00	15.7%	8.65	271.00	13.9%	8.81	231.00	11.9%	10.33
310	297.00	15.2%	8.58	281.00	14.4%	9.08	411.00	21.1%	9.69	304.00	15.6%	9.25	271.00	13.9%	9.42	233.00	12.0%	10.95
320	296.00	15.2%	9.19	280.00	14.4%	9.70	411.00	21.1%	10.30	304.00	15.6%	9.87	271.00	13.9%	10.04	235.00	12.1%	11.58
330	294.00	15.1%	9.83	279.00	14.3%	10.35	410.00	21.0%	10.95	303.00	15.6%	10.52	270.00	13.9%	10.68	236.00	12.1%	12.24
340	292.00	15.0%	10.49	279.00	14.3%	11.01	410.00	21.0%	11.61	302.00	15.5%	11.18	270.00	13.9%	11.34	238.00	12.2%	12.91
350	291.00	14.9%	11.17	278.00	14.3%	11.69	410.00	21.0%	12.30	302.00	15.5%	11.86	270.00	13.9%	12.03	239.00	12.3%	13.61
360	290.00	14.9%	11.87	277.00	14.2%	12.40	409.00	21.0%	13.00	301.00	15.4%	12.57	270.00	13.9%	12.74	240.00	12.3%	14.32
370	288.00	14.8%	12.59	277.00	14.2%	13.12	409.00	21.0%	13.73	301.00	15.4%	13.29	270.00	13.9%	13.46	241.00	12.4%	15.06
380	287.00	14.7%	13.33	276.00	14.2%	13.86	409.00	21.0%	14.47	300.00	15.4%	14.03	270.00	13.9%	14.21	243.00	12.5%	15.81
390	286.00	14.7%	14.10	276.00	14.2%	14.63	408.00	20.9%	15.24	300.00	15.4%	14.80	270.00	13.9%	14.98	243.00	12.5%	16.59
400	285.00	14.6%	14.89	275.00	14.1%	15.42	408.00	20.9%	16.03	299.00	15.3%	15.59	269.00	13.8%	15.76	244.00	12.5%	17.39
410	284.00	14.6%	15.69	275.00	14.1%	16.23	407.00	20.9%	16.84	299.00	15.3%	16.40	269.00	13.8%	16.57	245.00	12.6%	18.20
420	283.00	14.5%	16.52	274.00	14.1%	17.06	407.00	20.9%	17.67	299.00	15.3%	17.23	269.00	13.8%	17.41	246.00	12.6%	19.04
430	283.00	14.5%	17.37	274.00	14.1%	17.91	406.00	20.8%	18.52	298.00	15.3%	18.08	269.00	13.8%	18.26	247.00	12.7%	19.90
440	282.00	14.5%	18.25	274.00	14.1%	18.79	406.00	20.8%	19.39	298.00	15.3%	18.96	269.00	13.8%	19.13	247.00	12.7%	20.78
450	281.00	14.4%	19.14	273.00	14.0%	19.68	405.00	20.8%	20.29	297.00	15.2%	19.85	268.00	13.8%	20.03	248.00	12.7%	21.68
460	280.00	14.4%	20.06	273.00	14.0%	20.60	405.00	20.8%	21.20	297.00	15.2%	20.77	268.00	13.8%	20.95	249.00	12.8%	22.60
470	279.00	14.3%	20.99	272.00	14.0%	21.54	404.00	20.7%	22.14	296.00	15.2%	21.70	268.00	13.8%	21.89	249.00	12.8%	23.55
480	279.00	14.3%	21.95	272.00	14.0%	22.50	404.00	20.7%	23.10	296.00	15.2%	22.66	268.00	13.8%	22.85	250.00	12.8%	24.51
490	278.00	14.3%	22.94	272.00	14.0%	23.48	403.00	20.7%	24.08	296.00	15.2%	23.65	268.00	13.8%	23.83	250.00	12.8%	25.46
500	277.00	14.3%	23.94	271.00	13.9%	24.49	403.00	20.7%	25.09	295.00	15.1%	24.67	267.00	13.7%	24.85	251.00	12.9%	26.41
510	277.00	14.2%	24.97	271.00	13.9%	25.51	402.00	20.6%	26.12	295.00	15.1%	25.68	267.00	13.7%	25.86	251.00	12.9%	27.54
520	276.00	14.2%	26.02	271.00	13.9%	26.56	401.00	20.6%	27.16	294.00	15.1%	26.73	267.00	13.7%	26.91	251.00	12.9%	28.60
530	275.00	14.1%	27.06	270.00	13.8%	27.61	401.00	20.6%	28.24	294.00	15.1%	27.81	267.00	13.7%	28.00	252.00	13.0%	29.70
540	275.00	14.1%	28.19	270.00	13.8%	28.74	400.00	20.5%	29.34	294.00	15.1%	28.90	267.00	13.7%	29.09	252.00	13.0%	30.77
550	274.00	14.1%	29.31	269.00	13.8%	29.85	400.00	20.5%	30.45	293.00	15.0%	30.02	266.00	13.7%	30.21	252.00	13.0%	31.90
560	274.00	14.0%	30.44	269.00	13.8%	30.97	399.00	20.5%	31.59	293.00	15.0%	31.10	266.00	13.7%	31.30	253.00	13.1%	33.07
570	273.00	14.0%	31.61	268.00	13.8%	32.15	398.00	20.4%	32.75	292.00	15.0%	32.33	266.00	13.7%	32.51	253.00	13.0%	34.21
580	273.00	14.0%	32.80	268.00	13.8%	33.34	398.00	20.4%	33.94	292.00	15.0%	33.51	266.00	13.7%	33.70	253.00	13.0%	35.40
590	272.00	13.9%	34.01	267.00	13.7%	34.58	397.00	20.4%	35.15	291.00	14.9%	34.70	265.00	13.6%	34.90	254.00	13.1%	36.63
600	272.00	14.0%	35.25	268.00	13.8%	35.79	396.00	20.3%	36.39	291.00	14.9%	35.96	265.00	13.6%	36.14	253.00	13.0%	37.86

PENGUIN ACSR 4/0 AWG

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	816.00	22%	0.01	655.00	18%	0.01	620.00	17%	0.01	620.00	17%	0.01	473.00	12.7%	0.01	122.00	3%	0.04
20	816.00	22%	0.03	654.00	18%	0.03	635.00	17%	0.05	620.00	17%	0.04	477.00	12.8%	0.04	150.00	4%	0.14
30	816.00	22%	0.06	653.00	18%	0.07	634.00	17%	0.11	621.00	17%	0.08	483.00	13.0%	0.10	176.00	5%	0.27
40	816.00	22%	0.10	652.00	18%	0.13	644.00	17%	0.19	623.00	17%	0.15	490.00	13.2%	0.17	201.00	5%	0.42
50	816.00	22%	0.16	651.00	18%	0.20	655.00	18%	0.29	625.00	17%	0.23	488.00	13.4%	0.27	224.00	6%	0.59
60	806.00	22%	0.24	643.00	17%	0.30	661.00	18%	0.41	622.00	17%	0.33	501.00	13.5%	0.38	243.00	7%	0.79
70	789.00	21%	0.33	633.00	17%	0.41	664.00	18%	0.55	614.00	17%	0.45	501.00	13.5%	0.52	260.00	7%	1.00
80	772.00	21%	0.44	621.00	17%	0.55	665.00	18%	0.71	607.00	16%	0.60	500.00	13.5%	0.68	275.00	7%	1.23
90	754.00	20%	0.57	609.00	16%	0.71	666.00	18%	0.89	600.00	16%	0.76	501.00	13.5%	0.86	289.00	8%	1.49
100	736.00	20%	0.72	598.00	16%	0.89	668.00	18%	1.09	593.00	16%	0.95	501.00	13.5%	1.06	302.00	8%	1.75
110	716.00	19%	0.90	589.00	16%	1.09	668.00	18%	1.32	587.00	16%	1.17	501.00	13.5%	1.28	314.00	8%	2.04
120	698.00	19%	1.09	579.00	16%	1.32	668.00	18%	1.56	582.00	16%	1.40	501.00	13.5%	1.53	325.00	9%	2.36
130	680.00	18%	1.32	571.00	15%	1.57	668.00	18%	1.83	576.00	16%	1.65	500.00	13.5%	1.79	335.00	9%	2.67
140	664.00	18%	1.57	564.00	15%	1.84	667.00	18%	2.12	572.00	16%	1.93	500.00	13.5%	2.08	345.00	9%	3.02
150	648.00	17%	1.84	557.00	15%	2.14	667.00	18%	2.42	567.00	15%	2.23	500.00	13.5%	2.39	354.00	10%	3.38
160	635.00	17%	2.14	552.00	15%	2.46	666.00	18%	2.75	563.00	15%	2.56	500.00	13.5%	2.72	362.00	10%	3.76
170	623.00	17%	2.46	547.00	15%	2.80	665.00	18%	3.10	560.00	15%	2.90	500.00	13.5%	3.07	369.00	10%	4.16
180	611.00	16%	2.81	543.00	15%	3.17	664.00	18%	3.47	557.00	15%	3.27	500.00	13.5%	3.44	376.00	10%	4.57
190	600.00	16%	3.19	538.00	14%	3.56	663.00	18%	3.87	554.00	15%	3.66	500.00	13.5%	3.83	383.00	10%	5.01
200	592.00	16%	3.59	535.00	14%	3.97	663.00	18%	4.28	552.00	15%	4.07	499.00	13.4%	4.25	389.00	10%	5.47
210	584.00	16%	4.01	532.00	14%	4.40	662.00	18%	4.72	550.00	15%	4.50	499.00	13.4%	4.69	394.00	11%	5.94
220	576.00	16%	4.46	529.00	14%	4.86	660.00	18%	5.18	547.00	15%	4.96	499.00	13.4%	5.15	399.00	11%	6.44
230	570.00	15%	4.92	526.00	14%	5.33	659.00	18%	5.65	545.00	15%	5.44	499.00	13.4%	5.63	404.00	11%	6.95
240	564.00	15%	5.42	524.00	14%	5.83	658.00	18%	6.16	543.00	15%	5.94	499.00	13.4%	6.13	409.00	11%	7.48
250	559.00	15%	5.93	522.00	14%	6.36	657.00	18%	6.68	542.00	15%	6.46	499.00	13.4%	6.66	414.00	11%	8.02
260	554.00	15%	6.47	520.00	14%	6.90	656.00	18%	7.22	540.00	15%	7.01	498.00	13.4%	7.20	418.00	11%	8.58
270	550.00	15%	7.02	518.00	14%	7.47	655.00	18%	7.79	539.00	15%	7.57	498.00	13.4%	7.77	423.00	11%	9.16
280	546.00	15%	7.62	517.00	14%	8.06	654.00	18%	8.38	538.00	14%	8.16	498.00	13.3%	8.36	428.00	11%	9.77
290	543.00	15%	8.23	515.00	14%	8.67	653.00	18%	8.99	536.00	14%	8.78	498.00	13.4%	8.98	430.00	12%	10.40
300	539.00	15%	8.86	514.00	14%	9.30	652.00	18%	9.63	535.00	14%	9.41	497.00	13.4%	9.61	433.00	12%	11.05
310	536.00	14%	9.51	513.00	14%	9.96	651.00	18%	10.28	534.00	14%	10.07	497.00	13.4%	10.27	436.00	12%	11.71
320	534.00	14%	10.19	511.00	14%	10.64	649.00	18%	10.96	533.00	14%	10.75	497.00	13.4%	10.95	439.00	12%	12.41
330	531.00	14%	10.89	510.00	14%	11.34	648.00	17%	11.67	532.00	14%	11.45	496.00	13.4%	11.65	441.00	12%	13.12
340	529.00	14%	11.61	509.00	14%	12.07	647.00	17%	12.39	531.00	14%	12.18	496.00	13.4%	12.38	444.00	12%	13.85
350	527.00	14%	12.36	508.00	14%	12.81	646.00	17%	13.14	530.00	14%	12.92	496.00	13.4%	13.13	446.00	12%	14.61
360	525.00	14%	13.13	507.00	14%	13.58	645.00	17%	13.91	529.00	14%	13.69	495.00	13.3%	13.90	448.00	12%	15.39
370	523.00	14%	13.92	506.00	14%	14.38	644.00	17%	14.70	528.00	14%	14.49	495.00	13.3%	14.70	450.00	12%	16.19
380	521.00	14%	14.74	505.00	14%	15.19	643.00	17%	15.51	527.00	14%	15.30	495.00	13.3%	15.51	451.00	12%	17.01
390	519.00	14%	15.58	504.00	14%	16.03	642.00	17%	16.36	526.00	14%	16.14	494.00	13.3%	16.35	453.00	12%	17.86
400	517.00	14%	16.44	503.00	14%	16.90	641.00	17%	17.22	525.00	14%	17.01	494.00	13.3%	17.22	454.00	12%	18.73
410	516.00	14%	17.32	503.00	14%	17.78	640.00	17%	18.10	525.00	14%	17.89	494.00	13.3%	18.10	456.00	12%	19.62
420	514.00	14%	18.24	502.00	14%	18.70	639.00	17%	19.02	524.00	14%	18.91	493.00	13.3%	19.02	457.00	12%	20.54
430	513.00	14%	19.17	501.00	13%	19.63	638.00	17%	19.95	523.00	14%	19.74	493.00	13.3%	19.95	458.00	12%	21.48
440	512.00	14%	20.13	500.00	13%	20.59	637.00	17%	20.91	522.00	14%	20.70	493.00	13.3%	20.91	459.00	12%	22.44
450	510.00	14%	21.11	499.00	13%	21.57	635.00	17%	21.89	522.00	14%	21.68	492.00	13.2%	21.89	460.00	12%	23.43
460	509.00	14%	22.12	499.00	13%	22.58	634.00	17%	22.90	521.00	14%	22.69	492.00	13.2%	22.90	461.00	12%	24.45
470	508.00	14%	23.15	498.00	13%	23.61	633.00	17%	23.93	520.00	14%	23.72	491.00	13.2%	23.93	462.00	12%	25.48
480	507.00	14%	24.20	497.00	13%	24.67	632.00	17%	24.98	519.00	14%	24.77	491.00	13.2%	24.99	462.00	12%	26.54
490	506.00	14%	25.28	496.00	13%	25.74	631.00	17%	26.06	519.00	14%	25.85	490.00	13.2%	26.07	463.00	12%	27.62
500	504.00	14%	26.39	496.00	13%	26.85	630.00	17%	27.16	518.00	14%	26.96	490.00	13.2%	27.17	464.00	12%	28.73
510	503.00	14%	27.52	495.00	13%	27.97	629.00	17%	28.29	517.00	14%	28.09	489.00	13.2%	28.30	464.00	12%	29.86
520	502.00	14%	28.67	494.00	13%	29.14	628.00	17%	29.45	516.00	14%	29.24	489.00	13.2%	29.46	465.00	13%	31.02
530	501.00	13%	29.85	494.00	13%	30.32	627.00	17%	30.63	515.00	14%	30.42	488.00	13.1%	30.64	465.00	13%	32.21
540	500.00	13%	31.06	493.00	13%	31.52	626.00	17%	31.83	515.00	14%	31.62	488.00	13.1%	31.84	466.00	13%	33.41
550	499.00	13%	32.29	492.00	13%	32.75	625.00	17%	33.06	514.00	14%	32.86	487.00	13.1%	33.06	466.00	13%	34.65
560	498.00	13%	33.54	491.00	13%	34.01	624.00	17%	34.32	513.00	14%	34.12	487.00	13.1%	34.33	466.00	13%	35.90
570	497.00	13%	34.83	491.00	13%	35.29	623.00	17%	35.60	513.00	14%	35.40	486.00	13.1%	35.62	466.00	13%	37.19
580	496.00	13%	36.14	490.00	13%	36.61	622.00	17%	36.91	512.00	14%	36.71	486.00	13.1%	36.93	466.00	13%	38.51
590	495.00	13%	37.48	489.00	13%	37.94	620.00	17%	38.25	511.00	14%	38.05	485.00	13.1%	38.27	466.00	13%	39.84
600	494.00	13%	38.84	489.00	13%	39.30	619.00	17%	39.61	510.00	14%	39.41	485.00	13.1%	39.63	466.00	13%	41.20

WAXWING ACSR 266.8 KCMIL																		
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50																		
Propiedades físicas del conductor: Tensión de rotura (daN): 3060,38 Peso (daN/m): 0.4224																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 33% Operación diaria (EDS): 17%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1009.00	33.0%	0.01	709.00	23%	0.01	670.00	21.9%	0.01	668.00	21.8%	0.01	504.00	16.5%	0.01	98.00	3.2%	0.05
20	1009.00	33.0%	0.02	709.00	23%	0.03	675.00	22.1%	0.05	669.00	21.9%	0.03	507.00	16.6%	0.04	117.00	3.8%	0.18
30	1009.00	33.0%	0.05	708.00	23%	0.07	684.00	22.4%	0.10	669.00	21.9%	0.08	512.00	16.7%	0.09	137.00	4.5%	0.35
40	1009.00	33.0%	0.08	705.00	23%	0.12	694.00	22.7%	0.18	671.00	21.9%	0.14	518.00	16.9%	0.16	156.00	5.1%	0.54
50	1009.00	33.0%	0.13	703.00	23%	0.19	704.00	23.0%	0.28	673.00	22.0%	0.21	526.00	17.2%	0.25	173.00	5.7%	0.76
60	1009.00	33.0%	0.19	703.00	23%	0.27	718.00	23.5%	0.39	675.00	22.1%	0.31	534.00	17.4%	0.36	189.00	6.2%	1.00
70	995.00	32.5%	0.26	692.00	23%	0.37	721.00	23.6%	0.52	670.00	21.9%	0.42	535.00	17.5%	0.48	208.00	6.8%	1.24
80	976.00	31.9%	0.35	681.00	22%	0.50	724.00	23.7%	0.68	662.00	21.6%	0.55	535.00	17.5%	0.63	230.00	7.5%	1.47
90	957.00	31.3%	0.45	669.00	22%	0.64	727.00	23.8%	0.85	656.00	21.4%	0.70	535.00	17.5%	0.80	250.00	8.2%	1.71
100	935.00	30.6%	0.57	657.00	21%	0.80	728.00	23.8%	1.04	648.00	21.2%	0.88	535.00	17.5%	0.99	268.00	8.8%	1.97
110	912.00	29.8%	0.70	646.00	21%	0.99	730.00	23.9%	1.25	642.00	21.0%	1.07	535.00	17.5%	1.19	285.00	9.3%	2.24
120	888.00	28.9%	0.85	636.00	21%	1.20	731.00	23.9%	1.48	636.00	20.9%	1.29	535.00	17.5%	1.42	301.00	9.8%	2.53
130	865.00	28.3%	1.03	626.00	20%	1.43	732.00	23.9%	1.73	630.00	20.6%	1.52	535.00	17.5%	1.67	315.00	10.3%	2.83
140	839.00	27.4%	1.23	617.00	20%	1.68	731.00	23.9%	2.00	624.00	20.4%	1.78	534.00	17.4%	1.94	329.00	10.8%	3.15
150	816.00	26.7%	1.46	610.00	20%	1.95	732.00	23.9%	2.29	619.00	20.2%	2.06	534.00	17.4%	2.22	341.00	11.1%	3.48
160	794.00	25.9%	1.70	603.00	20%	2.24	732.00	23.9%	2.59	615.00	20.1%	2.36	534.00	17.4%	2.53	353.00	11.5%	3.83
170	772.00	25.2%	1.98	597.00	20%	2.56	732.00	23.9%	2.92	611.00	20.0%	2.68	534.00	17.4%	2.86	364.00	11.9%	4.20
180	752.00	24.6%	2.27	591.00	19%	2.90	731.00	23.9%	3.27	607.00	19.8%	3.02	534.00	17.4%	3.20	374.00	12.2%	4.59
190	733.00	24.0%	2.60	586.00	19%	3.25	730.00	23.9%	3.63	603.00	19.7%	3.38	534.00	17.4%	3.57	387.00	12.5%	4.99
200	716.00	23.4%	2.95	582.00	19%	3.63	729.00	23.8%	4.02	600.00	19.6%	3.76	534.00	17.4%	3.96	391.00	12.8%	5.41
210	701.00	22.9%	3.32	577.00	19%	4.04	729.00	23.8%	4.43	598.00	19.5%	4.16	534.00	17.4%	4.37	399.00	13.0%	5.85
220	687.00	22.4%	3.72	574.00	19%	4.46	728.00	23.8%	4.85	595.00	19.4%	4.58	533.00	17.4%	4.79	406.00	13.3%	6.30
230	674.00	22.0%	4.15	571.00	19%	4.90	728.00	23.8%	5.30	593.00	19.4%	5.03	533.00	17.4%	5.24	413.00	13.5%	6.78
240	663.00	21.7%	4.59	568.00	18%	5.36	726.00	23.7%	5.77	591.00	19.3%	5.49	533.00	17.4%	5.71	419.00	13.7%	7.27
250	652.00	21.3%	5.06	565.00	18%	5.85	725.00	23.7%	6.26	588.00	19.2%	5.98	533.00	17.4%	6.20	425.00	13.9%	7.78
260	643.00	21.0%	5.56	563.00	18%	6.35	724.00	23.7%	6.76	587.00	19.2%	6.48	533.00	17.4%	6.71	430.00	14.1%	8.31
270	634.00	20.7%	6.07	560.00	18%	6.88	723.00	23.6%	7.29	585.00	19.1%	7.01	532.00	17.4%	7.24	435.00	14.2%	8.86
280	627.00	20.5%	6.61	558.00	18%	7.42	722.00	23.6%	7.84	583.00	19.0%	7.59	532.00	17.4%	7.79	440.00	14.4%	9.43
290	620.00	20.3%	7.17	556.00	18%	7.99	721.00	23.6%	8.41	582.00	19.0%	8.13	532.00	17.4%	8.36	444.00	14.5%	10.02
300	614.00	20.1%	7.75	555.00	18%	8.58	720.00	23.5%	9.00	580.00	18.9%	8.72	532.00	17.4%	8.95	448.00	14.6%	10.62
310	608.00	19.9%	8.35	553.00	18%	9.19	719.00	23.5%	9.61	579.00	18.9%	9.32	532.00	17.4%	9.56	452.00	14.8%	11.25
320	603.00	19.7%	8.98	551.00	18%	9.82	718.00	23.5%	10.24	578.00	18.9%	9.96	531.00	17.4%	10.19	455.00	14.9%	11.90
330	598.00	19.5%	9.62	550.00	18%	10.47	717.00	23.4%	10.89	576.00	18.8%	10.61	531.00	17.4%	10.85	459.00	15.0%	12.56
340	594.00	19.4%	10.30	548.00	18%	11.15	716.00	23.4%	11.56	575.00	18.8%	11.28	531.00	17.4%	11.52	462.00	15.1%	13.25
350	590.00	19.3%	10.99	547.00	18%	11.84	714.00	23.3%	12.26	574.00	18.8%	11.98	530.00	17.3%	12.22	464.00	15.2%	13.96
360	586.00	19.1%	11.70	546.00	18%	12.55	714.00	23.3%	12.97	573.00	18.7%	12.69	530.00	17.3%	12.93	467.00	15.3%	14.68
370	582.00	19.0%	12.43	545.00	18%	13.26	712.00	23.3%	13.71	572.00	18.7%	13.43	530.00	17.3%	13.67	470.00	15.4%	15.43
380	579.00	18.9%	13.19	544.00	18%	14.05	711.00	23.2%	14.47	571.00	18.7%	14.19	529.00	17.3%	14.43	472.00	15.4%	16.20
390	576.00	18.8%	13.96	543.00	18%	14.83	710.00	23.2%	15.25	570.00	18.6%	14.97	529.00	17.3%	15.21	474.00	15.5%	16.99
400	574.00	18.7%	14.77	542.00	18%	15.63	709.00	23.2%	16.05	569.00	18.6%	15.77	529.00	17.3%	16.02	476.00	15.6%	17.80
410	571.00	18.7%	15.59	541.00	18%	16.46	708.00	23.1%	16.87	568.00	18.6%	16.59	528.00	17.3%	16.84	478.00	15.6%	18.64
420	568.00	18.6%	16.43	540.00	18%	17.30	707.00	23.1%	17.71	567.00	18.5%	17.44	528.00	17.3%	17.69	479.00	15.7%	19.49
430	566.00	18.5%	17.29	539.00	18%	18.17	706.00	23.1%	18.58	566.00	18.5%	18.30	528.00	17.3%	18.55	481.00	15.7%	20.36
440	564.00	18.4%	18.18	538.00	18%	19.05	705.00	23.0%	19.47	565.00	18.5%	19.19	527.00	17.2%	19.44	482.00	15.7%	21.26
450	562.00	18.4%	19.09	537.00	18%	19.96	704.00	23.0%	20.38	565.00	18.5%	20.10	527.00	17.2%	20.35	484.00	15.8%	22.17
460	560.00	18.3%	20.02	536.00	18%	20.90	703.00	23.0%	21.31	564.00	18.4%	21.03	527.00	17.2%	21.28	485.00	15.8%	23.11
470	558.00	18.2%	20.98	535.00	17%	21.85	702.00	22.9%	22.26	563.00	18.4%	21.98	526.00	17.2%	22.24	486.00	15.9%	24.07
480	556.00	18.2%	21.95	535.00	17%	22.83	700.00	22.9%	23.24	562.00	18.4%	22.97	526.00	17.2%	23.22	487.00	15.9%	25.06
490	554.00	18.1%	22.95	534.00	17%	23.83	699.00	22.8%	24.24	561.00	18.3%	23.96	525.00	17.2%	24.22	488.00	15.9%	26.06
500	552.00	18.0%	23.97	533.00	17%	24.85	698.00	22.8%	25.26	561.00	18.3%	24.99	525.00	17.2%	25.24	489.00	16.0%	27.09
510	551.00	18.0%	25.02	532.00	17%	25.90	697.00	22.8%	26.30	560.00	18.3%	26.03	524.00	17.1%	26.28	490.00	16.0%	28.13
520	549.00	17.9%	26.09	532.00	17%	26.96	696.00	22.7%	27.37	559.00	18.3%	27.10	524.00	17.1%	27.35	491.00	16.0%	29.21
530	548.00	17.9%	27.17	531.00	17%	28.05	695.00	22.7%	28.46	558.00	18.2%	28.19	524.00	17.1%	28.44	492.00	16.1%	30.31
540	546.00	17.8%	28.29	530.00	17%	29.17	694.00	22.7%	29.57	557.00	18.2%	29.30	523.00	17.1%	29.56	492.00	16.1%	31.43
550	545.00	17.8%	29.43	529.00	17%	30.31	693.00	22.6%	30.71	557.00	18.2%	30.44	523.00	17.1%	30.70	493.00	16.1%	32.57
560	544.00	17.8%	30.59	529.00	17%	31.46	691.00	22.6%	31.87	556.00	18.2%	31.60	522.00	17.1%	31.96	493.00	16.1%	33.73
570	542.00	17.7%	31.78	528.00	17%	32.65	690.00	22.5%	33.05	555.00	18.1%	32.79	522.00	17.1%	33.04	494.00	16.1%	34.92
580	541.00	17.7%	32.99	527.00	17%	33.86	689.00	22.5%	34.26	554.00	18.1%	34.00	521.00	17.0%	34.25	494.00	16.1%	36.13
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LINNET ACSR 336.4 KCMIL															
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50															
Propiedades físicas del conductor: Tensión de rotura (daN): 6271.99 Peso (daN/m): 0.6741															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 12%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1190.00	19.0%	0.01	952.00	15%	0.01	899.00	14.3%	0.01	896.00	14.3%	0.01	876.00	10.8%	0.01
20	1190.00	19.0%	0.03	949.00	15%	0.04	905.00	14.6%	0.05	895.00	14.3%	0.04	882.00	10.9%	0.05
30	1190.00	19.0%	0.06	944.00	15%	0.08	912.00	14.6%	0.11	896.00	14.3%	0.09	892.00	11.0%	0.11
40	1190.00	19.0%	0.11	944.00	15%	0.14	925.00	14.7%	0.19	898.00	14.3%	0.16	705.00	11.2%	0.19
50	1190.00	19.0%	0.18	941.00	15%	0.22	936.00	14.9%	0.29	899.00	14.3%	0.25	719.00	11.5%	0.29
60	1190.00	19.0%	0.25	940.00	15%	0.32	952.00	15.2%	0.41	906.00	14.4%	0.35	734.00	11.7%	0.41
70	1190.00	19.0%	0.35	940.00	15%	0.44	966.00	15.4%	0.54	910.00	14.5%	0.47	750.00	12.0%	0.55
80	1163.00	18.5%	0.46	922.00	15%	0.59	966.00	15.4%	0.71	899.00	14.3%	0.63	752.00	12.0%	0.72
90	1131.00	18.0%	0.60	905.00	14%	0.75	952.00	15.3%	0.90	886.00	14.1%	0.80	751.00	12.0%	0.91
100	1100.00	17.5%	0.77	888.00	14%	0.95	959.00	15.3%	1.11	875.00	14.0%	1.00	751.00	12.0%	1.12
110	1069.00	17.0%	0.96	874.00	14%	1.17	956.00	15.2%	1.34	869.00	13.9%	1.23	751.00	12.0%	1.36
120	1039.00	16.6%	1.17	860.00	14%	1.41	954.00	15.2%	1.59	857.00	13.7%	1.48	751.00	12.0%	1.62
130	1011.00	16.1%	1.41	848.00	14%	1.68	950.00	15.1%	1.87	848.00	13.5%	1.75	751.00	12.0%	1.90
140	985.00	15.7%	1.68	838.00	13%	1.97	947.00	15.1%	2.17	841.00	13.4%	2.04	751.00	12.0%	2.20
150	961.00	15.3%	1.97	829.00	13%	2.29	944.00	15.1%	2.49	835.00	13.3%	2.36	750.00	12.0%	2.53
160	940.00	15.0%	2.30	820.00	13%	2.63	940.00	15.0%	2.84	828.00	13.2%	2.71	750.00	12.0%	2.88
170	922.00	14.7%	2.64	814.00	13%	2.99	938.00	15.0%	3.21	824.00	13.1%	3.07	750.00	12.0%	3.25
180	906.00	14.4%	3.02	807.00	13%	3.38	935.00	14.9%	3.60	819.00	13.1%	3.47	750.00	12.0%	3.64
190	889.00	14.2%	3.42	802.00	13%	3.80	932.00	14.9%	4.02	815.00	13.0%	3.88	749.00	11.9%	4.06
200	877.00	14.0%	3.85	797.00	13%	4.23	930.00	14.8%	4.45	811.00	12.9%	4.32	749.00	11.9%	4.50
210	866.00	13.8%	4.30	793.00	13%	4.69	927.00	14.8%	4.92	808.00	12.8%	4.78	749.00	11.9%	4.97
220	855.00	13.6%	4.77	789.00	13%	5.17	926.00	14.8%	5.40	805.00	12.8%	5.26	749.00	11.9%	5.45
230	846.00	13.5%	5.27	785.00	13%	5.68	923.00	14.7%	5.91	802.00	12.8%	5.77	748.00	11.9%	5.96
240	838.00	13.4%	5.80	782.00	12%	6.21	921.00	14.7%	6.44	800.00	12.8%	6.30	748.00	11.9%	6.49
250	830.00	13.2%	6.35	779.00	12%	6.77	919.00	14.7%	6.99	797.00	12.7%	6.85	748.00	11.9%	7.05
260	824.00	13.1%	6.92	776.00	12%	7.34	917.00	14.6%	7.57	795.00	12.7%	7.43	747.00	11.9%	7.63
270	818.00	13.0%	7.52	774.00	12%	7.95	915.00	14.6%	8.17	793.00	12.6%	8.03	747.00	11.9%	8.23
280	812.00	12.9%	8.14	772.00	12%	8.57	913.00	14.6%	8.80	791.00	12.6%	8.66	747.00	11.9%	8.86
290	807.00	12.9%	8.79	770.00	12%	9.22	911.00	14.5%	9.45	790.00	12.6%	9.31	746.00	11.9%	9.51
300	803.00	12.8%	9.46	768.00	12%	9.89	909.00	14.5%	10.12	788.00	12.6%	9.98	746.00	11.9%	10.19
310	799.00	12.7%	10.16	766.00	12%	10.59	908.00	14.5%	10.82	786.00	12.5%	10.68	745.00	11.8%	10.89
320	795.00	12.7%	10.87	764.00	12%	11.31	905.00	14.4%	11.54	785.00	12.5%	11.40	745.00	11.9%	11.61
330	791.00	12.6%	11.62	763.00	12%	12.05	904.00	14.4%	12.28	783.00	12.5%	12.14	744.00	11.9%	12.35
340	788.00	12.6%	12.39	761.00	12%	12.83	902.00	14.4%	13.05	782.00	12.5%	12.92	744.00	11.9%	13.12
350	785.00	12.5%	13.18	759.00	12%	13.62	901.00	14.4%	13.85	780.00	12.4%	13.71	743.00	11.8%	13.92
360	782.00	12.5%	14.00	758.00	12%	14.44	899.00	14.3%	14.67	779.00	12.4%	14.53	743.00	11.8%	14.74
370	778.00	12.4%	14.84	757.00	12%	15.28	898.00	14.3%	15.51	778.00	12.4%	15.37	742.00	11.8%	15.59
380	776.00	12.4%	15.71	755.00	12%	16.15	896.00	14.3%	16.38	776.00	12.4%	16.24	741.00	11.8%	16.45
390	774.00	12.3%	16.60	754.00	12%	17.04	894.00	14.3%	17.27	775.00	12.4%	17.13	741.00	11.8%	17.39
400	772.00	12.3%	17.52	753.00	12%	17.86	893.00	14.3%	18.19	774.00	12.3%	18.05	740.00	11.8%	18.27
410	769.00	12.3%	18.46	751.00	12%	18.91	891.00	14.2%	19.13	773.00	12.3%	18.99	740.00	11.8%	19.21
420	767.00	12.2%	19.43	750.00	12%	19.89	890.00	14.2%	20.10	771.00	12.3%	19.96	739.00	11.8%	20.18
430	765.00	12.2%	20.42	748.00	12%	20.87	888.00	14.2%	21.08	770.00	12.3%	20.95	738.00	11.8%	21.17
440	763.00	12.2%	21.44	748.00	12%	21.89	887.00	14.1%	22.11	769.00	12.3%	21.98	738.00	11.8%	22.19
450	761.00	12.1%	22.49	747.00	12%	22.93	885.00	14.1%	23.16	768.00	12.2%	23.02	737.00	11.8%	23.24
460	759.00	12.1%	23.55	745.00	12%	24.01	883.00	14.1%	24.23	767.00	12.2%	24.10	736.00	11.7%	24.31
470	758.00	12.1%	24.66	744.00	12%	25.11	882.00	14.1%	25.33	766.00	12.2%	25.19	735.00	11.7%	25.41
480	756.00	12.1%	25.78	743.00	12%	26.23	880.00	14.0%	26.45	765.00	12.2%	26.32	735.00	11.7%	26.53
490	754.00	12.0%	26.93	742.00	12%	27.38	879.00	14.0%	27.60	763.00	12.2%	27.47	734.00	11.7%	27.69
500	753.00	12.0%	28.11	741.00	12%	28.56	877.00	14.0%	28.78	762.00	12.1%	28.65	733.00	11.7%	28.86
510	751.00	12.0%	29.32	740.00	12%	29.77	876.00	14.0%	29.99	761.00	12.1%	29.85	732.00	11.7%	30.07
520	749.00	11.9%	30.55	739.00	12%	31.00	874.00	13.9%	31.21	760.00	12.1%	31.08	732.00	11.7%	31.30
530	748.00	11.9%	31.81	737.00	12%	32.26	873.00	13.9%	32.47	759.00	12.1%	32.34	731.00	11.7%	32.56
540	746.00	11.9%	33.09	736.00	12%	33.54	871.00	13.9%	33.76	757.00	12.1%	33.63	730.00	11.6%	33.85
550	745.00	11.9%	34.41	735.00	12%	34.86	870.00	13.9%	35.07	756.00	12.1%	34.95	729.00	11.6%	34.66
560	743.00	11.8%	35.76	734.00	12%	36.20	868.00	13.8%	36.42	755.00	12.0%	36.29	728.00	11.6%	36.51
570	742.00	11.8%	37.13	733.00	12%	37.58	866.00	13.8%	37.79	754.00	12.0%	37.66	727.00	11.6%	37.88
580	740.00	11.8%	38.53	732.00	12%	38.97	865.00	13.8%	39.18	753.00	12.0%	39.06	726.00	11.6%	39.28
590	739.00	11.8%	39.96	731.00	12%	40.40	863.00	13.8%	40.61	752.00	12.0%	40.49	725.00	11.6%	40.71
600	737.00	11.8%	41.42	729.00	12%	41.86	862.00	13.7%	42.08	750.00	12.0%	41.95	724.00	11.5%	42.17

AMES AAAC 77.47 KCMIL															
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50															
Propiedades físicas del conductor: Tensión de rotura (daN): 1245.5 Peso (daN/m): 0.1060															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 23.5% Operación diaria (EDS): 14%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	292.00	23.4%	0.00	221.00	17.7%	0.01	211.00	16.9%	0.02	209.00	16.8%	0.01	164.00	13.2%	0.01
20	292.00	23.4%	0.02	220.00	17.7%	0.02	214.00	17.2%	0.06	210.00	16.9%	0.03	164.00	13.2%	0.03
30	292.00	23.4%	0.04	220.00	17.7%	0.05	220.00	17.7%	0.14	211.00	16.9%	0.08	165.00	13.2%	0.07
40	292.00	23.4%	0.07	220.00	17.7%	0.10	227.00	18.2%	0.23	212.00	17.0%	0.13	166.00	13.3%	0.13
50	292.00	23.4%	0.11	220.00	17.7%	0.15	234.00	18.8%	0.35	214.00	17.2%	0.21	167.00	13.4%	0.20
60	292.00	23.4%	0.16	220.00	17.7%	0.22	242.00	19.4%	0.48	216.00	17.3%	0.29	169.00	13.6%	0.28
70	292.00	23.4%	0.22	220.00	17.7%	0.30	250.00	20.1%	0.63	217.00	17.4%	0.39	171.00	13.7%	0.38
80	292.00	23.4%	0.29	220.00	17.7%	0.39	257.00	20.6%	0.79	220.00	17.7%	0.51	173.00	13.9%	0.49
90	291.00	23.4%	0.37	220.00	17.7%	0.49	264.00	21.2%	0.96	221.00	17.7%	0.63	174.00	14.0%	0.62
100	288.00	23.1%	0.46	218.00	17.5%	0.61	270.00	21.7%	1.16	221.00	17.7%	0.78	174.00	14.0%	0.76
110	284.00	22.8%	0.56	215.00	17.3%	0.75	275.00	22.1%	1.36	221.00	17.7%	0.94	174.00	14.0%	0.92
120	281.00	22.6%	0.68	213.00	17.1%	0.90	280.00	22.5%	1.58	222.00	17.8%	1.11	174.00	14.0%	1.10
130	277.00	22.2%	0.81	211.00	16.9%	1.06	284.00	22.8%	1.82	221.00	17.7%	1.30	174.00	14.0%	1.29
140	273.00	21.9%	0.95	209.00	16.8%	1.25	288.00	23.1%	2.07	221.00	17.7%	1.51	174.00	14.0%	1.49
150	268.00	21.5%	1.12	206.00	16.5%	1.45	292.00	23.4%	2.33	221.00	17.7%	1.73	174.00	14.0%	1.71
160	263.00	21.1%	1.29	204.00	16.4%	1.66	296.00	23.8%	2.60	221.00	17.7%	1.96	174.00	14.0%	1.95
170	259.00	20.8%	1.48	202.00	16.2%	1.90	299.00	24.0%	2.89	221.00	17.7%	2.21	174.00	14.0%	2.20
180	254.00	20.4%	1.69	200.00	16.1%	2.15	302.00	24.2%	3.19	220.00	17.7%	2.48	174.00	14.0%	2.47
190	251.00	20.2%	1.91	199.00	16.0%	2.41	305.00	24.5%	3.51	220.00	17.7%	2.76	174.00	14.0%	2.75
200	246.00	19.8%	2.15	197.00	15.8%	2.69	308.00	24.7%	3.84	220.00	17.7%	3.05	174.00	14.0%	3.05
210	242.00	19.4%	2.41	196.00	15.7%	2.99	310.00	24.9%	4.18	220.00	17.7%	3.37	174.00	14.0%	3.36
220	238.00	19.1%	2.70	194.00	15.6%	3.31	313.00	25.1%	4.54	219.00	17.6%	3.69	174.00	14.0%	3.69
230	234.00	18.8%	2.99	193.00	15.5%	3.64	315.00	25.3%	4.90	219.00	17.6%	4.03	174.00	14.0%	4.04
240	231.00	18.5%	3.31	192.00	15.4%	3.99	317.00	25.5%	5.29	219.00	17.6%	4.39	174.00	14.0%	4.40
250	228.00	18.3%	3.64	191.00	15.3%	4.35	319.00	25.6%	5.68	219.00	17.6%	4.76	174.00	14.0%	4.77
260	225.00	18.1%	3.99	190.00	15.3%	4.73	321.00	25.8%	6.09	218.00	17.5%	5.15	174.00	14.0%	5.16
270	221.00	17.7%	4.37	188.00	15.1%	5.13	322.00	25.9%	6.52	218.00	17.5%	5.55	174.00	14.0%	5.57
280	219.00	17.6%	4.76	188.00	15.1%	5.55	324.00	26.0%	6.96	218.00	17.5%	5.98	174.00	14.0%	5.99
290	216.00	17.3%	5.17	187.00	15.0%	5.97	325.00	26.1%	7.42	217.00	17.4%	6.41	174.00	14.0%	6.43
300	214.00	17.2%	5.59	186.00	14.9%	6.42	326.00	26.2%	7.89	217.00	17.4%	6.86	174.00	14.0%	6.88
310	211.00	16.9%	6.03	185.00	14.8%	6.88	328.00	26.3%	8.36	217.00	17.4%	7.32	174.00	14.0%	7.35
320	209.00	16.8%	6.49	185.00	14.9%	7.36	329.00	26.4%	8.87	217.00	17.4%	7.81	173.00	13.9%	7.83
330	207.00	16.6%	6.97	184.00	14.8%	7.86	330.00	26.5%	9.38	216.00	17.3%	8.31	173.00	13.9%	8.34
340	205.00	16.5%	7.47	183.00	14.7%	8.37	331.00	26.6%	9.91	216.00	17.3%	8.82	173.00	13.9%	8.85
350	204.00	16.4%	7.98	183.00	14.7%	8.89	331.00	26.6%	10.45	216.00	17.3%	9.35	173.00	13.9%	9.38
360	202.00	16.2%	8.52	182.00	14.6%	9.44	332.00	26.7%	11.01	215.00	17.3%	9.90	173.00	13.9%	9.93
370	201.00	16.1%	9.06	182.00	14.6%	10.00	333.00	26.7%	11.58	215.00	17.3%	10.46	173.00	13.9%	10.49
380	199.00	16.0%	9.63	181.00	14.5%	10.57	333.00	26.7%	12.17	215.00	17.3%	11.04	173.00	13.9%	11.07
390	198.00	15.9%	10.20	181.00	14.5%	11.17	334.00	26.8%	12.77	215.00	17.3%	11.63	173.00	13.9%	11.67
400	197.00	15.8%	10.81	180.00	14.5%	11.77	334.00	26.8%	13.39	214.00	17.2%	12.24	173.00	13.9%	12.28
410	195.00	15.7%	11.42	180.00	14.5%	12.40	335.00	26.9%	14.02	214.00	17.2%	12.86	173.00	13.9%	12.90
420	194.00	15.6%	12.06	180.00	14.5%	13.04	335.00	26.9%	14.68	214.00	17.2%	13.51	173.00	13.9%	13.55
430	193.00	15.5%	12.71	179.00	14.4%	13.70	335.00	26.9%	15.34	214.00	17.2%	14.17	173.00	13.9%	14.21
440	192.00	15.4%	13.37	179.00	14.4%	14.37	336.00	27.0%	16.02	213.00	17.1%	14.83	173.00	13.9%	14.88
450	191.00	15.3%	14.06	179.00	14.4%	15.06	336.00	27.0%	16.72	213.00	17.1%	15.52	173.00	13.9%	15.58
460	190.00	15.2%	14.76	178.00	14.3%	15.77	336.00	27.0%	17.44	213.00	17.1%	16.23	173.00	13.9%	16.29
470	190.00	15.3%	15.47	178.00	14.3%	16.49	337.00	27.1%	18.16	213.00	17.1%	16.96	173.00	13.9%	17.01
480	189.00	15.2%	16.21	178.00	14.3%	17.22	337.00	27.1%	18.90	212.00	17.0%	17.70	172.00	13.8%	17.75
490	188.00	15.1%	16.96	177.00	14.2%	17.98	337.00	27.1%	19.67	212.00	17.0%	18.45	172.00	13.8%	18.51
500	187.00	15.0%	17.73	177.00	14.2%	18.75	337.00	27.1%	20.44	212.00	17.0%	19.22	172.00	13.8%	19.28
510	187.00	15.0%	18.51	177.00	14.2%	19.54	337.00	27.1%	21.24	212.00	17.0%	20.01	172.00	13.8%	20.07
520	186.00	14.9%	19.31	177.00	14.2%	20.35	337.00	27.1%	22.04	211.00	16.9%	20.82	172.00	13.8%	20.88
530	185.00	14.9%	20.14	176.00	14.1%	21.17	337.00	27.1%	22.87	211.00	16.9%	21.64	172.00	13.8%	21.70
540	185.00	14.9%	20.97	176.00	14.1%	22.01	337.00	27.1%	23.71	211.00	16.9%	22.47	172.00	13.8%	22.54
550	184.00	14.8%	21.82	176.00	14.1%	22.87	337.00	27.1%	24.57	211.00	16.9%	23.34	172.00	13.8%	23.40
560	184.00	14.8%	22.70	176.00	14.1%	23.74	337.00	27.1%	25.45	210.00	16.9%	24.21	172.00	13.8%	24.28
570	183.00	14.7%	23.58	175.00	14.1%	24.63	337.00	27.1%	26.34	210.00	16.9%	25.10	172.00	13.8%	25.16
580	183.00	14.7%	24.48	175.00	14.1%	25.53	337.00	27.1%	27.25	210.00	16.9%	26.00	172.00	13.8%	26.07
590	182.00	14.6%	25.41	175.00	14.1%	26.45	337.00	27.1%	28.17	210.00	16.9%	26.92	172.00	13.7%	26.99
600	182.00	14.6%	26.35	175.00	14.1%	27.40	336.00	27.0%	29.12	209.00	16.8%	27.87	171.00	13.7%	27.94

ALLIANCE AAAC 246.9 KCMIIL

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907,68
 Peso (daN/m): 0,3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12,5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837,00	22,0%	0,01	637,00	17%	0,01	602,00	16%	0,01	601,00	16%	0,01	457,00	12,0%	0,01	28,00	1%	0,15
20	837,00	22,0%	0,02	637,00	17%	0,03	608,00	16%	0,05	602,00	16%	0,03	459,00	12,1%	0,04	55,00	1%	0,31
30	837,00	22,0%	0,05	636,00	17%	0,06	615,00	16%	0,10	603,00	16%	0,07	462,00	12,1%	0,08	80,00	2%	0,47
40	837,00	22,0%	0,08	635,00	17%	0,11	624,00	16%	0,18	604,00	16%	0,13	466,00	12,2%	0,15	104,00	3%	0,85
50	837,00	22,0%	0,13	634,00	17%	0,17	635,00	17%	0,27	605,00	16%	0,19	471,00	12,4%	0,22	124,00	3%	0,84
60	835,00	21,9%	0,18	631,00	17%	0,24	644,00	17%	0,38	606,00	16%	0,28	476,00	12,5%	0,32	147,00	4%	1,03
70	824,00	21,6%	0,25	624,00	16%	0,33	649,00	17%	0,50	602,00	16%	0,38	476,00	12,5%	0,44	167,00	4%	1,24
80	811,00	21,3%	0,33	615,00	16%	0,44	654,00	17%	0,65	597,00	16%	0,50	476,00	12,5%	0,57	185,00	5%	1,47
90	797,00	20,9%	0,43	607,00	16%	0,56	658,00	17%	0,81	592,00	16%	0,64	476,00	12,5%	0,72	201,00	5%	1,70
100	783,00	20,6%	0,54	597,00	16%	0,71	662,00	17%	0,99	587,00	15%	0,79	475,00	12,5%	0,89	217,00	6%	1,95
110	767,00	20,1%	0,67	587,00	15%	0,87	664,00	17%	1,19	582,00	15%	0,97	475,00	12,5%	1,08	231,00	6%	2,21
120	751,00	19,7%	0,81	579,00	15%	1,05	668,00	18%	1,40	577,00	15%	1,16	475,00	12,5%	1,28	245,00	6%	2,49
130	736,00	19,3%	0,97	570,00	15%	1,25	670,00	18%	1,63	573,00	15%	1,37	475,00	12,5%	1,51	258,00	7%	2,77
140	720,00	18,9%	1,15	563,00	15%	1,47	673,00	18%	1,88	568,00	15%	1,60	475,00	12,5%	1,74	270,00	7%	3,07
150	705,00	18,5%	1,35	556,00	15%	1,71	674,00	18%	2,14	564,00	15%	1,85	475,00	12,5%	2,00	281,00	7%	3,39
160	689,00	18,1%	1,57	550,00	14%	1,97	676,00	18%	2,42	560,00	15%	2,11	475,00	12,5%	2,28	291,00	8%	3,72
170	675,00	17,7%	1,81	544,00	14%	2,25	677,00	18%	2,72	557,00	15%	2,40	475,00	12,5%	2,57	301,00	8%	4,06
180	661,00	17,4%	2,07	538,00	14%	2,55	678,00	18%	3,04	554,00	15%	2,70	475,00	12,5%	2,89	310,00	8%	4,42
190	647,00	17,0%	2,36	533,00	14%	2,87	679,00	18%	3,37	551,00	14%	3,03	475,00	12,5%	3,22	318,00	8%	4,80
200	635,00	16,7%	2,67	528,00	14%	3,20	679,00	18%	3,72	548,00	14%	3,37	475,00	12,5%	3,57	326,00	9%	5,19
210	623,00	16,4%	2,99	524,00	14%	3,56	680,00	18%	4,09	546,00	14%	3,73	474,00	12,4%	3,93	334,00	9%	5,59
220	612,00	16,1%	3,34	520,00	14%	3,94	680,00	18%	4,48	543,00	14%	4,10	474,00	12,4%	4,32	341,00	9%	6,01
230	603,00	15,8%	3,71	517,00	14%	4,33	681,00	18%	4,88	541,00	14%	4,50	474,00	12,4%	4,72	347,00	9%	6,45
240	593,00	15,6%	4,11	514,00	13%	4,74	680,00	18%	5,30	539,00	14%	4,92	474,00	12,4%	5,14	353,00	9%	6,90
250	584,00	15,3%	4,52	511,00	13%	5,18	680,00	18%	5,74	537,00	14%	5,35	474,00	12,4%	5,58	359,00	9%	7,37
260	577,00	15,2%	4,96	508,00	13%	5,63	680,00	18%	6,20	535,00	14%	5,81	474,00	12,4%	6,04	364,00	10%	7,86
270	570,00	15,0%	5,41	506,00	13%	6,10	679,00	18%	6,68	533,00	14%	6,28	474,00	12,4%	6,51	369,00	10%	8,36
280	563,00	14,8%	5,89	504,00	13%	6,59	679,00	18%	7,17	531,00	14%	6,77	473,00	12,4%	7,01	374,00	10%	8,88
290	558,00	14,7%	6,38	501,00	13%	7,10	679,00	18%	7,68	530,00	14%	7,28	473,00	12,4%	7,52	378,00	10%	9,41
300	552,00	14,5%	6,90	499,00	13%	7,63	678,00	18%	8,21	528,00	14%	7,81	473,00	12,4%	8,05	382,00	10%	9,97
310	547,00	14,4%	7,44	498,00	13%	8,17	678,00	18%	8,76	527,00	14%	8,35	473,00	12,4%	8,60	386,00	10%	10,53
320	542,00	14,2%	7,99	496,00	13%	8,73	677,00	18%	9,33	526,00	14%	8,92	473,00	12,4%	9,17	390,00	10%	11,12
330	538,00	14,1%	8,57	495,00	13%	9,32	676,00	18%	9,91	525,00	14%	9,50	473,00	12,4%	9,75	393,00	10%	11,73
340	534,00	14,0%	9,16	493,00	13%	9,92	676,00	18%	10,52	524,00	14%	10,11	472,00	12,4%	10,36	396,00	10%	12,35
350	530,00	13,9%	9,78	492,00	13%	10,54	675,00	18%	11,14	522,00	14%	10,73	472,00	12,4%	10,99	399,00	10%	12,99
360	527,00	13,8%	10,41	491,00	13%	11,18	675,00	18%	11,78	522,00	14%	11,37	472,00	12,4%	11,63	402,00	11%	13,65
370	524,00	13,8%	11,07	489,00	13%	11,84	674,00	18%	12,44	520,00	14%	12,03	472,00	12,4%	12,29	405,00	11%	14,33
380	521,00	13,7%	11,74	488,00	13%	12,52	673,00	18%	13,12	519,00	14%	12,71	472,00	12,4%	12,97	407,00	11%	15,02
390	518,00	13,6%	12,44	487,00	13%	13,22	672,00	18%	13,82	519,00	14%	13,40	471,00	12,4%	13,67	410,00	11%	15,73
400	515,00	13,5%	13,15	486,00	13%	13,93	671,00	18%	14,54	518,00	14%	14,12	471,00	12,4%	14,39	412,00	11%	16,46
410	513,00	13,5%	13,88	485,00	13%	14,67	671,00	18%	15,27	517,00	14%	14,86	471,00	12,4%	15,12	414,00	11%	17,21
420	511,00	13,4%	14,63	484,00	13%	15,43	670,00	18%	16,03	516,00	14%	15,61	471,00	12,4%	15,88	416,00	11%	17,98
430	508,00	13,4%	15,40	484,00	13%	16,20	669,00	18%	16,80	515,00	14%	16,39	470,00	12,3%	16,66	418,00	11%	18,76
440	506,00	13,3%	16,19	483,00	13%	17,00	668,00	18%	17,60	514,00	13%	17,18	470,00	12,3%	17,45	419,00	11%	19,57
450	504,00	13,2%	17,01	482,00	13%	17,81	667,00	18%	18,41	514,00	13%	18,00	470,00	12,3%	18,27	421,00	11%	20,39
460	503,00	13,2%	17,83	481,00	13%	18,64	666,00	17%	19,24	513,00	13%	18,83	469,00	12,3%	19,10	422,00	11%	21,24
470	501,00	13,2%	18,69	480,00	13%	19,49	666,00	17%	20,10	512,00	13%	19,68	469,00	12,3%	19,96	424,00	11%	22,10
480	499,00	13,1%	19,56	480,00	13%	20,37	665,00	17%	20,97	511,00	13%	20,55	469,00	12,3%	20,83	425,00	11%	22,98
490	498,00	13,1%	20,45	479,00	13%	21,26	664,00	17%	21,88	511,00	13%	21,45	469,00	12,3%	21,73	426,00	11%	23,88
500	496,00	13,0%	21,36	478,00	13%	22,18	663,00	17%	22,77	510,00	13%	22,36	468,00	12,3%	22,64	428,00	11%	24,80
510	495,00	13,0%	22,29	477,00	13%	23,11	662,00	17%	23,71	509,00	13%	23,29	468,00	12,3%	23,57	429,00	11%	25,74
520	493,00	12,9%	23,24	477,00	13%	24,05	661,00	17%	24,65	509,00	13%	24,24	468,00	12,3%	24,52	430,00	11%	26,70
530	492,00	12,9%	24,21	476,00	13%	25,03	660,00	17%	25,63	508,00	13%	25,21	467,00	12,3%	25,49	431,00	11%	27,68
540	491,00	12,9%	25,20	475,00	12%	26,02	659,00	17%	26,62	507,00	13%	26,21	467,00	12,3%	26,49	432,00	11%	28,68
550	489,00	12,8%	26,22	475,00	12%	27,04	658,00	17%	27,64	506,00	13%	27,23	467,00	12,3%	27,51	432,00	11%	29,70
560	488,00	12,8%	27,25	474,00	12%	28,07	658,00	17%	28,67	506,00	13%	28,26	466,00	12,2%	28,54	433,00	11%	30,74
570	487,00	12,8%	28,30	473,00	12%	29,13	657,00	17%	29,72	505,00	13%	29,31	466,00	12,2%	29,59	434,00	11%	31,80
580	486,00	12,8%	29,38	473,00	12%	30,20	656,00	17%	30,79	504,00	13%	30,38	466,00	12,2%	30,67	435,00	11%	32,88
590	485,00	12,7%	30,47	472,00	12%	31,29	655,00	17%	31,88	504,00	13%	31,48	465,00	12,2%	31,76	436,00	11%	33,97
600	484,00	12,7%	31,59	471,00	12%	32,42	654,00	17%	33,00	503,00	13%	32,60	465,00	12,2%	32,88	436,00	11%	35,10

BUTTE AAAC 312.8 KCML

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 4993.04
 Peso (daN/m): 0.4284

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 19%
 Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	929.00	19.0%	0.01	734.00	15%	0.01	691.00	14%	0.01	690.00	14%	0.01	515.00	10.5%	0.01	35.00	1%	0.15
20	929.00	19.0%	0.02	733.00	15%	0.03	691.00	14%	0.05	690.00	14%	0.03	518.00	10.6%	0.04	68.00	1%	0.32
30	929.00	19.0%	0.05	731.00	15%	0.07	705.00	14%	0.11	690.00	14%	0.08	523.00	10.7%	0.09	98.00	2%	0.49
40	929.00	19.0%	0.09	729.00	15%	0.12	716.00	15%	0.18	692.00	14%	0.14	530.00	10.8%	0.16	127.00	3%	0.67
50	929.00	19.0%	0.14	727.00	15%	0.18	727.00	15%	0.28	694.00	14%	0.21	536.00	11.0%	0.25	155.00	3%	0.87
60	929.00	19.0%	0.21	728.00	15%	0.26	741.00	15%	0.39	698.00	14%	0.30	545.00	11.1%	0.35	181.00	4%	1.07
70	929.00	19.0%	0.28	727.00	15%	0.36	754.00	15%	0.52	701.00	14%	0.41	554.00	11.3%	0.47	206.00	4%	1.28
80	928.00	18.9%	0.37	724.00	15%	0.47	765.00	16%	0.66	702.00	14%	0.53	562.00	11.5%	0.61	229.00	5%	1.50
90	908.00	18.6%	0.48	712.00	15%	0.61	768.00	16%	0.83	694.00	14%	0.68	562.00	11.5%	0.77	249.00	5%	1.74
100	890.00	18.2%	0.60	700.00	14%	0.77	771.00	16%	1.02	688.00	14%	0.84	562.00	11.5%	0.95	268.00	5%	2.00
110	871.00	17.8%	0.74	689.00	14%	0.94	773.00	16%	1.22	682.00	14%	1.03	562.00	11.5%	1.15	286.00	6%	2.27
120	851.00	17.4%	0.91	678.00	14%	1.14	775.00	16%	1.45	675.00	14%	1.24	562.00	11.5%	1.37	302.00	6%	2.56
130	832.00	17.0%	1.09	668.00	14%	1.36	776.00	16%	1.69	669.00	14%	1.46	562.00	11.5%	1.61	317.00	6%	2.86
140	812.00	16.6%	1.29	659.00	13%	1.59	776.00	16%	1.95	664.00	14%	1.71	562.00	11.5%	1.87	331.00	7%	3.17
150	793.00	16.2%	1.52	650.00	13%	1.85	777.00	16%	2.23	658.00	13%	1.97	561.00	11.5%	2.15	345.00	7%	3.50
160	776.00	15.9%	1.77	642.00	13%	2.14	777.00	16%	2.53	653.00	13%	2.26	561.00	11.5%	2.44	357.00	7%	3.85
170	760.00	15.5%	2.04	635.00	13%	2.44	778.00	16%	2.84	649.00	13%	2.57	561.00	11.5%	2.76	368.00	8%	4.21
180	744.00	15.2%	2.33	629.00	13%	2.76	778.00	16%	3.17	645.00	13%	2.89	561.00	11.5%	3.09	379.00	8%	4.58
190	730.00	14.9%	2.65	623.00	13%	3.10	778.00	16%	3.53	641.00	13%	3.24	561.00	11.5%	3.45	389.00	8%	4.98
200	716.00	14.6%	2.99	618.00	13%	3.47	777.00	16%	3.90	637.00	13%	3.61	561.00	11.5%	3.82	398.00	8%	5.39
210	703.00	14.4%	3.36	613.00	13%	3.85	776.00	16%	4.30	634.00	13%	4.00	561.00	11.5%	4.22	406.00	8%	5.82
220	693.00	14.2%	3.74	609.00	12%	4.26	776.00	16%	4.71	631.00	13%	4.40	561.00	11.5%	4.63	414.00	8%	6.26
230	683.00	14.0%	4.15	605.00	12%	4.68	775.00	16%	5.14	629.00	13%	4.83	560.00	11.4%	5.06	422.00	9%	6.72
240	674.00	13.8%	4.58	602.00	12%	5.13	774.00	16%	5.59	626.00	13%	5.28	560.00	11.4%	5.51	429.00	9%	7.21
250	665.00	13.6%	5.04	599.00	12%	5.60	774.00	16%	6.06	624.00	13%	5.75	560.00	11.4%	5.98	435.00	9%	7.70
260	658.00	13.4%	5.51	596.00	12%	6.08	773.00	16%	6.55	622.00	13%	6.23	560.00	11.4%	6.47	441.00	9%	8.22
270	650.00	13.2%	6.01	593.00	12%	6.59	772.00	16%	7.06	620.00	13%	6.74	560.00	11.4%	6.98	447.00	9%	8.75
280	644.00	13.2%	6.52	591.00	12%	7.11	770.00	16%	7.59	618.00	13%	7.27	559.00	11.4%	7.52	452.00	9%	9.30
290	638.00	13.0%	7.06	589.00	12%	7.66	770.00	16%	8.14	617.00	13%	7.81	559.00	11.4%	8.06	457.00	9%	9.87
300	633.00	12.9%	7.62	587.00	12%	8.23	769.00	16%	8.70	615.00	13%	8.38	559.00	11.4%	8.64	461.00	9%	10.46
310	628.00	12.8%	8.20	585.00	12%	8.81	768.00	16%	9.29	613.00	13%	8.98	559.00	11.4%	9.22	466.00	10%	11.07
320	624.00	12.8%	8.80	583.00	12%	9.42	767.00	16%	9.90	612.00	13%	9.58	558.00	11.4%	9.83	470.00	10%	11.70
330	619.00	12.7%	9.43	581.00	12%	10.05	765.00	16%	10.53	610.00	13%	10.21	558.00	11.4%	10.47	473.00	10%	12.35
340	616.00	12.6%	10.07	580.00	12%	10.70	764.00	16%	11.18	609.00	12%	10.85	558.00	11.4%	11.11	477.00	10%	13.01
350	612.00	12.5%	10.73	578.00	12%	11.37	763.00	16%	11.85	608.00	12%	11.52	558.00	11.4%	11.78	480.00	10%	13.69
360	609.00	12.4%	11.42	577.00	12%	12.05	762.00	16%	12.54	607.00	12%	12.21	557.00	11.4%	12.48	483.00	10%	14.40
370	606.00	12.4%	12.12	575.00	12%	12.76	761.00	16%	13.24	606.00	12%	12.92	557.00	11.4%	13.19	486.00	10%	15.12
380	603.00	12.3%	12.85	574.00	12%	13.49	760.00	16%	13.97	604.00	12%	13.65	557.00	11.4%	13.92	489.00	10%	15.86
390	600.00	12.3%	13.60	573.00	12%	14.25	759.00	16%	14.72	603.00	12%	14.40	556.00	11.4%	14.67	491.00	10%	16.63
400	597.00	12.2%	14.37	572.00	12%	15.02	758.00	15%	15.50	602.00	12%	15.17	556.00	11.4%	15.44	493.00	10%	17.41
410	595.00	12.2%	15.16	571.00	12%	15.81	757.00	15%	16.29	601.00	12%	15.97	556.00	11.4%	16.24	496.00	10%	18.21
420	593.00	12.1%	15.97	570.00	12%	16.62	756.00	15%	17.10	600.00	12%	16.78	555.00	11.3%	17.05	498.00	10%	19.04
430	591.00	12.1%	16.80	569.00	12%	17.46	754.00	15%	17.94	598.00	12%	17.61	555.00	11.3%	17.88	500.00	10%	19.88
440	589.00	12.0%	17.65	568.00	12%	18.31	753.00	15%	18.79	598.00	12%	18.47	555.00	11.3%	18.74	501.00	10%	20.74
450	587.00	12.0%	18.53	567.00	12%	19.19	752.00	15%	19.67	597.00	12%	19.34	554.00	11.3%	19.62	503.00	10%	21.63
460	586.00	12.0%	19.42	566.00	12%	20.08	751.00	15%	20.56	597.00	12%	20.24	554.00	11.3%	20.52	505.00	10%	22.53
470	583.00	11.9%	20.34	565.00	12%	21.00	750.00	15%	21.48	596.00	12%	21.16	553.00	11.3%	21.44	506.00	10%	23.46
480	581.00	11.9%	21.28	564.00	12%	21.94	749.00	15%	22.42	595.00	12%	22.10	553.00	11.3%	22.38	507.00	10%	24.41
490	580.00	11.9%	22.24	563.00	12%	22.90	748.00	15%	23.38	594.00	12%	23.06	553.00	11.3%	23.34	509.00	10%	25.38
500	578.00	11.8%	23.22	562.00	11%	23.89	747.00	15%	24.36	593.00	12%	24.05	552.00	11.3%	24.32	510.00	10%	26.37
510	577.00	11.8%	24.23	561.00	11%	24.89	745.00	15%	25.37	592.00	12%	25.05	552.00	11.3%	25.33	511.00	10%	27.37
520	575.00	11.8%	25.26	561.00	11%	25.92	744.00	15%	26.39	591.00	12%	26.07	551.00	11.3%	26.36	512.00	10%	28.41
530	574.00	11.7%	26.30	560.00	11%	26.97	743.00	15%	27.44	591.00	12%	27.13	551.00	11.3%	27.40	513.00	10%	29.46
540	572.00	11.7%	27.38	559.00	11%	28.04	742.00	15%	28.51	590.00	12%	28.20	550.00	11.2%	28.48	514.00	11%	30.54
550	571.00	11.7%	28.47	558.00	11%	29.13	741.00	15%	29.61	589.00	12%	29.29	550.00	11.2%	29.57	514.00	11%	31.64
560	570.00	11.6%	29.58	557.00	11%	30.25	740.00	15%	30.72	588.00	12%	30.40	550.00	11.2%	30.69	515.00	11%	32.76
570	569.00	11.6%	30.72	557.00	11%	31.38	739.00	15%	31.85	587.00	12%	31.54	549.00	11.2%	31.82	516.00	11%	33.90
580	567.00	11.6%	31.98	556.00	11%	32.55	738.00	15%	32.92	586.00	12%	32.70	549.00	11.2%	32.99	516.00	11%	35.07
590	566.00	11.6%	33.06	555.00	11%	33.73	736.00	15%	34.20	586.00	12%	33.89	548.00	11.2%	34.17	517.00	11%	36.25
600	565.00	11.5%	34.27	554.00	11%	34.94	735.00	15%	35.40	585.00	12%	35.09	548.00	11.2%	35.38	517.00	11%	37.47

CANTON AAAC 336.4 KCMIL

Clima: Cálido
Altitud: 0 msnm - 1000 msnm
Temperatura máxima (°C): 40
Temperatura media (°C): 26
Temperatura mínima (°C): 16
Temperatura coincidente (°C): 18
Velocidad del viento máxima (km/h): 80
Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
Tensión de rotura (daN): 5916.13
Peso (daN/m): 0.5404

Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1123.00	19.0%	0.01	892.00	15%	0.01	838.00	14%	0.01	838.00	14%	0.01	616.00	10.4%	0.01	43.00	1%	0.16
20	1123.00	19.0%	0.02	899.00	15%	0.03	845.00	14%	0.05	838.00	14%	0.03	619.00	10.5%	0.04	83.00	1%	0.32
30	1123.00	19.0%	0.05	888.00	15%	0.07	853.00	14%	0.10	838.00	14%	0.08	627.00	10.6%	0.10	123.00	2%	0.50
40	1123.00	19.0%	0.10	885.00	15%	0.12	865.00	15%	0.18	839.00	14%	0.14	635.00	10.7%	0.17	158.00	3%	0.69
50	1123.00	19.0%	0.15	884.00	15%	0.19	877.00	15%	0.27	842.00	14%	0.22	646.00	10.9%	0.26	192.00	3%	0.88
60	1111.00	18.8%	0.22	873.00	15%	0.28	881.00	15%	0.39	834.00	14%	0.31	650.00	11.0%	0.37	223.00	4%	1.09
70	1088.00	18.4%	0.30	856.00	14%	0.39	883.00	15%	0.53	825.00	14%	0.43	650.00	11.0%	0.51	252.00	4%	1.32
80	1066.00	18.0%	0.41	839.00	14%	0.52	893.00	15%	0.68	813.00	14%	0.57	650.00	11.0%	0.67	278.00	5%	1.56
90	1041.00	17.6%	0.53	823.00	14%	0.67	894.00	15%	0.86	802.00	14%	0.73	650.00	11.0%	0.84	303.00	5%	1.81
100	1014.00	17.1%	0.67	806.00	14%	0.84	884.00	15%	1.06	792.00	13%	0.91	650.00	11.0%	1.04	325.00	5%	2.08
110	989.00	16.7%	0.83	791.00	13%	1.03	893.00	15%	1.27	783.00	13%	1.11	650.00	11.0%	1.26	346.00	6%	2.36
120	962.00	16.3%	1.01	777.00	13%	1.25	882.00	15%	1.51	773.00	13%	1.34	649.00	11.0%	1.50	366.00	6%	2.66
130	936.00	15.8%	1.22	765.00	13%	1.49	881.00	15%	1.77	765.00	13%	1.59	649.00	11.0%	1.76	384.00	6%	2.98
140	912.00	15.4%	1.45	752.00	13%	1.76	879.00	15%	2.05	757.00	13%	1.86	649.00	11.0%	2.04	400.00	7%	3.31
150	889.00	15.0%	1.71	743.00	13%	2.05	878.00	15%	2.35	751.00	13%	2.15	649.00	11.0%	2.34	415.00	7%	3.66
160	867.00	14.7%	1.99	734.00	12%	2.36	876.00	15%	2.67	744.00	13%	2.47	649.00	11.0%	2.66	429.00	7%	4.03
170	848.00	14.3%	2.30	726.00	12%	2.69	874.00	15%	3.01	739.00	12%	2.80	649.00	11.0%	3.01	443.00	7%	4.42
180	831.00	14.0%	2.64	719.00	12%	3.05	873.00	15%	3.38	734.00	12%	3.16	649.00	11.0%	3.27	455.00	8%	4.82
190	814.00	13.8%	3.00	712.00	12%	3.42	871.00	15%	3.76	730.00	12%	3.54	649.00	11.0%	3.76	466.00	8%	5.24
200	800.00	13.5%	3.38	707.00	12%	3.83	869.00	15%	4.17	726.00	12%	3.94	648.00	11.0%	4.17	476.00	8%	5.68
210	787.00	13.3%	3.79	701.00	12%	4.25	867.00	15%	4.60	721.00	12%	4.37	648.00	11.0%	4.60	486.00	8%	6.14
220	776.00	13.1%	4.22	697.00	12%	4.69	866.00	15%	5.04	719.00	12%	4.82	648.00	11.0%	5.05	495.00	8%	6.62
230	765.00	12.9%	4.67	693.00	12%	5.16	863.00	15%	5.51	715.00	12%	5.29	648.00	11.0%	5.52	503.00	9%	7.12
240	755.00	12.8%	5.15	689.00	12%	5.65	861.00	15%	6.00	713.00	12%	5.78	647.00	10.9%	6.02	510.00	9%	7.63
250	747.00	12.6%	5.66	686.00	12%	6.16	860.00	15%	6.52	710.00	12%	6.29	647.00	10.9%	6.53	517.00	9%	8.17
260	740.00	12.5%	6.18	683.00	12%	6.69	858.00	15%	7.05	708.00	12%	6.82	647.00	10.9%	7.07	524.00	9%	8.73
270	732.00	12.4%	6.72	680.00	11%	7.25	856.00	14%	7.61	705.00	12%	7.38	647.00	10.9%	7.63	530.00	9%	9.31
280	726.00	12.3%	7.30	677.00	11%	7.83	854.00	14%	8.19	703.00	12%	7.96	646.00	10.9%	8.21	536.00	9%	9.91
290	721.00	12.2%	7.89	675.00	11%	8.43	853.00	14%	8.78	701.00	12%	8.55	646.00	10.9%	8.81	541.00	9%	10.52
300	715.00	12.1%	8.51	673.00	11%	9.05	852.00	14%	9.40	700.00	12%	9.17	646.00	10.9%	9.43	546.00	9%	11.16
310	710.00	12.0%	9.15	671.00	11%	9.69	850.00	14%	10.05	698.00	12%	9.82	645.00	10.9%	10.08	550.00	9%	11.82
320	706.00	11.9%	9.81	669.00	11%	10.35	848.00	14%	10.71	696.00	12%	10.48	645.00	10.9%	10.74	554.00	9%	12.50
330	702.00	11.9%	10.50	667.00	11%	11.04	847.00	14%	11.40	695.00	12%	11.17	644.00	10.9%	11.43	558.00	9%	13.20
340	698.00	11.8%	11.20	665.00	11%	11.75	845.00	14%	12.11	693.00	12%	11.88	644.00	10.9%	12.14	562.00	9%	13.93
350	694.00	11.7%	11.93	664.00	11%	12.49	843.00	14%	12.85	692.00	12%	12.62	644.00	10.9%	12.88	565.00	10%	14.67
360	691.00	11.7%	12.68	662.00	11%	13.24	842.00	14%	13.60	690.00	12%	13.37	643.00	10.9%	13.63	568.00	10%	15.44
370	688.00	11.6%	13.46	661.00	11%	14.02	841.00	14%	14.38	689.00	12%	14.14	643.00	10.9%	14.41	571.00	10%	16.23
380	685.00	11.6%	14.26	660.00	11%	14.82	839.00	14%	15.18	688.00	12%	14.95	642.00	10.9%	15.22	574.00	10%	17.04
390	683.00	11.5%	15.08	658.00	11%	15.64	838.00	14%	16.00	687.00	12%	15.77	642.00	10.9%	16.04	577.00	10%	17.87
400	680.00	11.5%	15.93	657.00	11%	16.48	836.00	14%	16.84	685.00	12%	16.62	642.00	10.9%	16.89	579.00	10%	18.73
410	678.00	11.5%	16.79	656.00	11%	17.36	835.00	14%	17.71	684.00	12%	17.48	641.00	10.8%	17.76	581.00	10%	19.60
420	675.00	11.4%	17.68	655.00	11%	18.25	833.00	14%	18.61	683.00	12%	18.38	641.00	10.8%	18.65	583.00	10%	20.50
430	673.00	11.4%	18.60	653.00	11%	19.17	832.00	14%	19.52	682.00	12%	19.29	640.00	10.8%	19.57	585.00	10%	21.43
440	671.00	11.3%	19.54	652.00	11%	20.11	830.00	14%	20.46	681.00	12%	20.23	640.00	10.8%	20.51	587.00	10%	22.37
450	669.00	11.3%	20.50	651.00	11%	21.07	829.00	14%	21.42	680.00	11%	21.20	639.00	10.8%	21.47	588.00	10%	23.34
460	667.00	11.3%	21.48	650.00	11%	22.05	827.00	14%	22.41	679.00	11%	22.18	639.00	10.8%	22.45	590.00	10%	24.33
470	665.00	11.2%	22.49	649.00	11%	23.06	826.00	14%	23.41	678.00	11%	23.19	639.00	10.8%	23.46	591.00	10%	25.35
480	664.00	11.2%	23.53	648.00	11%	24.10	824.00	14%	24.45	677.00	11%	24.23	637.00	10.8%	24.50	592.00	10%	26.39
490	662.00	11.2%	24.59	647.00	11%	25.15	823.00	14%	25.51	676.00	11%	25.28	637.00	10.8%	25.56	593.00	10%	27.45
500	660.00	11.2%	25.67	646.00	11%	26.24	822.00	14%	26.59	675.00	11%	26.36	636.00	10.8%	26.64	594.00	10%	28.54
510	659.00	11.1%	26.77	645.00	11%	27.34	820.00	14%	27.70	674.00	11%	27.47	636.00	10.8%	27.75	595.00	10%	29.65
520	657.00	11.1%	27.90	644.00	11%	28.40	819.00	14%	28.83	673.00	11%	28.60	635.00	10.7%	28.88	596.00	10%	30.79
530	656.00	11.1%	29.08	643.00	11%	29.63	817.00	14%	29.98	671.00	11%	29.76	634.00	10.7%	30.03	597.00	10%	31.94
540	654.00	11.1%	30.24	642.00	11%	30.81	816.00	14%	31.16	671.00	11%	30.93	634.00	10.7%	31.21	598.00	10%	33.13
550	653.00	11.0%	31.45	641.00	11%	32.02	815.00	14%	32.36	670.00	11%	32.14	633.00	10.7%	32.42	599.00	10%	34.33
560	651.00	11.0%	32.67	640.00	11%	33.24	813.00	14%	33.59	669.00	11%	33.37	633.00	10.7%	33.65	599.00	10%	35.57
570	650.00	11.0%	33.93	639.00	11%	34.50	812.00	14%	34.85	667.00	11%	34.63	632.00	10.7%	34.91	599.00	10%	36.83
580	649.00	11.0%	35.21	638.00	11%	35.78	810.00	14%	36.13	667.00	11%	35.90	631.00	10.7%	36.19	600.00	10%	38.12
590	647.00	10.9%	36.52	637.00	11%	37.09	809.00	14%	37.43	666.00	11%	37.22	630.00	10.6%	37.50	600.00	10%	39.42
600	646.00	10.9%	37.85	636.00	11%	38.42	808.00	14%	38.76	664.00	11%	38.55	630.00	10.6%	38.83	600.00	10%	40.76



ANEXO B1.3: Zona 3 (Velocidad de viento máxima 100 km/h)

PENGUIN ACSR 4/0 AWG

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	816.00	22%	0.01	655.00	18%	0.01	623.00	17%	0.02	620.00	17%	0.01	473.00	12.7%	0.01	122.00	3%	0.04
20	816.00	22%	0.03	654.00	18%	0.03	637.00	17%	0.06	620.00	17%	0.04	477.00	12.8%	0.04	150.00	4%	0.14
30	816.00	22%	0.06	653.00	18%	0.07	655.00	18%	0.14	624.00	17%	0.09	483.00	13.0%	0.10	176.00	5%	0.27
40	816.00	22%	0.10	652.00	18%	0.13	677.00	18%	0.24	628.00	17%	0.16	490.00	13.2%	0.17	201.00	5%	0.42
50	816.00	22%	0.16	651.00	18%	0.20	699.00	19%	0.35	631.00	17%	0.24	488.00	13.4%	0.27	224.00	6%	0.59
60	806.00	22%	0.24	643.00	17%	0.30	715.00	19%	0.49	629.00	17%	0.35	501.00	13.5%	0.38	243.00	7%	0.79
70	789.00	21%	0.33	633.00	17%	0.41	728.00	20%	0.65	625.00	17%	0.47	501.00	13.5%	0.52	260.00	7%	1.00
80	772.00	21%	0.44	621.00	17%	0.55	740.00	20%	0.93	619.00	17%	0.62	500.00	13.5%	0.68	275.00	7%	1.23
90	754.00	20%	0.57	609.00	16%	0.71	751.00	20%	1.03	614.00	17%	0.79	501.00	13.5%	0.86	289.00	8%	1.49
100	736.00	20%	0.72	598.00	16%	0.89	760.00	20%	1.25	609.00	16%	0.99	501.00	13.5%	1.06	302.00	8%	1.75
110	716.00	19%	0.90	589.00	16%	1.09	767.00	21%	1.49	605.00	16%	1.20	501.00	13.5%	1.28	314.00	8%	2.04
120	698.00	19%	1.09	579.00	16%	1.32	774.00	21%	1.74	601.00	16%	1.44	501.00	13.5%	1.53	325.00	9%	2.85
130	680.00	18%	1.32	571.00	15%	1.57	780.00	21%	2.02	597.00	16%	1.69	500.00	13.5%	1.79	335.00	9%	2.67
140	664.00	18%	1.57	564.00	15%	1.84	784.00	21%	2.32	593.00	16%	1.97	500.00	13.5%	2.08	345.00	9%	3.02
150	648.00	17%	1.84	557.00	15%	2.14	789.00	21%	2.64	590.00	16%	2.29	500.00	13.5%	2.39	354.00	10%	3.38
160	635.00	17%	2.14	552.00	15%	2.46	792.00	21%	2.97	586.00	16%	2.60	500.00	13.5%	2.72	362.00	10%	3.76
170	623.00	17%	2.46	547.00	15%	2.80	795.00	21%	3.33	583.00	16%	2.95	500.00	13.5%	3.07	369.00	10%	4.16
180	611.00	16%	2.81	543.00	15%	3.17	798.00	21%	3.71	581.00	16%	3.32	500.00	13.5%	3.44	376.00	10%	4.57
190	600.00	16%	3.19	538.00	14%	3.56	799.00	22%	4.11	578.00	16%	3.71	500.00	13.5%	3.83	383.00	10%	5.01
200	592.00	16%	3.59	535.00	14%	3.97	801.00	22%	4.53	576.00	16%	4.12	499.00	13.4%	4.25	389.00	10%	5.47
210	584.00	16%	4.01	532.00	14%	4.40	802.00	22%	4.97	574.00	15%	4.55	499.00	13.4%	4.69	394.00	11%	5.94
220	576.00	16%	4.46	529.00	14%	4.86	803.00	22%	5.43	572.00	15%	5.01	499.00	13.4%	5.15	399.00	11%	6.44
230	570.00	15%	4.92	526.00	14%	5.33	804.00	22%	5.91	570.00	15%	5.49	499.00	13.4%	5.63	404.00	11%	6.95
240	564.00	15%	5.42	524.00	14%	5.83	804.00	22%	6.42	568.00	15%	5.99	499.00	13.4%	6.13	409.00	11%	7.48
250	559.00	15%	5.93	522.00	14%	6.36	804.00	22%	6.94	567.00	15%	6.51	499.00	13.4%	6.66	414.00	11%	8.02
260	554.00	15%	6.47	520.00	14%	6.90	804.00	22%	7.49	565.00	15%	7.06	498.00	13.4%	7.20	418.00	11%	8.58
270	550.00	15%	7.02	518.00	14%	7.47	804.00	22%	8.06	564.00	15%	7.62	498.00	13.4%	7.77	423.00	11%	9.16
280	546.00	15%	7.62	517.00	14%	8.06	804.00	22%	8.65	563.00	15%	8.21	498.00	13.3%	8.36	428.00	11%	9.77
290	543.00	15%	8.23	515.00	14%	8.67	803.00	22%	9.27	561.00	15%	8.82	498.00	13.4%	8.98	430.00	12%	10.40
300	538.00	15%	8.86	514.00	14%	9.30	803.00	22%	9.90	560.00	15%	9.46	497.00	13.4%	9.61	433.00	12%	11.05
310	536.00	14%	9.51	513.00	14%	9.96	802.00	22%	10.56	559.00	15%	10.11	497.00	13.4%	10.27	436.00	12%	11.71
320	534.00	14%	10.19	511.00	14%	10.64	801.00	22%	11.24	558.00	15%	10.79	497.00	13.4%	10.95	439.00	12%	12.41
330	531.00	14%	10.89	510.00	14%	11.34	801.00	22%	11.94	557.00	15%	11.50	496.00	13.4%	11.65	441.00	12%	13.12
340	529.00	14%	11.61	509.00	14%	12.07	800.00	22%	12.67	556.00	15%	12.22	496.00	13.4%	12.38	444.00	12%	13.85
350	527.00	14%	12.36	508.00	14%	12.81	799.00	22%	13.42	555.00	15%	12.97	496.00	13.4%	13.13	446.00	12%	14.61
360	525.00	14%	13.13	507.00	14%	13.58	798.00	21%	14.19	554.00	15%	13.74	495.00	13.3%	13.90	448.00	12%	15.39
370	523.00	14%	13.92	506.00	14%	14.38	797.00	21%	14.98	553.00	15%	14.53	495.00	13.3%	14.70	450.00	12%	16.19
380	521.00	14%	14.74	505.00	14%	15.19	796.00	21%	15.80	552.00	15%	15.35	495.00	13.3%	15.51	451.00	12%	17.01
390	519.00	14%	15.58	504.00	14%	16.03	795.00	21%	16.64	551.00	15%	16.19	494.00	13.3%	16.35	453.00	12%	17.86
400	517.00	14%	16.44	503.00	14%	16.90	794.00	21%	17.50	550.00	15%	17.05	494.00	13.3%	17.22	454.00	12%	18.73
410	516.00	14%	17.32	503.00	14%	17.78	793.00	21%	18.39	549.00	15%	17.94	494.00	13.3%	18.10	456.00	12%	19.62
420	514.00	14%	18.24	502.00	14%	18.70	792.00	21%	19.30	548.00	15%	18.95	493.00	13.3%	19.02	457.00	12%	20.54
430	513.00	14%	19.17	501.00	13%	19.63	791.00	21%	20.23	548.00	15%	19.79	493.00	13.3%	19.85	458.00	12%	21.48
440	512.00	14%	20.13	500.00	13%	20.59	789.00	21%	21.19	547.00	15%	20.74	493.00	13.3%	20.91	459.00	12%	22.44
450	510.00	14%	21.11	499.00	13%	21.57	788.00	21%	22.17	546.00	15%	21.72	492.00	13.2%	21.89	460.00	12%	23.43
460	509.00	14%	22.12	499.00	13%	22.58	787.00	21%	23.18	545.00	15%	22.73	492.00	13.2%	22.90	461.00	12%	24.45
470	508.00	14%	23.15	498.00	13%	23.61	786.00	21%	24.21	544.00	15%	23.76	491.00	13.2%	23.93	462.00	12%	25.48
480	507.00	14%	24.20	497.00	13%	24.67	784.00	21%	25.26	543.00	15%	24.82	491.00	13.2%	24.99	462.00	12%	26.54
490	506.00	14%	25.28	496.00	13%	25.74	783.00	21%	26.34	542.00	15%	25.90	490.00	13.2%	26.07	463.00	12%	27.62
500	504.00	14%	26.39	496.00	13%	26.85	782.00	21%	27.44	542.00	15%	27.00	490.00	13.2%	27.17	464.00	12%	28.73
510	503.00	14%	27.52	495.00	13%	27.97	780.00	21%	28.57	541.00	15%	28.13	489.00	13.2%	28.30	464.00	12%	29.86
520	502.00	14%	28.67	494.00	13%	29.14	779.00	21%	29.73	540.00	15%	29.29	489.00	13.2%	29.46	465.00	13%	31.02
530	501.00	13%	29.85	494.00	13%	30.32	778.00	21%	30.91	539.00	15%	30.47	488.00	13.1%	30.64	465.00	13%	32.21
540	500.00	13%	31.06	493.00	13%	31.52	776.00	21%	32.11	538.00	14%	31.67	488.00	13.1%	31.84	465.00	13%	33.41
550	499.00	13%	32.29	492.00	13%	32.75	775.00	21%	33.34	537.00	14%	32.90	487.00	13.1%	33.08	465.00	13%	34.65
560	498.00	13%	33.54	491.00	13%	34.01	774.00	21%	34.60	537.00	14%	34.16	487.00	13.1%	34.33	466.00	13%	35.90
570	497.00	13%	34.83	491.00	13%	35.29	772.00	21%	35.88	536.00	14%	35.44	486.00	13.1%	35.62	466.00	13%	37.19
580	496.00	13%	36.14	490.00	13%	36.61	771.00	21%	37.19	535.00	14%	36.75	486.00	13.1%	36.93	466.00	13%	38.51
590	495.00	13%	37.48	489.00	13%	37.94	769.00	21%	38.52	534.00	14%	38.09	485.00	13.1%	38.27	466.00	13%	39.84
600	494.00	13%	38.84	489.00	13%	39.30	768.00	21%	39.88	533.00	14%	39.45	485.00	13.1%	39.63	466.00	13%	41.20

Clima Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 100 Velocidad del viento promedio (km/h): 60 Propiedades físicas del conductor: Tensión de rotura (daN): 1245.5 Peso (daN/m): 0.1060 Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 23.5% Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	292.00	23.4%	0.00	221.00	17.7%	0.01	213.00	17.1%	0.02	210.00	16.9%	0.01	164.00	13.2%	0.01	10.00	0.8%	0.14
20	292.00	23.4%	0.02	220.00	17.7%	0.02	222.00	17.8%	0.09	211.00	16.9%	0.04	164.00	13.2%	0.03	19.00	1.5%	0.29
30	292.00	23.4%	0.04	220.00	17.7%	0.05	234.00	18.8%	0.19	213.00	17.1%	0.09	165.00	13.2%	0.07	27.00	2.2%	0.44
40	292.00	23.4%	0.07	220.00	17.7%	0.10	247.00	19.8%	0.32	216.00	17.3%	0.16	166.00	13.3%	0.13	35.00	2.8%	0.61
50	292.00	23.4%	0.11	220.00	17.7%	0.15	260.00	20.9%	0.47	219.00	17.6%	0.24	167.00	13.4%	0.20	42.00	3.4%	0.79
60	292.00	23.4%	0.16	220.00	17.7%	0.22	273.00	21.9%	0.63	222.00	17.8%	0.34	169.00	13.6%	0.28	49.00	3.9%	0.97
70	292.00	23.4%	0.22	220.00	17.7%	0.30	285.00	22.9%	0.81	225.00	18.1%	0.46	171.00	13.7%	0.38	56.00	4.5%	1.17
80	292.00	23.4%	0.29	220.00	17.7%	0.39	298.00	23.9%	1.01	228.00	18.3%	0.59	173.00	13.9%	0.49	62.00	5.0%	1.37
90	291.00	23.4%	0.37	220.00	17.7%	0.49	309.00	24.8%	1.22	232.00	18.6%	0.73	174.00	14.0%	0.62	68.00	5.5%	1.58
100	288.00	23.1%	0.46	218.00	17.5%	0.61	319.00	25.6%	1.45	233.00	18.7%	0.89	174.00	14.0%	0.76	73.00	5.9%	1.81
110	284.00	22.8%	0.56	215.00	17.3%	0.75	328.00	26.3%	1.69	235.00	18.9%	1.06	174.00	14.0%	0.92	78.00	6.3%	2.05
120	281.00	22.6%	0.68	213.00	17.1%	0.90	337.00	27.1%	1.94	236.00	18.9%	1.25	174.00	14.0%	1.10	83.00	6.7%	2.30
130	277.00	22.2%	0.81	211.00	16.9%	1.06	344.00	27.6%	2.21	237.00	19.0%	1.46	174.00	14.0%	1.29	87.00	7.0%	2.57
140	273.00	21.9%	0.95	209.00	16.8%	1.25	352.00	28.3%	2.49	239.00	19.2%	1.67	174.00	14.0%	1.49	91.00	7.3%	2.84
150	268.00	21.5%	1.12	206.00	16.5%	1.45	359.00	28.8%	2.78	239.00	19.2%	1.90	174.00	14.0%	1.71	95.00	7.6%	3.13
160	263.00	21.1%	1.29	204.00	16.4%	1.66	366.00	29.4%	3.09	240.00	19.3%	2.15	174.00	14.0%	1.95	99.00	7.9%	3.43
170	259.00	20.8%	1.48	202.00	16.2%	1.90	373.00	29.9%	3.41	241.00	19.3%	2.41	174.00	14.0%	2.20	102.00	8.2%	3.74
180	254.00	20.4%	1.69	200.00	16.1%	2.15	379.00	30.4%	3.74	242.00	19.4%	2.69	174.00	14.0%	2.47	105.00	8.5%	4.06
190	251.00	20.2%	1.91	199.00	16.0%	2.41	385.00	30.9%	4.08	242.00	19.4%	2.97	174.00	14.0%	2.75	108.00	8.8%	4.40
200	246.00	19.8%	2.15	197.00	15.8%	2.69	390.00	31.3%	4.44	243.00	19.5%	3.28	174.00	14.0%	3.05	112.00	9.0%	4.74
210	242.00	19.4%	2.41	196.00	15.7%	2.99	395.00	31.7%	4.81	243.00	19.5%	3.60	174.00	14.0%	3.36	115.00	9.2%	5.11
220	238.00	19.1%	2.70	194.00	15.6%	3.31	400.00	32.1%	5.20	244.00	19.6%	3.93	174.00	14.0%	3.69	117.00	9.4%	5.48
230	234.00	18.8%	2.99	193.00	15.5%	3.64	404.00	32.4%	5.59	244.00	19.6%	4.28	174.00	14.0%	4.04	120.00	9.6%	5.87
240	231.00	18.5%	3.31	192.00	15.4%	3.99	409.00	32.8%	6.00	245.00	19.7%	4.64	174.00	14.0%	4.40	122.00	9.8%	6.27
250	228.00	18.3%	3.64	191.00	15.3%	4.35	413.00	33.2%	6.43	245.00	19.7%	5.02	174.00	14.0%	4.77	124.00	10.0%	6.68
260	225.00	18.1%	3.99	190.00	15.3%	4.73	417.00	33.5%	6.86	245.00	19.7%	5.41	174.00	14.0%	5.16	126.00	10.1%	7.11

AZUSA AAAC 123.3 KCML															
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 100 Velocidad del viento promedio (km/h): 60															
Propiedades físicas del conductor: Tensión de rotura (daN): 1983.91 Peso (daN/m): 0.1688															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 13%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	446.00	22.5%	0.00	338.00	17.0%	0.01	323.00	16.3%	0.02	320.00	16.1%	0.01	247.00	12.5%	0.01
20	446.00	22.5%	0.02	337.00	17.0%	0.03	333.00	16.8%	0.08	321.00	16.2%	0.04	248.00	12.5%	0.03
30	446.00	22.5%	0.04	337.00	17.0%	0.06	347.00	17.5%	0.17	324.00	16.3%	0.08	249.00	12.6%	0.08
40	446.00	22.5%	0.08	337.00	17.0%	0.10	363.00	18.3%	0.28	327.00	16.5%	0.15	252.00	12.7%	0.13
50	446.00	22.5%	0.12	336.00	16.9%	0.16	379.00	19.1%	0.41	329.00	16.6%	0.23	254.00	12.8%	0.21
60	446.00	22.5%	0.17	336.00	16.9%	0.23	395.00	19.9%	0.56	333.00	16.8%	0.32	257.00	13.0%	0.30
70	443.00	22.3%	0.23	334.00	16.8%	0.31	409.00	20.6%	0.73	335.00	16.9%	0.43	257.00	13.0%	0.40
80	438.00	22.1%	0.31	330.00	16.6%	0.41	422.00	21.3%	0.92	336.00	16.9%	0.56	258.00	13.0%	0.52
90	432.00	21.8%	0.40	327.00	16.5%	0.52	434.00	21.9%	1.12	337.00	17.0%	0.70	258.00	13.0%	0.66
100	426.00	21.5%	0.50	323.00	16.3%	0.65	446.00	22.5%	1.33	337.00	17.0%	0.86	258.00	13.0%	0.82
110	420.00	21.2%	0.61	319.00	16.1%	0.80	456.00	23.0%	1.56	338.00	17.0%	1.04	258.00	13.0%	0.99
120	413.00	20.8%	0.74	315.00	15.9%	0.97	466.00	23.5%	1.81	338.00	17.1%	1.23	258.00	13.0%	1.18
130	405.00	20.4%	0.88	311.00	15.7%	1.15	475.00	23.9%	2.07	339.00	17.1%	1.43	258.00	13.0%	1.38
140	398.00	20.1%	1.04	307.00	15.5%	1.35	484.00	24.4%	2.34	339.00	17.1%	1.66	258.00	13.0%	1.61
150	390.00	19.7%	1.22	304.00	15.3%	1.56	492.00	24.8%	2.63	339.00	17.1%	1.89	258.00	13.0%	1.84
160	383.00	19.3%	1.41	301.00	15.2%	1.80	500.00	25.2%	2.93	339.00	17.1%	2.15	258.00	13.0%	2.10
170	376.00	19.0%	1.62	298.00	15.0%	2.05	507.00	25.6%	3.24	339.00	17.1%	2.42	258.00	13.0%	2.37
180	368.00	18.6%	1.86	294.00	14.8%	2.32	513.00	25.9%	3.57	339.00	17.1%	2.71	257.00	13.0%	2.66
190	361.00	18.2%	2.11	292.00	14.7%	2.61	519.00	26.2%	3.92	338.00	17.0%	3.01	257.00	13.0%	2.96
200	355.00	17.9%	2.38	289.00	14.6%	2.92	525.00	26.5%	4.27	339.00	17.1%	3.33	257.00	13.0%	3.28
210	349.00	17.6%	2.67	287.00	14.5%	3.25	530.00	26.7%	4.65	338.00	17.0%	3.67	257.00	13.0%	3.62
220	343.00	17.3%	2.98	285.00	14.4%	3.59	535.00	27.0%	5.03	338.00	17.0%	4.02	257.00	13.0%	3.97
230	337.00	17.0%	3.31	283.00	14.3%	3.95	539.00	27.2%	5.43	338.00	17.0%	4.39	257.00	13.0%	4.34
240	332.00	16.7%	3.67	281.00	14.2%	4.33	543.00	27.4%	5.85	337.00	17.0%	4.78	257.00	13.0%	4.73
250	327.00	16.5%	4.03	279.00	14.1%	4.72	547.00	27.6%	6.29	337.00	17.0%	5.18	257.00	13.0%	5.14
260	323.00	16.3%	4.42	278.00	14.0%	5.14	551.00	27.8%	6.73	337.00	17.0%	5.60	257.00	13.0%	5.56
270	318.00	16.1%	4.83	277.00	14.0%	5.57	554.00	27.9%	7.19	336.00	16.9%	6.04	257.00	13.0%	5.99
280	315.00	15.9%	5.26	275.00	13.9%	6.01	557.00	28.1%	7.67	336.00	16.9%	6.49	257.00	13.0%	6.45
290	311.00	15.7%	5.71	274.00	13.8%	6.48	560.00	28.2%	8.16	336.00	16.9%	6.96	257.00	13.0%	6.92
300	308.00	15.5%	6.18	273.00	13.8%	6.96	562.00	28.3%	8.67	335.00	16.9%	7.44	257.00	13.0%	7.41
310	306.00	15.4%	6.66	272.00	13.7%	7.46	565.00	28.5%	9.19	335.00	16.9%	7.95	257.00	13.0%	7.91
320	302.00	15.2%	7.17	271.00	13.7%	7.98	567.00	28.6%	9.73	334.00	16.8%	8.47	256.00	12.9%	8.43
330	299.00	15.1%	7.69	270.00	13.6%	8.51	569.00	28.7%	10.29	334.00	16.8%	9.00	256.00	12.9%	8.96
340	296.00	14.9%	8.24	269.00	13.6%	9.07	571.00	28.8%	10.86	333.00	16.8%	9.56	256.00	12.9%	9.53
350	294.00	14.8%	8.79	269.00	13.6%	9.64	572.00	28.8%	11.45	333.00	16.8%	10.13	256.00	12.9%	10.10
360	292.00	14.7%	9.38	268.00	13.5%	10.23	574.00	28.9%	12.05	333.00	16.8%	10.72	256.00	12.9%	10.70
370	290.00	14.6%	9.97	267.00	13.5%	10.83	575.00	29.0%	12.67	332.00	16.7%	11.33	256.00	12.9%	11.30
380	288.00	14.5%	10.59	266.00	13.4%	11.45	577.00	29.1%	13.30	332.00	16.7%	11.95	256.00	12.9%	11.93
390	286.00	14.4%	11.22	266.00	13.4%	12.10	578.00	29.1%	13.96	331.00	16.7%	12.59	256.00	12.9%	12.57
400	285.00	14.4%	11.87	265.00	13.3%	12.75	579.00	29.2%	14.63	331.00	16.7%	13.25	256.00	12.9%	13.23
410	283.00	14.3%	12.54	265.00	13.4%	13.42	580.00	29.2%	15.31	331.00	16.7%	13.92	256.00	12.9%	13.91
420	282.00	14.2%	13.22	264.00	13.3%	14.12	581.00	29.3%	16.01	330.00	16.6%	14.62	255.00	12.9%	14.60
430	281.00	14.2%	13.93	264.00	13.3%	14.82	581.00	29.3%	16.73	330.00	16.6%	15.33	255.00	12.9%	15.31
440	279.00	14.1%	14.65	263.00	13.3%	15.55	582.00	29.3%	17.47	329.00	16.6%	16.05	255.00	12.9%	16.04
450	278.00	14.0%	15.40	263.00	13.3%	16.30	582.00	29.3%	18.23	329.00	16.6%	16.80	255.00	12.9%	16.79
460	277.00	14.0%	16.15	262.00	13.2%	17.06	583.00	29.4%	18.99	329.00	16.6%	17.56	255.00	12.9%	17.55
470	276.00	13.9%	16.93	262.00	13.2%	17.84	583.00	29.4%	19.78	328.00	16.5%	18.34	255.00	12.9%	18.34
480	275.00	13.9%	17.73	261.00	13.2%	18.64	584.00	29.4%	20.59	328.00	16.5%	19.14	255.00	12.9%	19.14
490	274.00	13.8%	18.54	261.00	13.2%	19.46	584.00	29.4%	21.41	327.00	16.5%	19.96	255.00	12.9%	19.95
500	273.00	13.8%	19.38	261.00	13.2%	20.29	584.00	29.4%	22.25	327.00	16.5%	20.79	254.00	12.8%	20.79
510	272.00	13.7%	20.23	260.00	13.1%	21.15	584.00	29.4%	23.12	327.00	16.5%	21.65	254.00	12.8%	21.65
520	271.00	13.7%	21.09	260.00	13.1%	22.02	585.00	29.5%	23.98	326.00	16.4%	22.52	254.00	12.8%	22.52
530	270.00	13.6%	21.98	259.00	13.1%	22.90	585.00	29.5%	24.88	326.00	16.4%	23.40	254.00	12.8%	23.41
540	270.00	13.6%	22.89	259.00	13.1%	23.82	585.00	29.5%	25.79	325.00	16.4%	24.32	254.00	12.8%	24.32
550	269.00	13.6%	23.81	259.00	13.1%	24.74	585.00	29.5%	26.72	325.00	16.4%	25.24	254.00	12.8%	25.24
560	268.00	13.5%	24.76	258.00	13.0%	25.69	585.00	29.5%	27.67	325.00	16.4%	26.19	253.00	12.8%	26.19
570	267.00	13.5%	25.72	258.00	13.0%	26.65	585.00	29.5%	28.64	324.00	16.3%	27.15	253.00	12.8%	27.16
580	267.00	13.5%	26.70	258.00	13.0%	27.63	584.00	29.4%	29.63	324.00	16.3%	28.13	253.00	12.8%	28.14
590	266.00	13.4%	27.70	257.00	13.0%	28.63	584.00	29.4%	30.62	323.00	16.3%	29.13	253.00	12.8%	29.14
600	265.00	13.4%	28.71	257.00	13.0%	29.65	584.00	29.4%	31.65	323.00	16.3%	30.15	253.00	12.8%	30.16

ALLIANCE AAAC 246.9 KCMIL

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837.00	22.0%	0.01	637.00	17%	0.01	606.00	16%	0.02	602.00	16%	0.01	457.00	12.0%	0.01	28.00	1%	0.15
20	837.00	22.0%	0.02	637.00	17%	0.03	618.00	16%	0.06	603.00	16%	0.03	459.00	12.1%	0.04	55.00	1%	0.31
30	837.00	22.0%	0.05	636.00	17%	0.06	634.00	17%	0.14	606.00	16%	0.08	462.00	12.1%	0.08	80.00	2%	0.47
40	837.00	22.0%	0.08	635.00	17%	0.11	653.00	17%	0.23	609.00	16%	0.14	466.00	12.2%	0.15	104.00	3%	0.85
50	837.00	22.0%	0.13	634.00	17%	0.17	674.00	18%	0.35	611.00	16%	0.21	471.00	12.4%	0.22	124.00	3%	0.94
60	835.00	21.9%	0.18	631.00	17%	0.24	695.00	18%	0.48	615.00	16%	0.30	476.00	12.5%	0.32	147.00	4%	1.03
70	824.00	21.6%	0.25	624.00	16%	0.33	710.00	19%	0.63	612.00	16%	0.41	476.00	12.5%	0.44	167.00	4%	1.24
80	811.00	21.3%	0.33	615.00	16%	0.44	724.00	19%	0.80	610.00	16%	0.54	476.00	12.5%	0.57	185.00	5%	1.47
90	797.00	20.9%	0.43	607.00	16%	0.56	739.00	19%	0.99	607.00	16%	0.68	476.00	12.5%	0.72	201.00	5%	1.70
100	783.00	20.6%	0.54	597.00	16%	0.71	750.00	20%	1.19	604.00	16%	0.84	475.00	12.5%	0.89	217.00	6%	1.95
110	767.00	20.1%	0.67	587.00	15%	0.87	762.00	20%	1.41	600.00	16%	1.02	475.00	12.5%	1.08	231.00	6%	2.21
120	751.00	19.7%	0.81	579.00	15%	1.05	775.00	20%	1.64	588.00	16%	1.22	475.00	12.5%	1.28	245.00	6%	2.49
130	736.00	19.3%	0.97	570.00	15%	1.25	783.00	21%	1.89	595.00	16%	1.44	475.00	12.5%	1.51	258.00	7%	2.77
140	720.00	18.9%	1.15	563.00	15%	1.47	792.00	21%	2.16	593.00	16%	1.67	475.00	12.5%	1.74	270.00	7%	3.07
150	705.00	18.5%	1.35	556.00	15%	1.71	799.00	21%	2.44	590.00	15%	1.92	475.00	12.5%	2.00	281.00	7%	3.39
160	689.00	18.1%	1.57	550.00	14%	1.97	807.00	21%	2.74	587.00	15%	2.19	475.00	12.5%	2.28	291.00	8%	3.72
170	675.00	17.7%	1.81	544.00	14%	2.25	813.00	21%	3.05	585.00	15%	2.48	475.00	12.5%	2.57	301.00	8%	4.06
180	661.00	17.4%	2.07	538.00	14%	2.55	819.00	22%	3.38	582.00	15%	2.76	475.00	12.5%	2.89	310.00	8%	4.42
190	647.00	17.0%	2.36	533.00	14%	2.87	825.00	22%	3.73	580.00	15%	3.11	475.00	12.5%	3.22	318.00	8%	4.80
200	635.00	16.7%	2.67	528.00	14%	3.20	829.00	22%	4.09	578.00	15%	3.45	475.00	12.5%	3.57	326.00	9%	5.19
210	623.00	16.4%	2.99	524.00	14%	3.56	834.00	22%	4.47	576.00	15%	3.81	474.00	12.4%	3.93	334.00	9%	5.59
220	612.00	16.1%	3.34	520.00	14%	3.94	837.00	22%	4.87	574.00	15%	4.19	474.00	12.4%	4.32	341.00	9%	6.01
230	603.00	15.8%	3.71	517.00	14%	4.33	841.00	22%	5.28	573.00	15%	4.59	474.00	12.4%	4.72	347.00	9%	6.45
240	593.00	15.6%	4.11	514.00	13%	4.74	843.00	22%	5.71	571.00	15%	5.01	474.00	12.4%	5.14	353.00	9%	6.90
250	584.00	15.3%	4.52	511.00	13%	5.18	846.00	22%	6.16	569.00	15%	5.45	474.00	12.4%	5.58	359.00	9%	7.37
260	577.00	15.2%	4.96	508.00	13%	5.63	848.00	22%	6.63	568.00	15%	5.90	474.00	12.4%	6.04	364.00	10%	7.86
270	570.00	15.0%	5.41	506.00	13%	6.10	850.00	22%	7.11	566.00	15%	6.37	474.00	12.4%	6.51	369.00	10%	8.36
280	563.00	14.8%	5.89	504.00	13%	6.59	852.00	22%	7.61	565.00	15%	6.86	473.00	12.4%	7.01	374.00	10%	8.88
290	558.00	14.7%	6.38	501.00	13%	7.10	854.00	22%	8.13	564.00	15%	7.37	473.00	12.4%	7.52	378.00	10%	9.41
300	552.00	14.5%	6.90	499.00	13%	7.63	854.00	22%	8.67	562.00	15%	7.90	473.00	12.4%	8.05	382.00	10%	9.97
310	547.00	14.4%	7.44	498.00	13%	8.17	856.00	22%	9.22	561.00	15%	8.45	473.00	12.4%	8.60	386.00	10%	10.53
320	542.00	14.2%	7.99	496.00	13%	8.73	857.00	22%	9.79	560.00	15%	9.01	473.00	12.4%	9.17	390.00	10%	11.12
330	538.00	14.1%	8.57	495.00	13%	9.32	857.00	22%	10.38	559.00	15%	9.59	473.00	12.4%	9.75	393.00	10%	11.73
340	534.00	14.0%	9.16	493.00	13%	9.92	858.00	23%	10.99	558.00	15%	10.20	472.00	12.4%	10.36	396.00	10%	12.35
350	530.00	13.9%	9.78	492.00	13%	10.54	858.00	23%	11.62	556.00	15%	10.82	472.00	12.4%	10.99	399.00	10%	12.99
360	527.00	13.8%	10.41	491.00	13%	11.18	859.00	23%	12.26	556.00	15%	11.46	472.00	12.4%	11.63	402.00	11%	13.65
370	524.00	13.8%	11.07	489.00	13%	11.84	859.00	23%	12.93	555.00	15%	12.12	472.00	12.4%	12.29	405.00	11%	14.33
380	521.00	13.7%	11.74	488.00	13%	12.52	859.00	23%	13.61	554.00	15%	12.80	472.00	12.4%	12.97	407.00	11%	15.02
390	518.00	13.6%	12.44	487.00	13%	13.22	859.00	23%	14.31	553.00	15%	13.50	471.00	12.4%	13.67	410.00	11%	15.73
400	515.00	13.5%	13.15	486.00	13%	13.85	859.00	23%	15.03	552.00	14%	14.22	471.00	12.4%	14.39	412.00	11%	16.46
410	513.00	13.5%	13.88	485.00	13%	14.67	858.00	23%	15.77	551.00	14%	14.95	471.00	12.4%	15.12	414.00	11%	17.21
420	511.00	13.4%	14.63	484.00	13%	15.43	858.00	23%	16.52	550.00	14%	15.71	471.00	12.4%	15.88	416.00	11%	17.98
430	508.00	13.4%	15.40	484.00	13%	16.20	858.00	23%	17.30	548.00	14%	16.48	470.00	12.3%	16.66	418.00	11%	18.76
440	506.00	13.3%	16.19	483.00	13%	17.00	857.00	23%	18.10	548.00	14%	17.28	470.00	12.3%	17.45	419.00	11%	19.57
450	504.00	13.2%	17.01	482.00	13%	17.81	857.00	23%	18.91	548.00	14%	18.09	470.00	12.3%	18.27	421.00	11%	20.39
460	503.00	13.2%	17.83	481.00	13%	18.64	856.00	22%	19.75	547.00	14%	18.92	469.00	12.3%	19.10	422.00	11%	21.24
470	501.00	13.2%	18.69	480.00	13%	19.49	856.00	22%	20.60	546.00	14%	19.77	469.00	12.3%	19.96	424.00	11%	22.10
480	499.00	13.1%	19.56	480.00	13%	20.37	855.00	22%	21.47	545.00	14%	20.65	469.00	12.3%	20.83	425.00	11%	22.98
490	498.00	13.1%	20.45	479.00	13%	21.26	854.00	22%	22.37	544.00	14%	21.54	469.00	12.3%	21.73	426.00	11%	23.88
500	496.00	13.0%	21.36	478.00	13%	22.18	854.00	22%	23.28	544.00	14%	22.45	468.00	12.3%	22.64	428.00	11%	24.80
510	495.00	13.0%	22.29	477.00	13%	23.11	853.00	22%	24.21	543.00	14%	23.38	468.00	12.3%	23.57	429.00	11%	25.74
520	493.00	12.9%	23.24	477.00	13%	24.05	852.00	22%	25.16	542.00	14%	24.33	468.00	12.3%	24.52	430.00	11%	26.70
530	492.00	12.9%	24.21	476.00	13%	25.03	851.00	22%	26.13	541.00	14%	25.31	467.00	12.3%	25.49	431.00	11%	27.68
540	491.00	12.9%	25.20	475.00	12%	26.02	850.00	22%	27.13	541.00	14%	26.30	467.00	12.3%	26.49	432.00	11%	28.68
550	489.00	12.8%	26.22	475.00	12%	27.04	849.00	22%	28.14	540.00	14%	27.32	466.00	12.3%	27.51	432.00	11%	29.70
560	488.00	12.8%	27.25	474.00	12%	28.07	849.00	22%	29.18	539.00	14%	28.35	466.00	12.2%	28.54	433.00	11%	30.74
570	487.00	12.8%	28.30	473.00	12%	29.13	848.00	22%	30.23	538.00	14%	29.40	466.00	12.2%	29.59	434.00	11%	31.80
580	486.00	12.8%	29.38	473.00	12%	30.20	847.00	22%	31.30	538.00	14%	30.46	466.00	12.2%	30.67	435.00	11%	32.88
590	485.00	12.7%	30.47	472.00	12%	31.29	846.00	22%	32.39	537.00	14%	31.57	465.00	12.2%	31.76	436.00	11%	33.97
600	484.00	12.7%	31.59	471.00	12%	32.42	845.00	22%	33.51	536.00	14%	32.68	465.00	12.2%	32.88	436.00	11%	35.10

BUTTE AAAC 312.8 KCMLL

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 4993.04
 Peso (daN/m): 0.4284

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 19%
 Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	929.00	19.0%	0.01	734.00	15%	0.01	696.00	14%	0.02	691.00	14%	0.01	515.00	10.5%	0.01	35.00	1%	0.15
20	929.00	19.0%	0.02	733.00	15%	0.03	709.00	14%	0.06	691.00	14%	0.04	518.00	10.6%	0.04	68.00	1%	0.32
30	929.00	19.0%	0.05	731.00	15%	0.07	728.00	15%	0.14	693.00	14%	0.08	523.00	10.7%	0.09	98.00	2%	0.49
40	929.00	19.0%	0.09	729.00	15%	0.12	751.00	15%	0.23	697.00	14%	0.15	530.00	10.8%	0.16	127.00	3%	0.67
50	929.00	19.0%	0.14	727.00	15%	0.18	714.00	16%	0.35	700.00	14%	0.23	536.00	11.0%	0.25	155.00	3%	0.87
60	929.00	19.0%	0.21	728.00	15%	0.26	799.00	16%	0.49	707.00	14%	0.32	545.00	11.1%	0.35	181.00	4%	1.07
70	929.00	19.0%	0.28	727.00	15%	0.36	824.00	17%	0.63	713.00	15%	0.43	554.00	11.3%	0.47	206.00	4%	1.28
80	928.00	18.9%	0.37	724.00	15%	0.47	846.00	17%	0.80	715.00	15%	0.56	562.00	11.5%	0.61	229.00	5%	1.50
90	908.00	18.6%	0.45	712.00	15%	0.61	858.00	18%	0.99	711.00	15%	0.71	562.00	11.5%	0.77	249.00	5%	1.74
100	890.00	18.2%	0.60	700.00	14%	0.77	872.00	18%	1.20	706.00	14%	0.89	562.00	11.5%	0.95	268.00	5%	2.00
110	871.00	17.8%	0.74	699.00	14%	0.94	883.00	18%	1.42	702.00	14%	1.08	562.00	11.5%	1.15	286.00	6%	2.27
120	851.00	17.4%	0.91	678.00	14%	1.14	893.00	18%	1.66	697.00	14%	1.29	562.00	11.5%	1.37	302.00	6%	2.56
130	832.00	17.0%	1.09	668.00	14%	1.36	902.00	18%	1.92	693.00	14%	1.52	562.00	11.5%	1.61	317.00	6%	2.86
140	812.00	16.6%	1.29	659.00	13%	1.59	910.00	19%	2.20	689.00	14%	1.76	562.00	11.5%	1.87	331.00	7%	3.17
150	793.00	16.2%	1.52	650.00	13%	1.85	917.00	19%	2.49	684.00	14%	2.04	561.00	11.5%	2.15	345.00	7%	3.50
160	776.00	15.9%	1.77	642.00	13%	2.14	924.00	19%	2.80	681.00	14%	2.32	561.00	11.5%	2.44	357.00	7%	3.85
170	760.00	15.5%	2.04	635.00	13%	2.44	929.00	19%	3.13	678.00	14%	2.63	561.00	11.5%	2.76	368.00	8%	4.21
180	744.00	15.2%	2.33	629.00	13%	2.76	935.00	19%	3.47	675.00	14%	2.96	561.00	11.5%	3.09	379.00	8%	4.58
190	730.00	14.9%	2.65	623.00	13%	3.10	939.00	19%	3.84	672.00	14%	3.31	561.00	11.5%	3.45	389.00	8%	4.98
200	716.00	14.6%	2.99	618.00	13%	3.47	942.00	19%	4.22	669.00	14%	3.68	561.00	11.5%	3.82	398.00	8%	5.39
210	703.00	14.4%	3.36	613.00	13%	3.85	945.00	19%	4.63	666.00	14%	4.07	561.00	11.5%	4.22	408.00	8%	5.82
220	693.00	14.2%	3.74	609.00	12%	4.26	948.00	19%	5.04	664.00	14%	4.47	561.00	11.5%	4.63	414.00	8%	6.26
230	683.00	14.0%	4.15	605.00	12%	4.68	950.00	19%	5.48	662.00	14%	4.90	560.00	11.4%	5.06	422.00	9%	6.72
240	674.00	13.8%	4.58	602.00	12%	5.13	952.00	19%	5.94	660.00	13%	5.35	560.00	11.4%	5.51	429.00	9%	7.21
250	665.00	13.6%	5.04	599.00	12%	5.60	954.00	19%	6.42	657.00	13%	5.82	560.00	11.4%	5.98	435.00	9%	7.70
260	658.00	13.4%	5.51	596.00	12%	6.08	955.00	20%	6.91	655.00	13%	6.30	560.00	11.4%	6.47	441.00	9%	8.22
270	650.00	13.2%	6.01	593.00	12%	6.59	956.00	20%	7.42	654.00	13%	6.81	560.00	11.4%	6.98	447.00	9%	8.75
280	644.00	13.2%	6.52	591.00	12%	7.11	957.00	20%	7.96	652.00	13%	7.34	559.00	11.4%	7.52	452.00	9%	9.30
290	638.00	13.0%	7.06	589.00	12%	7.66	958.00	20%	8.51	650.00	13%	7.89	559.00	11.4%	8.06	457.00	9%	9.87
300	633.00	12.9%	7.62	587.00	12%	8.23	958.00	20%	9.09	649.00	13%	8.46	559.00	11.4%	8.64	461.00	9%	10.46
310	628.00	12.8%	8.20	585.00	12%	8.81	958.00	20%	9.67	647.00	13%	9.04	559.00	11.4%	9.22	466.00	10%	11.07
320	624.00	12.8%	8.80	583.00	12%	9.42	958.00	20%	10.29	646.00	13%	9.65	558.00	11.4%	9.83	470.00	10%	11.70
330	619.00	12.7%	9.43	581.00	12%	10.05	958.00	20%	10.92	644.00	13%	10.28	558.00	11.4%	10.47	473.00	10%	12.35
340	616.00	12.6%	10.07	580.00	12%	10.70	958.00	20%	11.57	643.00	13%	10.93	558.00	11.4%	11.11	477.00	10%	13.01
350	612.00	12.5%	10.73	578.00	12%	11.37	958.00	20%	12.24	642.00	13%	11.59	558.00	11.4%	11.78	480.00	10%	13.69
360	609.00	12.4%	11.42	577.00	12%	12.05	957.00	20%	12.93	641.00	13%	12.28	557.00	11.4%	12.48	483.00	10%	14.40
370	606.00	12.4%	12.12	575.00	12%	12.76	957.00	20%	13.64	640.00	13%	12.99	557.00	11.4%	13.19	486.00	10%	15.12
380	603.00	12.3%	12.85	574.00	12%	13.49	956.00	20%	14.37	638.00	13%	13.72	557.00	11.4%	13.92	489.00	10%	15.86
390	600.00	12.3%	13.60	573.00	12%	14.25	956.00	20%	15.13	637.00	13%	14.47	556.00	11.4%	14.67	491.00	10%	16.63
400	597.00	12.2%	14.37	572.00	12%	15.02	955.00	20%	15.90	636.00	13%	15.24	556.00	11.4%	15.44	493.00	10%	17.41
410	595.00	12.2%	15.16	571.00	12%	15.81	954.00	19%	16.69	635.00	13%	16.04	556.00	11.4%	16.24	496.00	10%	18.21
420	593.00	12.1%	15.97	570.00	12%	16.62	954.00	19%	17.50	634.00	13%	16.85	555.00	11.3%	17.05	498.00	10%	19.04
430	591.00	12.1%	16.80	569.00	12%	17.46	952.00	19%	18.34	633.00	13%	17.68	555.00	11.3%	17.88	500.00	10%	19.88
440	589.00	12.0%	17.65	568.00	12%	18.31	952.00	19%	19.20	632.00	13%	18.54	555.00	11.3%	18.74	501.00	10%	20.74
450	587.00	12.0%	18.53	567.00	12%	19.19	951.00	19%	20.07	631.00	13%	19.41	554.00	11.3%	19.62	503.00	10%	21.63
460	586.00	12.0%	19.42	566.00	12%	20.08	950.00	19%	20.97	630.00	13%	20.21	554.00	11.3%	20.52	505.00	10%	22.53
470	583.00	11.9%	20.34	565.00	12%	21.00	948.00	19%	21.89	629.00	13%	21.23	553.00	11.3%	21.44	506.00	10%	23.46
480	581.00	11.9%	21.28	564.00	12%	21.94	947.00	19%	22.83	628.00	13%	22.17	553.00	11.3%	22.38	507.00	10%	24.41
490	580.00	11.9%	22.24	563.00	12%	22.90	946.00	19%	23.79	627.00	13%	23.13	553.00	11.3%	23.34	509.00	10%	25.38
500	578.00	11.8%	23.22	562.00	11%	23.89	945.00	19%	24.77	626.00	13%	24.11	552.00	11.3%	24.32	510.00	10%	26.37
510	577.00	11.8%	24.23	561.00	11%	24.89	944.00	19%	25.77	625.00	13%	25.12	552.00	11.3%	25.33	511.00	10%	27.37
520	575.00	11.8%	25.26	561.00	11%	25.92	943.00	19%	26.80	624.00	13%	26.14	551.00	11.3%	26.36	512.00	10%	28.41
530	574.00	11.7%	26.30	560.00	11%	26.97	941.00	19%	27.85	623.00	13%	27.19	551.00	11.3%	27.40	513.00	10%	29.46
540	572.00	11.7%	27.38	559.00	11%	28.04	940.00	19%	28.92	623.00	13%	28.26	550.00	11.2%	28.48	514.00	11%	30.54
550	571.00	11.7%	28.47	558.00	11%	29.13	939.00	19%	30.01	622.00	13%	29.36	550.00	11.2%	29.57	514.00	11%	31.64
560	570.00	11.6%	29.58	557.00	11%	30.25	938.00	19%	31.13	621.00	13%	30.47	550.00	11.2%	30.69	515.00	11%	32.76
570	569.00	11.6%	30.72	557.00	11%	31.38	936.00	19%	32.26	620.00	13%	31.61	549.00	11.2%	31.82	516.00	11%	33.90
580	567.00	11.6%	31.98	556.00	11%	32.55	935.00	19%	33.42	619.00	13%	32.77	549.00	11.2%	32.98	516.00	11%	35.07
590	566.00	11.6%	33.06	555.00	11%	33.73	934.00	19%	34.61	618.00	13%	33.95	548.00	11.2%	34.17	517.00	11%	36.25
600	565.00	11.5%	34.27	554.00	11%	34.94	932.00	19%	35.81	617.00	13%	35.16	548.00	11.2%	35.38	517.00	11%	37.47



ANEXO B1.4: Zona 4 (Velocidad de viento máxima 120 km/h)

QUAL ACSR 2/0 AWG

Clima: Cálido
Altitud: 0 msnm - 1000 msnm
Temperatura máxima (°C): 40
Temperatura media (°C): 26
Temperatura mínima (°C): 16
Temperatura coincidente (°C): 18
Velocidad del viento máxima (km/h): 120
Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
Tensión de rotura (daN): 2362.01
Peso (daN/m): 0.2667
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 22.5%
Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	531.00	22.5%	0.01	425.00	18.0%	0.01	413.00	17.5%	0.03	403.00	17.1%	0.01	311.00	13.2%	0.01	83.00	3.5%	0.04
20	530.00	22.4%	0.03	424.00	18.0%	0.03	434.00	18.6%	0.10	406.00	17.2%	0.05	312.00	13.2%	0.04	99.00	4.2%	0.14
30	531.00	22.5%	0.06	425.00	18.0%	0.07	464.00	19.6%	0.20	411.00	17.4%	0.10	316.00	13.4%	0.10	115.00	4.9%	0.26
40	531.00	22.5%	0.10	424.00	18.0%	0.13	484.00	20.9%	0.33	417.00	17.7%	0.18	320.00	13.5%	0.17	131.00	5.5%	0.41
50	531.00	22.5%	0.16	423.00	17.9%	0.20	524.00	22.9%	0.48	424.00	18.0%	0.27	325.00	13.8%	0.26	145.00	6.1%	0.68
60	529.00	22.4%	0.23	422.00	17.9%	0.28	551.00	23.3%	0.65	430.00	18.2%	0.39	330.00	14.0%	0.36	158.00	6.7%	0.76
70	521.00	22.1%	0.31	416.00	17.6%	0.39	573.00	24.3%	0.84	432.00	18.3%	0.52	330.00	14.0%	0.49	168.00	7.1%	0.97
80	511.00	21.6%	0.42	409.00	17.3%	0.52	594.00	25.1%	1.05	432.00	18.3%	0.68	330.00	14.0%	0.65	178.00	7.5%	1.20
90	500.00	21.2%	0.54	403.00	17.1%	0.67	613.00	26.0%	1.28	433.00	18.3%	0.85	330.00	14.0%	0.82	187.00	7.9%	1.44
100	490.00	20.7%	0.69	396.00	16.8%	0.84	630.00	26.7%	1.52	433.00	18.3%	1.04	330.00	14.0%	1.01	195.00	8.3%	1.71
110	478.00	20.2%	0.84	390.00	16.5%	1.04	645.00	27.3%	1.78	434.00	18.4%	1.26	330.00	14.0%	1.22	203.00	8.6%	1.99
120	466.00	19.7%	1.03	384.00	16.2%	1.25	659.00	27.9%	2.06	434.00	18.4%	1.49	330.00	14.0%	1.45	210.00	8.9%	2.28
130	455.00	19.3%	1.24	379.00	16.0%	1.49	672.00	28.5%	2.36	434.00	18.4%	1.74	330.00	14.0%	1.71	217.00	9.2%	2.60
140	445.00	18.8%	1.47	374.00	15.8%	1.73	684.00	29.0%	2.67	433.00	18.3%	2.02	330.00	14.0%	1.98	223.00	9.4%	2.93
150	435.00	18.4%	1.72	370.00	15.7%	2.03	695.00	29.4%	3.00	433.00	18.3%	2.31	330.00	14.0%	2.27	229.00	9.7%	3.28
160	426.00	18.0%	2.01	366.00	15.5%	2.33	704.00	29.8%	3.35	433.00	18.3%	2.62	330.00	14.0%	2.59	234.00	9.9%	3.65
170	418.00	17.7%	2.31	363.00	15.4%	2.65	713.00	30.2%	3.72	433.00	18.3%	2.95	330.00	14.0%	2.92	239.00	10.1%	4.04
180	410.00	17.4%	2.63	360.00	15.2%	3.00	721.00	30.5%	4.10	432.00	18.3%	3.31	330.00	14.0%	3.28	243.00	10.3%	4.44
190	403.00	17.1%	2.99	357.00	15.1%	3.37	728.00	30.8%	4.50	431.00	18.2%	3.68	330.00	14.0%	3.65	248.00	10.5%	4.86
200	397.00	16.8%	3.36	355.00	15.0%	3.76	734.00	31.1%	4.92	431.00	18.2%	4.08	330.00	14.0%	4.05	252.00	10.7%	5.30
210	391.00	16.6%	3.76	352.00	14.9%	4.17	740.00	31.3%	5.36	430.00	18.2%	4.49	329.00	13.9%	4.47	256.00	10.8%	5.76
220	386.00	16.3%	4.18	351.00	14.9%	4.60	745.00	31.5%	5.82	430.00	18.2%	4.93	329.00	13.9%	4.90	259.00	11.0%	6.23
230	381.00	16.1%	4.63	349.00	14.8%	5.06	750.00	31.8%	6.30	429.00	18.2%	5.38	329.00	13.9%	5.36	263.00	11.1%	6.72
240	377.00	16.0%	5.09	347.00	14.7%	5.53	754.00	31.9%	6.79	428.00	18.1%	5.86	329.00	13.9%	5.84	266.00	11.3%	7.22
250	374.00	15.8%	5.58	346.00	14.6%	6.03	758.00	32.1%	7.31	428.00	18.1%	6.36	329.00	13.9%	6.34	270.00	11.4%	7.74
260	370.00	15.7%	6.09	344.00	14.6%	6.55	761.00	32.2%	7.85	427.00	18.1%	6.88	329.00	13.9%	6.86	273.00	11.6%	8.28
270	367.00	15.5%	6.62	343.00	14.5%	7.09	764.00	32.3%	8.40	426.00	18.0%	7.42	329.00	13.9%	7.40	275.00	11.6%	8.84
280	364.00	15.4%	7.18	342.00	14.5%	7.65	767.00	32.5%	8.98	426.00	18.0%	7.98	329.00	13.9%	7.96	278.00	11.8%	9.42
290	362.00	15.3%	7.76	341.00	14.4%	8.23	769.00	32.6%	9.57	425.00	18.0%	8.56	328.00	13.9%	8.55	280.00	11.9%	10.02
300	359.00	15.2%	8.36	340.00	14.4%	8.83	771.00	32.6%	10.19	424.00	18.0%	9.17	328.00	13.9%	9.15	283.00	12.0%	10.63
310	357.00	15.1%	8.98	339.00	14.4%	9.46	773.00	32.7%	10.82	424.00	18.0%	9.79	328.00	13.9%	9.78	285.00	12.1%	11.27
320	355.00	15.0%	9.62	338.00	14.3%	10.10	775.00	32.8%	11.48	423.00	17.9%	10.43	328.00	13.9%	10.43	287.00	12.2%	11.93
330	353.00	14.9%	10.29	338.00	14.3%	10.77	776.00	32.9%	12.15	422.00	17.9%	11.10	328.00	13.9%	11.10	288.00	12.3%	12.61
340	352.00	14.9%	10.97	337.00	14.3%	11.46	777.00	32.9%	12.85	422.00	17.9%	11.79	327.00	13.8%	11.79	290.00	12.3%	13.31
350	350.00	14.8%	11.68	336.00	14.2%	12.17	778.00	32.9%	13.57	421.00	17.8%	12.50	327.00	13.8%	12.50	292.00	12.4%	14.03
360	349.00	14.8%	12.41	335.00	14.2%	12.90	779.00	33.0%	14.31	420.00	17.8%	13.24	327.00	13.8%	13.23	293.00	12.4%	14.77
370	347.00	14.7%	13.16	335.00	14.2%	13.65	780.00	33.0%	15.07	420.00	17.8%	13.99	327.00	13.8%	13.99	294.00	12.4%	15.54
380	346.00	14.6%	13.93	334.00	14.1%	14.43	780.00	33.0%	15.85	419.00	17.7%	14.77	327.00	13.8%	14.77	296.00	12.5%	16.32
390	345.00	14.6%	14.73	334.00	14.1%	15.23	781.00	33.1%	16.65	418.00	17.7%	15.56	327.00	13.8%	15.56	297.00	12.6%	17.13
400	344.00	14.6%	15.55	333.00	14.1%	16.05	781.00	33.1%	17.47	418.00	17.7%	16.39	326.00	13.8%	16.38	298.00	12.6%	17.96
410	343.00	14.5%	16.39	332.00	14.1%	16.90	781.00	33.1%	18.33	417.00	17.7%	17.23	326.00	13.8%	17.23	299.00	12.7%	18.81
420	342.00	14.5%	17.26	332.00	14.1%	17.76	781.00	33.1%	19.19	416.00	17.6%	18.09	326.00	13.8%	18.09	300.00	12.7%	19.68
430	341.00	14.4%	18.14	331.00	14.0%	18.64	781.00	33.1%	20.08	416.00	17.6%	18.98	326.00	13.8%	18.98	301.00	12.7%	20.57
440	340.00	14.4%	19.05	331.00	14.0%	19.55	781.00	33.1%	20.99	415.00	17.6%	19.88	325.00	13.8%	19.89	301.00	12.7%	21.49
450	339.00	14.4%	19.98	330.00	14.0%	20.49	781.00	33.1%	21.93	414.00	17.5%	20.82	325.00	13.8%	20.83	302.00	12.8%	22.43
460	338.00	14.3%	20.94	330.00	14.0%	21.44	780.00	33.0%	22.89	414.00	17.5%	21.77	325.00	13.8%	21.78	303.00	12.8%	23.39
470	337.00	14.3%	21.91	329.00	13.9%	22.42	780.00	33.0%	23.86	413.00	17.5%	22.75	325.00	13.8%	22.76	303.00	12.8%	24.37
480	336.00	14.2%	22.92	329.00	13.9%	23.42	779.00	33.0%	24.87	413.00	17.5%	23.75	324.00	13.7%	23.76	304.00	12.9%	25.38
490	335.00	14.2%	23.94	329.00	13.9%	24.44	779.00	33.0%	25.89	412.00	17.4%	24.77	324.00	13.7%	24.78	304.00	12.9%	26.40
500	335.00	14.2%	24.99	328.00	13.9%	25.50	778.00	32.9%	26.94	411.00	17.4%	25.82	324.00	13.7%	25.84	305.00	12.9%	27.46
510	334.00	14.1%	26.06	328.00	13.9%	26.56	778.00	32.9%	28.01	411.00	17.4%	26.89	323.00	13.7%	26.90	305.00	12.9%	28.53
520	333.00	14.1%	27.15	327.00	13.8%	27.66	777.00	32.9%	29.10	410.00	17.4%	27.98	323.00	13.7%	27.99	305.00	13.0%	29.63
530	333.00	14.1%	28.27	327.00	13.8%	28.78	776.00	32.9%	30.22	409.00	17.3%	29.10	323.00	13.7%	29.12	305.00	13.0%	30.75
540	332.00	14.1%	29.41	326.00	13.8%	29.92	776.00	32.9%	31.37	409.00	17.3%	30.24	323.00	13.7%	30.26	306.00	13.0%	31.90
550	331.00	14.0%	30.58	326.00	13.8%	31.09	775.00	32.8%	32.53	408.00	17.3%	31.41	322.00	13.6%	31.43	306.00	13.0%	33.07
560	330.00	14.0%	31.77	325.00	13.8%	32.28	774.00	32.8%	33.72	407.00	17.2%	32.60	322.00	13.6%	32.62	307.00	13.0%	34.26
570	330.00	14.0%	32.98	325.00	13.8%	33.49	773.00	32.7%	34.94	407.00	17.2%	33.82	322.00	13.6%	33.83	307.00	13.0%	35.48
580	329.00	13.9%	34.22	324.00	13.7%	34.73	772.00	32.7%	36.17	406.00	17.2%	35.05	321.00	13.6%	35.06	307.00	13.0%	36.71
590	329.00	13.9%	35.49	324.00	13.7%	35.99	771.00	32.6%	37.44	405.00	17.1%	36.32	321.00	13.6%	36.34	307.00	13.0%	37.98
600	328.00	13.9%	36.78	324.00	13.7%	37.28	770.00	32.6%	38.73	405.00	17.1%	37.61	321.00	13.6%	37.63	307.00	13.0%	39.28

LINNET ACSR 336.4 KCMIL																		
Clima: Cálido																		
Altitud: 0 msnm - 1000 msnm																		
Temperatura máxima (°C): 40																		
Temperatura media (°C): 26																		
Temperatura mínima (°C): 16																		
Temperatura coincidente (°C): 18																		
Velocidad del viento máxima (km/h): 120																		
Velocidad del viento promedio (km/h): 70																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 6271.99																		
Peso (daN/m): 0.6741																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 19%																		
Operación diaria (EDS): 12%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1190.00	19.0%	0.01	952.00	15%	0.01	910.00	14.5%	0.02	899.00	14.3%	0.01	876.00	10.8%	0.01	186.00	3.0%	0.05
20	1190.00	19.0%	0.03	949.00	15%	0.04	939.00	15.0%	0.08	900.00	14.3%	0.04	882.00	10.9%	0.05	230.00	3.7%	0.15
30	1190.00	19.0%	0.06	944.00	15%	0.08	979.00	15.6%	0.16	905.00	14.4%	0.10	692.00	11.0%	0.11	272.00	4.3%	0.28
40	1190.00	19.0%	0.11	944.00	15%	0.14	1025.00	16.3%	0.28	911.00	14.5%	0.17	705.00	11.2%	0.19	312.00	5.0%	0.43
50	1190.00	19.0%	0.18	941.00	15%	0.22	1068.00	17.0%	0.41	920.00	14.7%	0.27	719.00	11.5%	0.29	347.00	5.5%	0.61
60	1190.00	19.0%	0.25	940.00	15%	0.32	1111.00	17.7%	0.56	929.00	14.8%	0.38	734.00	11.7%	0.41	381.00	6.1%	0.80
70	1190.00	19.0%	0.35	940.00	15%	0.44	1153.00	18.4%	0.73	940.00	15.0%	0.51	750.00	12.0%	0.55	412.00	6.6%	1.00
80	1163.00	18.5%	0.46	922.00	15%	0.59	1179.00	18.8%	0.92	934.00	14.9%	0.67	752.00	12.0%	0.72	436.00	7.0%	1.24
90	1131.00	18.0%	0.60	905.00	14%	0.75	1201.00	19.1%	1.14	927.00	14.8%	0.86	751.00	12.0%	0.91	457.00	7.3%	1.49
100	1100.00	17.5%	0.77	888.00	14%	0.95	1220.00	19.5%	1.37	920.00	14.7%	1.06	751.00	12.0%	1.12	476.00	7.6%	1.77
110	1069.00	17.0%	0.96	874.00	14%	1.17	1236.00	19.7%	1.63	914.00	14.6%	1.29	751.00	12.0%	1.36	494.00	7.9%	2.07
120	1039.00	16.6%	1.17	860.00	14%	1.41	1251.00	19.9%	1.90	908.00	14.5%	1.54	751.00	12.0%	1.62	511.00	8.1%	2.38
130	1011.00	16.1%	1.41	848.00	14%	1.68	1262.00	20.1%	2.20	903.00	14.4%	1.82	751.00	12.0%	1.90	525.00	8.4%	2.71
140	985.00	15.7%	1.68	838.00	13%	1.97	1273.00	20.3%	2.52	899.00	14.3%	2.11	751.00	12.0%	2.20	539.00	8.6%	3.06
150	961.00	15.3%	1.97	829.00	13%	2.29	1282.00	20.4%	2.86	894.00	14.3%	2.43	750.00	12.0%	2.53	552.00	8.8%	3.44
160	940.00	15.0%	2.30	820.00	13%	2.63	1290.00	20.6%	3.22	889.00	14.2%	2.78	750.00	12.0%	2.88	564.00	9.0%	3.83
170	922.00	14.7%	2.64	814.00	13%	2.99	1296.00	20.7%	3.60	886.00	14.1%	3.15	750.00	12.0%	3.25	575.00	9.2%	4.24
180	906.00	14.4%	3.02	807.00	13%	3.38	1301.00	20.7%	4.00	882.00	14.1%	3.54	750.00	12.0%	3.64	586.00	9.3%	4.67
190	889.00	14.2%	3.42	802.00	13%	3.80	1305.00	20.8%	4.43	878.00	14.0%	3.95	749.00	11.9%	4.06	594.00	9.5%	5.13
200	877.00	14.0%	3.85	797.00	13%	4.23	1309.00	20.9%	4.87	875.00	14.0%	4.39	749.00	11.9%	4.50	603.00	9.6%	5.60
210	866.00	13.8%	4.30	793.00	13%	4.69	1312.00	20.9%	5.34	872.00	13.9%	4.85	749.00	11.9%	4.87	610.00	9.7%	6.10
220	855.00	13.6%	4.77	789.00	13%	5.17	1315.00	21.0%	5.83	870.00	13.9%	5.33	749.00	11.9%	5.45	618.00	9.9%	6.61
230	846.00	13.5%	5.27	785.00	13%	5.68	1316.00	21.0%	6.34	867.00	13.8%	5.84	748.00	11.9%	5.96	625.00	10.0%	7.15
240	838.00	13.4%	5.80	782.00	12%	6.21	1318.00	21.0%	6.88	865.00	13.8%	6.37	748.00	11.9%	6.49	631.00	10.1%	7.70
250	830.00	13.2%	6.35	779.00	12%	6.77	1318.00	21.0%	7.44	863.00	13.8%	6.93	748.00	11.9%	7.05	637.00	10.2%	8.29
260	824.00	13.1%	6.92	776.00	12%	7.34	1319.00	21.0%	8.02	860.00	13.7%	7.51	747.00	11.9%	7.63	642.00	10.2%	8.89
270	818.00	13.0%	7.52	774.00	12%	7.95	1320.00	21.0%	8.62	858.00	13.7%	8.11	747.00	11.9%	8.23	647.00	10.3%	9.51
280	812.00	12.9%	8.14	772.00	12%	8.57	1319.00	21.0%	9.25	857.00	13.7%	8.73	747.00	11.9%	8.86	652.00	10.4%	10.16
290	807.00	12.9%	8.79	770.00	12%	9.22	1319.00	21.0%	9.90	855.00	13.6%	9.38	746.00	11.9%	9.51	656.00	10.5%	10.83
300	803.00	12.8%	9.46	768.00	12%	9.89	1318.00	21.0%	10.58	853.00	13.6%	10.06	746.00	11.9%	10.19	660.00	10.5%	11.52
310	799.00	12.7%	10.16	766.00	12%	10.59	1317.00	21.0%	11.28	851.00	13.6%	10.75	745.00	11.9%	10.89	663.00	10.6%	12.23
320	795.00	12.7%	10.87	764.00	12%	11.31	1316.00	21.0%	12.00	849.00	13.5%	11.47	745.00	11.9%	11.61	667.00	10.6%	12.97
330	791.00	12.6%	11.62	763.00	12%	12.05	1316.00	21.0%	12.75	848.00	13.5%	12.22	744.00	11.9%	12.35	670.00	10.7%	13.73
340	788.00	12.6%	12.39	761.00	12%	12.83	1314.00	21.0%	13.52	846.00	13.5%	12.99	744.00	11.9%	13.12	673.00	10.7%	14.51
350	785.00	12.5%	13.18	759.00	12%	13.62	1313.00	20.9%	14.31	845.00	13.5%	13.78	743.00	11.8%	13.92	676.00	10.8%	15.32
360	782.00	12.5%	14.00	758.00	12%	14.44	1311.00	20.9%	15.13	843.00	13.4%	14.60	743.00	11.8%	14.74	678.00	10.8%	16.14
370	778.00	12.4%	14.84	757.00	12%	15.28	1310.00	20.9%	15.97	841.00	13.4%	15.45	742.00	11.8%	15.59	681.00	10.9%	16.99
380	776.00	12.4%	15.71	755.00	12%	16.15	1308.00	20.9%	16.84	840.00	13.4%	16.31	741.00	11.8%	16.45	683.00	10.9%	17.86
390	774.00	12.3%	16.60	754.00	12%	17.04	1306.00	20.9%	17.73	839.00	13.4%	17.20	741.00	11.8%	17.39	685.00	10.9%	18.77
400	772.00	12.3%	17.52	753.00	12%	17.96	1304.00	20.9%	18.65	837.00	13.3%	18.13	740.00	11.8%	18.27	687.00	11.0%	19.69
410	769.00	12.3%	18.46	751.00	12%	18.91	1303.00	20.9%	19.60	836.00	13.3%	19.07	740.00	11.8%	19.21	689.00	11.0%	20.64
420	767.00	12.2%	19.43	750.00	12%	19.89	1301.00	20.7%	20.56	834.00	13.3%	20.04	739.00	11.8%	20.18	690.00	11.0%	21.61
430	765.00	12.2%	20.42	748.00	12%	20.87	1299.00	20.7%	21.56	833.00	13.2%	21.03	738.00	11.8%	21.17	692.00	11.0%	22.61
440	763.00	12.2%	21.44	748.00	12%	21.89	1297.00	20.7%	22.58	831.00	13.2%	22.05	738.00	11.8%	22.19	693.00	11.0%	23.63
450	761.00	12.1%	22.49	747.00	12%	22.93	1295.00	20.6%	23.62	830.00	13.2%	23.10	737.00	11.8%	23.24	694.00	11.1%	24.68
460	759.00	12.1%	23.55	745.00	12%	24.01	1292.00	20.6%	24.69	829.00	13.2%	24.17	736.00	11.7%	24.31	695.00	11.1%	25.76
470	758.00	12.1%	24.66	744.00	12%	25.11	1290.00	20.6%	25.79	827.00	13.2%	25.27	735.00	11.7%	25.41	696.00	11.1%	26.86
480	756.00	12.1%	25.78	743.00	12%	26.23	1288.00	20.5%	26.91	826.00	13.2%	26.39	735.00	11.7%	26.53	697.00	11.1%	27.99
490	754.00	12.0%	26.93	742.00	12%	27.38	1286.00	20.5%	28.06	825.00	13.2%	27.64	734.00	11.7%	27.69	698.00	11.1%	29.15
500	753.00	12.0%	28.11	741.00	12%	28.56	1283.00	20.5%	29.24	823.00	13.1%	28.71	733.00	11.7%	28.86	698.00	11.1%	30.32
510	751.00	12.0%	29.32	740.00	12%	29.77	128											

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	292.00	23.4%	0.00	221.00	17.7%	0.01	216.00	17.3%	0.03	210.00	16.9%	0.01	164.00	13.2%	0.01	10.00	0.8%	0.14
20	292.00	23.4%	0.02	220.00	17.7%	0.02	233.00	18.7%	0.12	212.00	17.0%	0.05	164.00	13.2%	0.03	19.00	1.5%	0.29
30	292.00	23.4%	0.04	220.00	17.7%	0.05	253.00	20.3%	0.25	216.00	17.3%	0.11	165.00	13.2%	0.07	27.00	2.2%	0.44
40	292.00	23.4%	0.07	220.00	17.7%	0.10	273.00	21.9%	0.41	221.00	17.7%	0.19	166.00	13.3%	0.13	35.00	2.8%	0.61
50	292.00	23.4%	0.11	220.00	17.7%	0.15	292.00	23.4%	0.59	225.00	18.1%	0.29	167.00	13.4%	0.20	42.00	3.4%	0.79
60	292.00	23.4%	0.16	220.00	17.7%	0.22	311.00	25.0%	0.78	230.00	18.5%	0.41	169.00	13.6%	0.28	49.00	3.9%	0.97
70	292.00	23.4%	0.22	220.00	17.7%	0.30	329.00	26.4%	0.99	236.00	18.9%	0.54	171.00	13.7%	0.38	56.00	4.5%	1.17
80	292.00	23.4%	0.29	220.00	17.7%	0.39	346.00	27.8%	1.22	241.00	19.3%	0.68	173.00	13.9%	0.49	62.00	5.0%	1.37
90	291.00	23.4%	0.37	220.00	17.7%	0.49	362.00	29.1%	1.46	246.00	19.8%	0.84	174.00	14.0%	0.62	68.00	5.5%	1.58
100	288.00	23.1%	0.46	218.00	17.5%	0.61	376.00	30.2%	1.72	250.00	20.1%	1.02	174.00	14.0%	0.76	73.00	5.9%	1.81
110	284.00	22.8%	0.56	215.00	17.3%	0.75	390.00	31.3%	2.00	253.00	20.3%	1.21	174.00	14.0%	0.92	78.00	6.3%	2.05
120	281.00	22.6%	0.68	213.00	17.1%	0.90	402.00	32.3%	2.28	256.00	20.6%	1.41	174.00	14.0%	1.10	83.00	6.7%	2.30
130	277.00	22.2%	0.81	211.00	16.9%	1.06	414.00	33.2%	2.58	258.00	20.7%	1.63	174.00	14.0%	1.29	87.00	7.0%	2.57
140	273.00	21.9%	0.95	209.00	16.8%	1.25	426.00	34.2%	2.90	261.00	21.0%	1.86	174.00	14.0%	1.49	91.00	7.3%	2.84
150	268.00	21.5%	1.12	206.00	16.5%	1.45	436.00	35.0%	3.22	263.00	21.1%	2.11	174.00	14.0%	1.71	95.00	7.6%	3.13
160	263.00	21.1%	1.29	204.00	16.4%	1.66	446.00	35.8%	3.56	266.00	21.4%	2.37	174.00	14.0%	1.95	99.00	7.9%	3.43
170	259.00	20.8%	1.48	202.00	16.2%	1.90	456.00	36.6%	3.92	267.00	21.4%	2.64	174.00	14.0%	2.20	102.00	8.2%	3.74
180	254.00	20.4%	1.69	200.00	16.1%	2.15	465.00	37.3%	4.28	269.00	21.6%	2.93	174.00	14.0%	2.47	106.00	8.5%	4.06
190	251.00	20.2%	1.91	199.00	16.0%	2.41	474.00	38.1%	4.65	271.00	21.8%	3.23	174.00	14.0%	2.75	109.00	8.8%	4.40
200	246.00	19.8%	2.15	197.00	15.8%	2.69	483.00	38.8%	5.04	273.00	21.9%	3.54	174.00	14.0%	3.05	112.00	9.0%	4.74
210	242.00	19.4%	2.41	196.00	15.7%	2.99	491.00	39.4%	5.44	274.00	22.0%	3.87	174.00	14.0%	3.36	115.00	9.2%	5.11
220	238.00	19.1%	2.70	194.00	15.6%	3.31	498.00	40.0%	5.86	276.00	22.2%	4.22	174.00	14.0%	3.69	117.00	9.4%	5.48
230	234.00	18.8%	2.99	193.00	15.5%	3.64	505.00	40.5%	6.28	277.00	22.2%	4.58	174.00	14.0%	4.04	120.00	9.6%	5.87
240	231.00	18.5%	3.31	192.00	15.4%	3.99	512.00	41.1%	6.72	278.00	22.3%	4.95	174.00	14.0%	4.40	122.00	9.8%	6.27
250	228.00	18.3%	3.64	191.00	15.3%	4.35	519.00	41.7%	7.18	279.00	22.4%	5.33	174.00	14.0%	4.77	124.00	10.0%	6.68
260	225.00	18.1%	3.99	190.00	15.3%	4.73	525.00	42.2%	7.64	280.00	22.5%	5.73	174.00	14.0%	5.16	126.00	10.1%	7.11
270	221.00	17.7%	4.37	188.00	15.1%	5.13	531.00	42.6%	8.12	281.00	22.6%	6.15	174.00	14.0%	5.57	128.00	10.3%	7.55
280	219.00	17.6%	4.76	188.00	15.1%	5.55	536.00	43.0%	8.61	281.00	22.6%	6.58	174.00	14.0%	5.99	130.00	10.4%	8.00
290	216.00	17.3%	5.17	187.00	15.0%	5.97	542.00	43.5%	9.11	282.00	22.6%	7.03	174.00	14.0%	6.43	132.00	10.6%	8.47
300	214.00	17.2%	5.59	186.00	14.9%	6.42	547.00	43.9%	9.63	282.00	22.6%	7.49	174.00	14.0%	6.88	133.00	10.7%	8.95

AZUSA AAAC 123.3 KCML															
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70															
Propiedades físicas del conductor: Tensión de rotura (daN): 1983.91 Peso (daN/m): 0.1688 Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 13%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	446.00	22.5%	0.00	338.00	17.0%	0.01	328.00	16.5%	0.03	320.00	16.1%	0.01	247.00	12.5%	0.01
20	446.00	22.5%	0.02	337.00	17.0%	0.03	346.00	17.4%	0.11	323.00	16.3%	0.05	248.00	12.5%	0.03
30	446.00	22.5%	0.04	337.00	17.0%	0.06	371.00	18.7%	0.22	327.00	16.5%	0.10	249.00	12.6%	0.08
40	446.00	22.5%	0.08	337.00	17.0%	0.10	396.00	20.0%	0.36	332.00	16.7%	0.17	252.00	12.7%	0.13
50	446.00	22.5%	0.12	336.00	16.9%	0.16	421.00	21.2%	0.52	337.00	17.0%	0.26	254.00	12.8%	0.21
60	446.00	22.5%	0.17	336.00	16.9%	0.23	444.00	22.4%	0.70	343.00	17.3%	0.37	257.00	13.0%	0.30
70	443.00	22.3%	0.23	334.00	16.8%	0.31	466.00	23.5%	0.89	348.00	17.5%	0.49	257.00	13.0%	0.40
80	438.00	22.1%	0.31	330.00	16.6%	0.41	486.00	24.5%	1.11	351.00	17.7%	0.64	258.00	13.0%	0.52
90	432.00	21.8%	0.40	327.00	16.5%	0.52	504.00	25.2%	1.34	354.00	17.8%	0.79	258.00	13.0%	0.66
100	426.00	21.5%	0.50	323.00	16.3%	0.65	522.00	26.3%	1.58	357.00	18.0%	0.96	258.00	13.0%	0.82
110	420.00	21.2%	0.61	319.00	16.1%	0.80	539.00	27.2%	1.84	360.00	18.2%	1.15	258.00	13.0%	0.99
120	413.00	20.8%	0.74	315.00	15.9%	0.97	554.00	27.9%	2.12	362.00	18.3%	1.35	258.00	13.0%	1.18
130	405.00	20.4%	0.88	311.00	15.7%	1.15	568.00	28.6%	2.40	364.00	18.3%	1.57	258.00	13.0%	1.38
140	398.00	20.1%	1.04	307.00	15.5%	1.35	582.00	29.3%	2.70	366.00	18.4%	1.81	258.00	13.0%	1.61
150	390.00	19.7%	1.22	304.00	15.3%	1.56	595.00	30.0%	3.02	368.00	18.5%	2.05	258.00	13.0%	1.84
160	383.00	19.3%	1.41	301.00	15.2%	1.80	607.00	30.6%	3.35	370.00	18.7%	2.32	258.00	13.0%	2.10
170	376.00	19.0%	1.62	298.00	15.0%	2.05	618.00	31.2%	3.69	371.00	18.7%	2.60	258.00	13.0%	2.37
180	368.00	18.6%	1.86	294.00	14.8%	2.32	630.00	31.7%	4.05	372.00	18.8%	2.90	257.00	13.0%	2.66
190	361.00	18.2%	2.11	292.00	14.7%	2.61	638.00	32.2%	4.42	373.00	18.8%	3.21	257.00	13.0%	2.96
200	355.00	17.9%	2.38	289.00	14.6%	2.92	648.00	32.7%	4.80	374.00	18.9%	3.53	257.00	13.0%	3.28
210	349.00	17.6%	2.67	287.00	14.5%	3.25	657.00	33.1%	5.20	375.00	18.9%	3.88	257.00	13.0%	3.62
220	343.00	17.3%	2.98	285.00	14.4%	3.59	665.00	33.5%	5.60	376.00	19.0%	4.24	257.00	13.0%	3.97
230	337.00	17.0%	3.31	283.00	14.3%	3.95	673.00	33.9%	6.03	376.00	19.0%	4.61	257.00	13.0%	4.34
240	332.00	16.7%	3.67	281.00	14.2%	4.33	680.00	34.3%	6.47	377.00	19.0%	5.00	257.00	13.0%	4.73
250	327.00	16.5%	4.03	279.00	14.1%	4.72	687.00	34.6%	6.92	377.00	19.0%	5.41	257.00	13.0%	5.14
260	323.00	16.3%	4.42	278.00	14.0%	5.14	694.00	35.0%	7.39	377.00	19.0%	5.83	257.00	13.0%	5.56
270	318.00	16.1%	4.83	277.00	14.0%	5.57	700.00	35.3%	7.87	378.00	19.1%	6.27	257.00	13.0%	5.99
280	315.00	15.9%	5.26	275.00	13.9%	6.01	706.00	35.6%	8.37	378.00	19.1%	6.73	257.00	13.0%	6.45
290	311.00	15.7%	5.71	274.00	13.8%	6.48	711.00	35.8%	8.88	378.00	19.1%	7.20	257.00	13.0%	6.92
300	308.00	15.5%	6.18	273.00	13.8%	6.96	716.00	36.1%	9.41	378.00	19.1%	7.69	257.00	13.0%	7.41
310	306.00	15.4%	6.66	272.00	13.7%	7.46	721.00	36.3%	9.95	378.00	19.1%	8.20	257.00	13.0%	7.91
320	302.00	15.2%	7.17	271.00	13.7%	7.98	725.00	36.5%	10.51	378.00	19.1%	8.72	256.00	12.9%	8.43
330	299.00	15.1%	7.69	270.00	13.6%	8.51	729.00	36.7%	11.08	378.00	19.1%	9.26	256.00	12.9%	8.96
340	296.00	14.9%	8.24	269.00	13.6%	9.07	733.00	36.9%	11.67	378.00	19.1%	9.82	256.00	12.9%	9.53
350	294.00	14.8%	8.79	269.00	13.6%	9.64	737.00	37.1%	12.27	378.00	19.1%	10.39	256.00	12.9%	10.10
360	292.00	14.7%	9.38	268.00	13.5%	10.23	740.00	37.3%	12.89	377.00	19.0%	10.98	256.00	12.9%	10.70
370	290.00	14.6%	9.97	267.00	13.5%	10.83	744.00	37.5%	13.52	377.00	19.0%	11.58	256.00	12.9%	11.30
380	288.00	14.5%	10.59	266.00	13.4%	11.45	747.00	37.7%	14.17	377.00	19.0%	12.21	256.00	12.9%	11.93
390	286.00	14.4%	11.22	265.00	13.4%	12.10	749.00	37.8%	14.84	377.00	19.0%	12.85	256.00	12.9%	12.57
400	285.00	14.4%	11.87	265.00	13.3%	12.75	752.00	37.9%	15.52	377.00	19.0%	13.51	256.00	12.9%	13.23
410	283.00	14.3%	12.54	265.00	13.4%	13.42	755.00	38.1%	16.22	376.00	19.0%	14.19	256.00	12.9%	13.91
420	282.00	14.2%	13.22	264.00	13.3%	14.12	757.00	38.2%	16.93	376.00	19.0%	14.88	255.00	12.9%	14.60
430	281.00	14.2%	13.93	264.00	13.3%	14.82	759.00	38.3%	17.66	376.00	19.0%	15.59	255.00	12.9%	15.31
440	279.00	14.1%	14.65	263.00	13.3%	15.55	761.00	38.4%	18.41	375.00	18.9%	16.32	255.00	12.9%	16.04
450	278.00	14.0%	15.40	263.00	13.3%	16.30	763.00	38.5%	19.18	375.00	18.9%	17.07	255.00	12.9%	16.79
460	277.00	14.0%	16.15	262.00	13.2%	17.05	765.00	38.6%	19.96	375.00	18.9%	17.83	255.00	12.9%	17.55
470	276.00	13.9%	16.93	262.00	13.2%	17.84	766.00	38.6%	20.76	374.00	18.9%	18.61	255.00	12.9%	18.34
480	275.00	13.9%	17.73	261.00	13.2%	18.64	767.00	38.7%	21.57	374.00	18.9%	19.41	255.00	12.9%	19.14
490	274.00	13.8%	18.54	261.00	13.2%	19.46	769.00	38.8%	22.40	374.00	18.9%	20.23	255.00	12.9%	19.95
500	273.00	13.8%	19.38	261.00	13.2%	20.29	770.00	38.8%	23.25	373.00	18.8%	21.06	254.00	12.8%	20.79
510	272.00	13.7%	20.23	260.00	13.1%	21.15	771.00	38.9%	24.12	373.00	18.8%	21.92	254.00	12.8%	21.65
520	271.00	13.7%	21.09	260.00	13.1%	22.02	772.00	38.9%	25.00	373.00	18.8%	22.79	254.00	12.8%	22.52
530	270.00	13.6%	21.98	259.00	13.1%	22.90	773.00	39.0%	25.90	372.00	18.8%	23.68	254.00	12.8%	23.41
540	270.00	13.6%	22.89	259.00	13.1%	23.82	774.00	39.0%	26.82	372.00	18.8%	24.59	254.00	12.8%	24.32
550	269.00	13.6%	23.81	259.00	13.1%	24.74	775.00	39.1%	27.75	371.00	18.7%	25.51	254.00	12.8%	25.24
560	268.00	13.5%	24.76	258.00	13.0%	25.69	775.00	39.1%	28.71	371.00	18.7%	26.46	253.00	12.8%	26.19
570	267.00	13.5%	25.72	258.00	13.0%	26.65	776.00	39.1%	29.69	370.00	18.7%	27.42	253.00	12.8%	27.16
580	267.00	13.5%	26.70	258.00	13.0%	27.63	776.00	39.1%	30.68	370.00	18.7%	28.40	253.00	12.8%	28.14
590	266.00	13.4%	27.70	257.00	13.0%	28.63	776.00	39.2%	31.68	370.00	18.7%	29.40	253.00	12.8%	29.14
600	265.00	13.4%	28.71	257.00	13.0%	29.65	777.00	39.2%	32.71	369.00	18.6%	30.42	253.00	12.8%	30.16

BUTTE AAAC 312.8 KCMLL

Clima: Cálido
 Altitud: 0 msnm - 1000 msnm
 Temperatura máxima (°C): 40
 Temperatura media (°C): 26
 Temperatura mínima (°C): 16
 Temperatura coincidente (°C): 18
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 4993.04
 Peso (daN/m): 0.4284

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 19%
 Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	929.00	19.0%	0.01	734.00	15%	0.01	709.00	14%	0.02	691.00	14%	0.01	515.00	10.5%	0.01	35.00	1%	0.15
20	929.00	19.0%	0.02	733.00	15%	0.03	727.00	15%	0.08	694.00	14%	0.04	518.00	10.6%	0.04	68.00	1%	0.32
30	929.00	19.0%	0.05	731.00	15%	0.07	764.00	16%	0.18	699.00	14%	0.09	523.00	10.7%	0.09	98.00	2%	0.49
40	929.00	19.0%	0.09	729.00	15%	0.12	802.00	16%	0.30	704.00	14%	0.16	530.00	10.8%	0.16	127.00	3%	0.67
50	929.00	19.0%	0.14	727.00	15%	0.18	841.00	17%	0.44	711.00	15%	0.25	536.00	11.0%	0.25	155.00	3%	0.87
60	929.00	19.0%	0.21	728.00	15%	0.26	881.00	18%	0.59	721.00	15%	0.35	545.00	11.1%	0.35	181.00	4%	1.07
70	929.00	19.0%	0.28	727.00	15%	0.36	918.00	19%	0.76	730.00	15%	0.47	554.00	11.3%	0.47	206.00	4%	1.28
80	929.00	18.9%	0.37	724.00	15%	0.47	952.00	19%	0.96	736.00	15%	0.61	562.00	11.5%	0.61	229.00	5%	1.50
90	908.00	18.6%	0.48	712.00	15%	0.61	977.00	20%	1.17	735.00	15%	0.77	569.00	11.5%	0.77	249.00	5%	1.74
100	890.00	18.2%	0.60	700.00	14%	0.77	1001.00	20%	1.40	733.00	15%	0.94	562.00	11.5%	0.95	268.00	5%	2.00
110	871.00	17.8%	0.74	689.00	14%	0.94	1024.00	21%	1.64	732.00	15%	1.14	562.00	11.5%	1.15	286.00	6%	2.27
120	851.00	17.4%	0.91	678.00	14%	1.14	1043.00	21%	1.90	730.00	15%	1.36	562.00	11.5%	1.37	302.00	6%	2.56
130	832.00	17.0%	1.09	668.00	14%	1.36	1061.00	22%	2.18	729.00	15%	1.59	562.00	11.5%	1.61	317.00	6%	2.86
140	812.00	16.6%	1.29	659.00	13%	1.59	1078.00	22%	2.47	726.00	15%	1.85	562.00	11.5%	1.87	331.00	7%	3.17
150	793.00	16.2%	1.52	650.00	13%	1.85	1092.00	23%	2.78	724.00	15%	2.12	561.00	11.5%	2.15	345.00	7%	3.50
160	776.00	15.9%	1.77	642.00	13%	2.14	1106.00	23%	3.11	722.00	15%	2.41	561.00	11.5%	2.44	357.00	7%	3.85
170	760.00	15.5%	2.04	635.00	13%	2.44	1118.00	23%	3.46	721.00	15%	2.72	561.00	11.5%	2.76	368.00	8%	4.21
180	744.00	15.2%	2.33	629.00	13%	2.76	1130.00	23%	3.82	719.00	15%	3.05	561.00	11.5%	3.09	379.00	8%	4.58
190	730.00	14.9%	2.65	623.00	13%	3.10	1140.00	23%	4.20	717.00	15%	3.40	561.00	11.5%	3.45	389.00	8%	4.98
200	716.00	14.6%	2.99	618.00	13%	3.47	1149.00	23%	4.60	715.00	15%	3.78	561.00	11.5%	3.82	398.00	8%	5.39
210	703.00	14.4%	3.36	613.00	13%	3.85	1157.00	24%	5.01	713.00	15%	4.17	561.00	11.5%	4.22	408.00	8%	5.82
220	693.00	14.2%	3.74	609.00	12%	4.26	1165.00	24%	5.44	712.00	15%	4.57	561.00	11.5%	4.63	414.00	8%	6.26
230	683.00	14.0%	4.15	605.00	12%	4.68	1172.00	24%	5.89	710.00	15%	5.00	560.00	11.4%	5.06	422.00	9%	6.72
240	674.00	13.8%	4.58	602.00	12%	5.13	1178.00	24%	6.36	709.00	14%	5.45	560.00	11.4%	5.51	429.00	9%	7.21
250	665.00	13.6%	5.04	599.00	12%	5.60	1183.00	24%	6.84	707.00	14%	5.92	560.00	11.4%	5.98	435.00	9%	7.70
260	658.00	13.4%	5.51	596.00	12%	6.08	1188.00	24%	7.35	705.00	14%	6.41	560.00	11.4%	6.47	441.00	9%	8.22
270	650.00	13.2%	6.01	593.00	12%	6.59	1192.00	24%	7.87	704.00	14%	6.92	560.00	11.4%	6.98	447.00	9%	8.75
280	644.00	13.2%	6.52	591.00	12%	7.11	1196.00	24%	8.42	702.00	14%	7.45	559.00	11.4%	7.52	452.00	9%	9.30
290	638.00	13.0%	7.06	589.00	12%	7.66	1199.00	25%	8.98	701.00	14%	7.99	559.00	11.4%	8.06	457.00	9%	9.87
300	633.00	12.9%	7.62	587.00	12%	8.23	1203.00	25%	9.55	700.00	14%	8.56	559.00	11.4%	8.64	461.00	9%	10.46
310	628.00	12.8%	8.20	585.00	12%	8.81	1205.00	25%	10.15	698.00	14%	9.15	559.00	11.4%	9.22	466.00	10%	11.07
320	624.00	12.8%	8.80	583.00	12%	9.42	1207.00	25%	10.77	697.00	14%	9.76	558.00	11.4%	9.83	470.00	10%	11.70
330	619.00	12.7%	9.43	581.00	12%	10.05	1209.00	25%	11.41	695.00	14%	10.39	558.00	11.4%	10.47	473.00	10%	12.35
340	616.00	12.6%	10.07	580.00	12%	10.70	1211.00	25%	12.06	694.00	14%	11.03	558.00	11.4%	11.11	477.00	10%	13.01
350	612.00	12.5%	10.73	578.00	12%	11.37	1213.00	25%	12.74	693.00	14%	11.70	558.00	11.4%	11.78	480.00	10%	13.69
360	609.00	12.4%	11.42	577.00	12%	12.05	1214.00	25%	13.43	692.00	14%	12.39	557.00	11.4%	12.48	483.00	10%	14.40
370	606.00	12.4%	12.12	575.00	12%	12.76	1215.00	25%	14.15	691.00	14%	13.10	557.00	11.4%	13.19	486.00	10%	15.12
380	603.00	12.3%	12.85	574.00	12%	13.49	1216.00	25%	14.88	690.00	14%	13.83	557.00	11.4%	13.92	489.00	10%	15.86
390	600.00	12.3%	13.60	573.00	12%	14.25	1216.00	25%	15.64	689.00	14%	14.58	556.00	11.4%	14.67	491.00	10%	16.63
400	597.00	12.2%	14.37	572.00	12%	15.02	1216.00	25%	16.42	687.00	14%	15.35	556.00	11.4%	15.44	493.00	10%	17.41
410	595.00	12.2%	15.16	571.00	12%	15.81	1216.00	25%	17.22	686.00	14%	16.15	556.00	11.4%	16.24	496.00	10%	18.21
420	593.00	12.1%	15.97	570.00	12%	16.62	1217.00	25%	18.03	685.00	14%	16.95	555.00	11.3%	17.05	498.00	10%	19.04
430	591.00	12.1%	16.80	569.00	12%	17.46	1217.00	25%	18.87	684.00	14%	17.79	555.00	11.3%	17.88	500.00	10%	19.88
440	589.00	12.0%	17.65	568.00	12%	18.31	1216.00	25%	19.72	683.00	14%	18.64	555.00	11.3%	18.74	501.00	10%	20.74
450	587.00	12.0%	18.53	567.00	12%	19.19	1216.00	25%	20.60	682.00	14%	19.52	554.00	11.3%	19.62	503.00	10%	21.63
460	586.00	12.0%	19.42	566.00	12%	20.08	1216.00	25%	21.50	681.00	14%	20.41	554.00	11.3%	20.52	505.00	10%	22.53
470	583.00	11.9%	20.34	565.00	12%	21.00	1215.00	25%	22.42	680.00	14%	21.33	553.00	11.3%	21.44	506.00	10%	23.46
480	581.00	11.9%	21.28	564.00	12%	21.94	1214.00	25%	23.36	679.00	14%	22.27	553.00	11.3%	22.38	507.00	10%	24.41
490	580.00	11.9%	22.24	563.00	12%	22.90	1214.00	25%	24.32	678.00	14%	23.23	553.00	11.3%	23.34	509.00	10%	25.38
500	578.00	11.8%	23.22	562.00	11%	23.89	1213.00	25%	25.31	677.00	14%	24.22	552.00	11.3%	24.32	510.00	10%	26.37
510	577.00	11.8%	24.23	561.00	11%	24.89	1212.00	25%	26.32	676.00	14%	25.22	552.00	11.3%	25.33	511.00	10%	27.37
520	575.00	11.8%	25.26	561.00	11%	25.92	1211.00	25%	27.34	675.00	14%	26.25	551.00	11.3%	26.36	512.00	10%	28.41
530	574.00	11.7%	26.30	560.00	11%	26.97	1210.00	25%	28.39	674.00	14%	27.30	551.00	11.3%	27.40	513.00	10%	29.46
540	572.00	11.7%	27.38	559.00	11%	28.04	1209.00	25%	29.46	673.00	14%	28.37	550.00	11.2%	28.48	514.00	11%	30.54
550	571.00	11.7%	28.47	558.00	11%	29.13	1208.00	25%	30.58	672.00	14%	29.46	550.00	11.2%	29.57	514.00	11%	31.64
560	570.00	11.6%	29.58	557.00	11%	30.25	1206.00	25%	31.67	671.00	14%	30.58	550.00	11.2%	30.69	515.00	11%	32.76
570	569.00	11.6%	30.72	557.00	11%	31.38	1205.00	25%	32.81	670.00	14%	31.71	549.00	11.2%	31.82	516.00	11%	33.90
580	567.00	11.6%	31.98	556.00	11%	32.55	1204.00	25%	33.97	669.00	14%	32.88	549.00	11.2%	32.98	516.00	11%	35.07
590	566.00	11.6%	33.06	555.00	11%	33.73	1203.00	25%	35.15	668.00	14%	34.05	548.00	11.2%	34.17	517.00	11%	36.25
600	565.00	11.5%	34.27	554.00	11%	34.94	1201.00	25%	36.36	667.00	14%	35.26	548.00	11.2%	35.38	517.00	11%	37.47

CANTON AAAC 336.4 KCML															
Clima: Cálido Altitud: 0 msnm - 1000 msnm Temperatura máxima (°C): 40 Temperatura media (°C): 26 Temperatura mínima (°C): 16 Temperatura coincidente (°C): 18 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70															
Propiedades físicas del conductor: Tensión de rotura (daN): 5916.13 Peso (daN/m): 0.5404															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1123.00	19.0%	0.01	892.00	15%	0.01	849.00	14%	0.02	836.00	14%	0.01	616.00	10.4%	0.01
20	1123.00	19.0%	0.02	899.00	15%	0.03	877.00	15%	0.08	841.00	14%	0.04	619.00	10.5%	0.04
30	1123.00	19.0%	0.05	888.00	15%	0.07	918.00	16%	0.17	846.00	14%	0.09	627.00	10.6%	0.10
40	1123.00	19.0%	0.10	885.00	15%	0.12	960.00	16%	0.28	852.00	14%	0.16	636.00	10.7%	0.17
50	1123.00	19.0%	0.15	884.00	15%	0.19	1004.00	17%	0.42	860.00	15%	0.25	646.00	10.9%	0.26
60	1111.00	18.8%	0.22	873.00	15%	0.28	1040.00	18%	0.57	861.00	15%	0.36	650.00	11.0%	0.37
70	1088.00	18.4%	0.30	856.00	14%	0.39	1071.00	18%	0.75	857.00	14%	0.48	650.00	11.0%	0.51
80	1066.00	18.0%	0.41	839.00	14%	0.52	1099.00	19%	0.95	851.00	14%	0.63	650.00	11.0%	0.67
90	1041.00	17.6%	0.53	823.00	14%	0.67	1125.00	19%	1.16	847.00	14%	0.80	650.00	11.0%	0.84
100	1014.00	17.1%	0.67	806.00	14%	0.84	1148.00	19%	1.39	842.00	14%	0.99	650.00	11.0%	1.04
110	989.00	16.7%	0.83	791.00	13%	1.03	1169.00	20%	1.64	837.00	14%	1.20	650.00	11.0%	1.26
120	962.00	16.3%	1.01	777.00	13%	1.25	1187.00	20%	1.91	833.00	14%	1.44	649.00	11.0%	1.50
130	936.00	15.8%	1.22	765.00	13%	1.49	1204.00	20%	2.20	829.00	14%	1.69	649.00	11.0%	1.76
140	912.00	15.4%	1.45	752.00	13%	1.76	1218.00	21%	2.51	824.00	14%	1.97	649.00	11.0%	2.04
150	889.00	15.0%	1.71	743.00	13%	2.05	1232.00	21%	2.83	820.00	14%	2.26	649.00	11.0%	2.34
160	867.00	14.7%	1.99	734.00	12%	2.36	1243.00	21%	3.17	817.00	14%	2.58	649.00	11.0%	2.66
170	848.00	14.3%	2.30	726.00	12%	2.69	1253.00	21%	3.54	814.00	14%	2.92	649.00	11.0%	3.01
180	831.00	14.0%	2.64	719.00	12%	3.05	1262.00	21%	3.92	811.00	14%	3.26	649.00	11.0%	3.27
190	814.00	13.8%	3.00	712.00	12%	3.42	1270.00	21%	4.32	807.00	14%	3.67	649.00	11.0%	3.76
200	800.00	13.5%	3.38	707.00	12%	3.83	1277.00	22%	4.74	804.00	14%	4.07	649.00	11.0%	4.17
210	787.00	13.3%	3.79	701.00	12%	4.25	1283.00	22%	5.18	801.00	14%	4.50	649.00	11.0%	4.60
220	776.00	13.1%	4.22	697.00	12%	4.69	1289.00	22%	5.64	799.00	14%	4.94	649.00	11.0%	5.05
230	765.00	12.9%	4.67	693.00	12%	5.16	1293.00	22%	6.13	796.00	13%	5.41	648.00	11.0%	5.52
240	755.00	12.8%	5.15	689.00	12%	5.65	1297.00	22%	6.63	794.00	13%	5.90	647.00	10.9%	6.02
250	747.00	12.6%	5.66	686.00	12%	6.16	1300.00	22%	7.15	792.00	13%	6.41	647.00	10.9%	6.53
260	740.00	12.5%	6.18	683.00	12%	6.69	1304.00	22%	7.69	790.00	13%	6.95	647.00	10.9%	7.07
270	732.00	12.4%	6.72	680.00	11%	7.25	1305.00	22%	8.26	788.00	13%	7.50	647.00	10.9%	7.63
280	726.00	12.3%	7.30	677.00	11%	7.83	1307.00	22%	8.84	786.00	13%	8.08	646.00	10.9%	8.21
290	721.00	12.2%	7.89	675.00	11%	8.43	1309.00	22%	9.45	784.00	13%	8.68	646.00	10.9%	8.81
300	715.00	12.1%	8.51	673.00	11%	9.05	1310.00	22%	10.07	782.00	13%	9.30	646.00	10.9%	9.43
310	710.00	12.0%	9.15	671.00	11%	9.69	1311.00	22%	10.72	780.00	13%	9.95	645.00	10.9%	10.08
320	706.00	11.9%	9.81	669.00	11%	10.35	1312.00	22%	11.39	779.00	13%	10.61	645.00	10.9%	10.74
330	702.00	11.9%	10.50	667.00	11%	11.04	1312.00	22%	12.08	777.00	13%	11.30	644.00	10.9%	11.43
340	698.00	11.8%	11.20	665.00	11%	11.75	1312.00	22%	12.80	776.00	13%	12.01	644.00	10.9%	12.14
350	694.00	11.7%	11.93	664.00	11%	12.49	1312.00	22%	13.53	774.00	13%	12.74	644.00	10.9%	12.88
360	691.00	11.7%	12.68	662.00	11%	13.24	1312.00	22%	14.29	773.00	13%	13.49	643.00	10.9%	13.63
370	688.00	11.6%	13.46	661.00	11%	14.02	1311.00	22%	15.07	771.00	13%	14.27	643.00	10.9%	14.41
380	685.00	11.6%	14.26	660.00	11%	14.82	1311.00	22%	15.87	770.00	13%	15.07	642.00	10.9%	15.22
390	683.00	11.5%	15.08	658.00	11%	15.64	1310.00	22%	16.70	769.00	13%	15.89	642.00	10.9%	16.04
400	680.00	11.5%	15.93	657.00	11%	16.48	1309.00	22%	17.55	767.00	13%	16.74	642.00	10.9%	16.89
410	678.00	11.5%	16.79	656.00	11%	17.36	1308.00	22%	18.41	766.00	13%	17.61	641.00	10.8%	17.76
420	675.00	11.4%	17.68	655.00	11%	18.25	1307.00	22%	19.31	764.00	13%	18.50	641.00	10.8%	18.65
430	673.00	11.4%	18.60	653.00	11%	19.17	1306.00	22%	20.23	763.00	13%	19.42	640.00	10.8%	19.57
440	671.00	11.3%	19.54	652.00	11%	20.11	1305.00	22%	21.16	762.00	13%	20.36	640.00	10.8%	20.51
450	669.00	11.3%	20.50	651.00	11%	21.07	1303.00	22%	22.13	760.00	13%	21.32	639.00	10.8%	21.47
460	667.00	11.3%	21.48	650.00	11%	22.05	1302.00	22%	23.11	759.00	13%	22.30	639.00	10.8%	22.45
470	665.00	11.2%	22.49	649.00	11%	23.06	1300.00	22%	24.12	758.00	13%	23.31	638.00	10.8%	23.46
480	664.00	11.2%	23.53	648.00	11%	24.10	1299.00	22%	25.15	756.00	13%	24.35	637.00	10.8%	24.50
490	662.00	11.2%	24.59	647.00	11%	25.15	1297.00	22%	26.21	755.00	13%	25.40	637.00	10.8%	25.56
500	660.00	11.2%	25.67	646.00	11%	26.24	1295.00	22%	27.29	754.00	13%	26.49	636.00	10.8%	26.64
510	659.00	11.1%	26.77	645.00	11%	27.34	1293.00	22%	28.40	753.00	13%	27.59	636.00	10.8%	27.75
520	657.00	11.1%	27.90	644.00	11%	28.40	1292.00	22%	29.53	751.00	13%	28.72	635.00	10.7%	28.88
530	656.00	11.1%	29.08	643.00	11%	29.63	1290.00	22%	30.68	750.00	13%	29.88	634.00	10.7%	30.03
540	654.00	11.1%	30.24	642.00	11%	30.81	1288.00	22%	31.86	749.00	13%	31.05	634.00	10.7%	31.21
550	653.00	11.0%	31.45	641.00	11%	32.02	1286.00	22%	33.06	748.00	13%	32.26	633.00	10.7%	32.42
560	651.00	11.0%	32.67	640.00	11%	33.24	1284.00	22%	34.29	747.00	13%	33.49	633.00	10.7%	33.65
570	650.00	11.0%	33.93	639.00	11%	34.50	1282.00	22%	35.55	745.00	13%	34.75	632.00	10.7%	34.91
580	649.00	11.0%	35.21	638.00	11%	35.78	1280.00	22%	36.83	744.00	13%	35.03	631.00	10.7%	36.19
590	647.00	10.9%	36.52	637.00	11%	37.09	1278.00	22%	38.14	743.00	13%	37.33	630.00	10.6%	37.50
600	646.00	10.9%	37.85	636.00	11%	38.42	1275.00	22%	39.47	741.00	13%	38.67	630.00	10.6%	38.83



ANEXO B2: Clima templado



ANEXO B2.1: Zona 1 (Velocidad de viento máxima 60 km/h)

RAVEN ACSR 110 AWG															
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 60 Velocidad del viento promedio (km/h): 40															
Propiedades físicas del conductor: Tensión de rotura (daN): 1948.32 Peso (daN/m): 0.2118															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 14%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	438.00	22.5%	0.01	352.00	18.1%	0.01	334.00	17.1%	0.01	334.00	17.1%	0.01	252.00	12.9%	0.01
20	438.00	22.5%	0.02	352.00	18.1%	0.02	335.00	17.2%	0.04	334.00	17.1%	0.03	254.00	13.0%	0.04
30	438.00	22.5%	0.05	350.00	18.0%	0.07	337.00	17.3%	0.09	334.00	17.1%	0.07	256.00	13.1%	0.09
40	438.00	22.5%	0.10	351.00	18.0%	0.12	339.00	17.4%	0.15	334.00	17.1%	0.13	260.00	13.3%	0.16
50	438.00	22.5%	0.15	349.00	17.9%	0.19	341.00	17.5%	0.24	335.00	17.2%	0.21	263.00	13.5%	0.25
60	438.00	22.5%	0.22	350.00	18.0%	0.27	344.00	17.7%	0.33	336.00	17.3%	0.30	268.00	13.8%	0.36
70	438.00	22.5%	0.30	350.00	18.0%	0.37	348.00	17.9%	0.45	337.00	17.3%	0.40	272.00	14.0%	0.48
80	431.00	22.1%	0.39	344.00	17.7%	0.49	346.00	17.8%	0.59	333.00	17.1%	0.53	272.00	14.0%	0.62
90	423.00	21.7%	0.51	339.00	17.4%	0.63	345.00	17.7%	0.74	330.00	16.5%	0.68	272.00	14.0%	0.79
100	413.00	21.2%	0.64	333.00	17.1%	0.80	342.00	17.6%	0.92	326.00	16.7%	0.85	272.00	14.0%	0.97
110	405.00	20.8%	0.79	328.00	16.8%	0.98	341.00	17.5%	1.12	322.00	16.5%	1.04	272.00	14.0%	1.18
120	396.00	20.3%	0.95	323.00	16.6%	1.18	339.00	17.4%	1.34	318.00	16.3%	1.25	272.00	14.0%	1.40
130	387.00	19.9%	1.16	318.00	16.3%	1.41	337.00	17.3%	1.57	315.00	16.2%	1.48	272.00	14.0%	1.64
140	378.00	19.4%	1.37	314.00	16.1%	1.65	335.00	17.2%	1.83	312.00	16.0%	1.73	272.00	14.0%	1.91
150	370.00	19.0%	1.61	311.00	16.0%	1.92	334.00	17.1%	2.11	310.00	15.9%	2.00	272.00	14.0%	2.19
160	362.00	18.6%	1.87	307.00	15.8%	2.21	333.00	17.1%	2.40	307.00	15.8%	2.29	272.00	14.0%	2.49
170	354.00	18.2%	2.16	304.00	15.6%	2.52	331.00	17.0%	2.72	305.00	15.7%	2.61	272.00	14.0%	2.82
180	346.00	17.9%	2.47	301.00	15.4%	2.85	330.00	16.9%	3.06	303.00	15.6%	2.94	272.00	14.0%	3.16
190	342.00	17.6%	2.80	298.00	15.3%	3.21	328.00	16.8%	3.41	301.00	15.4%	3.29	272.00	14.0%	3.52
200	336.00	17.2%	3.16	295.00	15.2%	3.58	327.00	16.8%	3.79	299.00	15.3%	3.67	272.00	14.0%	3.90
210	331.00	17.0%	3.53	294.00	15.1%	3.97	326.00	16.7%	4.19	298.00	15.2%	4.07	272.00	14.0%	4.30
220	326.00	16.7%	3.94	292.00	15.0%	4.39	325.00	16.7%	4.60	296.00	15.2%	4.48	272.00	14.0%	4.72
230	322.00	16.5%	4.36	291.00	14.9%	4.82	324.00	16.6%	5.04	295.00	15.1%	4.92	272.00	14.0%	5.16
240	318.00	16.3%	4.80	289.00	14.8%	5.28	323.00	16.6%	5.50	294.00	15.1%	5.38	272.00	14.0%	5.62
250	314.00	16.1%	5.27	288.00	14.8%	5.76	322.00	16.5%	5.97	293.00	15.0%	5.85	271.00	13.9%	6.10
260	311.00	16.0%	5.76	287.00	14.7%	6.25	322.00	16.5%	6.47	292.00	15.0%	6.35	271.00	13.9%	6.60
270	308.00	15.8%	6.27	285.00	14.6%	6.77	321.00	16.5%	6.99	291.00	14.9%	6.87	271.00	13.9%	7.13
280	305.00	15.7%	6.80	284.00	14.6%	7.31	320.00	16.4%	7.53	290.00	14.9%	7.41	271.00	13.9%	7.67
290	303.00	15.6%	7.35	283.00	14.5%	7.87	319.00	16.4%	8.09	289.00	14.8%	7.97	271.00	13.9%	8.23
300	301.00	15.4%	7.93	282.00	14.5%	8.45	319.00	16.3%	8.67	288.00	14.8%	8.55	271.00	13.9%	8.81
310	299.00	15.3%	8.52	282.00	14.5%	9.05	318.00	16.3%	9.27	288.00	14.8%	9.15	271.00	13.9%	9.41
320	297.00	15.2%	9.14	281.00	14.4%	9.67	317.00	16.3%	9.89	287.00	14.7%	9.77	271.00	13.9%	10.04
330	295.00	15.1%	9.78	280.00	14.4%	10.31	317.00	16.2%	10.53	286.00	14.7%	10.41	270.00	13.9%	10.68
340	294.00	15.1%	10.44	279.00	14.3%	10.97	316.00	16.2%	11.19	286.00	14.7%	11.07	270.00	13.9%	11.34
350	292.00	15.0%	11.12	279.00	14.3%	11.66	315.00	16.2%	11.88	285.00	14.6%	11.76	270.00	13.9%	12.03
360	291.00	14.9%	11.82	278.00	14.3%	12.36	315.00	16.2%	12.58	285.00	14.6%	12.46	270.00	13.9%	12.73
370	290.00	14.9%	12.54	278.00	14.3%	13.08	314.00	16.1%	13.30	284.00	14.6%	13.18	270.00	13.9%	13.46
380	288.00	14.8%	13.28	277.00	14.2%	13.83	314.00	16.1%	14.05	284.00	14.6%	13.93	270.00	13.9%	14.21
390	287.00	14.7%	14.05	276.00	14.2%	14.60	313.00	16.1%	14.82	283.00	14.5%	14.70	270.00	13.9%	14.98
400	286.00	14.7%	14.83	276.00	14.2%	15.38	313.00	16.1%	15.61	283.00	14.5%	15.48	269.00	13.8%	15.76
410	285.00	14.6%	15.64	276.00	14.2%	16.19	312.00	16.0%	16.42	282.00	14.5%	16.29	269.00	13.8%	16.57
420	284.00	14.6%	16.47	275.00	14.1%	17.02	312.00	16.0%	17.25	282.00	14.5%	17.13	269.00	13.8%	17.41
430	283.00	14.5%	17.32	275.00	14.1%	17.87	311.00	16.0%	18.10	281.00	14.4%	17.98	269.00	13.8%	18.26
440	283.00	14.5%	18.19	274.00	14.1%	18.75	311.00	16.0%	18.97	281.00	14.4%	18.85	269.00	13.8%	19.13
450	282.00	14.5%	19.09	274.00	14.1%	19.64	310.00	15.9%	19.87	281.00	14.4%	19.75	268.00	13.8%	20.03
460	281.00	14.4%	20.01	273.00	14.0%	20.56	310.00	15.9%	20.78	280.00	14.4%	20.66	268.00	13.8%	20.95
470	280.00	14.4%	20.94	273.00	14.0%	21.50	309.00	15.9%	21.72	280.00	14.4%	21.60	268.00	13.8%	21.89
480	279.00	14.3%	21.91	272.00	14.0%	22.46	309.00	15.9%	22.69	279.00	14.3%	22.56	268.00	13.8%	22.85
490	278.00	14.3%	22.89	272.00	14.0%	23.45	308.00	15.8%	23.67	279.00	14.3%	23.55	268.00	13.8%	23.83
500	278.00	14.3%	23.89	272.00	14.0%	24.45	308.00	15.8%	24.67	279.00	14.3%	24.56	267.00	13.7%	24.84
510	277.00	14.2%	24.92	271.00	13.9%	25.48	307.00	15.8%	25.70	278.00	14.3%	25.58	267.00	13.7%	25.87
520	277.00	14.2%	25.97	271.00	13.9%	26.53	307.00	15.8%	26.75	278.00	14.3%	26.63	267.00	13.7%	26.92
530	276.00	14.2%	27.04	271.00	13.9%	27.60	307.00	15.8%	27.82	278.00	14.3%	27.70	267.00	13.7%	27.99
540	275.00	14.1%	28.14	270.00	13.9%	28.70	306.00	15.7%	28.92	277.00	14.2%	28.80	267.00	13.7%	29.09
550	275.00	14.1%	29.25	270.00	13.9%	29.81	306.00	15.7%	30.03	277.00	14.2%	29.92	266.00	13.7%	30.20
560	274.00	14.1%	30.40	269.00	13.8%	30.96	305.00	15.7%	31.18	276.00	14.2%	31.06	266.00	13.7%	31.35
570	274.00	14.1%	31.56	269.00	13.8%	32.12	305.00	15.7%	32.34	276.00	14.2%	32.22	266.00	13.7%	32.51
580	273.00	14.0%	32.74	269.00	13.8%	33.30	304.00	15.6%	33.52	276.00	14.2%	33.41	266.00	13.7%	33.70
590	273.00	14.0%	33.96	268.00	13.8%	34.52	304.00	15.6%	34.74	275.00	14.1%	34.61	265.00	13.6%	34.91
600	272.00	14.0%	35.19	268.00	13.8%	35.75	303.00	15.6%	35.97	275.00	14.1%	35.85	265.00	13.6%	36.14

PENGUIN ACSR 4/0 AWG																														
Clima: Templado																														
Altitud: 1000 msnm - 2500 msnm																														
Temperatura máxima (°C): 34																														
Temperatura media (°C): 21																														
Temperatura mínima (°C): 10																														
Temperatura coincidente (°C): 12																														
Velocidad del viento máxima (km/h): 60																														
Velocidad del viento promedio (km/h): 40																														
Propiedades físicas del conductor:																														
Tensión de rotura (daN): 3714.26																														
Peso (daN/m): 0.4243																														
Condición de tensionado: (% límite de tensión de rotura)																														
Temperatura mínima: 22.5%																														
Operación diaria (EDS): 13.5%																														
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial					Mínima temperatura (temperatura mínima y sin viento). Condición Final					Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final					Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final					Operación Diaria (Tensión diaria promedio, EDS). Condición Final					Máxima flecha (Temperatura máxima, sin viento). Condición Final				
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha			
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m			
10	816.00	22%	0.01	659.00	18%	0.01	622.00	17%	0.01	622.00	17%	0.01	458.00	12.3%	0.01	96.00	3%	0.06												
20	816.00	22%	0.03	657.00	18%	0.03	623.00	17%	0.04	622.00	17%	0.03	462.00	12.4%	0.05	129.00	3%	0.16												
30	816.00	22%	0.06	656.00	18%	0.07	624.00	17%	0.09	621.00	17%	0.08	468.00	12.6%	0.10	158.00	4%	0.30												
40	816.00	22%	0.10	655.00	18%	0.13	627.00	17%	0.15	621.00	17%	0.14	476.00	12.8%	0.18	184.00	5%	0.46												
50	816.00	22%	0.16	653.00	18%	0.20	630.00	17%	0.23	622.00	17%	0.22	485.00	13.1%	0.27	208.00	6%	0.64												
60	816.00	22%	0.23	653.00	18%	0.29	635.00	17%	0.33	624.00	17%	0.31	495.00	13.3%	0.39	230.00	6%	0.83												
70	808.00	22%	0.32	646.00	17%	0.40	634.00	17%	0.45	622.00	17%	0.43	501.00	13.5%	0.52	249.00	7%	1.05												
80	780.00	21%	0.43	634.00	17%	0.54	626.00	17%	0.60	611.00	16%	0.57	501.00	13.5%	0.68	265.00	7%	1.28												
90	770.00	21%	0.56	621.00	17%	0.69	618.00	17%	0.77	602.00	16%	0.73	501.00	13.5%	0.86	279.00	8%	1.54												
100	750.00	20%	0.71	609.00	16%	0.87	611.00	16%	0.95	592.00	16%	0.91	500.00	13.5%	1.06	293.00	8%	1.81												
110	731.00	20%	0.88	598.00	16%	1.07	605.00	16%	1.17	584.00	16%	1.12	500.00	13.5%	1.28	305.00	8%	2.10												
120	712.00	19%	1.07	589.00	16%	1.30	599.00	16%	1.40	577.00	16%	1.35	501.00	13.5%	1.53	317.00	9%	2.41												
130	693.00	19%	1.29	580.00	16%	1.55	594.00	16%	1.65	570.00	15%	1.60	501.00	13.5%	1.79	327.00	9%	2.74												
140	676.00	18%	1.54	571.00	15%	1.82	589.00	16%	1.93	564.00	15%	1.88	500.00	13.5%	2.08	337.00	9%	3.09												
150	659.00	18%	1.81	564.00	15%	2.12	584.00	16%	2.23	558.00	15%	2.18	500.00	13.5%	2.39	346.00	9%	3.45												
160	645.00	17%	2.11	557.00	15%	2.44	581.00	16%	2.55	553.00	15%	2.50	500.00	13.5%	2.72	354.00	10%	3.83												
170	631.00	17%	2.43	552.00	15%	2.78	577.00	16%	2.90	549.00	15%	2.84	500.00	13.5%	3.07	362.00	10%	4.23												
180	619.00	17%	2.78	547.00	15%	3.15	573.00	15%	3.27	545.00	15%	3.21	500.00	13.5%	3.44	369.00	10%	4.66												
190	608.00	16%	3.15	543.00	15%	3.53	571.00	15%	3.66	542.00	15%	3.60	500.00	13.5%	3.83	376.00	10%	5.09												
200	598.00	16%	3.55	539.00	15%	3.94	568.00	15%	4.07	539.00	15%	4.01	499.00	13.4%	4.25	382.00	10%	5.55												
210	590.00	16%	3.97	535.00	14%	4.37	565.00	15%	4.50	536.00	14%	4.45	499.00	13.4%	4.69	388.00	10%	6.03												
220	582.00	16%	4.42	532.00	14%	4.83	563.00	15%	4.96	533.00	14%	4.90	499.00	13.4%	5.15	394.00	11%	6.53												
230	575.00	15%	4.88	529.00	14%	5.30	561.00	15%	5.43	531.00	14%	5.38	499.00	13.4%	5.63	399.00	11%	7.04												
240	569.00	15%	5.37	527.00	14%	5.80	559.00	15%	5.93	529.00	14%	5.88	499.00	13.4%	6.13	404.00	11%	7.58												
250	563.00	15%	5.89	525.00	14%	6.33	557.00	15%	6.46	527.00	14%	6.40	498.00	13.4%	6.40	408.00	11%	8.14												
260	558.00	15%	6.43	522.00	14%	6.87	556.00	15%	7.00	526.00	14%	6.94	498.00	13.4%	7.20	412.00	11%	8.71												
270	554.00	15%	6.99	521.00	14%	7.44	554.00	15%	7.57	524.00	14%	7.51	498.00	13.4%	7.77	417.00	11%	9.30												
280	549.00	15%	7.58	519.00	14%	7.92	552.00	15%	8.06	522.00	14%	8.00	498.00	13.3%	8.37	420.00	11%	9.91												
290	546.00	15%	8.18	517.00	14%	8.64	551.00	15%	8.77	521.00	14%	8.72	498.00	13.4%	8.98	424.00	11%	10.53												
300	542.00	15%	8.81	515.00	14%	9.27	550.00	15%	9.40	520.00	14%	9.35	497.00	13.4%	9.61	428.00	12%	11.18												
310	539.00	15%	9.47	514.00	14%	9.92	549.00	15%	10.06	519.00	14%	10.00	497.00	13.4%	10.27	431.00	12%	11.85												
320	536.00	14%	10.15	513.00	14%	10.61	547.00	15%	10.74	517.00	14%	10.68	497.00	13.4%	10.95	434.00	12%	12.55												
330	533.00	14%	10.86	512.00	14%	11.31	546.00	15%	11.44	516.00	14%	11.38	496.00	13.4%	11.65	437.00	12%	13.26												
340	531.00	14%	11.57	511.00	14%	12.03	545.00	15%	12.16	515.00	14%	12.11	496.00	13.4%	12.38	439.00	12%	14.00												
350	529.00	14%	12.31	509.00	14%	12.78	544.00	15%	12.91	514.00	14%	12.86	496.00	13.4%	13.13	441.00	12%	14.75												
360	526.00	14%	13.08	508.00	14%	13.55	543.00	15%	13.68	513.00	14%	13.63	496.00	13.4%	13.90	444.00	12%	15.53												
370	524.00	14%	13.88	507.00	14%	14.34	542.00	15%	14.48	512.00	14%	14.42	495.00	13.3%	14.70	446.00	12%	16.34												
380	522.00	14%	14.69	506.00	14%	15.16	541.00	15%	15.29	512.00	14%	15.24	495.00	13.3%	15.51	448.00	12%	17.16												
390	521.00	14%	15.53	505.00	14%	16.00	540.00	15%	16.13	511.00	14%	16.08	494.00	13.3%	16.35	449.00	12%	18.01												
400	519.00	14%	16.39	504.00	14%	16.86	539.00	15%	17.00	510.00	14%	16.94	494.00	13.3%	17.22	451.00	12%	18.88												
410	517.00	14%	17.28	503.00	14%	17.75	538.00	14%	17.89	509.00	14%	17.83	494.00	13.3%	18.11	452.00	12%	19.78												
420	516.00	14%	18.19	503.00	14%	18.66	537.00	14%	18.79	508.00	14%	18.74	493.00	13.3%	19.02	454.00	12%	20.69												
430	514.00	14%	19.12	502.00	14%	19.60	536.00	14%	19.73	508.00	14%	19.67	493.00	13.3%	19.85	455.00	12%	21.63												
440	513.00	14%	20.08	501.00	13%	20.55	536.00	14%	20.69	507.00	14%	20.63	493.00	13.3%	20.91	456.00	12%	22.60												
450	511.00	14%	21.06	500.00	13%	21.54	535.00	14%	21.67	506.00	14%	21.62	492.00	13.2%	21.89	457.00	12%	23.58												
460	510.00	14%	22.07	499.00	13%	22.54	534.00	14%	22.68	505.00	14%	22.63	492.00	13.2%	22.90	458.00	12%	24.60												
470	509.00	14%	23.10	499.00	13%	23.58	533.00	14%	23.71	505.00	14%	23.65	491.00	13.2%	23.93	459.00	12%	25.63												
480	508.00	14%	24.15	498.00	13%	24.63	532.00	14%	24.76	504.00	14%	24.71	491.00	13.2%	24.99	460.00	12%	26.69												
490	506.00	14%	25.23	497.00	13%	25.71	531.00	14%	25.84	503.00	14%	25.79	490.00	13.2%	26.07	460.00	12%	27.78												
500	505.00	14%	26.35	496.00	13%	26.82	530.00	14%	26.95	502.00	14%	26.90	490.00	13.2%	27.18	461.00	12%	28.89												
510	504.00	14%	27.47	496.00	13%	27.94	530.00	14%	28.07	502.00	14%	28.02	489.00	13.2%	28.30	462.00	12%	30.02												
520	503.00	14%	28.62	495.00	13%	29.10	529.00	14%	29.23	501.00	13%	29.18	489.00	13.2%	29.46	462.00	12%	31.18												

AMES AAAC 77.47 KCMLL

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	292.00	23.4%	0.00	223.00	17.9%	0.01	212.00	17.0%	0.01	212.00	17.0%	0.01	161.00	12.9%	0.01	9.00	0.7%	0.15
20	292.00	23.4%	0.02	223.00	17.9%	0.02	213.00	17.1%	0.04	212.00	17.0%	0.03	161.00	12.9%	0.03	17.00	1.4%	0.32
30	292.00	23.4%	0.04	223.00	17.9%	0.05	214.00	17.2%	0.08	212.00	17.0%	0.06	162.00	13.0%	0.07	24.00	1.9%	0.49
40	292.00	23.4%	0.07	222.00	17.8%	0.10	216.00	17.3%	0.15	212.00	17.0%	0.11	163.00	13.1%	0.13	32.00	2.6%	0.67
50	292.00	23.4%	0.11	222.00	17.8%	0.15	218.00	17.5%	0.22	213.00	17.1%	0.17	165.00	13.2%	0.20	39.00	3.1%	0.86
60	292.00	23.4%	0.16	222.00	17.8%	0.21	221.00	17.7%	0.32	213.00	17.1%	0.25	166.00	13.3%	0.29	45.00	3.6%	1.05
70	292.00	23.4%	0.22	222.00	17.8%	0.29	223.00	17.9%	0.43	214.00	17.2%	0.34	168.00	13.5%	0.39	52.00	4.2%	1.26
80	292.00	23.4%	0.29	222.00	17.8%	0.38	226.00	18.1%	0.55	215.00	17.3%	0.44	170.00	13.6%	0.50	58.00	4.7%	1.47
90	292.00	23.4%	0.37	222.00	17.8%	0.48	229.00	18.2%	0.68	216.00	17.3%	0.55	172.00	13.8%	0.62	64.00	5.1%	1.69
100	292.00	23.4%	0.45	222.00	17.8%	0.60	232.00	18.6%	0.82	217.00	17.4%	0.67	174.00	14.0%	0.76	69.00	5.5%	1.91
110	289.00	23.2%	0.56	220.00	17.7%	0.73	232.00	18.6%	0.99	216.00	17.3%	0.82	174.00	14.0%	0.92	74.00	5.9%	2.16
120	284.00	22.8%	0.67	217.00	17.4%	0.88	233.00	18.7%	1.17	214.00	17.2%	0.98	174.00	14.0%	1.10	79.00	6.3%	2.42
130	280.00	22.5%	0.80	215.00	17.3%	1.04	233.00	18.7%	1.36	213.00	17.1%	1.15	174.00	14.0%	1.29	83.00	6.7%	2.69
140	276.00	22.2%	0.94	212.00	17.0%	1.22	234.00	18.8%	1.57	211.00	16.9%	1.35	174.00	14.0%	1.49	88.00	7.1%	2.97
150	272.00	21.8%	1.10	210.00	16.8%	1.42	234.00	18.8%	1.80	210.00	16.8%	1.55	174.00	14.0%	1.71	92.00	7.4%	3.26
160	267.00	21.4%	1.27	208.00	16.7%	1.64	234.00	18.8%	2.04	209.00	16.8%	1.78	174.00	14.0%	1.95	95.00	7.6%	3.57
170	263.00	21.1%	1.46	206.00	16.5%	1.86	234.00	18.8%	2.29	207.00	16.6%	2.02	174.00	14.0%	2.20	99.00	7.9%	3.88
180	258.00	20.7%	1.67	203.00	16.3%	2.11	234.00	18.8%	2.56	206.00	16.5%	2.27	174.00	14.0%	2.47	102.00	8.2%	4.21
190	254.00	20.4%	1.89	202.00	16.2%	2.37	234.00	18.8%	2.84	205.00	16.5%	2.54	174.00	14.0%	2.75	105.00	8.4%	4.55
200	249.00	20.0%	2.13	200.00	16.1%	2.66	235.00	18.9%	3.14	204.00	16.4%	2.83	174.00	14.0%	3.05	108.00	8.7%	4.90
210	245.00	19.7%	2.39	198.00	15.9%	2.95	235.00	18.9%	3.45	203.00	16.3%	3.13	174.00	14.0%	3.36	111.00	8.9%	5.27
220	241.00	19.3%	2.66	197.00	15.8%	3.26	235.00	18.9%	3.78	202.00	16.2%	3.45	174.00	14.0%	3.69	114.00	9.2%	5.65
230	237.00	19.0%	2.96	195.00	15.7%	3.60	234.00	18.8%	4.13	201.00	16.1%	3.79	174.00	14.0%	4.04	116.00	9.3%	6.04
240	233.00	18.7%	3.27	194.00	15.6%	3.95	234.00	18.8%	4.49	200.00	16.1%	4.14	174.00	14.0%	4.40	119.00	9.6%	6.44
250	230.00	18.5%	3.60	192.00	15.4%	4.31	234.00	18.8%	4.86	199.00	16.0%	4.51	174.00	14.0%	4.77	121.00	9.7%	6.86
260	227.00	18.2%	3.96	191.00	15.3%	4.69	234.00	18.8%	5.26	199.00	16.0%	4.89	174.00	14.0%	5.16	123.00	9.9%	7.29
270	224.00	18.0%	4.32	190.00	15.3%	5.09	234.00	18.8%	5.66	198.00	15.9%	5.29	174.00	14.0%	5.57	125.00	10.0%	7.73
280	221.00	17.7%	4.72	189.00	15.2%	5.50	234.00	18.8%	6.08	197.00	15.8%	5.71	174.00	14.0%	5.99	127.00	10.2%	8.19
290	218.00	17.5%	5.12	188.00	15.1%	5.93	234.00	18.8%	6.51	197.00	15.8%	6.14	174.00	14.0%	6.43	129.00	10.4%	8.66
300	215.00	17.3%	5.54	187.00	15.0%	6.37	233.00	18.7%	6.97	196.00	15.7%	6.59	174.00	14.0%	6.88	131.00	10.5%	9.15

ALLIANCE AAAC 246.9 KCMIIL																		
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 60 Velocidad del viento promedio (km/h): 40																		
Propiedades físicas del conductor: Tensión de rotura (daN): 3907.68 Peso (daN/m): 0.3382																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22% Operación diaria (EDS): 12.5%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837.00	22.0%	0.01	646.00	17%	0.01	609.00	16%	0.01	609.00	16%	0.01	447.00	11.7%	0.01	26.00	1%	0.16
20	837.00	22.0%	0.02	646.00	17%	0.03	611.00	16%	0.03	609.00	16%	0.03	448.00	11.8%	0.04	50.00	1%	0.34
30	837.00	22.0%	0.05	643.00	17%	0.06	612.00	16%	0.07	608.00	16%	0.06	453.00	11.9%	0.08	74.00	2%	0.52
40	837.00	22.0%	0.08	643.00	17%	0.11	614.00	16%	0.13	609.00	16%	0.12	457.00	12.0%	0.15	96.00	3%	0.70
50	837.00	22.0%	0.13	641.00	17%	0.16	615.00	16%	0.20	609.00	16%	0.18	463.00	12.2%	0.23	117.00	3%	0.90
60	837.00	22.0%	0.18	640.00	17%	0.24	618.00	16%	0.29	610.00	16%	0.26	469.00	12.3%	0.32	138.00	4%	1.11
70	837.00	22.0%	0.25	639.00	17%	0.32	621.00	16%	0.39	610.00	16%	0.35	475.00	12.5%	0.44	157.00	4%	1.32
80	824.00	21.6%	0.33	629.00	17%	0.43	618.00	16%	0.51	603.00	16%	0.46	475.00	12.5%	0.57	175.00	5%	1.55
90	810.00	21.3%	0.42	621.00	16%	0.55	613.00	16%	0.65	595.00	16%	0.59	475.00	12.5%	0.72	191.00	5%	1.79
100	796.00	20.9%	0.53	611.00	16%	0.69	608.00	16%	0.80	588.00	15%	0.74	475.00	12.5%	0.89	207.00	5%	2.05
110	780.00	20.5%	0.66	601.00	16%	0.85	604.00	16%	0.98	582.00	15%	0.91	475.00	12.5%	1.08	221.00	6%	2.31
120	764.00	20.1%	0.80	591.00	16%	1.03	599.00	16%	1.17	574.00	15%	1.09	475.00	12.5%	1.28	235.00	6%	2.59
130	748.00	19.6%	0.96	582.00	15%	1.23	594.00	16%	1.38	567.00	15%	1.30	475.00	12.5%	1.50	248.00	7%	2.89
140	731.00	19.2%	1.13	574.00	15%	1.45	590.00	15%	1.61	561.00	15%	1.52	475.00	12.5%	1.74	260.00	7%	3.19
150	715.00	18.8%	1.33	565.00	15%	1.68	586.00	15%	1.86	555.00	15%	1.77	475.00	12.5%	2.00	271.00	7%	3.51
160	699.00	18.4%	1.55	558.00	15%	1.94	582.00	15%	2.12	550.00	14%	2.03	475.00	12.5%	2.28	281.00	7%	3.85
170	684.00	18.0%	1.79	551.00	14%	2.22	579.00	15%	2.41	545.00	14%	2.31	475.00	12.5%	2.57	291.00	8%	4.20
180	669.00	17.6%	2.06	546.00	14%	2.51	576.00	15%	2.71	541.00	14%	2.61	475.00	12.5%	2.89	301.00	8%	4.56
190	655.00	17.2%	2.33	539.00	14%	2.83	572.00	15%	3.04	536.00	14%	2.93	475.00	12.5%	3.22	309.00	8%	4.94
200	641.00	16.8%	2.64	534.00	14%	3.17	569.00	15%	3.38	532.00	14%	3.27	475.00	12.5%	3.57	317.00	8%	5.34
210	630.00	16.5%	2.96	530.00	14%	3.52	567.00	15%	3.73	529.00	14%	3.63	474.00	12.4%	3.93	325.00	8%	5.74
220	619.00	16.3%	3.31	526.00	14%	3.90	564.00	15%	4.11	526.00	14%	4.00	474.00	12.4%	4.32	332.00	9%	6.17
230	608.00	16.0%	3.68	521.00	14%	4.29	562.00	15%	4.51	523.00	14%	4.40	474.00	12.4%	4.72	339.00	9%	6.61
240	598.00	15.7%	4.07	518.00	14%	4.71	559.00	15%	4.93	520.00	14%	4.82	474.00	12.4%	5.14	345.00	9%	7.07
250	589.00	15.5%	4.49	515.00	14%	5.13	557.00	15%	5.36	518.00	14%	5.25	474.00	12.4%	5.58	351.00	9%	7.54
260	581.00	15.3%	4.92	512.00	13%	5.59	555.00	15%	5.81	515.00	14%	5.70	474.00	12.4%	6.04	357.00	9%	8.02
270	574.00	15.1%	5.37	509.00	13%	6.06	554.00	15%	6.28	513.00	13%	6.17	474.00	12.4%	6.51	362.00	10%	8.53
280	567.00	14.9%	5.85	507.00	13%	6.55	552.00	14%	6.78	511.00	13%	6.66	473.00	12.3%	7.01	367.00	10%	9.05
290	561.00	14.7%	6.34	504.00	13%	7.06	550.00	14%	7.29	509.00	13%	7.17	473.00	12.4%	7.52	374.00	10%	9.59
300	556.00	14.6%	6.86	502.00	13%	7.58	549.00	14%	7.81	508.00	13%	7.70	473.00	12.4%	8.05	379.00	10%	10.15
310	550.00	14.4%	7.39	501.00	13%	8.13	547.00	14%	8.36	506.00	13%	8.24	473.00	12.4%	8.60	385.00	10%	10.72
320	545.00	14.3%	7.95	499.00	13%	8.69	546.00	14%	8.93	505.00	13%	8.81	473.00	12.4%	9.17	384.00	10%	11.31
330	541.00	14.2%	8.53	497.00	13%	9.28	545.00	14%	9.51	503.00	13%	9.39	473.00	12.4%	9.75	387.00	10%	11.91
340	536.00	14.1%	9.12	495.00	13%	9.88	543.00	14%	10.11	502.00	13%	10.00	472.00	12.4%	10.36	391.00	10%	12.54
350	533.00	14.0%	9.73	494.00	13%	10.50	542.00	14%	10.73	501.00	13%	10.62	472.00	12.4%	10.98	394.00	10%	13.18
360	529.00	13.9%	10.37	493.00	13%	11.14	541.00	14%	11.37	500.00	13%	11.25	472.00	12.4%	11.63	397.00	10%	13.84
370	526.00	13.8%	11.02	491.00	13%	11.80	540.00	14%	12.03	499.00	13%	11.92	472.00	12.4%	12.29	399.00	10%	14.52
380	523.00	13.7%	11.70	490.00	13%	12.48	539.00	14%	12.71	497.00	13%	12.60	471.00	12.4%	12.97	402.00	11%	15.22
390	520.00	13.7%	12.39	489.00	13%	13.17	538.00	14%	13.41	497.00	13%	13.29	471.00	12.4%	13.67	405.00	11%	15.93
400	517.00	13.6%	13.10	488.00	13%	13.89	537.00	14%	14.12	496.00	13%	14.01	471.00	12.4%	14.39	407.00	11%	16.66
410	515.00	13.5%	13.83	487.00	13%	14.63	536.00	14%	14.86	495.00	13%	14.75	471.00	12.4%	15.13	409.00	11%	17.41
420	512.00	13.4%	14.59	486.00	13%	15.38	535.00	14%	15.62	494.00	13%	15.51	471.00	12.4%	15.89	411.00	11%	18.18
430	510.00	13.4%	15.36	485.00	13%	16.15	534.00	14%	16.38	493.00	13%	16.28	470.00	12.3%	16.66	413.00	11%	18.97
440	508.00	13.3%	16.15	484.00	13%	16.95	533.00	14%	17.18	492.00	13%	17.07	470.00	12.3%	17.45	415.00	11%	19.77
450	506.00	13.3%	16.96	483.00	13%	17.77	532.00	14%	18.00	491.00	13%	17.89	470.00	12.3%	18.27	417.00	11%	20.60
460	504.00	13.2%	17.79	482.00	13%	18.60	531.00	14%	18.83	491.00	13%	18.72	469.00	12.3%	19.10	418.00	11%	21.44
470	502.00	13.2%	18.65	481.00	13%	19.45	530.00	14%	19.69	490.00	13%	19.58	469.00	12.3%	19.96	420.00	11%	22.31
480	500.00	13.1%	19.51	481.00	13%	20.32	530.00	14%	20.56	489.00	13%	20.44	469.00	12.3%	20.83	421.00	11%	23.19
490	499.00	13.1%	20.40	480.00	13%	21.21	529.00	14%	21.45	488.00	13%	21.34	469.00	12.3%	21.72	423.00	11%	24.09
500	497.00	13.1%	21.31	479.00	13%	22.13	528.00	14%	22.36	488.00	13%	22.25	468.00	12.3%	22.64	424.00	11%	25.01
510	496.00	13.0%	22.24	478.00	13%	23.06	527.00	14%	23.29	487.00	13%	23.18	468.00	12.3%	23.57	425.00	11%	25.95
520	494.00	13.0%	23.19	476.00	13%	24.01	527.00	14%	24.24	486.00	13%	24.13	468.00	12.3%	24.52	426.00	11%	26.91
530	493.00	12.9%	24.17	477.00	13%	24.99	526.00	14%	25.22	486.00	13%	25.11	467.00	12.3%	25.50	427.00	11%	27.89
540	492.00	12.9%	25.16	476.00	13%	25.97	525.00	14%	26.21	485.00	13%	26.10	467.00	12.3%	26.49	428.00	11%	28.89
550	490.00	12.9%	26.17	475.00	12%	26.99	524.00	14%	27.22	484.00	13%	27.11	467.00	12.3%	27.50	429.00	11%	29.91
560	489.00	12.8%	27.20	475.00	12%	28.02	524.00	14%	28.25	484.00	13%	28.14	466.00	12.2%	28.54	430.00	11%	30.95
570	488.00	12.8%	28.26	474.00	12%	29.08	523.00	14%	29.31	483.00	13%	29.20	466.00	12.2%	29.59	431.00	11%	32.02
580	487.00	12.8%	29.33	473.00	12%	30.16	522.00	14%	30.39	482.00	13%	30.27	466.00	12.2%	30.67	432.00	11%	33.10
590	486.00	12.8%	30.42	473.00	12%	31.25	521.00	14%	31.48	482.00	13%	31.37	465.00	12.2%	31.76	432.00	11%	34.20
600	484.00	12.7%	31.54	472.00	12%	32.36	521.00	14%	32.59	481.00	13%	32.49	465.00	12.2%	32.88	433.00	11%	35.32



ANEXO B2.2: Zona 2 (Velocidad de viento máxima 80 km/h)

AMES AAAC 77.47 KCMLC																		
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C):34 Temperatura media (°C):21 Temperatura mínima (°C):10 Temperatura coincidente (°C):12 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50																		
Propiedades físicas del conductor: Tensión de rotura (daN): 1245.5 Peso (daN/m): 0.1060																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 23.5% Operación diaria (EDS):14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	292.00	23.4%	0.00	223.00	17.9%	0.01	213.00	17.1%	0.01	212.00	17.0%	0.01	161.00	12.9%	0.01	9.00	0.7%	0.15
20	292.00	23.4%	0.02	223.00	17.9%	0.02	216.00	17.3%	0.06	212.00	17.0%	0.03	161.00	12.9%	0.03	17.00	1.4%	0.32
30	292.00	23.4%	0.04	223.00	17.9%	0.05	220.00	17.7%	0.12	213.00	17.1%	0.07	162.00	13.0%	0.07	24.00	1.9%	0.49
40	292.00	23.4%	0.07	222.00	17.8%	0.10	225.00	18.1%	0.21	214.00	17.2%	0.13	163.00	13.1%	0.13	32.00	2.6%	0.67
50	292.00	23.4%	0.11	222.00	17.8%	0.15	231.00	18.5%	0.31	215.00	17.3%	0.19	165.00	13.2%	0.20	39.00	3.1%	0.86
60	292.00	23.4%	0.16	222.00	17.8%	0.21	237.00	19.0%	0.44	216.00	17.3%	0.28	166.00	13.3%	0.29	45.00	3.6%	1.05
70	292.00	23.4%	0.22	222.00	17.8%	0.29	243.00	19.5%	0.57	218.00	17.5%	0.37	168.00	13.5%	0.39	52.00	4.2%	1.26
80	292.00	23.4%	0.29	222.00	17.8%	0.38	249.00	20.0%	0.72	219.00	17.6%	0.48	170.00	13.6%	0.50	58.00	4.7%	1.47
90	292.00	23.4%	0.37	222.00	17.8%	0.48	255.00	20.5%	0.88	221.00	17.7%	0.60	172.00	13.8%	0.62	64.00	5.1%	1.69
100	292.00	23.4%	0.45	222.00	17.8%	0.60	261.00	21.0%	1.06	223.00	17.9%	0.73	174.00	14.0%	0.76	69.00	5.5%	1.91
110	289.00	23.2%	0.56	220.00	17.7%	0.73	265.00	21.3%	1.26	222.00	17.8%	0.89	174.00	14.0%	0.92	74.00	5.9%	2.16
120	284.00	22.8%	0.67	217.00	17.4%	0.88	268.00	21.5%	1.47	221.00	17.7%	1.06	174.00	14.0%	1.10	79.00	6.3%	2.42
130	280.00	22.5%	0.80	215.00	17.3%	1.04	272.00	21.8%	1.69	221.00	17.7%	1.24	174.00	14.0%	1.29	83.00	6.7%	2.69
140	276.00	22.2%	0.94	212.00	17.0%	1.22	275.00	22.1%	1.93	220.00	17.7%	1.44	174.00	14.0%	1.49	88.00	7.1%	2.97
150	272.00	21.8%	1.10	210.00	16.9%	1.42	278.00	22.3%	2.19	219.00	17.6%	1.65	174.00	14.0%	1.71	92.00	7.4%	3.26
160	267.00	21.4%	1.27	208.00	16.7%	1.64	280.00	22.5%	2.44	219.00	17.6%	1.88	174.00	14.0%	1.95	95.00	7.6%	3.57
170	263.00	21.1%	1.46	206.00	16.5%	1.86	283.00	22.7%	2.72	218.00	17.5%	2.13	174.00	14.0%	2.20	99.00	7.9%	3.88
180	258.00	20.7%	1.67	203.00	16.3%	2.11	285.00	22.9%	3.01	217.00	17.4%	2.39	174.00	14.0%	2.47	102.00	8.2%	4.21
190	254.00	20.4%	1.89	202.00	16.2%	2.37	287.00	23.0%	3.32	217.00	17.4%	2.66	174.00	14.0%	2.75	105.00	8.4%	4.55
200	249.00	20.0%	2.13	200.00	16.1%	2.66	289.00	23.2%	3.64	216.00	17.3%	2.95	174.00	14.0%	3.05	108.00	8.7%	4.90
210	245.00	19.7%	2.39	198.00	15.9%	2.95	291.00	23.4%	3.97	215.00	17.2%	3.26	174.00	14.0%	3.36	111.00	8.9%	5.27
220	241.00	19.3%	2.66	197.00	15.8%	3.26	293.00	23.5%	4.31	215.00	17.3%	3.58	174.00	14.0%	3.69	114.00	9.2%	5.65
230	237.00	19.0%	2.96	195.00	15.7%	3.60	294.00	23.6%	4.68	214.00	17.2%	3.93	174.00	14.0%	4.04	116.00	9.3%	6.04
240	233.00	18.7%	3.27	194.00	15.6%	3.95	296.00	23.8%	5.05	214.00	17.2%	4.28	174.00	14.0%	4.40	119.00	9.6%	6.44
250	230.00	18.5%	3.60	192.00	15.4%	4.31	297.00	23.8%	5.44	213.00	17.1%	4.65	174.00	14.0%	4.77	121.00	9.7%	6.86
260	227.00	18.2%	3.96	191.00	15.3%	4.69	298.00	23.9%	5.85	212.00	17.0%	5.04	174.00	14.0%	5.16	123.00	9.9%	7.29
270	224.00	18.0%	4.32	190.00	15.3%	5.09	299.00	24.0%	6.27	212.00	17.0%	5.44	174.00	14.0%	5.57	125.00	10.0%	7.73
280	221.00	17.7%	4.72	189.00	15.2%	5.50	300.00	24.1%	6.70	212.00	17.0%	5.86	174.00	14.0%	5.99	127.00	10.2%	8.19
290	218.00	17.5%	5.12	188.00	15.1%	5.93	301.00	24.2%	7.15	211.00	16.9%	6.29	174.00	14.0%	6.43	129.00	10.4%	8.66
300	215.00	17.3%	5.54	187.00	15.0%	6.37	302.00	24.2%	7.61	211.00	16.9%	6.74	174.00	14.0%	6.88	131.00	10.5%	9.15

ALLIANCE AAAC 246.9 KCMIIL

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837.00	22.0%	0.01	646.00	17%	0.01	610.00	16%	0.01	609.00	16%	0.01	447.00	11.7%	0.01	26.00	1%	0.16
20	837.00	22.0%	0.02	646.00	17%	0.03	614.00	16%	0.04	609.00	16%	0.03	448.00	11.8%	0.04	50.00	1%	0.34
30	837.00	22.0%	0.05	643.00	17%	0.06	618.00	16%	0.09	610.00	16%	0.07	453.00	11.9%	0.08	74.00	2%	0.52
40	837.00	22.0%	0.08	643.00	17%	0.11	626.00	16%	0.16	611.00	16%	0.12	457.00	12.0%	0.15	96.00	3%	0.70
50	837.00	22.0%	0.13	641.00	17%	0.16	637.00	1%	0.25	611.00	16%	0.18	463.00	12.2%	0.23	117.00	3%	0.90
60	837.00	22.0%	0.18	640.00	17%	0.24	641.00	17%	0.35	613.00	16%	0.27	469.00	12.3%	0.32	138.00	4%	1.11
70	837.00	22.0%	0.25	639.00	17%	0.32	650.00	17%	0.46	615.00	16%	0.36	475.00	12.5%	0.44	157.00	4%	1.32
80	824.00	21.6%	0.33	629.00	17%	0.43	651.00	17%	0.60	609.00	16%	0.48	475.00	12.5%	0.57	175.00	5%	1.55
90	810.00	21.3%	0.42	621.00	16%	0.55	652.00	17%	0.75	602.00	16%	0.61	475.00	12.5%	0.72	191.00	5%	1.79
100	796.00	20.9%	0.53	611.00	16%	0.69	653.00	17%	0.93	595.00	16%	0.76	475.00	12.5%	0.89	207.00	5%	2.05
110	780.00	20.5%	0.66	601.00	16%	0.85	653.00	17%	1.12	589.00	15%	0.93	475.00	12.5%	1.08	221.00	6%	2.31
120	764.00	20.1%	0.80	591.00	16%	1.03	654.00	17%	1.32	583.00	15%	1.12	475.00	12.5%	1.28	235.00	6%	2.59
130	748.00	19.6%	0.96	582.00	15%	1.23	654.00	17%	1.54	577.00	15%	1.33	475.00	12.5%	1.50	248.00	7%	2.89
140	731.00	19.2%	1.13	574.00	15%	1.45	654.00	17%	1.78	572.00	15%	1.55	475.00	12.5%	1.74	260.00	7%	3.19
150	715.00	18.8%	1.33	565.00	15%	1.68	654.00	17%	2.04	567.00	15%	1.80	475.00	12.5%	2.00	271.00	7%	3.51
160	699.00	18.4%	1.55	558.00	15%	1.94	653.00	17%	2.32	562.00	15%	2.06	475.00	12.5%	2.28	281.00	7%	3.85
170	684.00	18.0%	1.79	551.00	14%	2.22	653.00	17%	2.61	557.00	15%	2.35	475.00	12.5%	2.57	291.00	8%	4.20
180	669.00	17.6%	2.05	546.00	14%	2.51	652.00	17%	2.92	554.00	15%	2.65	475.00	12.5%	2.89	301.00	8%	4.56
190	655.00	17.2%	2.33	539.00	14%	2.83	651.00	17%	3.25	549.00	14%	2.97	475.00	12.5%	3.22	309.00	8%	4.94
200	641.00	16.8%	2.64	534.00	14%	3.17	651.00	17%	3.60	546.00	14%	3.31	475.00	12.5%	3.57	317.00	8%	5.34
210	630.00	16.5%	2.96	530.00	14%	3.52	650.00	17%	3.96	543.00	14%	3.67	474.00	12.4%	3.93	325.00	9%	5.74
220	619.00	16.3%	3.31	526.00	14%	3.90	649.00	17%	4.34	540.00	14%	4.04	474.00	12.4%	4.32	332.00	9%	6.17
230	608.00	16.0%	3.68	521.00	14%	4.29	648.00	17%	4.75	537.00	14%	4.44	474.00	12.4%	4.72	339.00	9%	6.61
240	598.00	15.7%	4.07	518.00	14%	4.71	647.00	17%	5.17	534.00	14%	4.86	474.00	12.4%	5.14	345.00	9%	7.07
250	589.00	15.5%	4.49	515.00	14%	5.13	646.00	17%	5.60	532.00	14%	5.29	474.00	12.4%	5.58	351.00	9%	7.54
260	581.00	15.3%	4.92	512.00	13%	5.59	645.00	17%	6.06	530.00	14%	5.74	474.00	12.4%	6.04	357.00	9%	8.02
270	574.00	15.1%	5.37	509.00	13%	6.06	644.00	17%	6.53	528.00	14%	6.21	474.00	12.4%	6.51	362.00	10%	8.53
280	567.00	14.9%	5.85	507.00	13%	6.55	643.00	17%	7.02	526.00	14%	6.70	473.00	12.4%	7.01	367.00	10%	9.05
290	561.00	14.7%	6.34	504.00	13%	7.06	642.00	17%	7.54	524.00	14%	7.21	473.00	12.4%	7.52	374.00	10%	9.59
300	556.00	14.6%	6.86	502.00	13%	7.58	641.00	17%	8.06	523.00	14%	7.74	473.00	12.4%	8.05	378.00	10%	10.15
310	550.00	14.4%	7.39	501.00	13%	8.13	640.00	17%	8.61	521.00	14%	8.28	473.00	12.4%	8.60	385.00	10%	10.72
320	545.00	14.3%	7.95	499.00	13%	8.69	639.00	17%	9.18	520.00	14%	8.85	473.00	12.4%	9.17	384.00	10%	11.31
330	541.00	14.2%	8.53	497.00	13%	9.28	638.00	17%	9.76	518.00	14%	9.44	473.00	12.4%	9.75	387.00	10%	11.91
340	536.00	14.1%	9.12	495.00	13%	9.88	637.00	17%	10.36	517.00	14%	10.04	472.00	12.4%	10.36	391.00	10%	12.54
350	533.00	14.0%	9.73	494.00	13%	10.50	636.00	17%	10.99	516.00	14%	10.66	472.00	12.4%	10.98	394.00	10%	13.18
360	529.00	13.9%	10.37	493.00	13%	11.14	635.00	17%	11.63	515.00	14%	11.30	472.00	12.4%	11.63	397.00	10%	13.84
370	526.00	13.8%	11.02	491.00	13%	11.80	634.00	17%	12.29	514.00	13%	11.96	472.00	12.4%	12.29	399.00	10%	14.52
380	523.00	13.7%	11.70	490.00	13%	12.48	633.00	17%	12.97	513.00	14%	12.64	471.00	12.4%	12.97	402.00	11%	15.22
390	520.00	13.7%	12.39	489.00	13%	13.17	632.00	17%	13.66	512.00	13%	13.34	471.00	12.4%	13.67	405.00	11%	15.93
400	517.00	13.6%	13.10	488.00	13%	13.89	631.00	17%	14.38	511.00	13%	14.06	471.00	12.4%	14.39	407.00	11%	16.66
410	515.00	13.5%	13.83	487.00	13%	14.63	630.00	17%	15.12	510.00	13%	14.79	471.00	12.4%	15.13	409.00	11%	17.41
420	512.00	13.4%	14.59	486.00	13%	15.38	630.00	17%	15.87	509.00	13%	15.54	471.00	12.4%	15.88	411.00	11%	18.18
430	510.00	13.4%	15.36	485.00	13%	16.15	629.00	16%	16.65	508.00	13%	16.32	470.00	12.3%	16.66	413.00	11%	18.97
440	508.00	13.3%	16.15	484.00	13%	16.95	628.00	16%	17.44	507.00	13%	17.11	470.00	12.3%	17.45	415.00	11%	19.77
450	506.00	13.3%	16.96	483.00	13%	17.77	627.00	16%	18.26	506.00	13%	17.93	470.00	12.3%	18.27	417.00	11%	20.60
460	504.00	13.2%	17.79	482.00	13%	18.60	626.00	16%	19.09	505.00	13%	18.76	469.00	12.3%	19.10	418.00	11%	21.44
470	502.00	13.2%	18.65	481.00	13%	19.45	625.00	16%	19.94	505.00	13%	19.62	469.00	12.3%	19.96	420.00	11%	22.31
480	500.00	13.1%	19.51	481.00	13%	20.32	624.00	16%	20.81	504.00	13%	20.49	469.00	12.3%	20.83	421.00	11%	23.19
490	499.00	13.1%	20.40	480.00	13%	21.21	623.00	16%	21.70	503.00	13%	21.38	469.00	12.3%	21.72	423.00	11%	24.09
500	497.00	13.1%	21.31	479.00	13%	22.13	622.00	16%	22.61	502.00	13%	22.29	468.00	12.3%	22.64	424.00	11%	25.01
510	496.00	13.0%	22.24	478.00	13%	23.06	621.00	16%	23.55	502.00	13%	23.22	468.00	12.3%	23.57	425.00	11%	25.95
520	494.00	13.0%	23.19	476.00	13%	24.01	620.00	16%	24.50	501.00	13%	24.17	468.00	12.3%	24.52	426.00	11%	26.91
530	493.00	12.9%	24.17	477.00	13%	24.96	619.00	16%	25.47	500.00	13%	25.15	467.00	12.3%	25.50	427.00	11%	27.89
540	492.00	12.9%	25.16	476.00	13%	25.97	619.00	16%	26.46	500.00	13%	26.14	467.00	12.3%	26.49	428.00	11%	28.89
550	490.00	12.9%	26.17	475.00	12%	26.99	618.00	16%	27.47	499.00	13%	27.15	467.00	12.3%	27.50	429.00	11%	29.91
560	489.00	12.8%	27.20	475.00	12%	28.02	617.00	16%	28.50	498.00	13%	28.18	466.00	12.2%	28.54	430.00	11%	30.95
570	488.00	12.8%	28.26	474.00	12%	29.08	616.00	16%	29.56	497.00	13%	29.24	466.00	12.2%	29.59	431.00	11%	32.02
580	487.00	12.8%	29.33	473.00	12%	30.16	615.00	16%	30.64	497.00	13%	30.52	466.00	12.2%	30.67	432.00	11%	33.10
590	486.00	12.8%	30.42	473.00	12%	31.25	614.00	16%	31.73	496.00	13%	31.41	465.00	12.2%	31.76	432.00	11%	34.20
600	484.00	12.7%	31.54	472.00	12%	32.36	613.00	16%	32.84	496.00	13%	32.52	465.00	12.2%	32.88	433.00	11%	35.32

BUTTE AAAC 312.8 KCML																		
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50																		
Propiedades físicas del conductor: Tensión de rotura (daN): 4993.04 Peso (daN/m): 0.4284																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	929.00	19.0%	0.01	744.00	15%	0.01	701.00	14%	0.01	700.00	14%	0.01	503.00	10.3%	0.01	32.00	1%	0.17
20	929.00	19.0%	0.02	743.00	15%	0.03	705.00	14%	0.04	700.00	14%	0.03	506.00	10.3%	0.04	62.00	1%	0.36
30	929.00	19.0%	0.05	740.00	15%	0.07	710.00	15%	0.10	699.00	14%	0.07	511.00	10.4%	0.09	91.00	2%	0.53
40	929.00	19.0%	0.09	739.00	15%	0.12	718.00	15%	0.17	701.00	14%	0.13	518.00	10.6%	0.17	118.00	2%	0.72
50	929.00	19.0%	0.14	735.00	15%	0.18	725.00	15%	0.26	700.00	14%	0.20	526.00	10.7%	0.25	144.00	3%	0.93
60	929.00	19.0%	0.21	734.00	15%	0.26	735.00	15%	0.36	703.00	14%	0.29	535.00	10.9%	0.36	169.00	3%	1.14
70	929.00	19.0%	0.28	733.00	15%	0.36	745.00	15%	0.49	704.00	14%	0.40	545.00	11.1%	0.48	193.00	4%	1.36
80	929.00	19.0%	0.37	733.00	15%	0.47	756.00	15%	0.62	708.00	14%	0.52	555.00	11.3%	0.62	218.00	4%	1.59
90	925.00	18.9%	0.47	729.00	15%	0.59	763.00	16%	0.78	708.00	14%	0.65	562.00	11.5%	0.77	237.00	5%	1.83
100	905.00	18.5%	0.59	716.00	15%	0.75	762.00	16%	0.96	699.00	14%	0.81	562.00	11.5%	0.95	256.00	5%	2.09
110	885.00	18.1%	0.73	704.00	14%	0.92	760.00	16%	1.15	690.00	14%	1.00	562.00	11.5%	1.15	274.00	6%	2.37
120	865.00	17.7%	0.89	692.00	14%	1.11	759.00	16%	1.37	682.00	14%	1.20	562.00	11.5%	1.37	290.00	6%	2.66
130	845.00	17.3%	1.07	680.00	14%	1.33	758.00	15%	1.61	674.00	14%	1.42	562.00	11.5%	1.61	305.00	6%	2.97
140	824.00	16.8%	1.27	668.00	14%	1.57	755.00	15%	1.86	666.00	14%	1.67	561.00	11.5%	1.87	319.00	7%	3.29
150	805.00	16.5%	1.50	660.00	13%	1.83	754.00	15%	2.14	660.00	13%	1.93	561.00	11.5%	2.15	333.00	7%	3.62
160	787.00	16.1%	1.74	652.00	13%	2.10	753.00	15%	2.43	655.00	13%	2.22	561.00	11.5%	2.44	345.00	7%	3.97
170	769.00	15.7%	2.01	644.00	13%	2.40	751.00	15%	2.74	649.00	13%	2.52	561.00	11.5%	2.76	357.00	7%	4.34
180	753.00	15.4%	2.31	636.00	13%	2.73	749.00	15%	3.07	644.00	13%	2.85	561.00	11.5%	3.09	369.00	8%	4.72
190	738.00	15.1%	2.62	630.00	13%	3.07	747.00	15%	3.42	639.00	13%	3.19	561.00	11.5%	3.45	378.00	8%	5.12
200	724.00	14.8%	2.96	624.00	13%	3.43	746.00	15%	3.79	636.00	13%	3.56	561.00	11.5%	3.82	387.00	8%	5.54
210	711.00	14.5%	3.32	619.00	13%	3.82	744.00	15%	4.18	632.00	13%	3.94	561.00	11.5%	4.22	396.00	8%	5.97
220	699.00	14.3%	3.71	615.00	13%	4.22	742.00	15%	4.59	629.00	13%	4.36	561.00	11.5%	4.63	405.00	8%	6.42
230	689.00	14.1%	4.11	611.00	12%	4.64	741.00	15%	5.02	626.00	13%	4.77	560.00	11.4%	5.06	412.00	8%	6.88
240	679.00	13.9%	4.55	607.00	12%	5.09	739.00	15%	5.47	622.00	13%	5.22	560.00	11.4%	5.51	419.00	9%	7.36
250	670.00	13.7%	5.00	603.00	12%	5.56	737.00	15%	5.94	620.00	13%	5.69	560.00	11.4%	5.98	426.00	9%	7.87
260	662.00	13.5%	5.47	600.00	12%	6.04	736.00	15%	6.43	617.00	13%	6.18	560.00	11.4%	6.47	433.00	9%	8.38
270	655.00	13.4%	5.97	597.00	12%	6.55	734.00	15%	6.93	615.00	13%	6.68	560.00	11.4%	6.98	439.00	9%	8.92
280	648.00	13.2%	6.48	594.00	12%	7.07	733.00	15%	7.46	613.00	13%	7.21	559.00	11.4%	7.51	444.00	9%	9.47
290	642.00	13.1%	7.02	592.00	12%	7.62	731.00	15%	8.01	611.00	12%	7.76	559.00	11.4%	8.06	449.00	9%	10.05
300	636.00	13.0%	7.58	589.00	12%	8.19	730.00	15%	8.58	609.00	12%	8.33	559.00	11.4%	8.64	454.00	9%	10.64
310	631.00	12.9%	8.16	587.00	12%	8.77	728.00	15%	9.17	608.00	12%	8.91	559.00	11.4%	9.22	459.00	9%	11.25
320	627.00	12.8%	8.76	585.00	12%	9.38	727.00	15%	9.77	606.00	12%	9.52	558.00	11.4%	9.83	463.00	9%	11.88
330	622.00	12.7%	9.39	584.00	12%	10.01	725.00	15%	10.40	604.00	12%	10.15	558.00	11.4%	10.46	467.00	10%	12.52
340	618.00	12.6%	10.03	582.00	12%	10.66	724.00	15%	11.05	603.00	12%	10.80	558.00	11.4%	11.11	470.00	10%	13.19
350	614.00	12.5%	10.69	580.00	12%	11.32	723.00	15%	11.72	601.00	12%	11.46	558.00	11.4%	11.78	474.00	10%	13.88
360	611.00	12.5%	11.38	579.00	12%	12.01	722.00	15%	12.41	600.00	12%	12.15	557.00	11.4%	12.48	477.00	10%	14.58
370	608.00	12.4%	12.08	577.00	12%	12.74	720.00	15%	13.11	598.00	12%	12.86	557.00	11.4%	13.19	480.00	10%	15.31
380	605.00	12.4%	12.81	576.00	12%	13.45	719.00	15%	13.85	598.00	12%	13.59	557.00	11.4%	13.92	483.00	10%	16.06
390	602.00	12.3%	13.55	575.00	12%	14.20	718.00	15%	14.60	597.00	12%	14.34	556.00	11.4%	14.67	486.00	10%	16.81
400	598.00	12.2%	14.33	573.00	12%	14.97	717.00	15%	15.37	595.00	12%	15.11	556.00	11.4%	15.45	489.00	10%	17.60
410	597.00	12.2%	15.12	572.00	12%	15.76	715.00	15%	16.16	594.00	12%	15.91	556.00	11.4%	16.24	490.00	10%	18.41
420	594.00	12.1%	15.92	571.00	12%	16.57	714.00	15%	16.97	593.00	12%	16.72	555.00	11.3%	17.05	493.00	10%	19.23
430	592.00	12.1%	16.76	570.00	12%	17.41	713.00	15%	17.80	592.00	12%	17.55	555.00	11.3%	17.88	495.00	10%	20.07
440	590.00	12.1%	17.61	569.00	12%	18.27	712.00	15%	18.66	591.00	12%	18.41	555.00	11.3%	18.74	497.00	10%	20.94
450	588.00	12.0%	18.49	568.00	12%	19.14	711.00	15%	19.53	590.00	12%	19.28	554.00	11.3%	19.62	499.00	10%	21.83
460	586.00	12.0%	19.35	567.00	12%	20.04	709.00	14%	20.43	589.00	12%	20.18	554.00	11.3%	20.52	500.00	10%	22.73
470	584.00	11.9%	20.30	566.00	12%	20.96	708.00	14%	21.35	588.00	12%	21.10	554.00	11.3%	21.43	502.00	10%	23.66
480	583.00	11.9%	21.23	565.00	12%	21.90	707.00	14%	22.28	588.00	12%	22.04	553.00	11.3%	22.37	503.00	10%	24.60
490	581.00	11.9%	22.20	564.00	12%	22.86	706.00	14%	23.25	587.00	12%	23.00	553.00	11.3%	23.34	505.00	10%	25.58
500	579.00	11.8%	23.18	563.00	12%	23.85	705.00	14%	24.24	586.00	12%	23.99	552.00	11.3%	24.33	506.00	10%	26.57
510	578.00	11.8%	24.19	562.00	11%	24.85	704.00	14%	25.24	585.00	12%	24.99	552.00	11.3%	25.33	507.00	10%	27.58
520	576.00	11.8%	25.21	562.00	11%	25.87	703.00	14%	26.26	584.00	12%	26.01	551.00	11.3%	26.36	508.00	10%	28.61
530	575.00	11.8%	26.26	561.00	11%	26.93	702.00	14%	27.31	583.00	12%	27.07	551.00	11.3%	27.41	509.00	10%	29.67
540	573.00	11.7%	27.33	560.00	11%	28.00	701.00	14%	28.38	582.00	12%	28.14	550.00	11.2%	28.48	510.00	10%	30.74
550	572.00	11.7%	28.42	559.00	11%	29.09	699.00	14%	29.47	582.00	12%	29.23	550.00	11.2%	29.57	511.00	10%	31.84
560	571.00	11.7%	29.54	558.00	11%	30.20	698.00	14%	30.59	581.00	12%	30.34	550.00	11.2%	30.69	512.00	10%	32.96
570	569.00	11.6%	30.68	557.00	11%	31.35	697.00	14%	31.73	580.00	12%	31.48	549.00	11.2%	31.83	513.00	10%	34.10
580	568.00	11.6%	31.94	557.00	11%	32.51	696.00	14%	32.89	579.00	12%	32.65	549.00	11.2%	32.99	513.00	10%	35.27
590	567.00	11.6%	33.02	556.00	11%	33.69	695.00	14%	34.07	578.00	12%	33.83	548.00	11.2%	34.17	514.00	11%	36.46
600	566.00	11.6%	34.23	555.00	11%	34.90	694.00	14%	35.28	577.00	12%	35.04	547.00	11.2%	35.38	514.00	11%	37.67

CANTON AAAC 336.4 KCMIL															
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50															
Propiedades físicas del conductor: Tensión de rotura (daN): 5916.13 Peso (daN/m): 0.5404															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1123.00	19.0%	0.01	905.00	15%	0.01	849.00	14%	0.01	849.00	14%	0.01	601.00	10.2%	0.01
20	1123.00	19.0%	0.02	902.00	15%	0.03	854.00	14%	0.04	850.00	14%	0.03	606.00	10.2%	0.04
30	1123.00	19.0%	0.05	899.00	15%	0.07	859.00	15%	0.09	847.00	14%	0.08	612.00	10.3%	0.10
40	1123.00	19.0%	0.10	895.00	15%	0.12	866.00	15%	0.17	847.00	14%	0.13	622.00	10.5%	0.17
50	1123.00	19.0%	0.15	893.00	15%	0.19	875.00	15%	0.26	849.00	14%	0.21	633.00	10.7%	0.27
60	1123.00	19.0%	0.22	890.00	15%	0.27	886.00	15%	0.36	850.00	14%	0.30	645.00	10.9%	0.38
70	1110.00	18.8%	0.30	878.00	15%	0.38	887.00	15%	0.49	842.00	14%	0.41	650.00	11.0%	0.51
80	1086.00	18.4%	0.40	861.00	15%	0.50	893.00	15%	0.64	830.00	14%	0.55	650.00	11.0%	0.67
90	1060.00	17.9%	0.52	842.00	14%	0.65	879.00	15%	0.81	817.00	14%	0.70	650.00	11.0%	0.84
100	1032.00	17.4%	0.65	824.00	14%	0.82	874.00	15%	1.00	804.00	14%	0.88	650.00	11.0%	1.04
110	1005.00	17.0%	0.81	806.00	14%	1.01	870.00	15%	1.21	792.00	13%	1.08	650.00	11.0%	1.26
120	978.00	16.5%	0.99	793.00	13%	1.23	866.00	15%	1.44	781.00	13%	1.31	650.00	11.0%	1.50
130	949.00	16.0%	1.20	777.00	13%	1.47	860.00	15%	1.70	770.00	13%	1.55	649.00	11.0%	1.76
140	925.00	15.6%	1.43	765.00	13%	1.73	857.00	14%	1.97	761.00	13%	1.82	649.00	11.0%	2.04
150	902.00	15.2%	1.69	754.00	13%	2.02	853.00	14%	2.27	754.00	13%	2.11	649.00	11.0%	2.34
160	879.00	14.9%	1.97	744.00	13%	2.32	849.00	14%	2.59	746.00	13%	2.42	649.00	11.0%	2.67
170	859.00	14.5%	2.27	734.00	12%	2.66	846.00	14%	2.93	740.00	13%	2.76	649.00	11.0%	3.01
180	841.00	14.2%	2.60	727.00	12%	3.01	843.00	14%	3.29	735.00	12%	3.11	649.00	11.0%	3.27
190	822.00	13.9%	2.97	719.00	12%	3.39	839.00	14%	3.67	728.00	12%	3.50	648.00	11.0%	3.76
200	808.00	13.7%	3.35	713.00	12%	3.79	836.00	14%	4.08	723.00	12%	3.90	648.00	11.0%	4.17
210	794.00	13.4%	3.75	708.00	12%	4.21	833.00	14%	4.50	719.00	12%	4.32	648.00	11.0%	4.60
220	782.00	13.2%	4.18	702.00	12%	4.66	830.00	14%	4.95	716.00	12%	4.77	648.00	11.0%	5.05
230	770.00	13.0%	4.64	698.00	12%	5.13	827.00	14%	5.42	712.00	12%	5.24	648.00	11.0%	5.52
240	761.00	12.8%	5.12	694.00	12%	5.61	825.00	14%	5.90	709.00	12%	5.73	647.00	10.9%	6.01
250	752.00	12.7%	5.62	690.00	12%	6.12	823.00	14%	6.42	706.00	12%	6.24	647.00	10.9%	6.53
260	744.00	12.6%	6.14	687.00	12%	6.66	820.00	14%	6.95	703.00	12%	6.77	647.00	10.9%	7.07
270	737.00	12.5%	6.69	683.00	12%	7.21	818.00	14%	7.51	701.00	12%	7.32	646.00	10.9%	7.63
280	730.00	12.3%	7.26	681.00	12%	7.79	817.00	14%	8.08	699.00	12%	7.90	646.00	10.9%	8.20
290	724.00	12.2%	7.86	678.00	11%	8.39	814.00	14%	8.68	696.00	12%	8.50	646.00	10.9%	8.81
300	718.00	12.1%	8.47	676.00	11%	9.01	812.00	14%	9.31	694.00	12%	9.12	645.00	10.9%	9.43
310	713.00	12.1%	9.11	674.00	11%	9.65	810.00	14%	9.95	693.00	12%	9.76	645.00	10.9%	10.07
320	709.00	12.0%	9.77	671.00	11%	10.32	809.00	14%	10.61	691.00	12%	10.43	645.00	10.9%	10.74
330	705.00	11.9%	10.46	670.00	11%	11.00	807.00	14%	11.30	689.00	12%	11.12	645.00	10.9%	11.43
340	700.00	11.8%	11.17	668.00	11%	11.71	805.00	14%	12.01	687.00	12%	11.83	644.00	10.9%	12.14
350	697.00	11.8%	11.89	666.00	11%	12.45	803.00	14%	12.74	686.00	12%	12.56	644.00	10.9%	12.88
360	693.00	11.7%	12.65	664.00	11%	13.20	802.00	14%	13.50	684.00	12%	13.32	643.00	10.9%	13.63
370	690.00	11.7%	13.42	663.00	11%	13.98	800.00	14%	14.28	683.00	12%	14.10	643.00	10.9%	14.41
380	687.00	11.6%	14.22	661.00	11%	14.78	798.00	13%	15.07	682.00	12%	14.90	643.00	10.9%	15.21
390	684.00	11.6%	15.04	660.00	11%	15.60	797.00	13%	15.90	680.00	11%	15.72	642.00	10.9%	16.04
400	682.00	11.5%	15.89	659.00	11%	16.45	796.00	13%	16.74	679.00	11%	16.56	642.00	10.9%	16.89
410	679.00	11.5%	16.75	657.00	11%	17.32	794.00	13%	17.61	678.00	11%	17.43	641.00	10.8%	17.76
420	677.00	11.4%	17.65	656.00	11%	18.21	792.00	13%	18.50	677.00	11%	18.33	641.00	10.8%	18.69
430	676.00	11.4%	18.56	655.00	11%	19.13	791.00	13%	19.42	676.00	11%	19.24	640.00	10.8%	19.57
440	672.00	11.4%	19.50	654.00	11%	20.06	790.00	13%	20.36	674.00	11%	20.18	640.00	10.8%	20.50
450	670.00	11.3%	20.46	652.00	11%	21.03	788.00	13%	21.32	673.00	11%	21.14	639.00	10.8%	21.47
460	668.00	11.3%	21.44	651.00	11%	22.01	787.00	13%	22.30	672.00	11%	22.13	639.00	10.8%	22.45
470	667.00	11.3%	22.45	650.00	11%	23.02	785.00	13%	23.31	671.00	11%	23.14	638.00	10.8%	23.46
480	665.00	11.2%	23.49	649.00	11%	24.06	784.00	13%	24.35	670.00	11%	24.17	638.00	10.8%	24.50
490	663.00	11.2%	24.55	648.00	11%	25.12	782.00	13%	25.40	669.00	11%	25.23	637.00	10.8%	25.56
500	661.00	11.2%	25.62	647.00	11%	26.20	781.00	13%	26.48	668.00	11%	26.31	636.00	10.8%	26.64
510	660.00	11.1%	26.73	646.00	11%	27.31	780.00	13%	27.59	667.00	11%	27.41	636.00	10.8%	27.75
520	658.00	11.1%	27.86	645.00	11%	28.23	778.00	13%	28.72	666.00	11%	28.55	635.00	10.7%	28.88
530	657.00	11.1%	29.02	644.00	11%	29.59	777.00	13%	29.87	665.00	11%	29.70	635.00	10.7%	30.03
540	655.00	11.1%	30.19	643.00	11%	30.77	776.00	13%	31.05	664.00	11%	30.89	634.00	10.7%	31.21
550	654.00	11.1%	31.40	642.00	11%	31.97	774.00	13%	32.26	663.00	11%	32.09	633.00	10.7%	32.42
560	652.00	11.0%	32.64	641.00	11%	33.21	773.00	13%	33.49	662.00	11%	33.32	632.00	10.7%	33.65
570	651.00	11.0%	33.89	640.00	11%	34.46	772.00	13%	34.74	661.00	11%	34.58	632.00	10.7%	34.91
580	649.00	11.0%	35.17	639.00	11%	35.75	770.00	13%	36.03	660.00	11%	35.85	631.00	10.7%	36.19
590	648.00	11.0%	36.48	638.00	11%	37.06	769.00	13%	37.33	659.00	11%	37.17	630.00	10.6%	37.50
600	647.00	10.9%	37.81	637.00	11%	38.38	768.00	13%	38.66	658.00	11%	38.49	630.00	10.6%	38.83



ANEXO B2.3: Zona 3 (Velocidad de viento máxima 100 km/h)

SPARROW ACSR 2 AWG

Clima: Templado

Altitud: 1000 msnm - 2500 msnm

Temperatura máxima (°C): 34

Temperatura media (°C): 21

Temperatura mínima (°C): 10

Temperatura coincidente (°C): 12

Velocidad del viento máxima (km/h): 100

Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:

Tensión de rotura (daN): 1267.74

Peso (daN/m): 0.1330

Condición de tensionado: (% límite de tensión de rotura)

Temperatura mínima: 23%

Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	291.00	23.0%	0.01	226.00	17.8%	0.01	215.00	17.0%	0.01	215.00	17.0%	0.01	162.00	12.8%	0.01	33.00	2.6%	0.05
20	291.00	23.0%	0.07	226.00	17.8%	0.03	219.00	17.8%	0.06	216.00	17.0%	0.04	162.00	12.8%	0.04	43.00	3.4%	0.16
30	291.00	23.0%	0.05	225.00	17.7%	0.07	223.00	17.6%	0.13	215.00	17.0%	0.08	164.00	12.9%	0.09	52.00	4.1%	0.29
40	291.00	23.0%	0.09	224.00	17.7%	0.12	229.00	18.1%	0.22	216.00	17.0%	0.14	165.00	13.0%	0.16	60.00	4.7%	0.44
50	291.00	23.0%	0.14	224.00	17.7%	0.19	235.00	18.5%	0.32	217.00	17.1%	0.22	168.00	13.3%	0.25	67.00	5.3%	0.62
60	291.00	23.0%	0.21	223.00	17.6%	0.27	242.00	19.1%	0.45	219.00	17.3%	0.32	170.00	13.4%	0.35	74.00	5.8%	0.80
70	291.00	23.0%	0.28	223.00	17.6%	0.37	248.00	19.6%	0.59	220.00	17.4%	0.43	173.00	13.6%	0.47	81.00	6.4%	1.01
80	291.00	23.0%	0.37	223.00	17.6%	0.48	255.00	20.1%	0.75	222.00	17.5%	0.56	176.00	13.9%	0.61	87.00	6.9%	1.22
90	288.00	22.7%	0.47	221.00	17.4%	0.61	259.00	20.4%	0.93	222.00	17.5%	0.70	177.00	14.0%	0.76	92.00	7.3%	1.46
100	282.00	22.2%	0.59	217.00	17.1%	0.77	262.00	20.7%	1.12	220.00	17.4%	0.87	177.00	14.0%	0.94	97.00	7.7%	1.72
110	276.00	21.8%	0.73	214.00	16.9%	0.94	264.00	20.8%	1.34	219.00	17.3%	1.06	177.00	14.0%	1.14	101.00	8.0%	1.99
120	268.00	21.2%	0.89	211.00	16.6%	1.14	267.00	21.1%	1.57	217.00	17.1%	1.27	177.00	14.0%	1.35	105.00	8.3%	2.28
130	263.00	20.7%	1.07	208.00	16.4%	1.35	269.00	21.2%	1.82	216.00	17.0%	1.49	177.00	14.0%	1.59	109.00	8.6%	2.59
140	257.00	20.3%	1.27	205.00	16.2%	1.59	271.00	21.4%	2.09	214.00	16.9%	1.74	177.00	14.0%	1.84	112.00	8.8%	2.91
150	251.00	19.8%	1.49	203.00	16.0%	1.84	272.00	21.5%	2.37	213.00	16.8%	2.00	177.00	14.0%	2.11	115.00	9.1%	3.25
160	245.00	19.3%	1.74	201.00	15.9%	2.12	274.00	21.6%	2.67	212.00	16.7%	2.29	177.00	14.0%	2.41	118.00	9.3%	3.60
170	239.00	18.9%	2.01	199.00	15.7%	2.42	275.00	21.7%	2.99	211.00	16.6%	2.59	177.00	14.0%	2.72	121.00	9.5%	3.97
180	234.00	18.5%	2.30	197.00	15.5%	2.74	276.00	21.8%	3.33	210.00	16.6%	2.91	177.00	14.0%	3.05	124.00	9.8%	4.36
190	230.00	18.1%	2.62	195.00	15.4%	3.08	277.00	21.8%	3.68	209.00	16.5%	3.26	177.00	14.0%	3.39	126.00	9.9%	4.76
200	225.00	17.7%	2.96	194.00	15.3%	3.44	277.00	21.8%	4.06	208.00	16.4%	3.62	177.00	14.0%	3.76	128.00	10.1%	5.18
210	221.00	17.4%	3.32	192.00	15.1%	3.82	278.00	21.9%	4.45	208.00	16.4%	4.00	177.00	14.0%	4.15	131.00	10.3%	5.62
220	218.00	17.2%	3.70	191.00	15.1%	4.22	279.00	22.0%	4.86	207.00	16.3%	4.41	177.00	14.0%	4.56	133.00	10.5%	6.07
230	215.00	17.0%	4.10	190.00	15.0%	4.64	279.00	22.0%	5.29	206.00	16.2%	4.83	177.00	14.0%	4.98	135.00	10.6%	6.53
240	212.00	16.7%	4.53	189.00	14.9%	5.08	279.00	22.0%	5.74	205.00	16.2%	5.27	177.00	14.0%	5.43	137.00	10.8%	7.00
250	208.00	16.5%	4.98	188.00	14.8%	5.53	280.00	22.1%	6.20	205.00	16.2%	5.73	177.00	14.0%	5.89	139.00	11.0%	7.48
260	206.00	16.2%	5.45	187.00	14.8%	6.02	280.00	22.1%	6.69	204.00	16.1%	6.21	177.00	14.0%	6.37	141.00	11.1%	8.00
270	204.00	16.1%	5.94	186.00	14.7%	6.51	280.00	22.1%	7.19	204.00	16.1%	6.71	177.00	14.0%	6.88	143.00	11.3%	8.52
280	202.00	15.9%	6.45	186.00	14.7%	7.03	280.00	22.1%	7.72	203.00	16.0%	7.23	176.00	13.9%	7.40	144.00	11.4%	9.06
290	201.00	15.9%	6.98	185.00	14.6%	7.57	280.00	22.1%	8.26	203.00	16.0%	7.77	176.00	13.9%	7.94	146.00	11.5%	9.62
300	199.00	15.7%	7.53	184.00	14.5%	8.13	280.00	22.1%	8.82	202.00	15.9%	8.33	176.00	13.9%	8.50	147.00	11.6%	10.20
310	197.00	15.5%	8.11	184.00	14.5%	8.71	280.00	22.1%	9.41	202.00	15.9%	8.91	176.00	13.9%	9.08	148.00	11.7%	10.80
320	196.00	15.5%	8.70	183.00	14.4%	9.30	280.00	22.1%	10.00	201.00	15.9%	9.50	176.00	13.9%	9.68	150.00	11.8%	11.41
330	195.00	15.4%	9.31	183.00	14.4%	9.92	280.00	22.1%	10.62	201.00	15.9%	10.12	176.00	13.9%	10.30	151.00	11.9%	12.04
340	194.00	15.3%	9.95	182.00	14.4%	10.56	279.00	22.0%	11.26	201.00	15.9%	10.76	176.00	13.9%	10.94	152.00	12.0%	12.70
350	192.00	15.1%	10.60	182.00	14.4%	11.22	279.00	22.0%	11.93	200.00	15.8%	11.42	176.00	13.9%	11.60	153.00	12.1%	13.37
360	191.00	15.1%	11.28	182.00	14.4%	11.90	279.00	22.0%	12.60	200.00	15.8%	12.09	176.00	13.9%	12.28	154.00	12.1%	14.06
370	190.00	15.0%	11.98	181.00	14.3%	12.60	279.00	22.0%	13.30	199.00	15.7%	12.80	176.00	13.9%	12.98	154.00	12.1%	14.78
380	190.00	15.0%	12.69	181.00	14.3%	13.31	279.00	22.0%	14.02	199.00	15.7%	13.51	176.00	13.9%	13.70	155.00	12.2%	15.51
390	189.00	14.9%	13.43	180.00	14.2%	14.05	278.00	21.9%	14.76	199.00	15.7%	14.25	176.00	13.9%	14.44	156.00	12.3%	16.26
400	188.00	14.8%	14.18	180.00	14.2%	14.81	278.00	21.9%	15.52	198.00	15.6%	15.01	176.00	13.8%	15.20	157.00	12.4%	17.02
410	187.00	14.8%	14.97	180.00	14.2%	15.59	278.00	21.9%	16.30	198.00	15.6%	15.79	176.00	13.8%	15.99	157.00	12.4%	17.82
420	187.00	14.8%	15.76	179.00	14.1%	16.39	278.00	21.9%	17.10	198.00	15.6%	16.58	176.00	13.8%	16.78	158.00	12.5%	18.62
430	186.00	14.7%	16.58	179.00	14.1%	17.21	277.00	21.8%	17.92	198.00	15.6%	17.40	176.00	13.8%	17.60	159.00	12.5%	19.45
440	185.00	14.6%	17.42	179.00	14.1%	18.05	277.00	21.8%	18.76	197.00	15.5%	18.25	176.00	13.8%	18.45	159.00	12.5%	20.30
450	185.00	14.6%	18.28	179.00	14.1%	18.91	277.00	21.8%	19.63	197.00	15.5%	19.11	176.00	13.8%	19.31	160.00	12.6%	21.17
460	184.00	14.5%	19.16	178.00	14.0%	19.80	276.00	21.8%	20.51	197.00	15.5%	19.99	176.00	13.8%	20.19	160.00	12.6%	22.06
470	184.00	14.5%	20.07	178.00	14.0%	20.70	276.00	21.8%	21.41	196.00	15.5%	20.80	176.00	13.8%	21.10	160.00	12.6%	22.98
480	183.00	14.4%	20.99	178.00	14.0%	21.63	276.00	21.8%	22.33	196.00	15.5%	21.82	176.00	13.8%	22.02	161.00	12.7%	23.90
490	183.00	14.4%	21.94	177.00	14.0%	22.57	275.00	21.7%	23.28	196.00	15.5%	22.77	174.00	13.7%	22.97	161.00	12.7%	24.86
500	182.00	14.4%	22.90	177.00	14.0%	23.54	275.00	21.7%	24.26	195.00	15.4%	23.73	174.00	13.7%	23.94	162.00	12.8%	25.83
510	182.00	14.4%	23.89	177.00	14.0%	24.53	274.00	21.6%	25.24	195.00	15.4%	24.72	174.00	13.7%	24.93	162.00	12.8%	26.82
520	181.00	14.3%	24.90	177.00	14.0%	25.53	274.00	21.6%	26.24	195.00	15.4%	25.73	174.00	13.7%	25.94	162.00	12.8%	27.84
530	181.00	14.3%	25.93	177.00	14.0%	26.57	274.00	21.6%	27.27	195.00	15.4%	26.76	174.00	13.7%	26.97	162.00	12.8%	28.87
540	180.00	14.2%	26.98	176.00	13.9%	27.62	273.00	21.5%	28.33	194.00	15.3%	27.82	174.00	13.7%	28.02	163.00	12.9%	29.94
550	180.00	14.2%	28.06	176.00	13.9%	28.69	273.00	21.5%	29.40	194.00	15.3%	28.89	174.00	13.7%	29.10	163.00	12.9%	31.01
560	180.00	14.2%	29.16	176.00	13.9%	29.78	272.00	21.5%	30.50	194.00	15.3%	29.99	173.00	13.6%	30.20	163.00	12.9%	32.11
570	179.00	14.1%	30.28	176.00	13.9%	30.91	272.00	21.5%	31.62	194.00	15.3%	31.11	173.00	13.6%	31.31	163.00	12.9%	33.24
580	179.00	14.1%	31.42	175.00	13.8%	32.05	272.00	21.5%	32.76	193.00	15.2%	32.25	173.00	13.6%	32.46	164.00	12.9%	34.38
590	178.00	14.0%	32.59	175.00	13.8%	33.22	271.00	21.4%	33.92	193.00	15.2%	33.41	173.00	13.6%	33.63	164.00	12.9%	35.55
600	178.0																	

RAVEN ACSR 110 AWG																		
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 100 Velocidad del viento promedio (km/h): 60																		
Propiedades físicas del conductor: Tensión de rotura (daN): 1948.32 Peso (daN/m): 0.2118 Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	438.00	22.5%	0.01	352.00	18.1%	0.01	337.00	17.3%	0.02	334.00	17.1%	0.01	252.00	12.9%	0.01	57.00	2.9%	0.05
20	438.00	22.5%	0.02	352.00	18.1%	0.03	346.00	17.8%	0.07	335.00	17.2%	0.04	254.00	13.0%	0.04	72.00	3.7%	0.15
30	438.00	22.5%	0.05	350.00	18.0%	0.07	357.00	18.3%	0.15	337.00	17.3%	0.09	256.00	13.1%	0.09	86.00	4.4%	0.28
40	438.00	22.5%	0.10	351.00	18.0%	0.12	370.00	19.0%	0.25	339.00	17.4%	0.15	260.00	13.3%	0.16	98.00	5.0%	0.43
50	438.00	22.5%	0.15	349.00	17.9%	0.19	384.00	19.7%	0.37	341.00	17.5%	0.24	263.00	13.5%	0.25	110.00	5.6%	0.60
60	438.00	22.5%	0.22	350.00	18.0%	0.27	397.00	20.4%	0.51	344.00	17.7%	0.33	268.00	13.8%	0.36	121.00	6.2%	0.79
70	438.00	22.5%	0.30	350.00	18.0%	0.37	411.00	21.1%	0.67	348.00	17.9%	0.45	272.00	14.0%	0.48	131.00	6.7%	0.99
80	431.00	22.1%	0.39	344.00	17.7%	0.49	420.00	21.6%	0.95	346.00	17.8%	0.59	272.00	14.0%	0.62	139.00	7.1%	1.22
90	423.00	21.7%	0.51	339.00	17.4%	0.63	428.00	22.0%	1.04	345.00	17.7%	0.74	272.00	14.0%	0.79	147.00	7.5%	1.46
100	413.00	21.2%	0.64	333.00	17.1%	0.80	435.00	22.3%	1.26	342.00	17.6%	0.92	272.00	14.0%	0.97	154.00	7.9%	1.73
110	405.00	20.8%	0.79	328.00	16.8%	0.98	441.00	22.6%	1.49	341.00	17.5%	1.12	272.00	14.0%	1.18	160.00	8.2%	2.00
120	396.00	20.3%	0.95	323.00	16.6%	1.18	447.00	22.9%	1.74	339.00	17.4%	1.34	272.00	14.0%	1.40	166.00	8.5%	2.30
130	387.00	19.9%	1.16	318.00	16.3%	1.41	453.00	23.3%	2.00	337.00	17.3%	1.57	272.00	14.0%	1.64	172.00	8.8%	2.61
140	378.00	19.4%	1.37	314.00	16.1%	1.65	457.00	23.5%	2.29	335.00	17.2%	1.83	272.00	14.0%	1.91	177.00	9.1%	2.94
150	370.00	19.0%	1.61	311.00	16.0%	1.92	462.00	23.7%	2.59	334.00	17.1%	2.11	272.00	14.0%	2.19	182.00	9.3%	3.28
160	362.00	18.6%	1.87	307.00	15.8%	2.21	466.00	23.9%	2.91	332.00	17.0%	2.40	272.00	14.0%	2.49	186.00	9.5%	3.64
170	354.00	18.2%	2.16	304.00	15.6%	2.52	469.00	24.1%	3.24	331.00	17.0%	2.72	272.00	14.0%	2.82	190.00	9.8%	4.03
180	346.00	17.9%	2.47	301.00	15.4%	2.85	471.00	24.3%	3.60	330.00	16.9%	3.06	272.00	14.0%	3.16	194.00	10.0%	4.42
190	342.00	17.6%	2.80	298.00	15.3%	3.21	474.00	24.3%	3.97	328.00	16.8%	3.41	272.00	14.0%	3.52	198.00	10.2%	4.83
200	336.00	17.2%	3.16	295.00	15.2%	3.58	476.00	24.4%	4.36	327.00	16.8%	3.79	272.00	14.0%	3.90	201.00	10.3%	5.26
210	331.00	17.0%	3.53	294.00	15.1%	3.97	478.00	24.5%	4.77	326.00	16.7%	4.18	272.00	14.0%	4.30	205.00	10.5%	5.71
220	326.00	16.7%	3.94	292.00	15.0%	4.39	480.00	24.6%	5.21	325.00	16.7%	4.60	272.00	14.0%	4.72	208.00	10.7%	6.18
230	322.00	16.5%	4.36	291.00	14.9%	4.82	481.00	24.7%	5.65	324.00	16.6%	5.04	272.00	14.0%	5.16	211.00	10.8%	6.66
240	318.00	16.3%	4.80	289.00	14.8%	5.28	483.00	24.8%	6.12	323.00	16.6%	5.50	272.00	14.0%	5.62	213.00	10.9%	7.16
250	314.00	16.1%	5.27	288.00	14.8%	5.76	483.00	24.8%	6.61	322.00	16.5%	5.97	271.00	13.9%	6.10	216.00	11.1%	7.67
260	311.00	16.0%	5.76	287.00	14.7%	6.25	484.00	24.8%	7.11	322.00	16.5%	6.47	271.00	13.9%	6.60	219.00	11.2%	8.19
270	308.00	15.8%	6.27	285.00	14.6%	6.77	485.00	24.9%	7.64	321.00	16.5%	6.99	271.00	13.9%	7.13	221.00	11.3%	8.74
280	305.00	15.7%	6.80	284.00	14.6%	7.31	486.00	24.9%	8.19	320.00	16.4%	7.53	271.00	13.9%	7.67	224.00	11.5%	9.29
290	303.00	15.6%	7.35	283.00	14.5%	7.87	486.00	24.9%	8.75	319.00	16.4%	8.09	271.00	13.9%	8.23	226.00	11.6%	9.88
300	301.00	15.4%	7.93	282.00	14.5%	8.45	486.00	24.9%	9.34	318.00	16.3%	8.67	271.00	13.9%	8.81	228.00	11.7%	10.47
310	299.00	15.3%	8.52	282.00	14.5%	9.05	487.00	25.0%	9.94	318.00	16.3%	9.27	271.00	13.9%	9.41	230.00	11.8%	11.09
320	297.00	15.2%	9.14	281.00	14.4%	9.67	487.00	25.0%	10.57	317.00	16.3%	9.89	271.00	13.9%	10.04	232.00	11.9%	11.73
330	295.00	15.1%	9.78	280.00	14.4%	10.31	487.00	25.0%	11.21	317.00	16.3%	10.53	270.00	13.9%	10.68	233.00	12.0%	12.38
340	294.00	15.1%	10.44	279.00	14.3%	10.97	487.00	25.0%	11.88	316.00	16.2%	11.20	270.00	13.9%	11.34	235.00	12.1%	13.06
350	292.00	15.0%	11.12	279.00	14.3%	11.66	487.00	25.0%	12.56	315.00	16.2%	11.88	270.00	13.9%	12.03	236.00	12.1%	13.76
360	291.00	14.9%	11.82	278.00	14.3%	12.36	487.00	25.0%	13.27	315.00	16.2%	12.58	270.00	13.9%	12.73	238.00	12.2%	14.47
370	290.00	14.9%	12.54	278.00	14.3%	13.08	487.00	25.0%	13.99	314.00	16.1%	13.31	270.00	13.9%	13.46	239.00	12.3%	15.21
380	288.00	14.8%	13.28	277.00	14.2%	13.83	486.00	24.9%	14.74	314.00	16.1%	14.05	270.00	13.9%	14.21	240.00	12.3%	15.97
390	287.00	14.7%	14.05	276.00	14.2%	14.60	486.00	24.9%	15.51	313.00	16.1%	14.82	270.00	13.9%	14.98	241.00	12.4%	16.75
400	286.00	14.7%	14.83	276.00	14.2%	15.38	486.00	24.9%	16.30	313.00	16.1%	15.60	269.00	13.8%	15.76	242.00	12.4%	17.54
410	285.00	14.6%	15.64	276.00	14.2%	16.19	485.00	24.9%	17.11	312.00	16.0%	16.42	269.00	13.8%	16.57	243.00	12.5%	18.36
420	284.00	14.6%	16.47	275.00	14.1%	17.02	485.00	24.9%	17.94	312.00	16.0%	17.25	269.00	13.8%	17.41	244.00	12.5%	19.20
430	283.00	14.5%	17.32	275.00	14.1%	17.87	485.00	24.9%	18.79	311.00	16.0%	18.10	269.00	13.8%	18.26	245.00	12.6%	20.06
440	283.00	14.5%	18.19	274.00	14.1%	18.75	484.00	24.8%	19.67	311.00	16.0%	18.97	269.00	13.8%	19.13	246.00	12.6%	20.94
450	282.00	14.5%	19.09	274.00	14.1%	19.64	484.00	24.8%	20.56	310.00	15.9%	19.87	268.00	13.8%	20.03	246.00	12.6%	21.84
460	281.00	14.4%	20.01	273.00	14.0%	20.56	483.00	24.8%	21.48	310.00	15.9%	20.78	268.00	13.8%	20.95	247.00	12.7%	22.77
470	280.00	14.4%	20.94	273.00	14.0%	21.50	483.00	24.8%	22.42	309.00	15.9%	21.72	268.00	13.8%	21.89	248.00	12.7%	23.72
480	279.00	14.3%	21.91	272.00	14.0%	22.46	482.00	24.7%	23.38	309.00	15.9%	22.68	268.00	13.8%	22.85	248.00	12.7%	24.68
490	278.00	14.3%	22.89	272.00	14.0%	23.45	481.00	24.7%	24.36	308.00	15.8%	23.67	268.00	13.8%	23.83	249.00	12.8%	25.67
500	278.00	14.3%	23.89	272.00	14.0%	24.45	481.00	24.7%	25.37	308.00	15.8%	24.67	267.00	13.7%	24.84	249.00	12.8%	26.68
510	277.00	14.2%	24.92	271.00	13.9%	25.48	480.00	24.6%	26.39	307.00	15.8%	25.70	267.00	13.7%	25.87	250.00	12.8%	27.71
520	277.00	14.2%	25.97	271.00	13.9%	26.53	480.00	24.6%	27.44	307.00	15.8%	26.75	267.00	13.7%	26.92	250.00	12.8%	28.77
530	276.00	14.2%	27.04	271.00	13.9%	27.60	479.00	24.6%	28.51	307.00	15.8%	27.82	267.00	13.7%	27.99	250.00	12.8%	29.84
540	275.00	14.1%	28.14	270.00	13.9%	28.70	478.00	24.5%	29.61	306.00	15.7%	28.92	267.00	13.7%	29.09	251.00	12.9%	30.95
550	275.00	14.1%	29.25	270.00	13.9%	29.81	478.00	24.5%	30.72	306.00	15.7%	30.03	266.00	13.7%	30.20	251.00	12.9%	32.06
560	274.00	14.1%	30.40	269.00	13.8%	30.96	477.00	24.5%	31.87	305.00	15.7%	31.18	266.00	13.7%	31.35	251.00	12.9%	33.21
570	274.00	14.1%	31.56	269.00	13.8%	32.12	476.00	24.4%	33.03	305.00	15.7%	32.34	266.00	13.7%	32.51	252.00	12.9%	34.38
580	273.00	14.0%	32.74	269.00	13.8%	33.30	476.00	24.4%	34.22	304.00	15.6%	33.53	266.00	13.7%	33.70	252.00	12.9%	35.57
590	273.00	14.0%	33.96	268.00	13.8%	34.52	475.00	24.4%	35.42	304.00	1							

QUAL ACSR 2/0 AWG

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2362.01
 Peso (daN/m): 0.2667

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	531.00	22.5%	0.01	428.00	18.1%	0.01	409.00	17.3%	0.02	406.00	17.2%	0.01	302.00	12.8%	0.01	56.00	2.8%	0.05
20	531.00	22.5%	0.03	427.00	18.1%	0.03	417.00	17.7%	0.07	406.00	17.2%	0.04	304.00	12.9%	0.04	85.00	3.0%	0.16
30	531.00	22.5%	0.06	427.00	18.1%	0.07	430.00	18.2%	0.14	407.00	17.2%	0.09	307.00	13.0%	0.10	103.00	4.4%	0.29
40	531.00	22.5%	0.10	425.00	18.0%	0.13	445.00	18.8%	0.24	410.00	17.4%	0.15	312.00	13.2%	0.17	119.00	5.0%	0.45
50	531.00	22.5%	0.16	424.00	18.0%	0.20	459.00	19.4%	0.36	413.00	17.5%	0.24	317.00	13.4%	0.26	134.00	5.7%	0.62
60	531.00	22.5%	0.23	425.00	18.0%	0.28	475.00	20.1%	0.49	417.00	17.7%	0.34	323.00	13.7%	0.37	148.00	6.3%	0.81
70	531.00	22.5%	0.31	425.00	18.0%	0.38	490.00	20.7%	0.65	420.00	17.9%	0.45	329.00	13.9%	0.50	161.00	6.8%	1.02
80	522.00	22.1%	0.41	418.00	17.7%	0.51	499.00	21.1%	0.82	418.00	17.7%	0.59	330.00	14.0%	0.65	171.00	7.2%	1.25
90	511.00	21.6%	0.53	410.00	17.4%	0.66	506.00	21.4%	1.02	414.00	17.5%	0.76	330.00	14.0%	0.82	181.00	7.7%	1.50
100	499.00	21.1%	0.67	403.00	17.1%	0.83	514.00	21.8%	1.23	411.00	17.4%	0.94	330.00	14.0%	1.01	189.00	8.0%	1.76
110	497.00	20.6%	0.83	396.00	16.8%	1.02	519.00	22.0%	1.46	408.00	17.3%	1.14	330.00	14.0%	1.22	197.00	8.3%	2.05
120	476.00	20.1%	1.01	390.00	16.5%	1.23	525.00	22.2%	1.71	405.00	17.1%	1.36	330.00	14.0%	1.46	205.00	8.7%	2.36
130	464.00	19.6%	1.22	384.00	16.3%	1.47	529.00	22.4%	1.98	402.00	17.0%	1.61	330.00	14.0%	1.71	211.00	8.9%	2.67
140	453.00	19.2%	1.44	379.00	16.0%	1.73	534.00	22.6%	2.27	400.00	16.9%	1.87	330.00	14.0%	1.98	215.00	9.2%	3.00
150	443.00	18.8%	1.69	374.00	15.8%	2.00	538.00	22.8%	2.57	398.00	16.8%	2.16	330.00	14.0%	2.27	224.00	9.5%	3.36
160	433.00	18.3%	1.97	370.00	15.7%	2.31	541.00	22.9%	2.90	396.00	16.8%	2.47	330.00	14.0%	2.59	229.00	9.7%	3.73
170	423.00	17.9%	2.28	366.00	15.5%	2.63	543.00	23.0%	3.25	393.00	16.6%	2.80	330.00	14.0%	2.92	234.00	9.9%	4.12
180	416.00	17.6%	2.60	363.00	15.4%	2.98	545.00	23.1%	3.61	392.00	16.6%	3.15	330.00	14.0%	3.28	239.00	10.1%	4.52
190	408.00	17.3%	2.95	360.00	15.2%	3.34	547.00	23.2%	3.99	390.00	16.5%	3.52	330.00	14.0%	3.65	244.00	10.3%	4.95
200	402.00	17.0%	3.32	358.00	15.2%	3.73	549.00	23.2%	4.39	388.00	16.4%	3.91	330.00	14.0%	4.05	248.00	10.5%	5.39
210	396.00	16.7%	3.72	355.00	15.0%	4.14	550.00	23.3%	4.82	387.00	16.4%	4.32	329.00	13.9%	4.47	252.00	10.7%	5.85
220	390.00	16.5%	4.14	353.00	14.9%	4.57	551.00	23.3%	5.26	385.00	16.3%	4.75	329.00	13.9%	4.90	255.00	10.8%	6.33
230	385.00	16.3%	4.58	351.00	14.9%	5.03	552.00	23.4%	5.72	384.00	16.3%	5.21	329.00	13.9%	5.36	259.00	11.0%	6.82
240	381.00	16.1%	5.05	349.00	14.8%	5.50	553.00	23.4%	6.20	383.00	16.2%	5.69	329.00	13.9%	5.84	262.00	11.1%	7.34
250	377.00	16.0%	5.53	348.00	14.7%	6.00	554.00	23.5%	6.70	382.00	16.2%	6.18	329.00	13.9%	6.34	265.00	11.2%	7.87
260	373.00	15.8%	6.05	346.00	14.6%	6.52	554.00	23.5%	7.23	381.00	16.1%	6.70	329.00	13.9%	6.86	268.00	11.3%	8.42
270	370.00	15.7%	6.58	345.00	14.6%	7.05	554.00	23.5%	7.77	380.00	16.1%	7.24	329.00	13.9%	7.40	271.00	11.5%	8.98
280	367.00	15.5%	7.13	343.00	14.5%	7.62	554.00	23.5%	8.34	379.00	16.0%	7.80	328.00	13.9%	7.97	274.00	11.6%	9.58
290	364.00	15.4%	7.71	342.00	14.5%	8.20	554.00	23.5%	8.92	378.00	16.0%	8.38	328.00	13.9%	8.55	277.00	11.7%	10.16
300	362.00	15.3%	8.31	341.00	14.4%	8.80	554.00	23.5%	9.52	377.00	16.0%	8.98	328.00	13.9%	9.15	279.00	11.8%	10.77
310	359.00	15.2%	8.93	340.00	14.4%	9.42	554.00	23.5%	10.15	376.00	15.9%	9.61	328.00	13.9%	9.78	281.00	11.9%	11.42
320	357.00	15.1%	9.57	339.00	14.4%	10.07	554.00	23.5%	10.80	375.00	15.9%	10.25	328.00	13.9%	10.43	283.00	12.0%	12.08
330	355.00	15.0%	10.24	339.00	14.4%	10.74	553.00	23.4%	11.47	374.00	15.8%	10.92	328.00	13.9%	11.10	285.00	12.1%	12.76
340	353.00	14.9%	10.92	338.00	14.3%	11.42	553.00	23.4%	12.16	374.00	15.8%	11.61	328.00	13.9%	11.79	287.00	12.2%	13.46
350	352.00	14.9%	11.63	337.00	14.3%	12.13	553.00	23.4%	12.87	373.00	15.8%	12.32	327.00	13.8%	12.50	289.00	12.2%	14.18
360	350.00	14.8%	12.36	336.00	14.2%	12.87	552.00	23.4%	13.60	372.00	15.7%	13.05	327.00	13.8%	13.23	290.00	12.3%	14.92
370	348.00	14.8%	13.11	336.00	14.2%	13.62	552.00	23.4%	14.36	372.00	15.7%	13.80	327.00	13.8%	13.99	292.00	12.4%	15.69
380	347.00	14.7%	13.89	335.00	14.2%	14.40	551.00	23.3%	15.14	371.00	15.7%	14.58	327.00	13.8%	14.76	293.00	12.4%	16.47
390	346.00	14.6%	14.68	334.00	14.1%	15.19	551.00	23.3%	15.93	370.00	15.7%	15.38	327.00	13.8%	15.56	294.00	12.4%	17.28
400	345.00	14.6%	15.50	334.00	14.1%	16.02	550.00	23.2%	16.75	370.00	15.7%	16.20	326.00	13.8%	16.38	295.00	12.5%	18.11
410	344.00	14.6%	16.34	333.00	14.1%	16.86	549.00	23.2%	17.59	369.00	15.6%	17.04	326.00	13.8%	17.23	296.00	12.5%	18.96
420	343.00	14.5%	17.21	333.00	14.1%	17.72	549.00	23.2%	18.46	369.00	15.6%	17.90	326.00	13.8%	18.09	297.00	12.6%	19.84
430	342.00	14.5%	18.09	332.00	14.1%	18.61	548.00	23.2%	19.35	368.00	15.6%	18.79	326.00	13.8%	18.98	298.00	12.6%	20.73
440	340.00	14.4%	19.00	331.00	14.0%	19.52	547.00	23.2%	20.26	367.00	15.5%	19.70	325.00	13.8%	19.89	299.00	12.7%	21.64
450	340.00	14.4%	19.93	331.00	14.0%	20.45	547.00	23.2%	21.19	367.00	15.5%	20.63	325.00	13.8%	20.82	300.00	12.7%	22.58
460	339.00	14.4%	20.89	330.00	14.0%	21.41	546.00	23.1%	22.14	366.00	15.5%	21.59	325.00	13.8%	21.78	301.00	12.7%	23.54
470	338.00	14.3%	21.87	330.00	14.0%	22.39	545.00	23.1%	23.12	366.00	15.5%	22.57	325.00	13.8%	22.76	301.00	12.7%	24.53
480	337.00	14.3%	22.87	329.00	13.9%	23.39	544.00	23.0%	24.12	365.00	15.5%	23.57	324.00	13.7%	23.76	302.00	12.8%	25.54
490	336.00	14.2%	23.89	329.00	13.9%	24.41	544.00	23.0%	25.14	364.00	15.4%	24.59	324.00	13.7%	24.78	303.00	12.8%	26.56
500	335.00	14.2%	24.94	328.00	13.9%	25.46	543.00	23.0%	26.19	364.00	15.4%	25.64	324.00	13.7%	25.83	303.00	12.8%	27.62
510	335.00	14.2%	26.00	328.00	13.9%	26.53	542.00	22.9%	27.26	363.00	15.4%	26.71	324.00	13.7%	26.90	304.00	12.9%	28.69
520	334.00	14.1%	27.10	328.00	13.9%	27.63	541.00	22.9%	28.35	363.00	15.4%	27.80	323.00	13.7%	28.00	304.00	12.9%	29.79
530	333.00	14.1%	28.22	327.00	13.8%	28.74	540.00	22.9%	29.47	362.00	15.3%	28.92	323.00	13.7%	29.12	304.00	12.9%	30.91
540	332.00	14.1%	29.36	327.00	13.8%	29.88	539.00	22.8%	30.61	362.00	15.3%	30.06	323.00	13.7%	30.26	305.00	12.9%	32.06
550	332.00	14.1%	30.53	326.00	13.8%	31.02	539.00	22.8%	31.78	361.00	15.3%	31.23	322.00	13.6%	31.42	305.00	12.9%	33.23
560	331.00	14.0%	31.71	326.00	13.8%	32.24	538.00	22.8%	32.96	361.00	15.3%	32.41	322.00	13.6%	32.62	305.00	12.9%	34.42
570	330.00	14.0%	32.94	325.00	13.8%	33.46	537.00	22.7%	34.18	360.00	15.2%	33.63	322.00	13.6%	33.84	305.00	12.9%	35.64
580	330.00	14.0%	34.17	325.00	13.8%	34.70	536.00	22.7%	35.42	359.00	15.2%	34.87	321.00	13.6%	34.97	306.00	13.0%	36.88
590	329.00	13.9%	35.43	324.00	13.7%	35.96	535.00	22.7%	36.68	359.00	15.2%	36.14	321.00	13.6%	36.34	306.00	13.0%	38.15
600	328.00	13.9%	36.72															

PENGUIN ACSR 4/0 AWG

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	816.00	22%	0.01	658.00	18%	0.01	625.00	17%	0.01	622.00	17%	0.01	458.00	12.3%	0.01	96.00	3%	0.06
20	816.00	22%	0.03	657.00	18%	0.03	635.00	17%	0.06	623.00	17%	0.04	462.00	12.4%	0.05	123.00	3%	0.16
30	816.00	22%	0.06	656.00	18%	0.07	650.00	18%	0.13	624.00	17%	0.09	468.00	12.6%	0.10	158.00	4%	0.30
40	816.00	22%	0.10	655.00	18%	0.13	665.00	18%	0.22	627.00	17%	0.15	476.00	12.8%	0.18	184.00	5%	0.46
50	816.00	22%	0.16	653.00	18%	0.20	682.00	18%	0.33	630.00	17%	0.23	485.00	13.1%	0.27	203.00	6%	0.64
60	816.00	22%	0.23	653.00	18%	0.29	701.00	19%	0.45	635.00	17%	0.33	495.00	13.3%	0.39	230.00	6%	0.83
70	808.00	22%	0.32	646.00	17%	0.40	714.00	19%	0.60	634.00	17%	0.45	501.00	13.5%	0.52	249.00	7%	1.05
80	780.00	21%	0.43	634.00	17%	0.54	721.00	19%	0.77	626.00	17%	0.60	501.00	13.5%	0.68	265.00	7%	1.28
90	770.00	21%	0.56	621.00	17%	0.69	727.00	20%	0.96	618.00	17%	0.77	501.00	13.5%	0.86	279.00	8%	1.54
100	750.00	20%	0.71	609.00	16%	0.87	732.00	20%	1.17	611.00	16%	0.95	500.00	13.5%	1.06	293.00	8%	1.81
110	731.00	20%	0.88	598.00	16%	1.07	736.00	20%	1.41	605.00	16%	1.17	500.00	13.5%	1.28	305.00	8%	2.10
120	712.00	19%	1.07	589.00	16%	1.30	739.00	20%	1.66	599.00	16%	1.40	501.00	13.5%	1.53	317.00	9%	2.41
130	693.00	19%	1.29	580.00	16%	1.55	742.00	20%	1.93	594.00	16%	1.65	501.00	13.5%	1.79	327.00	9%	2.74
140	676.00	18%	1.54	571.00	15%	1.82	744.00	20%	2.22	589.00	16%	1.93	501.00	13.5%	2.08	337.00	9%	3.09
150	659.00	18%	1.81	564.00	15%	2.12	746.00	20%	2.53	584.00	16%	2.23	500.00	13.5%	2.39	346.00	9%	3.45
160	645.00	17%	2.11	557.00	15%	2.44	748.00	20%	2.86	581.00	16%	2.55	500.00	13.5%	2.72	354.00	10%	3.83
170	631.00	17%	2.43	552.00	15%	2.78	749.00	20%	3.22	577.00	16%	2.90	500.00	13.5%	3.07	362.00	10%	4.23
180	619.00	17%	2.78	547.00	15%	3.15	749.00	20%	3.59	573.00	15%	3.27	500.00	13.5%	3.44	369.00	10%	4.66
190	608.00	16%	3.15	543.00	15%	3.53	750.00	20%	3.99	571.00	15%	3.66	500.00	13.5%	3.83	376.00	10%	5.09
200	598.00	16%	3.55	539.00	15%	3.94	749.00	20%	4.41	568.00	15%	4.07	499.00	13.4%	4.25	382.00	10%	5.55
210	590.00	16%	3.97	535.00	14%	4.37	750.00	20%	4.84	565.00	15%	4.50	499.00	13.4%	4.69	388.00	10%	6.03
220	582.00	16%	4.42	532.00	14%	4.83	750.00	20%	5.30	563.00	15%	4.96	499.00	13.4%	5.15	394.00	11%	6.53
230	575.00	15%	4.88	529.00	14%	5.30	749.00	20%	5.78	561.00	15%	5.43	499.00	13.4%	5.63	399.00	11%	7.04
240	569.00	15%	5.37	527.00	14%	5.80	749.00	20%	6.29	559.00	15%	5.93	499.00	13.4%	6.13	404.00	11%	7.58
250	563.00	15%	5.89	525.00	14%	6.33	748.00	20%	6.81	557.00	15%	6.46	498.00	13.4%	6.66	408.00	11%	8.14
260	558.00	15%	6.43	522.00	14%	6.87	747.00	20%	7.36	556.00	15%	7.00	498.00	13.4%	7.20	412.00	11%	8.71
270	554.00	15%	6.99	521.00	14%	7.44	746.00	20%	7.82	554.00	15%	7.57	498.00	13.4%	7.77	417.00	11%	9.30
280	549.00	15%	7.58	519.00	14%	8.02	745.00	20%	8.32	552.00	15%	8.18	498.00	13.3%	8.37	420.00	11%	9.91
290	546.00	15%	8.18	517.00	14%	8.64	745.00	20%	9.13	551.00	15%	8.77	498.00	13.4%	8.98	424.00	11%	10.53
300	542.00	15%	8.81	515.00	14%	9.27	744.00	20%	9.76	550.00	15%	9.40	497.00	13.4%	9.61	428.00	12%	11.18
310	539.00	15%	9.47	514.00	14%	9.92	743.00	20%	10.42	549.00	15%	10.06	497.00	13.4%	10.27	431.00	12%	11.85
320	536.00	14%	10.15	513.00	14%	10.61	742.00	20%	11.10	547.00	15%	10.74	497.00	13.4%	10.95	434.00	12%	12.55
330	533.00	14%	10.85	512.00	14%	11.31	741.00	20%	11.80	546.00	15%	11.44	496.00	13.4%	11.65	437.00	12%	13.26
340	531.00	14%	11.57	511.00	14%	12.03	740.00	20%	12.52	545.00	15%	12.17	496.00	13.4%	12.38	439.00	12%	14.00
350	529.00	14%	12.31	509.00	14%	12.78	739.00	20%	13.27	544.00	15%	12.91	496.00	13.4%	13.13	441.00	12%	14.75
360	526.00	14%	13.08	508.00	14%	13.55	737.00	20%	14.04	543.00	15%	13.68	496.00	13.4%	13.90	444.00	12%	15.53
370	524.00	14%	13.88	507.00	14%	14.34	736.00	20%	14.84	542.00	15%	14.48	495.00	13.3%	14.70	446.00	12%	16.34
380	522.00	14%	14.69	506.00	14%	15.16	735.00	20%	15.65	541.00	15%	15.29	495.00	13.3%	15.51	448.00	12%	17.16
390	521.00	14%	15.53	505.00	14%	16.00	734.00	20%	16.49	540.00	15%	16.13	494.00	13.3%	16.35	449.00	12%	18.01
400	519.00	14%	16.39	504.00	14%	16.86	733.00	20%	17.36	539.00	15%	17.00	494.00	13.3%	17.22	451.00	12%	18.88
410	517.00	14%	17.28	503.00	14%	17.75	732.00	20%	18.24	538.00	14%	17.88	494.00	13.3%	18.11	452.00	12%	19.78
420	516.00	14%	18.19	503.00	14%	18.66	730.00	20%	19.15	537.00	14%	18.79	493.00	13.3%	19.02	454.00	12%	20.69
430	514.00	14%	19.12	502.00	14%	19.60	729.00	20%	20.08	536.00	14%	19.73	493.00	13.3%	19.85	455.00	12%	21.63
440	513.00	14%	20.08	501.00	13%	20.55	728.00	20%	21.04	536.00	14%	20.69	493.00	13.3%	20.91	456.00	12%	22.60
450	511.00	14%	21.06	500.00	13%	21.54	727.00	20%	22.03	535.00	14%	21.67	492.00	13.2%	21.89	457.00	12%	23.58
460	510.00	14%	22.07	499.00	13%	22.54	725.00	20%	23.03	534.00	14%	22.68	492.00	13.2%	22.90	458.00	12%	24.60
470	509.00	14%	23.10	499.00	13%	23.58	724.00	19%	24.06	533.00	14%	23.71	491.00	13.2%	23.93	459.00	12%	25.63
480	508.00	14%	24.15	498.00	13%	24.63	723.00	19%	25.11	532.00	14%	24.76	491.00	13.2%	24.99	460.00	12%	26.69
490	506.00	14%	25.23	497.00	13%	25.71	722.00	19%	26.19	531.00	14%	25.84	490.00	13.2%	26.07	460.00	12%	27.78
500	505.00	14%	26.35	496.00	13%	26.82	720.00	19%	27.30	530.00	14%	26.95	490.00	13.2%	27.18	461.00	12%	28.89
510	504.00	14%	27.47	496.00	13%	27.94	719.00	19%	28.42	530.00	14%	28.07	489.00	13.2%	28.30	462.00	12%	30.02
520	503.00	14%	28.62	495.00	13%	29.10	718.00	19%	29.58	529.00	14%	29.23	489.00	13.2%	29.46	462.00	12%	31.18
530	502.00	14%	29.80	494.00	13%	30.28	717.00	19%	30.76	528.00	14%	30.41	488.00	13.1%	30.64	463.00	12%	32.36
540	501.00	13%	31.01	493.00	13%	31.49	715.00	19%	31.97	527.00	14%	31.62	488.00	13.1%	31.85	463.00	12%	33.58
550	500.00	13%	32.24	493.00	13%	32.72	714.00	19%	33.20	526.00	14%	32.85	487.00	13.1%	33.08	463.00	12%	34.80
560	499.00	13%	33.50	492.00	13%	33.97	713.00	19%	34.45	526.00	14%	34.11	487.00	13.1%	34.33	464.00	12%	36.06
570	498.00	13%	34.78	491.00	13%	35.26	711.00	19%	35.73	525.00	14%	35.39	486.00	13.1%	35.62	464.00	12%	37.34
580	497.00	13%	36.09	491.00	13%	36.56	710.00	19%	37.04	524.00	14%	36.69	486.00	13.1%	36.93	464.00	12%	38.66
590	496.00	13%	37.43	490.00	13%	37.91	709.00	19%	38.38	523.00	14%	38.04	485.00	13.1%	38.27	464.00	12%	40.00
600	495.00	13%	38.80	489.00	13%	39.27	708.00	19%	39.74	522.00	14%	39.40	485.00	13.1%	39.63	464.00	12%	41.36

WAXWING ACSR 266.8 KCMIL																		
Clima: Templado																		
Altitud: 1000 msnm - 2500 msnm																		
Temperatura máxima (°C): 33.8611052631579																		
Temperatura media (°C): 20.54																		
Temperatura mínima (°C): 10.0233157894737																		
Temperatura coincidente (°C): 11.9718421052632																		
Velocidad del viento máxima (km/h): 100																		
Velocidad del viento promedio (km/h): 60																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 3060.38																		
Peso (daN/m): 0.4224																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 33%																		
Operación diaria (EDS): 17%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1010.00	33.0%	0.01	718.00	23%	0.01	681.00	22.2%	0.01	678.00	22.2%	0.01	492.00	16.1%	0.01	84.00	2.7%	0.06
20	1010.00	33.0%	0.02	716.00	23%	0.03	690.00	22.5%	0.06	678.00	22.2%	0.04	495.00	16.2%	0.04	106.00	3.2%	0.20
30	1010.00	33.0%	0.05	716.00	23%	0.07	704.00	23.0%	0.12	679.00	22.2%	0.08	501.00	16.4%	0.09	128.00	4.2%	0.37
40	1010.00	33.0%	0.08	713.00	23%	0.12	720.00	23.5%	0.21	681.00	22.3%	0.14	507.00	16.6%	0.17	147.00	4.8%	0.58
50	1010.00	33.0%	0.13	710.00	23%	0.19	735.00	24.0%	0.32	682.00	22.3%	0.22	510.00	16.9%	0.26	165.00	5.4%	0.80
60	1010.00	33.0%	0.19	709.00	23%	0.27	756.00	24.7%	0.44	686.00	22.4%	0.31	525.00	17.2%	0.36	181.00	5.9%	1.05
70	1010.00	33.0%	0.26	708.00	23%	0.37	774.00	25.3%	0.58	690.00	22.5%	0.42	534.00	17.4%	0.48	197.00	6.4%	1.31
80	993.00	32.4%	0.34	697.00	23%	0.49	794.00	25.6%	0.75	694.00	22.4%	0.55	535.00	17.5%	0.63	213.00	7.2%	1.55
90	973.00	31.8%	0.44	683.00	22%	0.63	792.00	25.9%	0.93	677.00	22.1%	0.71	535.00	17.5%	0.80	235.00	7.8%	1.80
100	951.00	31.1%	0.56	671.00	22%	0.79	798.00	26.1%	1.13	670.00	21.9%	0.88	535.00	17.5%	0.99	257.00	8.4%	2.06
110	928.00	30.2%	0.69	659.00	22%	0.97	804.00	26.3%	1.35	663.00	21.7%	1.08	535.00	17.5%	1.20	274.00	9.0%	2.34
120	904.00	29.5%	0.84	647.00	21%	1.16	809.00	26.4%	1.59	657.00	21.5%	1.29	535.00	17.5%	1.42	289.00	9.4%	2.63
130	880.00	28.8%	1.01	637.00	21%	1.40	814.00	26.6%	1.84	651.00	21.3%	1.53	535.00	17.5%	1.67	304.00	9.9%	2.94
140	854.00	27.9%	1.21	627.00	20%	1.65	817.00	26.7%	2.12	645.00	21.1%	1.78	535.00	17.5%	1.94	315.00	10.4%	3.26
150	831.00	27.2%	1.43	615.00	20%	1.92	821.00	26.8%	2.41	640.00	20.9%	2.06	534.00	17.4%	2.22	331.00	10.8%	3.60
160	808.00	26.4%	1.67	611.00	20%	2.21	823.00	26.9%	2.72	636.00	20.8%	2.36	534.00	17.4%	2.53	342.00	11.2%	3.95
170	785.00	25.7%	1.94	604.00	20%	2.53	825.00	27.0%	3.06	632.00	20.7%	2.67	534.00	17.4%	2.86	353.00	11.5%	4.32
180	763.00	24.9%	2.24	597.00	20%	2.87	827.00	27.0%	3.41	627.00	20.5%	3.02	534.00	17.4%	3.21	363.00	11.9%	4.72
190	744.00	24.3%	2.56	592.00	19%	3.22	828.00	27.1%	3.78	624.00	20.4%	3.38	534.00	17.4%	3.57	373.00	12.2%	5.12
200	726.00	23.7%	2.91	587.00	19%	3.60	829.00	27.1%	4.17	620.00	20.3%	3.76	534.00	17.4%	3.96	381.00	12.4%	5.54
210	710.00	23.2%	3.28	583.00	19%	4.00	830.00	27.1%	4.58	617.00	20.2%	4.16	534.00	17.4%	4.37	390.00	12.7%	5.98
220	695.00	22.7%	3.68	578.00	19%	4.42	830.00	27.1%	5.01	614.00	20.1%	4.59	533.00	17.4%	4.80	397.00	13.0%	6.44
230	681.00	22.3%	4.10	574.00	19%	4.87	830.00	27.1%	5.46	612.00	20.0%	5.03	533.00	17.4%	5.24	404.00	13.2%	6.92
240	669.00	21.9%	4.55	571.00	19%	5.33	830.00	27.1%	5.93	610.00	19.9%	5.49	533.00	17.4%	5.71	411.00	13.4%	7.42
250	659.00	21.5%	5.01	569.00	19%	5.81	831.00	27.2%	6.41	607.00	19.8%	5.98	533.00	17.4%	6.20	417.00	13.6%	7.93
260	649.00	21.2%	5.51	566.00	18%	6.32	830.00	27.1%	6.93	605.00	19.8%	6.48	533.00	17.4%	6.71	422.00	13.8%	8.46
270	640.00	20.9%	6.02	563.00	18%	6.84	830.00	27.1%	7.46	604.00	19.7%	7.01	532.00	17.4%	7.24	429.00	14.0%	9.01
280	632.00	20.7%	6.55	561.00	18%	7.39	829.00	27.1%	8.00	602.00	19.7%	7.55	532.00	17.3%	7.79	433.00	14.1%	9.58
290	624.00	20.4%	7.12	559.00	18%	7.96	829.00	27.1%	8.58	600.00	19.6%	8.12	532.00	17.4%	8.36	437.00	14.3%	10.17
300	618.00	20.2%	7.70	557.00	18%	8.54	828.00	27.1%	9.17	598.00	19.5%	8.71	532.00	17.4%	8.95	442.00	14.4%	10.78
310	612.00	20.0%	8.30	555.00	18%	9.15	827.00	27.0%	9.78	597.00	19.5%	9.32	531.00	17.4%	9.56	446.00	14.6%	11.41
320	606.00	19.8%	8.93	553.00	18%	9.78	826.00	27.0%	10.41	595.00	19.4%	9.95	531.00	17.4%	10.20	449.00	14.7%	12.06
330	601.00	19.6%	9.58	552.00	18%	10.44	825.00	27.0%	11.06	594.00	19.4%	10.60	531.00	17.4%	10.85	453.00	14.8%	12.73
340	597.00	19.5%	10.24	550.00	18%	11.11	825.00	27.0%	11.73	593.00	19.4%	11.27	531.00	17.4%	11.52	456.00	14.9%	13.42
350	593.00	19.4%	10.93	549.00	18%	11.80	824.00	26.9%	12.43	592.00	19.3%	11.97	530.00	17.3%	12.22	459.00	15.0%	14.12
360	588.00	19.2%	11.65	548.00	18%	12.52	823.00	26.9%	13.15	590.00	19.3%	12.69	530.00	17.3%	12.94	462.00	15.1%	14.86
370	585.00	19.1%	12.38	546.00	18%	13.26	822.00	26.9%	13.88	589.00	19.2%	13.42	530.00	17.3%	13.67	464.00	15.2%	15.60
380	582.00	19.0%	13.13	545.00	18%	14.01	821.00	26.8%	14.64	588.00	19.2%	14.18	529.00	17.3%	14.43	467.00	15.3%	16.37
390	578.00	18.9%	13.91	544.00	18%	14.79	820.00	26.8%	15.42	587.00	19.2%	14.98	529.00	17.3%	15.21	469.00	15.3%	17.18
400	575.00	18.8%	14.71	543.00	18%	15.58	819.00	26.7%	16.22	586.00	19.1%	15.79	529.00	17.3%	16.01	471.00	15.4%	17.88
410	573.00	18.7%	15.53	542.00	18%	16.41	817.00	26.7%	17.04	585.00	19.1%	16.58	528.00	17.3%	16.84	473.00	15.5%	18.81
420	570.00	18.6%	16.38	541.00	18%	17.26	816.00	26.7%	17.89	584.00	19.1%	17.43	528.00	17.3%	17.68	475.00	15.5%	19.66
430	568.00	18.6%	17.24	540.00	18%	18.13	815.00	26.6%	18.75	583.00	19.0%	18.30	528.00	17.3%	18.55	477.00	15.6%	20.54
440	565.00	18.5%	18.13	539.00	18%	19.01	814.00	26.6%	19.64	582.00	19.0%	19.18	527.00	17.2%	19.44	479.00	15.7%	21.43
450	563.00	18.4%	19.04	538.00	18%	19.92	813.00	26.6%	20.55	581.00	19.0%	20.09	527.00	17.2%	20.35	480.00	15.7%	22.35
460	561.00	18.3%	19.97	537.00	18%	20.85	811.00	26.5%	21.48	580.00	19.0%	21.02	527.00	17.2%	21.28	481.00	15.7%	23.29
470	559.00	18.3%	20.92	536.00	18%	21.81	810.00	26.5%	22.44	579.00	18.9%	21.98	526.00	17.2%	22.24	483.00	15.8%	24.25
480	557.00	18.2%	21.90	536.00	18%	22.79	809.00	26.4%	23.41	578.00	18.9%	22.95	526.00	17.2%	23.22	484.00	15.8%	25.23
490	555.00	18.1%	22.90	535.00	17%	23.79	808.00	26.4%	24.41	577.00	18.9%	23.95	525.00	17.2%	24.22	485.00	15.8%	26.24
500	554.00	18.1%	23.92	534.00	17%	24.81	806.00	26.3%	25.43	576.00	18.8%	24.98	525.00	17.2%	25.24	486.00	15.9%	27.27
510	552.00	18.0%	24.96	533.00	17%	25.86	805.00	26.3%										

LINNET ACSR 336.4 KCML																		
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 100 Velocidad del viento promedio (km/h): 60																		
Propiedades físicas del conductor: Tensión de rotura (daN): 6271.99 Peso (daN/m): 0.6741																		
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 12%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1190.00	19.0%	0.01	987.00	15%	0.01	996.00	14.4%	0.01	901.00	14.4%	0.01	854.00	10.4%	0.01	146.00	2.3%	0.06
20	1188.00	18.9%	0.03	992.00	15%	0.04	914.00	14.6%	0.06	901.00	14.4%	0.04	860.00	10.5%	0.05	199.00	3.2%	0.17
30	1190.00	19.0%	0.06	990.00	15%	0.08	931.00	14.8%	0.12	901.00	14.4%	0.09	872.00	10.7%	0.11	246.00	3.9%	0.31
40	1188.00	18.9%	0.11	943.00	15%	0.14	948.00	15.1%	0.21	902.00	14.4%	0.16	884.00	10.9%	0.20	286.00	4.6%	0.47
50	1188.00	18.9%	0.18	940.00	15%	0.22	968.00	15.4%	0.32	906.00	14.4%	0.25	900.00	11.2%	0.30	324.00	5.2%	0.68
60	1190.00	19.0%	0.25	939.00	15%	0.32	990.00	15.8%	0.45	909.00	14.5%	0.36	916.00	11.4%	0.42	358.00	5.7%	0.85
70	1190.00	19.0%	0.35	939.00	15%	0.44	1011.00	16.1%	0.59	916.00	14.6%	0.48	933.00	11.7%	0.56	390.00	6.2%	1.06
80	1190.00	19.0%	0.45	940.00	15%	0.57	1033.00	16.5%	0.76	924.00	14.7%	0.62	950.00	12.0%	0.72	420.00	6.7%	1.29
90	1159.00	18.5%	0.59	922.00	15%	0.74	1037.00	16.5%	0.95	911.00	14.5%	0.80	952.00	12.0%	0.91	443.00	7.1%	1.54
100	1126.00	18.0%	0.75	904.00	14%	0.93	1038.00	16.5%	1.16	899.00	14.3%	1.00	951.00	12.0%	1.12	462.00	7.4%	1.82
110	1093.00	17.4%	0.93	887.00	14%	1.15	1040.00	16.6%	1.40	888.00	14.2%	1.22	952.00	12.0%	1.36	481.00	7.7%	2.12
120	1061.00	16.9%	1.14	873.00	14%	1.38	1039.00	16.6%	1.66	879.00	14.0%	1.47	951.00	12.0%	1.62	498.00	7.9%	2.44
130	1030.00	16.4%	1.38	860.00	14%	1.66	1039.00	16.6%	1.94	869.00	13.9%	1.74	951.00	12.0%	1.90	514.00	8.2%	2.77
140	1003.00	16.0%	1.65	848.00	14%	1.95	1039.00	16.6%	2.24	862.00	13.7%	2.04	951.00	12.0%	2.20	528.00	8.4%	3.13
150	978.00	15.6%	1.94	838.00	13%	2.26	1038.00	16.5%	2.57	855.00	13.6%	2.35	951.00	12.0%	2.53	542.00	8.6%	3.50
160	955.00	15.2%	2.26	828.00	13%	2.61	1037.00	16.5%	2.92	848.00	13.5%	2.70	950.00	12.0%	2.88	554.00	8.8%	3.90
170	936.00	14.9%	2.60	821.00	13%	2.97	1036.00	16.5%	3.29	843.00	13.4%	3.06	950.00	12.0%	3.25	565.00	9.0%	4.31
180	917.00	14.6%	2.96	814.00	13%	3.36	1034.00	16.5%	3.68	837.00	13.3%	3.46	950.00	12.0%	3.64	576.00	9.2%	4.75
190	900.00	14.3%	3.38	808.00	13%	3.77	1032.00	16.5%	4.10	833.00	13.3%	3.87	950.00	12.0%	4.06	585.00	9.3%	5.20
200	887.00	14.1%	3.80	802.00	13%	4.20	1031.00	16.4%	4.54	829.00	13.2%	4.30	949.00	11.9%	4.50	594.00	9.5%	5.68
210	874.00	13.9%	4.25	797.00	13%	4.66	1029.00	16.4%	5.00	826.00	13.2%	4.76	949.00	11.9%	4.96	603.00	9.6%	6.18
220	863.00	13.8%	4.73	793.00	13%	5.15	1026.00	16.4%	5.49	822.00	13.1%	5.25	949.00	11.9%	5.45	610.00	9.7%	6.70
230	853.00	13.6%	5.23	789.00	13%	5.65	1025.00	16.3%	5.99	819.00	13.1%	5.75	949.00	11.9%	5.96	617.00	9.8%	7.23
240	844.00	13.5%	5.75	786.00	13%	6.18	1023.00	16.3%	6.53	816.00	13.0%	6.28	948.00	11.9%	6.50	624.00	9.9%	7.79
250	837.00	13.3%	6.30	783.00	12%	6.74	1021.00	16.3%	7.08	814.00	13.0%	6.84	948.00	11.9%	7.05	630.00	10.0%	8.37
260	830.00	13.2%	6.87	780.00	12%	7.31	1019.00	16.2%	7.66	811.00	12.9%	7.42	947.00	11.9%	7.63	636.00	10.1%	8.98
270	823.00	13.1%	7.47	777.00	12%	7.92	1017.00	16.2%	8.26	809.00	12.9%	8.02	947.00	11.9%	8.23	641.00	10.2%	9.60
280	817.00	13.0%	8.10	774.00	12%	8.54	1015.00	16.2%	8.88	807.00	12.9%	8.65	946.00	11.9%	8.66	645.00	10.3%	10.25
290	812.00	12.9%	8.74	772.00	12%	9.19	1014.00	16.2%	9.53	805.00	12.8%	9.29	946.00	11.9%	9.51	650.00	10.4%	10.92
300	807.00	12.8%	9.41	770.00	12%	9.86	1011.00	16.1%	10.21	803.00	12.8%	9.97	946.00	11.9%	10.19	655.00	10.4%	11.62
310	802.00	12.8%	10.11	768.00	12%	10.56	1010.00	16.1%	10.90	801.00	12.8%	10.66	945.00	11.8%	10.89	659.00	10.5%	12.33
320	798.00	12.7%	10.83	766.00	12%	11.28	1008.00	16.1%	11.62	799.00	12.7%	11.39	945.00	11.9%	11.61	662.00	10.6%	13.07
330	795.00	12.7%	11.57	764.00	12%	12.03	1006.00	16.0%	12.37	796.00	12.7%	12.13	944.00	11.9%	12.35	665.00	10.6%	13.83
340	791.00	12.6%	12.34	763.00	12%	12.80	1004.00	16.0%	13.14	796.00	12.7%	12.90	944.00	11.9%	13.12	668.00	10.7%	14.61
350	788.00	12.6%	13.13	761.00	12%	13.59	1002.00	16.0%	13.93	795.00	12.7%	13.69	943.00	11.8%	13.92	671.00	10.7%	15.42
360	785.00	12.5%	13.95	760.00	12%	14.41	1000.00	15.9%	14.75	793.00	12.6%	14.51	943.00	11.8%	14.74	674.00	10.7%	16.26
370	782.00	12.5%	14.79	758.00	12%	15.26	998.00	15.9%	15.59	792.00	12.6%	15.36	942.00	11.8%	15.58	676.00	10.8%	17.11
380	779.00	12.4%	15.66	757.00	12%	16.12	997.00	15.9%	16.46	790.00	12.6%	16.23	941.00	11.8%	16.45	678.00	10.8%	17.99
390	776.00	12.4%	16.55	755.00	12%	17.02	995.00	15.9%	17.35	789.00	12.6%	17.12	941.00	11.8%	17.39	680.00	10.8%	18.90
400	774.00	12.3%	17.47	754.00	12%	17.85	993.00	15.8%	18.27	788.00	12.6%	18.04	940.00	11.8%	18.27	682.00	10.9%	19.82
410	772.00	12.3%	18.41	753.00	12%	18.87	991.00	15.8%	19.21	786.00	12.5%	18.98	940.00	11.8%	19.21	684.00	10.9%	20.78
420	769.00	12.3%	19.38	751.00	12%	19.84	989.00	15.8%	20.18	785.00	12.5%	19.95	939.00	11.8%	20.18	686.00	10.9%	21.75
430	767.00	12.2%	20.37	750.00	12%	20.84	987.00	15.7%	21.17	784.00	12.5%	20.84	938.00	11.8%	21.17	687.00	11.0%	22.75
440	765.00	12.2%	21.39	749.00	12%	21.86	986.00	15.7%	22.19	782.00	12.5%	21.96	938.00	11.8%	22.19	688.00	11.0%	23.78
450	763.00	12.2%	22.44	748.00	12%	22.90	984.00	15.7%	23.24	781.00	12.5%	23.01	937.00	11.8%	23.24	689.00	11.0%	24.83
460	761.00	12.1%	23.51	747.00	12%	23.97	982.00	15.7%	24.31	780.00	12.4%	24.08	936.00	11.7%	24.31	691.00	11.0%	25.80
470	759.00	12.1%	24.61	745.00	12%	25.08	980.00	15.6%	25.41	778.00	12.4%	25.18	935.00	11.7%	25.41	692.00	11.0%	27.01
480	757.00	12.1%	25.73	744.00	12%	26.20	978.00	15.6%	26.53	777.00	12.4%	26.30	935.00	11.7%	26.54	693.00	11.0%	28.13
490	756.00	12.1%	26.88	743.00	12%	27.35	976.00	15.6%	27.68	776.00	12.4%	27.45	934.00	11.7%	27.69	694.00	11.1%	29.28
500	754.00	12.0%	28.06	742.00	12%	28.53	974.00	15.5%	28.86	775.00	12.4%	28.63	933.00	11.7%	28.87	695.00	11.1%	30.47
510	752.00	12.0%	29.26	740.00	12%	29.74	973.00	15.5%	30.06	774.00	12.3%	29.83	932.00	11.7%	30.07	696.00	11.1%	31.67
520	750.00	12.0%	30.50	739.00	12%	30.97	971.00	15.5%	31.29	772.00	12.3%	31.07	931.00	11.7%	31.30	697.00	11.1%	32.91
530	749.00	11.9%	31.76	738.00	12%	32.23	969.00	15.4%	32.55	771.00	12.3%	32.33	931.00	11.7%	32.56	697.00	11.1%	34.17
540	747.00	11.9%	33.05	737.00	12%	33.52	967.00	15.4%	33.84	770.00	12.3%	33.62	930.00	11.6%	33.85	697.00	11.1%	35.46
550	746.00	11.9%	34.37	736.00	12%	34.83	965.00	15.4%	35.16	769.00	12.3%	34.93	929.00	11.6%	35.17	697.00	11.1%	36.78
560	744.00	11.9%	35.70	735.00	12%	36.17	963.00	15.4%	36.50	768.00	12.2%	36.27	928.00	11.6%	36.51	697.00	11.1%	38.12
570	743.00	11.8%	37.08	734.00	12%	37.54	961.00	15.3%	37.87	766.00	12.2%	37.64	927.00	11.6%	37.88	698.00	11.1%	39.50
580	741.00	11.8%	38.49	732.00	12%	38.95	960.00	15.3%	39.27	765.00	12.2%	39.05	926.00	11.6%	39.28	698.00	11.1%	40.91

AZUSA AAAC 123.3 KCMLL																								
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 100 Velocidad del viento promedio (km/h): 60																								
Propiedades físicas del conductor: Tensión de rotura (daN): 1983.91 Peso (daN/m): 0.1688																								
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 13%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final								
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha			Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	446.00	22.5%	0.00	342.00	17.2%	0.01	325.00	16.4%	0.01	324.00	16.3%	0.01	242.00	12.2%	0.01	13.00	0.7%	0.16						
20	446.00	22.5%	0.02	341.00	17.2%	0.02	328.00	16.5%	0.05	324.00	16.3%	0.03	243.00	12.2%	0.03	26.00	1.2%	0.32						
30	445.00	22.4%	0.04	341.00	17.2%	0.06	332.00	16.7%	0.11	324.00	16.3%	0.07	244.00	12.3%	0.08	38.00	1.9%	0.50						
40	446.00	22.5%	0.08	341.00	17.2%	0.10	338.00	17.0%	0.18	326.00	16.4%	0.12	247.00	12.5%	0.14	49.00	2.5%	0.68						
50	446.00	22.5%	0.12	340.00	17.1%	0.16	345.00	17.4%	0.28	327.00	16.5%	0.18	248.00	12.6%	0.21	60.00	3.0%	0.87						
60	445.00	22.4%	0.17	339.00	17.1%	0.22	351.00	17.7%	0.39	328.00	16.5%	0.27	252.00	12.7%	0.30	71.00	3.6%	1.07						
70	446.00	22.5%	0.23	339.00	17.1%	0.31	358.00	18.0%	0.52	329.00	16.6%	0.36	255.00	12.9%	0.41	81.00	4.1%	1.28						
80	445.00	22.4%	0.30	338.00	17.0%	0.40	365.00	18.4%	0.66	331.00	16.7%	0.47	258.00	13.0%	0.52	90.00	4.5%	1.50						
90	439.00	22.1%	0.39	334.00	16.8%	0.51	369.00	18.6%	0.82	328.00	16.5%	0.60	257.00	13.0%	0.66	99.00	5.0%	1.73						
100	432.00	21.8%	0.49	329.00	16.6%	0.64	372.00	18.8%	1.00	326.00	16.4%	0.74	257.00	13.0%	0.82	107.00	5.4%	1.98						
110	425.00	21.4%	0.60	325.00	16.4%	0.79	376.00	19.0%	1.19	324.00	16.3%	0.90	257.00	13.0%	0.99	114.00	5.7%	2.23						
120	418.00	21.1%	0.73	321.00	16.2%	0.95	379.00	19.1%	1.40	322.00	16.2%	1.08	257.00	13.0%	1.18	121.00	6.1%	2.50						
130	411.00	20.7%	0.87	317.00	16.0%	1.13	382.00	19.3%	1.62	320.00	16.1%	1.27	258.00	13.0%	1.39	128.00	6.5%	2.78						
140	404.00	20.4%	1.03	313.00	15.8%	1.32	384.00	19.4%	1.85	319.00	16.1%	1.48	257.00	13.0%	1.61	135.00	6.8%	3.07						
150	396.00	20.0%	1.20	309.00	15.6%	1.54	387.00	19.5%	2.11	316.00	15.9%	1.71	257.00	13.0%	1.85	141.00	7.1%	3.38						
160	388.00	19.6%	1.39	305.00	15.4%	1.77	389.00	19.6%	2.37	315.00	15.9%	1.95	258.00	13.0%	2.10	146.00	7.4%	3.70						
170	381.00	19.2%	1.60	302.00	15.2%	2.02	391.00	19.7%	2.66	311.00	15.8%	2.21	257.00	13.0%	2.37	151.00	7.6%	4.03						
180	374.00	18.8%	1.83	298.00	15.0%	2.29	392.00	19.8%	2.96	311.00	15.7%	2.49	257.00	13.0%	2.66	156.00	7.9%	4.37						
190	366.00	18.4%	2.08	296.00	14.9%	2.58	394.00	19.9%	3.27	310.00	15.6%	2.79	257.00	13.0%	2.96	161.00	8.1%	4.73						
200	359.00	18.1%	2.35	293.00	14.8%	2.88	395.00	19.9%	3.60	308.00	15.5%	3.10	257.00	13.0%	3.28	166.00	8.4%	5.10						
210	353.00	17.8%	2.64	290.00	14.6%	3.21	396.00	20.0%	3.94	307.00	15.5%	3.43	257.00	13.0%	3.62	170.00	8.6%	5.48						
220	347.00	17.5%	2.95	288.00	14.5%	3.55	397.00	20.0%	4.30	306.00	15.4%	3.78	257.00	13.0%	3.97	174.00	8.8%	5.88						
230	341.00	17.2%	3.28	286.00	14.4%	3.91	398.00	20.1%	4.68	304.00	15.3%	4.14	257.00	13.0%	4.34	178.00	9.0%	6.30						
240	335.00	16.9%	3.63	284.00	14.3%	4.29	399.00	20.1%	5.07	303.00	15.3%	4.52	257.00	13.0%	4.73	181.00	9.1%	6.73						
250	330.00	16.6%	4.00	282.00	14.2%	4.68	399.00	20.1%	5.48	302.00	15.2%	4.92	257.00	13.0%	5.14	184.00	9.3%	7.17						
260	326.00	16.4%	4.38	280.00	14.1%	5.09	400.00	20.2%	5.91	301.00	15.2%	5.33	257.00	13.0%	5.56	187.00	9.4%	7.62						
270	321.00	16.2%	4.80	279.00	14.1%	5.52	400.00	20.2%	6.35	300.00	15.1%	5.77	257.00	13.0%	5.99	190.00	9.6%	8.10						
280	317.00	16.0%	5.22	277.00	14.0%	5.97	401.00	20.2%	6.80	299.00	15.1%	6.21	257.00	13.0%	6.45	193.00	9.7%	8.58						
290	313.00	15.8%	5.67	276.00	13.9%	6.44	401.00	20.2%	7.28	298.00	15.0%	6.69	257.00	13.0%	6.92	196.00	9.9%	9.08						
300	310.00	15.6%	6.13	275.00	13.9%	6.92	401.00	20.2%	7.77	297.00	15.0%	7.17	257.00	13.0%	7.41	199.00	10.0%	9.60						
310	307.00	15.5%	6.62	274.00	13.8%	7.42	401.00	20.2%	8.28	297.00	15.0%	7.67	257.00	13.0%	7.91	200.00	10.1%	10.13						
320	304.00	15.3%	7.12	273.00	13.8%	7.93	402.00	20.3%	8.80	296.00	14.9%	8.19	256.00	12.9%	8.44	203.00	10.2%	10.67						
330	301.00	15.2%	7.65	272.00	13.7%	8.47	401.00	20.2%	9.34	295.00	14.9%	8.72	256.00	12.9%	8.98	205.00	10.3%	11.25						
340	298.00	15.0%	8.18	271.00	13.7%	9.02	402.00	20.3%	9.90	295.00	14.9%	9.27	256.00	12.9%	9.53	207.00	10.4%	11.82						
350	296.00	14.9%	8.75	270.00	13.6%	9.59	401.00	20.2%	10.47	294.00	14.8%	9.85	256.00	12.9%	10.10	209.00	10.5%	12.42						
360	294.00	14.8%	9.33	269.00	13.6%	10.18	401.00	20.2%	11.06	293.00	14.8%	10.44	256.00	12.9%	10.70	210.00	10.6%	13.03						
370	291.00	14.7%	9.92	268.00	13.5%	10.78	401.00	20.2%	11.67	293.00	14.8%	11.04	256.00	12.9%	11.30	212.00	10.7%	13.66						
380	290.00	14.6%	10.54	268.00	13.5%	11.40	401.00	20.2%	12.30	292.00	14.7%	11.66	256.00	12.9%	11.93	214.00	10.8%	14.30						
390	288.00	14.5%	11.17	267.00	13.5%	12.04	401.00	20.2%	12.94	292.00	14.7%	12.30	256.00	12.9%	12.57	215.00	10.8%	14.95						
400	286.00	14.4%	11.82	266.00	13.4%	12.70	401.00	20.2%	13.60	291.00	14.7%	12.96	256.00	12.9%	13.23	216.00	10.9%	15.63						
410	284.00	14.3%	12.49	266.00	13.4%	13.37	400.00	20.2%	14.27	290.00	14.6%	13.63	256.00	12.9%	13.91	218.00	11.0%	16.33						
420	283.00	14.3%	13.17	265.00	13.4%	14.06	400.00	20.2%	14.97	290.00	14.6%	14.32	255.00	12.9%	14.60	219.00	11.0%	17.03						
430	282.00	14.2%	13.88	265.00	13.4%	14.78	400.00	20.2%	15.68	289.00	14.6%	15.04	255.00	12.9%	15.31	220.00	11.1%	17.76						
440	280.00	14.1%	14.60	264.00	13.3%	15.50	400.00	20.2%	16.41	289.00	14.6%	15.76	255.00	12.9%	16.04	221.00	11.1%	18.50						
450	279.00	14.1%	15.35	263.00	13.3%	16.25	399.00	20.1%	17.16	289.00	14.6%	16.51	255.00	12.9%	16.79	222.00	11.2%	19.27						
460	278.00	14.0%	16.10	263.00	13.3%	17.01	399.00	20.1%	17.92	288.00	14.5%	17.27	255.00	12.9%	17.55	223.00	11.2%	20.04						
470	277.00	14.0%	16.88	262.00	13.2%	17.80	399.00	20.1%	18.70	288.00	14.5%	18.05	255.00	12.9%	18.34	224.00	11.3%	20.84						
480	276.00	13.9%	17.68	262.00	13.2%	18.59	398.00	20.1%	19.50	287.00	14.5%	18.85	255.00	12.9%	19.14	225.00	11.3%	21.65						
490	275.00	13.9%	18.49	262.00	13.2%	19.41	398.00	20.1%	20.32	287.00	14.5%	19.67	254.00	12.8%	19.96	226.00	11.4%	22.48						
500	274.00	13.8%	19.32	261.00	13.2%	20.25	398.00	20.1%	21.15	286.00	14.4%	20.50	254.00	12.8%	20.79	227.00	11.							

ANAREIM AAAC 155.4 KCML

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2397.59
 Peso (daN/m): 0.2129
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	539.00	22.5%	0.00	415.00	17.3%	0.01	395.00	16.5%	0.02	393.00	16.4%	0.01	290.00	12.1%	0.01	16.00	0.7%	0.16
20	539.00	22.5%	0.02	415.00	17.3%	0.03	403.00	16.8%	0.06	394.00	16.4%	0.03	291.00	12.1%	0.04	32.00	1.2%	0.33
30	539.00	22.5%	0.04	414.00	17.3%	0.06	414.00	17.3%	0.14	395.00	16.5%	0.08	293.00	12.2%	0.08	47.00	2.0%	0.51
40	539.00	22.5%	0.08	413.00	17.2%	0.10	428.00	17.9%	0.24	397.00	16.6%	0.14	296.00	12.3%	0.14	61.00	2.5%	0.70
50	539.00	22.5%	0.12	413.00	17.2%	0.16	442.00	18.4%	0.35	399.00	16.6%	0.21	299.00	12.5%	0.22	75.00	3.1%	0.89
60	539.00	22.5%	0.18	412.00	17.2%	0.23	457.00	19.1%	0.49	402.00	16.8%	0.30	303.00	12.6%	0.32	88.00	3.7%	1.09
70	539.00	22.5%	0.24	411.00	17.1%	0.32	471.00	19.6%	0.64	405.00	16.9%	0.40	307.00	12.8%	0.42	100.00	4.2%	1.31
80	539.00	22.5%	0.32	411.00	17.1%	0.41	486.00	20.3%	0.80	409.00	17.1%	0.52	311.00	13.0%	0.55	112.00	4.7%	1.52
90	531.00	22.1%	0.41	405.00	16.9%	0.53	495.00	20.6%	0.99	406.00	16.9%	0.66	311.00	13.0%	0.69	122.00	5.1%	1.76
100	522.00	21.8%	0.51	399.00	16.6%	0.67	504.00	21.0%	1.19	405.00	16.9%	0.81	311.00	13.0%	0.86	132.00	5.5%	2.01
110	513.00	21.4%	0.63	393.00	16.4%	0.82	512.00	21.4%	1.41	403.00	16.8%	0.99	311.00	13.0%	1.03	142.00	5.9%	2.28
120	505.00	21.0%	0.76	387.00	16.1%	0.95	520.00	21.7%	1.64	401.00	16.7%	1.17	311.00	13.0%	1.23	150.00	6.3%	2.55
130	494.00	20.6%	0.91	382.00	15.9%	1.18	527.00	22.0%	1.88	399.00	16.6%	1.38	311.00	13.0%	1.45	159.00	6.6%	2.84
140	484.00	20.2%	1.08	377.00	15.7%	1.38	534.00	22.3%	2.14	398.00	16.6%	1.60	311.00	13.0%	1.68	166.00	6.9%	3.14
150	473.00	19.7%	1.27	372.00	15.5%	1.61	540.00	22.5%	2.42	396.00	16.5%	1.84	311.00	13.0%	1.92	174.00	7.3%	3.45
160	463.00	19.3%	1.47	367.00	15.3%	1.86	546.00	22.8%	2.71	395.00	16.5%	2.10	311.00	13.0%	2.19	181.00	7.5%	3.77
170	454.00	18.9%	1.69	363.00	15.1%	2.12	551.00	23.0%	3.02	393.00	16.4%	2.38	311.00	13.0%	2.47	187.00	7.8%	4.11
180	444.00	18.5%	1.94	359.00	15.0%	2.41	555.00	23.1%	3.35	391.00	16.3%	2.67	311.00	13.0%	2.73	193.00	8.0%	4.47
190	435.00	18.1%	2.21	355.00	14.8%	2.71	559.00	23.3%	3.68	390.00	16.3%	2.98	311.00	13.0%	3.09	199.00	8.3%	4.84
200	427.00	17.8%	2.49	352.00	14.7%	3.03	563.00	23.5%	4.04	388.00	16.2%	3.31	311.00	13.0%	3.43	204.00	8.5%	5.22
210	419.00	17.5%	2.80	349.00	14.6%	3.37	567.00	23.6%	4.41	387.00	16.1%	3.66	311.00	13.0%	3.78	209.00	8.7%	5.62
220	412.00	17.2%	3.13	346.00	14.4%	3.73	570.00	23.8%	4.79	386.00	16.1%	4.02	311.00	13.0%	4.15	214.00	8.9%	6.03
230	405.00	16.9%	3.48	344.00	14.3%	4.10	573.00	23.9%	5.19	385.00	16.1%	4.40	311.00	13.0%	4.53	218.00	9.1%	6.45
240	398.00	16.6%	3.85	341.00	14.2%	4.50	575.00	24.0%	5.62	383.00	16.0%	4.81	310.00	12.9%	4.94	222.00	9.3%	6.90
250	392.00	16.3%	4.24	339.00	14.1%	4.91	577.00	24.1%	6.05	382.00	15.9%	5.22	310.00	12.9%	5.36	226.00	9.4%	7.35
260	387.00	16.1%	4.66	337.00	14.1%	5.34	579.00	24.1%	6.50	381.00	15.9%	5.66	310.00	12.9%	5.80	230.00	9.6%	7.83
270	382.00	15.9%	5.08	335.00	14.0%	5.79	581.00	24.2%	6.96	380.00	15.8%	6.11	310.00	12.9%	6.26	234.00	9.8%	8.31
280	377.00	15.7%	5.54	333.00	13.9%	6.26	583.00	24.3%	7.45	379.00	15.8%	6.58	310.00	12.9%	6.73	237.00	9.9%	8.82
290	373.00	15.6%	6.01	332.00	13.8%	6.75	584.00	24.4%	7.95	378.00	15.8%	7.07	310.00	12.9%	7.23	240.00	10.0%	9.34
300	369.00	15.4%	6.50	331.00	13.8%	7.25	585.00	24.4%	8.47	378.00	15.8%	7.58	310.00	12.9%	7.74	243.00	10.1%	9.88
310	366.00	15.2%	7.01	329.00	13.7%	7.78	586.00	24.4%	9.00	377.00	15.7%	8.10	310.00	12.9%	8.26	246.00	10.3%	10.43
320	362.00	15.1%	7.54	328.00	13.7%	8.32	587.00	24.5%	9.56	376.00	15.7%	8.65	310.00	12.9%	8.81	248.00	10.3%	11.00
330	359.00	15.0%	8.09	327.00	13.6%	8.88	588.00	24.5%	10.12	375.00	15.6%	9.20	310.00	12.9%	9.37	251.00	10.5%	11.58
340	356.00	14.8%	8.66	326.00	13.6%	9.46	589.00	24.6%	10.71	374.00	15.6%	9.79	309.00	12.9%	9.95	253.00	10.6%	12.18
350	353.00	14.7%	9.25	325.00	13.6%	10.05	590.00	24.6%	11.31	374.00	15.6%	10.38	309.00	12.9%	10.55	255.00	10.6%	12.80
360	350.00	14.6%	9.85	324.00	13.5%	10.67	590.00	24.6%	11.94	373.00	15.6%	11.00	309.00	12.9%	11.17	257.00	10.7%	13.44
370	346.00	14.5%	10.48	323.00	13.5%	11.30	590.00	24.6%	12.58	372.00	15.5%	11.63	309.00	12.9%	11.80	259.00	10.8%	14.09
380	346.00	14.4%	11.12	322.00	13.4%	11.94	591.00	24.6%	13.23	372.00	15.5%	12.27	309.00	12.9%	12.45	261.00	10.9%	14.76
390	344.00	14.3%	11.79	321.00	13.4%	12.62	591.00	24.6%	13.91	371.00	15.5%	12.95	309.00	12.9%	13.13	263.00	11.0%	15.45
400	342.00	14.3%	12.47	321.00	13.4%	13.30	591.00	24.6%	14.59	370.00	15.4%	13.63	309.00	12.9%	13.82	264.00	11.0%	16.15
410	340.00	14.2%	13.17	320.00	13.3%	14.01	591.00	24.6%	15.31	370.00	15.4%	14.34	309.00	12.9%	14.52	266.00	11.1%	16.88
420	338.00	14.1%	13.89	319.00	13.3%	14.73	591.00	24.6%	16.03	369.00	15.4%	15.06	308.00	12.8%	15.25	267.00	11.1%	17.61
430	337.00	14.1%	14.63	319.00	13.3%	15.46	591.00	24.6%	16.78	368.00	15.3%	15.80	308.00	12.8%	15.99	269.00	11.2%	18.37
440	335.00	14.0%	15.39	318.00	13.3%	16.24	591.00	24.6%	17.54	368.00	15.3%	16.57	308.00	12.8%	16.76	270.00	11.3%	19.15
450	334.00	13.9%	16.16	317.00	13.2%	17.02	591.00	24.6%	18.32	367.00	15.3%	17.35	308.00	12.8%	17.54	271.00	11.3%	19.94
460	333.00	13.9%	16.96	317.00	13.2%	17.82	591.00	24.6%	19.13	367.00	15.3%	18.14	308.00	12.8%	18.34	272.00	11.3%	20.75
470	331.00	13.8%	17.78	316.00	13.2%	18.63	591.00	24.6%	19.95	366.00	15.3%	18.96	308.00	12.8%	19.16	273.00	11.4%	21.58
480	330.00	13.8%	18.61	316.00	13.2%	19.47	590.00	24.6%	20.78	366.00	15.3%	19.80	307.00	12.8%	19.99	274.00	11.4%	22.43
490	329.00	13.7%	19.46	315.00	13.1%	20.32	590.00	24.6%	21.64	365.00	15.2%	20.65	307.00	12.8%	20.85	275.00	11.5%	23.29
500	328.00	13.7%	20.33	315.00	13.1%	21.20	590.00	24.6%	22.52	365.00	15.2%	21.52	307.00	12.8%	21.73	276.00	11.5%	24.18
510	327.00	13.6%	21.23	314.00	13.1%	22.09	589.00	24.6%	23.41	364.00	15.2%	22.42	307.00	12.8%	22.62	277.00	11.6%	25.08
520	326.00	13.6%	22.14	314.00	13.1%	23.01	589.00	24.6%	24.33	363.00	15.1%	23.33	307.00	12.8%	23.54	278.00	11.6%	25.00
530	325.00	13.6%	23.06	313.00	13.1%	23.93	589.00	24.6%	25.25	363.00	15.1%	24.26	306.00	12.8%	24.46	278.00	11.6%	26.94
540	324.00	13.5%	24.02	313.00	13.1%	24.89	588.00	24.5%	26.21	362.00	15.1%	25.21	306.00	12.8%	25.42	279.00	11.6%	27.90
550	323.00	13.5%	24.98	312.00	13.0%	25.85	588.00	24.5%	27.17	362.00	15.1%	26.18	306.00	12.8%	26.39	280.00	11.7%	28.87
560	322.00	13.4%	25.97	312.00	13.0%	26.84	587.00	24.5%	28.16	361.00	15.1%	27.17	306.00	12.8%	27.38	280.00	11.7%	29.88
570	321.00	13.4%	26.98	311.00	13.0%	27.86	587.00	24.5%	29.18	361.00	15.1%	28.18	306.00	12.8%	28.39	281.00	11.7%	30.90
580	321.00	13.4%	28.00	311.00	13.0%	28.88	586.00	24.4%	30.20	361.00	15.1%	29.20	306.00	12.7%	29.42	282.00	11.8%	31.92
590	320.00	13.3%	29.05	311.00	13.0%	29.93	585.00	24.4%	31.25	360.00	15.0%	30.26	305.00	12.7%	30.47	282.00	11.8%	32.98
600	319.00	13.3%	30.12	310.00	12.9%	31.00	585.00	24.4%	32.32									

ALLIANCE AAAC 246.9 KCMIIL

Clima: Templado

Altitud: 1000 msnm - 2500 msnm

Temperatura máxima (°C): 34

Temperatura media (°C): 21

Temperatura mínima (°C): 10

Temperatura coincidente (°C): 12

Velocidad del viento máxima (km/h): 100

Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:

Tensión de rotura (daN): 3907.68

Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)

Temperatura mínima: 22%

Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	837.00	22.0%	0.01	646.00	17%	0.01	613.00	16%	0.01	609.00	16%	0.01	447.00	11.7%	0.01	26.00	1%	0.16
20	837.00	22.0%	0.02	646.00	17%	0.03	622.00	16%	0.06	611.00	16%	0.03	448.00	11.8%	0.04	50.00	1%	0.34
30	837.00	22.0%	0.05	643.00	17%	0.06	633.00	17%	0.12	612.00	16%	0.07	453.00	11.9%	0.08	74.00	2%	0.52
40	837.00	22.0%	0.08	643.00	17%	0.11	648.00	17%	0.21	614.00	16%	0.13	457.00	12.0%	0.15	96.00	3%	0.70
50	837.00	22.0%	0.13	641.00	17%	0.16	664.00	17%	0.31	616.00	16%	0.20	463.00	12.2%	0.23	117.00	3%	0.90
60	837.00	22.0%	0.18	640.00	17%	0.24	681.00	18%	0.43	618.00	16%	0.29	469.00	12.3%	0.32	138.00	4%	1.11
70	837.00	22.0%	0.25	639.00	17%	0.32	698.00	18%	0.57	621.00	16%	0.39	475.00	12.5%	0.44	157.00	4%	1.32
80	824.00	21.6%	0.33	629.00	17%	0.43	708.00	19%	0.73	618.00	16%	0.51	475.00	12.5%	0.57	175.00	5%	1.55
90	810.00	21.3%	0.42	621.00	16%	0.55	717.00	19%	0.91	613.00	16%	0.65	475.00	12.5%	0.72	191.00	5%	1.79
100	796.00	20.9%	0.53	611.00	16%	0.69	726.00	19%	1.10	608.00	16%	0.80	475.00	12.5%	0.89	207.00	5%	2.05
110	780.00	20.5%	0.66	601.00	16%	0.85	734.00	19%	1.31	604.00	16%	0.96	475.00	12.5%	1.08	221.00	6%	2.31
120	764.00	20.1%	0.80	591.00	16%	1.03	741.00	19%	1.53	599.00	16%	1.17	475.00	12.5%	1.28	235.00	6%	2.59
130	748.00	19.6%	0.96	582.00	15%	1.23	747.00	20%	1.77	594.00	16%	1.38	475.00	12.5%	1.50	248.00	7%	2.89
140	731.00	19.2%	1.13	574.00	15%	1.45	754.00	20%	2.03	590.00	15%	1.61	475.00	12.5%	1.74	260.00	7%	3.19
150	715.00	18.8%	1.33	565.00	15%	1.68	758.00	20%	2.30	586.00	15%	1.86	475.00	12.5%	2.00	271.00	7%	3.51
160	699.00	18.4%	1.55	558.00	15%	1.94	763.00	20%	2.59	582.00	15%	2.12	475.00	12.5%	2.28	281.00	7%	3.85
170	684.00	18.0%	1.79	551.00	14%	2.22	767.00	20%	2.90	579.00	15%	2.41	475.00	12.5%	2.57	291.00	8%	4.20
180	669.00	17.6%	2.05	546.00	14%	2.51	771.00	20%	3.22	576.00	15%	2.71	475.00	12.5%	2.89	301.00	8%	4.56
190	655.00	17.2%	2.33	539.00	14%	2.83	773.00	20%	3.56	572.00	15%	3.04	475.00	12.5%	3.22	309.00	8%	4.94
200	641.00	16.8%	2.64	534.00	14%	3.17	776.00	20%	3.92	569.00	15%	3.38	475.00	12.5%	3.57	317.00	8%	5.34
210	630.00	16.5%	2.96	530.00	14%	3.52	779.00	20%	4.29	567.00	15%	3.73	474.00	12.4%	3.93	325.00	9%	5.74
220	619.00	16.3%	3.31	526.00	14%	3.90	781.00	21%	4.68	564.00	15%	4.11	474.00	12.4%	4.32	332.00	9%	6.17
230	608.00	16.0%	3.68	521.00	14%	4.29	783.00	21%	5.09	562.00	15%	4.51	474.00	12.4%	4.72	339.00	9%	6.61
240	598.00	15.7%	4.07	518.00	14%	4.71	784.00	21%	5.52	559.00	15%	4.93	474.00	12.4%	5.14	345.00	9%	7.07
250	589.00	15.5%	4.49	515.00	14%	5.13	785.00	21%	5.97	557.00	15%	5.36	474.00	12.4%	5.58	351.00	9%	7.54
260	581.00	15.3%	4.92	512.00	13%	5.59	786.00	21%	6.42	555.00	15%	5.81	474.00	12.4%	6.04	357.00	9%	8.02
270	574.00	15.1%	5.37	509.00	13%	6.06	787.00	21%	6.90	554.00	15%	6.29	474.00	12.4%	6.51	362.00	10%	8.53
280	567.00	14.9%	5.85	507.00	13%	6.55	787.00	21%	7.40	552.00	14%	6.78	473.00	12.4%	7.01	367.00	10%	9.05
290	561.00	14.7%	6.34	504.00	13%	7.06	788.00	21%	7.92	550.00	14%	7.29	473.00	12.4%	7.52	371.00	10%	9.59
300	556.00	14.6%	6.86	502.00	13%	7.58	788.00	21%	8.45	549.00	14%	7.81	473.00	12.4%	8.05	374.00	10%	10.15
310	550.00	14.4%	7.39	501.00	13%	8.13	789.00	21%	9.00	547.00	14%	8.36	473.00	12.4%	8.60	380.00	10%	10.72
320	545.00	14.3%	7.95	499.00	13%	8.69	789.00	21%	9.57	546.00	14%	8.93	473.00	12.4%	9.17	384.00	10%	11.31
330	541.00	14.2%	8.53	497.00	13%	9.28	788.00	21%	10.16	545.00	14%	9.51	473.00	12.4%	9.75	387.00	10%	11.91
340	536.00	14.1%	9.12	495.00	13%	9.88	788.00	21%	10.77	543.00	14%	10.11	472.00	12.4%	10.36	391.00	10%	12.54
350	533.00	14.0%	9.73	494.00	13%	10.50	788.00	21%	11.39	542.00	14%	10.73	472.00	12.4%	10.98	394.00	10%	13.18
360	529.00	13.9%	10.37	493.00	13%	11.14	788.00	21%	12.03	541.00	14%	11.37	472.00	12.4%	11.63	397.00	10%	13.84
370	526.00	13.8%	11.02	491.00	13%	11.80	787.00	21%	12.69	540.00	14%	12.03	472.00	12.4%	12.29	399.00	10%	14.52
380	523.00	13.7%	11.70	490.00	13%	12.48	787.00	21%	13.38	539.00	14%	12.71	471.00	12.4%	12.97	402.00	11%	15.22
390	520.00	13.7%	12.39	489.00	13%	13.17	787.00	21%	14.07	538.00	14%	13.41	471.00	12.4%	13.67	405.00	11%	15.93
400	517.00	13.6%	13.10	488.00	13%	13.89	786.00	21%	14.79	537.00	14%	14.12	471.00	12.4%	14.39	407.00	11%	16.66
410	515.00	13.5%	13.83	487.00	13%	14.63	785.00	21%	15.53	536.00	14%	14.86	471.00	12.4%	15.13	409.00	11%	17.41
420	512.00	13.4%	14.59	486.00	13%	15.38	785.00	21%	16.29	535.00	14%	15.62	471.00	12.4%	15.88	411.00	11%	18.18
430	510.00	13.4%	15.36	485.00	13%	16.15	784.00	21%	17.06	534.00	14%	16.39	470.00	12.3%	16.66	413.00	11%	18.97
440	508.00	13.3%	16.15	484.00	13%	16.95	783.00	21%	17.85	533.00	14%	17.18	470.00	12.3%	17.45	415.00	11%	19.77
450	506.00	13.3%	16.96	483.00	13%	17.77	783.00	21%	18.67	532.00	14%	18.00	470.00	12.3%	18.27	417.00	11%	20.60
460	504.00	13.2%	17.79	482.00	13%	18.60	782.00	21%	19.50	531.00	14%	18.83	469.00	12.3%	19.10	418.00	11%	21.44
470	502.00	13.2%	18.65	481.00	13%	19.45	781.00	21%	20.36	530.00	14%	19.69	469.00	12.3%	19.96	420.00	11%	22.31
480	500.00	13.1%	19.51	481.00	13%	20.32	780.00	20%	21.23	530.00	14%	20.56	469.00	12.3%	20.83	421.00	11%	23.19
490	499.00	13.1%	20.40	480.00	13%	21.21	779.00	20%	22.12	529.00	14%	21.45	469.00	12.3%	21.72	423.00	11%	24.09
500	497.00	13.1%	21.31	479.00	13%	22.13	779.00	20%	23.03	528.00	14%	22.36	468.00	12.3%	22.64	424.00	11%	25.01
510	496.00	13.0%	22.24	478.00	13%	23.06	778.00	20%	23.96	527.00	14%	23.29	468.00	12.3%	23.57	425.00	11%	25.95
520	494.00	13.0%	23.19	478.00	13%	24.01	777.00	20%	24.91	527.00	14%	24.24	468.00	12.3%	24.52	426.00	11%	26.91
530	493.00	12.9%	24.17	477.00	13%	24.99	776.00	20%	25.89	526.00	14%	25.22	467.00	12.3%	25.50	427.00	11%	27.89
540	492.00	12.9%	25.16	476.00	13%	25.97	775.00	20%	26.88	525.00	14%	26.21	467.00	12.3%	26.49	428.00	11%	28.89
550	490.00	12.9%	26.17	475.00	12%	26.99	774.00	20%	27.89	524.00	14%	27.22	467.00	12.3%	27.50	429.00	11%	29.91
560	489.00	12.8%	27.20	475.00	12%	28.02	773.00	20%	28.92	524.00	14%	28.25	466.00	12.2%	28.54	430.00	11%	30.95
570	488.00	12.8%	28.26	474.00	12%	29.08	772.00	20%	29.98	523.00	14%	29.31	466.00	12.2%	29.59	431.00	11%	32.02
580	487.00	12.8%	29.33	473.00	12%	30.16	771.00	20%	31.05	522.00	14%	30.36	466.00	12.2%	30.67	432.00	11%	33.10
590	486.00	12.8%	30.42	473.00	12%	31.25	770.00	20%	32.15	521.00	14%	31.48	465.00	12.2%	31.76	432.00	11%	34.20
600	484.00	12.7%	31.54	472.00	12%	32.36	769.00	20%	33.26	521.00	14%	32.59	465.00	12.2%	32.88	433.00	11%	35.32



ANEXO B2.4: Zona 4 (Velocidad de viento máxima 120 km/h)

SPARROW ACSR 2 AWG

Clima: Templado

Altitud: 1000 msnm - 2500 msnm

Temperatura máxima (°C): 34

Temperatura media (°C): 21

Temperatura mínima (°C): 10

Temperatura coincidente (°C): 12

Velocidad del viento máxima (km/h): 120

Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:

Tensión de rotura (daN): 1267.74

Peso (daN/m): 0.1330

Condición de tensionado: (% límite de tensión de rotura)

Temperatura mínima: 23%

Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	291.00	23.0%	0.01	226.00	17.8%	0.01	220.00	17.4%	0.03	215.00	17.0%	0.01	162.00	12.8%	0.01	33.00	2.6%	0.05
20	291.00	23.0%	0.07	226.00	17.8%	0.03	235.00	18.5%	0.11	217.00	17.1%	0.05	162.00	12.8%	0.04	43.00	3.4%	0.16
30	291.00	23.0%	0.05	225.00	17.7%	0.07	253.00	20.0%	0.22	220.00	17.4%	0.11	164.00	12.9%	0.09	52.00	4.1%	0.29
40	291.00	23.0%	0.09	224.00	17.7%	0.12	272.00	21.5%	0.36	223.00	17.6%	0.19	165.00	13.0%	0.16	60.00	4.7%	0.44
50	291.00	23.0%	0.14	224.00	17.7%	0.19	290.00	22.8%	0.52	227.00	17.8%	0.28	168.00	13.3%	0.25	67.00	5.3%	0.62
60	291.00	23.0%	0.21	223.00	17.6%	0.27	307.00	24.2%	0.70	231.00	18.2%	0.40	170.00	13.4%	0.35	74.00	5.8%	0.80
70	291.00	23.0%	0.28	223.00	17.6%	0.37	323.00	25.5%	0.89	235.00	18.5%	0.53	173.00	13.6%	0.47	81.00	6.4%	1.01
80	291.00	23.0%	0.37	223.00	17.6%	0.48	338.00	26.7%	1.10	240.00	18.8%	0.67	176.00	13.9%	0.61	87.00	6.9%	1.22
90	288.00	22.7%	0.47	221.00	17.4%	0.61	351.00	27.7%	1.33	243.00	19.2%	0.84	177.00	14.0%	0.76	92.00	7.3%	1.46
100	282.00	22.2%	0.59	217.00	17.1%	0.77	362.00	28.6%	1.58	244.00	19.2%	1.02	177.00	14.0%	0.94	97.00	7.7%	1.72
110	276.00	21.8%	0.73	214.00	16.9%	0.94	373.00	29.4%	1.84	245.00	19.2%	1.23	177.00	14.0%	1.14	101.00	8.0%	1.99
120	268.00	21.2%	0.89	211.00	16.6%	1.14	382.00	30.1%	2.12	246.00	19.4%	1.45	177.00	14.0%	1.35	105.00	8.3%	2.28
130	263.00	20.7%	1.07	208.00	16.4%	1.35	391.00	30.8%	2.41	247.00	19.5%	1.69	177.00	14.0%	1.59	109.00	8.6%	2.59
140	257.00	20.3%	1.27	205.00	16.2%	1.59	399.00	31.5%	2.72	247.00	19.5%	1.95	177.00	14.0%	1.84	112.00	8.8%	2.91
150	251.00	19.8%	1.49	203.00	16.0%	1.84	407.00	32.1%	3.05	247.00	19.5%	2.22	177.00	14.0%	2.11	115.00	9.1%	3.25
160	245.00	19.3%	1.74	201.00	15.9%	2.12	414.00	32.7%	3.39	248.00	19.6%	2.52	177.00	14.0%	2.41	118.00	9.3%	3.60
170	239.00	18.9%	2.01	199.00	15.7%	2.42	421.00	33.2%	3.75	248.00	19.6%	2.83	177.00	14.0%	2.72	121.00	9.5%	3.97
180	234.00	18.5%	2.30	197.00	15.5%	2.74	426.00	33.6%	4.12	248.00	19.6%	3.16	177.00	14.0%	3.05	124.00	9.8%	4.36
190	230.00	18.1%	2.62	195.00	15.4%	3.08	432.00	34.1%	4.51	248.00	19.6%	3.51	177.00	14.0%	3.39	126.00	9.9%	4.76
200	225.00	17.7%	2.96	194.00	15.3%	3.44	437.00	34.5%	4.92	248.00	19.6%	3.88	177.00	14.0%	3.76	128.00	10.1%	5.18
210	221.00	17.4%	3.32	192.00	15.1%	3.82	442.00	34.9%	5.34	248.00	19.6%	4.27	177.00	14.0%	4.15	131.00	10.3%	5.62
220	218.00	17.2%	3.70	191.00	15.1%	4.22	446.00	35.3%	5.78	248.00	19.6%	4.67	177.00	14.0%	4.56	133.00	10.5%	6.07
230	215.00	17.0%	4.10	190.00	15.0%	4.64	450.00	35.5%	6.24	248.00	19.6%	5.10	177.00	14.0%	4.98	135.00	10.6%	6.53
240	212.00	16.7%	4.53	189.00	14.9%	5.08	453.00	35.7%	6.72	248.00	19.6%	5.54	177.00	14.0%	5.43	137.00	10.8%	7.00
250	208.00	16.5%	4.98	188.00	14.8%	5.53	457.00	36.0%	7.21	248.00	19.6%	6.01	177.00	14.0%	5.89	139.00	11.0%	7.48
260	206.00	16.2%	5.45	187.00	14.8%	6.02	460.00	36.3%	7.72	247.00	19.5%	6.49	177.00	14.0%	6.37	141.00	11.1%	8.00
270	204.00	16.1%	5.94	186.00	14.7%	6.51	463.00	36.5%	8.24	247.00	19.5%	6.99	177.00	14.0%	6.88	143.00	11.3%	8.52
280	202.00	15.9%	6.45	186.00	14.7%	7.03	465.00	36.7%	8.78	247.00	19.5%	7.51	176.00	13.9%	7.40	144.00	11.4%	9.06
290	201.00	15.9%	6.98	185.00	14.6%	7.57	467.00	36.8%	9.35	247.00	19.5%	8.05	176.00	13.9%	7.94	146.00	11.5%	9.62
300	199.00	15.7%	7.53	184.00	14.5%	8.13	470.00	37.1%	9.93	246.00	19.4%	8.61	176.00	13.9%	8.50	147.00	11.6%	10.20
310	197.00	15.5%	8.11	184.00	14.5%	8.71	471.00	37.2%	10.53	246.00	19.4%	9.19	176.00	13.9%	9.08	148.00	11.7%	10.80
320	196.00	15.5%	8.70	183.00	14.4%	9.30	473.00	37.3%	11.15	246.00	19.4%	9.79	176.00	13.9%	9.68	150.00	11.8%	11.41
330	195.00	15.4%	9.31	183.00	14.4%	9.92	475.00	37.5%	11.78	246.00	19.4%	10.41	176.00	13.9%	10.30	151.00	11.9%	12.04
340	194.00	15.3%	9.95	182.00	14.4%	10.56	476.00	37.5%	12.44	245.00	19.3%	11.05	176.00	13.9%	10.94	152.00	12.0%	12.70
350	192.00	15.1%	10.60	182.00	14.4%	11.22	478.00	37.7%	13.11	245.00	19.3%	11.71	176.00	13.9%	11.60	153.00	12.1%	13.37
360	191.00	15.1%	11.28	182.00	14.4%	11.90	479.00	37.8%	13.80	245.00	19.3%	12.38	176.00	13.9%	12.28	154.00	12.1%	14.06
370	190.00	15.0%	11.98	181.00	14.3%	12.60	480.00	37.9%	14.52	244.00	19.2%	13.08	176.00	13.9%	12.98	154.00	12.1%	14.78
380	190.00	15.0%	12.69	181.00	14.3%	13.31	481.00	37.9%	15.25	244.00	19.2%	13.80	176.00	13.9%	13.70	155.00	12.2%	15.51
390	189.00	14.9%	13.43	180.00	14.2%	14.05	482.00	38.0%	15.99	244.00	19.2%	14.54	176.00	13.9%	14.44	156.00	12.3%	16.26
400	188.00	14.8%	14.18	180.00	14.2%	14.81	482.00	38.0%	16.77	243.00	19.2%	15.30	176.00	13.8%	15.20	157.00	12.4%	17.02
410	187.00	14.8%	14.97	180.00	14.2%	15.59	483.00	38.1%	17.56	243.00	19.2%	16.08	176.00	13.8%	15.99	157.00	12.4%	17.82
420	187.00	14.8%	15.76	179.00	14.1%	16.39	484.00	38.2%	18.36	243.00	19.2%	16.88	176.00	13.8%	16.78	158.00	12.5%	18.62
430	186.00	14.7%	16.58	179.00	14.1%	17.21	484.00	38.2%	19.19	242.00	19.1%	17.70	176.00	13.8%	17.60	159.00	12.5%	19.45
440	185.00	14.6%	17.42	179.00	14.1%	18.05	485.00	38.3%	20.04	242.00	19.1%	18.54	176.00	13.8%	18.45	159.00	12.5%	20.30
450	185.00	14.6%	18.28	179.00	14.1%	18.91	485.00	38.3%	20.91	242.00	19.1%	19.40	176.00	13.8%	19.31	160.00	12.6%	21.17
460	184.00	14.5%	19.16	178.00	14.0%	19.80	485.00	38.3%	21.79	241.00	19.0%	20.28	176.00	13.8%	20.19	160.00	12.6%	22.06
470	184.00	14.5%	20.07	178.00	14.0%	20.70	485.00	38.3%	22.71	241.00	19.0%	21.19	176.00	13.8%	21.10	160.00	12.6%	22.98
480	183.00	14.4%	20.99	178.00	14.0%	21.63	486.00	38.3%	23.63	241.00	19.0%	22.11	176.00	13.8%	22.02	161.00	12.7%	23.90
490	183.00	14.4%	21.94	177.00	14.0%	22.57	486.00	38.3%	24.58	240.00	18.9%	23.05	174.00	13.7%	22.97	161.00	12.7%	24.86
500	182.00	14.4%	22.90	177.00	14.0%	23.54	486.00	38.3%	25.56	240.00	18.9%	24.02	174.00	13.7%	23.94	162.00	12.8%	25.83
510	182.00	14.4%	23.89	177.00	14.0%	24.53	486.00	38.3%	26.55	240.00	18.9%	25.01	174.00	13.7%	24.93	162.00	12.8%	26.82
520	181.00	14.3%	24.90	177.00	14.0%	25.53	486.00	38.3%	27.56	239.00	18.9%	26.02	174.00	13.7%	25.94	162.00	12.8%	27.84
530	181.00	14.3%	25.93	177.00	14.0%	26.57	486.00	38.3%	28.59	239.00	18.9%	27.05	174.00	13.7%	26.97	162.00	12.8%	28.87
540	180.00	14.2%	26.98	176.00	13.9%	27.62	485.00	38.3%	29.65	239.00	18.9%	28.10	174.00	13.7%	28.02	163.00	12.9%	29.94
550	180.00	14.2%	28.06	176.00	13.9%	28.69	485.00	38.3%	30.73	238.00	18.8%	29.17	174.00	13.7%	29.10	163.00	12.9%	31.01
560	180.00	14.2%	29.16	176.00	13.9%	29.79	485.00	38.3%	31.83	238.00	18.8%	30.28	173.00	13.6%	30.20	163.00	12.9%	32.11
570	179.00	14.1%	30.28	176.00	13.9%	30.91	485.00	38.3%	32.95	237.00	18.7%	31.39	173.00	13.6%	31.31	163.00	12.9%	33.24
580	179.00	14.1%	31.42	175.00	13.8%	32.05	485.00	38.3%	34.09	237.00	18.7%	32.53	173.00	13.6%	32.46	164.00	12.9%	34.38
590	178.00	14.0%																

RAVEN ACSR 110 AWG																		
Clima: Templado																		
Altitud: 1000 msnm - 2500 msnm																		
Temperatura máxima (°C): 34																		
Temperatura media (°C): 21																		
Temperatura mínima (°C): 10																		
Temperatura coincidente (°C): 12																		
Velocidad del viento máxima (km/h): 120																		
Velocidad del viento promedio (km/h): 70																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1948.32																		
Peso (daN/m): 0.2118																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 22.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	438.00	22.5%	0.01	352.00	18.1%	0.01	340.00	17.5%	0.02	335.00	17.2%	0.01	252.00	12.9%	0.01	57.00	2.9%	0.05
20	438.00	22.5%	0.02	352.00	18.1%	0.03	357.00	18.3%	0.09	337.00	17.5%	0.04	254.00	13.0%	0.04	72.00	3.7%	0.15
30	438.00	22.5%	0.05	350.00	18.0%	0.07	377.00	19.4%	0.19	340.00	17.5%	0.10	256.00	13.1%	0.09	86.00	4.4%	0.28
40	438.00	22.5%	0.10	351.00	18.0%	0.12	399.00	20.5%	0.31	343.00	17.6%	0.17	260.00	13.3%	0.16	98.00	5.0%	0.43
50	438.00	22.5%	0.15	349.00	17.9%	0.19	421.00	21.6%	0.46	348.00	17.9%	0.26	263.00	13.5%	0.25	110.00	5.6%	0.60
60	438.00	22.5%	0.22	350.00	18.0%	0.27	442.00	22.7%	0.62	353.00	18.1%	0.37	268.00	13.8%	0.36	121.00	6.2%	0.79
70	438.00	22.5%	0.30	350.00	18.0%	0.37	462.00	23.7%	0.80	358.00	18.4%	0.49	272.00	14.0%	0.48	131.00	6.7%	0.99
80	431.00	22.1%	0.39	344.00	17.7%	0.49	478.00	24.5%	1.00	358.00	18.4%	0.64	272.00	14.0%	0.62	139.00	7.1%	1.22
90	423.00	21.7%	0.51	339.00	17.4%	0.63	492.00	25.3%	1.22	358.00	18.4%	0.80	272.00	14.0%	0.79	147.00	7.5%	1.46
100	413.00	21.2%	0.64	333.00	17.1%	0.80	505.00	25.9%	1.46	358.00	18.4%	0.99	272.00	14.0%	0.97	154.00	7.9%	1.73
110	405.00	20.8%	0.79	328.00	16.8%	0.98	517.00	26.5%	1.71	358.00	18.4%	1.19	272.00	14.0%	1.18	160.00	8.2%	2.00
120	396.00	20.3%	0.96	323.00	16.6%	1.18	526.00	27.1%	1.98	358.00	18.4%	1.41	272.00	14.0%	1.40	166.00	8.5%	2.30
130	387.00	19.9%	1.16	318.00	16.3%	1.41	538.00	27.6%	2.27	357.00	18.3%	1.66	272.00	14.0%	1.64	172.00	8.8%	2.61
140	378.00	19.4%	1.37	314.00	16.1%	1.65	547.00	28.1%	2.57	357.00	18.3%	1.92	272.00	14.0%	1.91	177.00	9.1%	2.94
150	370.00	19.0%	1.61	311.00	16.0%	1.92	555.00	28.5%	2.89	356.00	18.3%	2.20	272.00	14.0%	2.19	182.00	9.3%	3.28
160	362.00	18.6%	1.87	307.00	15.8%	2.21	563.00	28.9%	3.23	356.00	18.3%	2.50	272.00	14.0%	2.49	186.00	9.5%	3.64
170	354.00	18.2%	2.16	304.00	15.6%	2.52	569.00	29.2%	3.58	355.00	18.2%	2.82	272.00	14.0%	2.82	190.00	9.8%	4.03
180	346.00	17.9%	2.47	301.00	15.4%	2.85	576.00	29.6%	3.95	354.00	18.2%	3.16	272.00	14.0%	3.16	194.00	10.0%	4.42
190	342.00	17.6%	2.80	298.00	15.3%	3.21	581.00	29.8%	4.34	354.00	18.2%	3.52	272.00	14.0%	3.52	198.00	10.2%	4.83
200	336.00	17.2%	3.16	295.00	15.2%	3.58	586.00	30.1%	4.75	353.00	18.1%	3.90	272.00	14.0%	3.90	201.00	10.3%	5.26
210	331.00	17.0%	3.53	294.00	15.1%	3.97	591.00	30.3%	5.17	352.00	18.1%	4.29	272.00	14.0%	4.30	205.00	10.5%	5.71
220	326.00	16.7%	3.94	292.00	15.0%	4.39	595.00	30.5%	5.62	352.00	18.1%	4.71	272.00	14.0%	4.72	208.00	10.7%	6.18
230	322.00	16.5%	4.36	291.00	14.9%	4.82	599.00	30.7%	6.08	351.00	18.0%	5.15	272.00	14.0%	5.16	211.00	10.8%	6.66
240	318.00	16.3%	4.80	289.00	14.8%	5.28	602.00	30.9%	6.55	351.00	18.0%	5.61	272.00	14.0%	5.62	213.00	10.9%	7.16
250	314.00	16.1%	5.27	288.00	14.8%	5.76	605.00	31.1%	7.05	350.00	18.0%	6.09	271.00	13.9%	6.10	216.00	11.1%	7.67
260	311.00	16.0%	5.76	287.00	14.7%	6.25	608.00	31.2%	7.57	349.00	17.9%	6.59	271.00	13.9%	6.60	219.00	11.2%	8.19
270	308.00	15.8%	6.27	285.00	14.6%	6.77	610.00	31.3%	8.10	348.00	17.9%	7.11	271.00	13.9%	7.13	221.00	11.3%	8.74
280	306.00	15.7%	6.80	284.00	14.6%	7.31	613.00	31.5%	8.66	348.00	17.9%	7.64	271.00	13.9%	7.67	224.00	11.5%	9.29
290	303.00	15.6%	7.35	283.00	14.5%	7.87	614.00	31.5%	9.23	347.00	17.8%	8.21	271.00	13.9%	8.23	226.00	11.6%	9.88
300	301.00	15.4%	7.93	282.00	14.5%	8.45	616.00	31.6%	9.82	347.00	17.8%	8.79	271.00	13.9%	8.81	228.00	11.7%	10.47
310	299.00	15.3%	8.52	282.00	14.5%	9.05	618.00	31.7%	10.43	346.00	17.8%	9.39	271.00	13.9%	9.41	230.00	11.8%	11.09
320	297.00	15.2%	9.14	281.00	14.4%	9.67	619.00	31.8%	11.07	346.00	17.8%	10.01	271.00	13.9%	10.04	232.00	11.9%	11.73
330	295.00	15.1%	9.78	280.00	14.4%	10.31	620.00	31.8%	11.72	345.00	17.7%	10.65	270.00	13.9%	10.68	233.00	12.0%	12.38
340	294.00	15.1%	10.44	279.00	14.3%	10.97	621.00	31.9%	12.39	344.00	17.7%	11.31	270.00	13.9%	11.34	235.00	12.1%	13.06
350	292.00	15.0%	11.12	279.00	14.3%	11.66	622.00	31.9%	13.08	344.00	17.7%	12.00	270.00	13.9%	12.03	236.00	12.1%	13.76
360	291.00	14.9%	11.82	278.00	14.3%	12.36	623.00	32.0%	13.79	343.00	17.6%	12.70	270.00	13.9%	12.73	238.00	12.2%	14.47
370	290.00	14.9%	12.54	278.00	14.3%	13.08	624.00	32.0%	14.52	343.00	17.6%	13.42	270.00	13.9%	13.46	239.00	12.3%	15.21
380	288.00	14.8%	13.28	277.00	14.2%	13.83	624.00	32.0%	15.27	342.00	17.6%	14.17	270.00	13.9%	14.21	240.00	12.3%	15.97
390	287.00	14.7%	14.05	276.00	14.2%	14.60	624.00	32.0%	16.05	341.00	17.5%	14.94	270.00	13.9%	14.98	241.00	12.4%	16.75
400	286.00	14.7%	14.83	276.00	14.2%	15.38	624.00	32.0%	16.84	341.00	17.5%	15.72	269.00	13.8%	15.76	242.00	12.4%	17.54
410	285.00	14.6%	15.64	276.00	14.2%	16.19	625.00	32.1%	17.65	340.00	17.5%	16.53	269.00	13.8%	16.57	243.00	12.5%	18.36
420	284.00	14.6%	16.47	275.00	14.1%	17.02	625.00	32.1%	18.49	340.00	17.5%	17.36	269.00	13.8%	17.41	244.00	12.5%	19.20
430	283.00	14.5%	17.32	275.00	14.1%	17.87	625.00	32.1%	19.34	339.00	17.4%	18.21	268.00	13.8%	18.26	245.00	12.6%	20.06
440	283.00	14.5%	18.19	274.00	14.1%	18.75	625.00	32.1%	20.22	339.00	17.4%	19.08	268.00	13.8%	19.13	246.00	12.6%	20.94
450	282.00	14.5%	19.09	274.00	14.1%	19.64	625.00	32.1%	21.12	338.00	17.3%	19.98	268.00	13.8%	20.03	246.00	12.6%	21.84
460	281.00	14.4%	20.01	273.00	14.0%	20.56	624.00	32.0%	22.04	338.00	17.3%	20.90	268.00	13.8%	20.95	247.00	12.7%	22.77
470	280.00	14.4%	20.94	273.00	14.0%	21.50	624.00	32.0%	22.98	337.00	17.3%	21.84	268.00	13.8%	21.89	248.00	12.7%	23.72
480	279.00	14.3%	21.91	272.00	14.0%	22.46	624.00	32.0%	23.94	337.00	17.3%	22.80	268.00	13.8%	22.85	248.00	12.7%	24.68
490	279.00	14.3%	22.89	272.00	14.0%	23.45	623.00	32.0%	24.93	336.00	17.2%	23.78	268.00	13.8%	23.83	249.00	12.8%	25.67
500	278.00	14.3%	23.89	272.00	14.0%	24.45	623.00	32.0%	25.93	336.00	17.2%	24.78	267.00	13.7%	24.84	249.00	12.8%	26.68
510	277.00	14.2%	24.92	271.00	13.9%	25.48	623.00	32.0%	26.96	335.00	17.2%	25.81	267.00	13.7%	25.87	250.00		

QUAL ACSR 2/0 AWG

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70
 Propiedades físicas del conductor:
 Tensión de rotura (daN): 2362.01
 Peso (daN/m): 0.2667
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	531.00	22.5%	0.01	428.00	18.1%	0.01	411.00	17.4%	0.02	406.00	17.2%	0.01	302.00	12.8%	0.01	56.00	2.8%	0.05
20	531.00	22.5%	0.03	427.00	18.1%	0.03	430.00	18.2%	0.09	408.00	17.5%	0.04	304.00	12.9%	0.04	85.00	3.0%	0.16
30	531.00	22.5%	0.06	427.00	18.1%	0.07	452.00	19.1%	0.18	411.00	17.4%	0.10	307.00	13.0%	0.10	103.00	4.4%	0.29
40	531.00	22.5%	0.10	425.00	18.0%	0.13	477.00	20.2%	0.30	415.00	17.6%	0.17	312.00	13.2%	0.17	119.00	5.0%	0.45
50	531.00	22.5%	0.16	424.00	18.0%	0.20	502.00	21.8%	0.44	420.00	17.8%	0.26	317.00	13.4%	0.26	134.00	5.7%	0.62
60	531.00	22.5%	0.23	425.00	18.0%	0.28	525.00	22.2%	0.60	425.00	18.0%	0.37	323.00	13.7%	0.37	148.00	6.3%	0.81
70	531.00	22.5%	0.31	425.00	18.0%	0.38	548.00	23.2%	0.77	431.00	18.2%	0.49	329.00	13.9%	0.50	161.00	6.8%	1.02
80	522.00	22.1%	0.41	418.00	17.7%	0.51	565.00	23.9%	0.97	431.00	18.2%	0.64	330.00	14.0%	0.65	171.00	7.2%	1.25
90	511.00	21.6%	0.53	410.00	17.4%	0.66	580.00	24.6%	1.19	429.00	18.2%	0.80	330.00	14.0%	0.82	181.00	7.7%	1.50
100	499.00	21.1%	0.67	403.00	17.1%	0.83	593.00	25.1%	1.42	428.00	18.1%	0.99	330.00	14.0%	1.01	189.00	8.0%	1.76
110	487.00	20.6%	0.83	396.00	16.8%	1.02	606.00	25.7%	1.67	427.00	18.1%	1.20	330.00	14.0%	1.22	197.00	8.3%	2.05
120	475.00	20.1%	1.01	390.00	16.5%	1.23	616.00	26.1%	1.94	426.00	18.0%	1.43	330.00	14.0%	1.46	205.00	8.7%	2.36
130	464.00	19.6%	1.22	384.00	16.3%	1.47	626.00	26.5%	2.22	424.00	18.0%	1.68	330.00	14.0%	1.71	211.00	8.9%	2.67
140	453.00	19.2%	1.44	379.00	16.0%	1.73	635.00	26.9%	2.53	422.00	17.9%	1.95	330.00	14.0%	1.98	215.00	9.2%	3.00
150	443.00	18.8%	1.69	374.00	15.8%	2.00	644.00	27.3%	2.85	421.00	17.8%	2.23	330.00	14.0%	2.27	224.00	9.5%	3.36
160	433.00	18.3%	1.97	370.00	15.7%	2.31	651.00	27.6%	3.19	420.00	17.8%	2.55	330.00	14.0%	2.59	229.00	9.7%	3.73
170	423.00	17.9%	2.28	366.00	15.5%	2.63	657.00	27.8%	3.55	419.00	17.7%	2.88	330.00	14.0%	2.92	234.00	9.9%	4.12
180	416.00	17.6%	2.60	363.00	15.4%	2.98	663.00	28.1%	3.92	418.00	17.7%	3.23	330.00	14.0%	3.28	239.00	10.1%	4.52
190	408.00	17.3%	2.95	360.00	15.2%	3.34	668.00	28.3%	4.32	416.00	17.6%	3.60	330.00	14.0%	3.65	244.00	10.3%	4.95
200	402.00	17.0%	3.32	358.00	15.2%	3.73	673.00	28.5%	4.73	415.00	17.6%	3.99	330.00	14.0%	4.05	248.00	10.5%	5.39
210	396.00	16.7%	3.72	355.00	15.0%	4.14	677.00	28.7%	5.17	414.00	17.5%	4.41	329.00	13.9%	4.47	252.00	10.7%	5.85
220	390.00	16.5%	4.14	353.00	14.9%	4.57	680.00	28.8%	5.62	413.00	17.5%	4.84	329.00	13.9%	4.90	255.00	10.8%	6.33
230	385.00	16.3%	4.58	351.00	14.9%	5.03	684.00	29.0%	6.09	412.00	17.4%	5.30	329.00	13.9%	5.36	259.00	11.0%	6.82
240	381.00	16.1%	5.05	349.00	14.8%	5.50	687.00	29.1%	6.58	411.00	17.4%	5.77	329.00	13.9%	5.84	262.00	11.1%	7.34
250	377.00	16.0%	5.53	348.00	14.7%	6.00	689.00	29.2%	7.09	410.00	17.4%	6.27	329.00	13.9%	6.34	265.00	11.2%	7.87
260	373.00	15.8%	6.05	346.00	14.6%	6.52	691.00	29.3%	7.62	409.00	17.3%	6.79	329.00	13.9%	6.86	268.00	11.3%	8.42
270	370.00	15.7%	6.58	345.00	14.6%	7.05	693.00	29.3%	8.17	408.00	17.3%	7.33	329.00	13.9%	7.40	271.00	11.5%	8.98
280	367.00	15.5%	7.13	343.00	14.5%	7.62	694.00	29.4%	8.74	407.00	17.2%	7.89	328.00	13.9%	7.97	274.00	11.6%	9.58
290	364.00	15.4%	7.71	342.00	14.5%	8.20	696.00	29.5%	9.33	406.00	17.2%	8.47	328.00	13.9%	8.55	277.00	11.7%	10.16
300	362.00	15.3%	8.31	341.00	14.4%	8.80	697.00	29.5%	9.94	406.00	17.2%	9.07	328.00	13.9%	9.15	279.00	11.8%	10.77
310	359.00	15.2%	8.93	340.00	14.4%	9.42	698.00	29.6%	10.58	405.00	17.1%	9.70	328.00	13.9%	9.78	281.00	11.9%	11.42
320	357.00	15.1%	9.57	339.00	14.4%	10.07	699.00	29.6%	11.23	404.00	17.1%	10.34	328.00	13.9%	10.43	283.00	12.0%	12.08
330	355.00	15.0%	10.24	339.00	14.4%	10.74	700.00	29.6%	11.90	403.00	17.1%	11.01	328.00	13.9%	11.10	285.00	12.1%	12.76
340	353.00	14.9%	10.92	338.00	14.3%	11.42	700.00	29.6%	12.59	403.00	17.1%	11.70	328.00	13.9%	11.79	287.00	12.2%	13.46
350	352.00	14.9%	11.63	337.00	14.3%	12.13	701.00	29.7%	13.31	402.00	17.0%	12.41	327.00	13.8%	12.50	289.00	12.2%	14.18
360	350.00	14.8%	12.36	336.00	14.2%	12.87	701.00	29.7%	14.05	401.00	17.0%	13.14	327.00	13.8%	13.23	290.00	12.3%	14.92
370	348.00	14.8%	13.11	336.00	14.2%	13.62	701.00	29.7%	14.80	400.00	16.9%	13.89	327.00	13.8%	13.99	292.00	12.4%	15.69
380	347.00	14.7%	13.89	335.00	14.2%	14.40	701.00	29.7%	15.58	400.00	16.9%	14.67	327.00	13.8%	14.76	293.00	12.4%	16.47
390	346.00	14.6%	14.68	334.00	14.1%	15.19	701.00	29.7%	16.38	399.00	16.9%	15.47	327.00	13.8%	15.56	294.00	12.4%	17.28
400	345.00	14.6%	15.50	334.00	14.1%	16.02	701.00	29.7%	17.22	398.00	16.8%	16.29	326.00	13.8%	16.38	295.00	12.5%	18.11
410	344.00	14.6%	16.34	333.00	14.1%	16.86	700.00	29.6%	18.05	398.00	16.8%	17.13	326.00	13.8%	17.23	296.00	12.5%	18.96
420	343.00	14.5%	17.21	333.00	14.1%	17.72	700.00	29.6%	18.91	397.00	16.8%	17.99	326.00	13.8%	18.09	297.00	12.6%	19.84
430	342.00	14.5%	18.09	332.00	14.1%	18.61	700.00	29.6%	19.80	396.00	16.8%	18.88	326.00	13.8%	18.88	298.00	12.6%	20.73
440	340.00	14.4%	19.00	331.00	14.0%	19.52	699.00	29.5%	20.72	396.00	16.8%	19.79	325.00	13.8%	19.89	299.00	12.7%	21.64
450	340.00	14.4%	19.93	331.00	14.0%	20.45	699.00	29.5%	21.65	395.00	16.7%	20.72	325.00	13.8%	20.82	300.00	12.7%	22.58
460	339.00	14.4%	20.89	330.00	14.0%	21.41	698.00	29.5%	22.60	394.00	16.7%	21.67	325.00	13.8%	21.78	301.00	12.7%	23.54
470	338.00	14.3%	21.87	330.00	14.0%	22.39	698.00	29.5%	23.58	394.00	16.7%	22.65	325.00	13.8%	22.76	301.00	12.7%	24.53
480	337.00	14.3%	22.87	329.00	13.9%	23.39	697.00	29.5%	24.59	393.00	16.6%	23.68	324.00	13.7%	23.76	302.00	12.8%	25.54
490	336.00	14.2%	23.89	329.00	13.9%	24.41	696.00	29.5%	25.61	392.00	16.6%	24.68	324.00	13.7%	24.78	303.00	12.8%	26.56
500	335.00	14.2%	24.94	328.00	13.9%	25.46	696.00	29.5%	26.65	392.00	16.6%	25.72	324.00	13.7%	25.83	303.00	12.8%	27.62
510	335.00	14.2%	26.00	328.00	13.9%	26.53	695.00	29.4%	27.73	391.00	16.6%	26.79	324.00	13.7%	26.90	304.00	12.9%	28.69
520	334.00	14.1%	27.10	328.00	13.9%	27.63	694.00	29.4%	28.82	391.00	16.6%	27.89	323.00	13.7%	28.00	304.00	12.9%	29.79
530	333.00	14.1%	28.22	327.00	13.8%	28.74	693.00	29.3%	29.94	390.00	16.5%	29.00	323.00	13.7%	29.12	304.00	12.9%	30.91
540	332.00	14.1%	29.36	327.00	13.8%	29.88	692.00	29.3%	31.08	389.00	16.5%	30.15	323.00	13.7%	30.26	305.00	12.9%	32.06
550	332.00	14.1%	30.53	326.00	13.8%	31.05	691.00	29.3%	32.24	389.00	16.5%	31.31	322.00	13.6%	31.42	305.00	12.9%	33.23
560	331.00	14.0%	31.71	326.00	13.8%	32.24	690.00	29.2%	33.43	388.00	16.4%	32.50	322.00	13.6%	32.62	305.00	12.9%	34.42
570	330.00	14.0%	32.94	325.00	13.8%	33.46	689.00	29.2%	34.65	388.00	16.4%	33.72	322.00	13.6%	33.84	305.00	12.9%	35.64
580	330.00	14.0%	34.17	325.00	13.8%	34.70	689.00	29.2%	35.88	387.00	16.4%	34.96	321.00	13.6%	35.07	306.00	13.0%	36.88
590	329.00	13.9%	35.43	324.00	13.7%	35.96	688.00	29.1%	37.15	386.00	16.3%	36.22	321.00	13.6%	36.34	306.00	13.0%	38.15
600	328.00	13.9%	36.72	324.00	13.7%	37.25	686.00	29.0%	38.44	386.00	16.3%	37.51	321.00	13.6%	37.62	306.00	13.0%	39.44

PENGUIN ACSR 4/0 AWG

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	816.00	22%	0.01	658.00	18%	0.01	629.00	17%	0.02	622.00	17%	0.01	458.00	12.3%	0.01	96.00	3%	0.06
20	816.00	22%	0.03	657.00	18%	0.03	649.00	17%	0.07	625.00	17%	0.04	462.00	12.4%	0.05	123.00	3%	0.16
30	816.00	22%	0.06	656.00	18%	0.07	675.00	18%	0.16	628.00	17%	0.09	468.00	12.6%	0.10	158.00	4%	0.30
40	816.00	22%	0.10	655.00	18%	0.13	704.00	19%	0.27	632.00	17%	0.16	476.00	12.8%	0.18	184.00	5%	0.46
50	816.00	22%	0.16	653.00	18%	0.20	733.00	20%	0.39	637.00	17%	0.25	485.00	13.1%	0.27	209.00	6%	0.64
60	816.00	22%	0.23	653.00	18%	0.29	763.00	21%	0.54	644.00	17%	0.35	495.00	13.3%	0.39	230.00	6%	0.83
70	808.00	22%	0.32	646.00	17%	0.40	786.00	21%	0.71	646.00	17%	0.48	501.00	13.5%	0.52	249.00	7%	1.05
80	780.00	21%	0.43	634.00	17%	0.54	803.00	22%	0.90	640.00	17%	0.63	501.00	13.5%	0.68	265.00	7%	1.28
90	770.00	21%	0.56	621.00	17%	0.69	818.00	22%	1.11	635.00	17%	0.80	501.00	13.5%	0.86	279.00	8%	1.54
100	750.00	20%	0.71	609.00	16%	0.87	832.00	22%	1.33	631.00	17%	0.99	500.00	13.5%	1.06	293.00	8%	1.81
110	731.00	20%	0.88	598.00	16%	1.07	844.00	23%	1.58	626.00	17%	1.21	500.00	13.5%	1.28	305.00	8%	2.10
120	712.00	19%	1.07	589.00	16%	1.30	855.00	23%	1.84	621.00	17%	1.44	501.00	13.5%	1.53	317.00	9%	2.41
130	693.00	19%	1.29	580.00	16%	1.55	865.00	23%	2.13	617.00	17%	1.70	501.00	13.5%	1.79	327.00	9%	2.74
140	676.00	18%	1.54	571.00	15%	1.82	872.00	23%	2.43	614.00	17%	1.98	501.00	13.5%	2.08	337.00	9%	3.09
150	659.00	18%	1.81	564.00	15%	2.12	879.00	24%	2.76	610.00	16%	2.28	500.00	13.5%	2.39	346.00	9%	3.45
160	645.00	17%	2.11	557.00	15%	2.44	886.00	24%	3.10	607.00	16%	2.61	500.00	13.5%	2.72	354.00	10%	3.83
170	631.00	17%	2.43	552.00	15%	2.78	891.00	24%	3.46	604.00	16%	2.95	500.00	13.5%	3.07	362.00	10%	4.23
180	619.00	17%	2.78	547.00	15%	3.15	895.00	24%	3.84	601.00	16%	3.32	500.00	13.5%	3.44	369.00	10%	4.66
190	608.00	16%	3.15	543.00	15%	3.53	899.00	24%	4.25	599.00	16%	3.71	500.00	13.5%	3.83	376.00	10%	5.09
200	598.00	16%	3.55	539.00	15%	3.94	902.00	24%	4.67	595.00	16%	4.12	499.00	13.4%	4.25	382.00	10%	5.55
210	590.00	16%	3.97	535.00	14%	4.37	905.00	24%	5.11	594.00	16%	4.55	499.00	13.4%	4.69	388.00	10%	6.03
220	582.00	16%	4.42	532.00	14%	4.83	908.00	24%	5.58	592.00	16%	5.01	499.00	13.4%	5.15	394.00	11%	6.53
230	575.00	15%	4.88	529.00	14%	5.30	909.00	24%	6.07	590.00	16%	5.49	499.00	13.4%	5.63	399.00	11%	7.04
240	569.00	15%	5.37	527.00	14%	5.80	911.00	25%	6.57	588.00	16%	5.99	499.00	13.4%	6.13	404.00	11%	7.58
250	563.00	15%	5.89	525.00	14%	6.33	912.00	25%	7.10	587.00	16%	6.51	498.00	13.4%	6.66	408.00	11%	8.14
260	558.00	15%	6.43	522.00	14%	6.87	913.00	25%	7.65	585.00	16%	7.06	498.00	13.4%	7.20	412.00	11%	8.71
270	554.00	15%	6.98	521.00	14%	7.44	914.00	25%	8.22	584.00	16%	7.62	498.00	13.4%	7.77	417.00	11%	9.30
280	549.00	15%	7.58	519.00	14%	8.02	914.00	25%	8.82	582.00	16%	8.21	498.00	13.3%	8.37	420.00	11%	9.91
290	546.00	15%	8.18	517.00	14%	8.64	914.00	25%	9.43	581.00	16%	8.82	498.00	13.4%	8.98	424.00	11%	10.53
300	542.00	15%	8.81	515.00	14%	9.27	914.00	25%	10.07	579.00	16%	9.46	497.00	13.4%	9.61	428.00	12%	11.18
310	539.00	15%	9.47	514.00	14%	9.92	914.00	25%	10.73	578.00	16%	10.11	497.00	13.4%	10.27	431.00	12%	11.85
320	536.00	14%	10.15	513.00	14%	10.61	914.00	25%	11.41	577.00	16%	10.80	497.00	13.4%	10.95	434.00	12%	12.55
330	533.00	14%	10.86	512.00	14%	11.31	914.00	25%	12.11	576.00	16%	11.50	496.00	13.4%	11.65	437.00	12%	13.26
340	531.00	14%	11.57	511.00	14%	12.03	913.00	25%	12.84	574.00	15%	12.22	496.00	13.4%	12.38	439.00	12%	14.00
350	529.00	14%	12.31	509.00	14%	12.78	912.00	25%	13.59	573.00	15%	12.97	496.00	13.4%	13.13	441.00	12%	14.75
360	526.00	14%	13.08	508.00	14%	13.55	912.00	25%	14.36	572.00	15%	13.74	496.00	13.4%	13.90	444.00	12%	15.53
370	524.00	14%	13.88	507.00	14%	14.34	911.00	25%	15.15	571.00	15%	14.53	495.00	13.3%	14.70	446.00	12%	16.34
380	522.00	14%	14.69	506.00	14%	15.16	910.00	25%	15.97	570.00	15%	15.35	495.00	13.3%	15.51	448.00	12%	17.16
390	521.00	14%	15.53	505.00	14%	16.00	909.00	24%	16.81	569.00	15%	16.19	494.00	13.3%	16.35	449.00	12%	18.01
400	519.00	14%	16.39	504.00	14%	16.86	908.00	24%	17.67	568.00	15%	17.05	494.00	13.3%	17.22	451.00	12%	18.88
410	517.00	14%	17.28	503.00	14%	17.75	907.00	24%	18.56	567.00	15%	17.94	494.00	13.3%	18.11	452.00	12%	19.78
420	516.00	14%	18.19	503.00	14%	18.66	906.00	24%	19.47	566.00	15%	18.85	493.00	13.3%	19.02	454.00	12%	20.69
430	514.00	14%	19.12	502.00	14%	19.60	905.00	24%	20.40	565.00	15%	19.78	493.00	13.3%	19.95	455.00	12%	21.63
440	513.00	14%	20.08	501.00	13%	20.55	903.00	24%	21.36	564.00	15%	20.74	493.00	13.3%	20.91	456.00	12%	22.60
450	511.00	14%	21.06	500.00	13%	21.54	902.00	24%	22.35	563.00	15%	21.72	492.00	13.2%	21.89	457.00	12%	23.58
460	510.00	14%	22.07	499.00	13%	22.54	901.00	24%	23.35	562.00	15%	22.73	492.00	13.2%	22.90	458.00	12%	24.60
470	509.00	14%	23.10	499.00	13%	23.58	900.00	24%	24.38	561.00	15%	23.76	491.00	13.2%	23.93	459.00	12%	25.63
480	508.00	14%	24.15	498.00	13%	24.63	899.00	24%	25.44	560.00	15%	24.81	491.00	13.2%	24.99	460.00	12%	26.69
490	506.00	14%	25.23	497.00	13%	25.71	897.00	24%	26.52	559.00	15%	25.89	490.00	13.2%	26.07	460.00	12%	27.78
500	505.00	14%	26.35	496.00	13%	26.82	895.00	24%	27.62	559.00	15%	27.00	490.00	13.2%	27.18	461.00	12%	28.89
510	504.00	14%	27.47	496.00	13%	27.94	894.00	24%	28.75	558.00	15%	28.13	489.00	13.2%	28.30	462.00	12%	30.02
520	503.00	14%	28.62	495.00	13%	29.10	893.00	24%	29.90	557.00	15%	29.28	489.00	13.2%	29.46	462.00	12%	31.18
530	502.00	14%	29.80	494.00	13%	30.28	891.00	24%	31.08	555.00	15%	30.46	488.00	13.1%	30.64	463.00	12%	32.36
540	501.00	13%	31.01	493.00	13%	31.49	889.00	24%	32.29	555.00	15%	31.67	488.00	13.1%	31.85	463.00	12%	33.58
550	500.00	13%	32.24	493.00	13%	32.72	888.00	24%	33.52	554.00	15%	32.90	487.00	13.1%	33.08	463.00	12%	34.80
560	499.00	13%	33.50	492.00	13%	33.97	886.00	24%	34.77	553.00	15%	34.15	487.00	13.1%	34.33	464.00	12%	36.06
570	498.00	13%	34.78	491.00	13%	35.26	885.00	24%	36.05	552.00	15%	35.44	486.00	13.1%	35.62	464.00	12%	37.34
580	497.00	13%	36.09	491.00	13%	36.56	883.00	24%	37.36	551.00	15%	36.75	486.00	13.1%	36.93	464.00	12%	38.66
590	496.00	13%	37.43	490.00	13%	37.91	882.00	24%	38.70	550.00	15%	38.09	485.00	13.1%	38.27	464.00	12%	40.00
600	495.00	13%	38.80	489.00	13%	39.27	880.00	24%	40.06	550.00	15%	39.45	485.00	13.1%	39.63	464.00	12%	41.36

WAXWING ACSR 266.8 KCMIL																		
Clima: Templado																		
Altitud: 1000 msnm - 2500 msnm																		
Temperatura máxima (°C): 33.8611052631579																		
Temperatura media (°C): 20.54																		
Temperatura mínima (°C): 10.0233157894737																		
Temperatura coincidente (°C): 11.9718421052632																		
Velocidad del viento máxima (km/h): 120																		
Velocidad del viento promedio (km/h): 70																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 3060.38																		
Peso (daN/m): 0.4224																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 33%																		
Operación diaria (EDS): 17%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1010.00	33.0%	0.01	718.00	23%	0.01	684.00	22.4%	0.02	678.00	22.2%	0.01	492.00	16.1%	0.01	84.00	2.7%	0.06
20	1010.00	33.0%	0.02	716.00	23%	0.03	704.00	23.0%	0.07	680.00	22.2%	0.04	496.00	16.2%	0.04	106.00	3.2%	0.20
30	1010.00	33.0%	0.05	716.00	23%	0.07	730.00	23.9%	0.16	682.00	22.3%	0.09	501.00	16.4%	0.09	128.00	4.2%	0.37
40	1010.00	33.0%	0.08	713.00	23%	0.12	759.00	24.8%	0.26	685.00	22.4%	0.15	507.00	16.6%	0.17	147.00	4.8%	0.58
50	1010.00	33.0%	0.13	710.00	23%	0.19	789.00	25.8%	0.39	691.00	22.6%	0.24	510.00	16.9%	0.26	165.00	5.4%	0.80
60	1010.00	33.0%	0.19	709.00	23%	0.27	821.00	26.8%	0.53	697.00	22.9%	0.33	525.00	17.2%	0.36	181.00	5.9%	1.05
70	1010.00	33.0%	0.26	708.00	23%	0.37	850.00	27.8%	0.70	703.00	23.0%	0.45	534.00	17.4%	0.48	197.00	6.4%	1.31
80	993.00	32.4%	0.34	697.00	23%	0.49	870.00	28.4%	0.88	699.00	22.8%	0.59	535.00	17.5%	0.63	213.00	7.2%	1.55
90	973.00	31.8%	0.44	683.00	22%	0.63	889.00	29.0%	1.08	695.00	22.7%	0.75	535.00	17.5%	0.80	235.00	7.8%	1.80
100	951.00	31.1%	0.56	671.00	22%	0.79	905.00	29.6%	1.30	690.00	22.5%	0.92	535.00	17.5%	0.99	257.00	8.4%	2.06
110	928.00	30.3%	0.69	659.00	22%	0.97	920.00	30.1%	1.54	686.00	22.4%	1.12	535.00	17.5%	1.20	274.00	9.0%	2.34
120	904.00	29.5%	0.84	647.00	21%	1.16	933.00	30.5%	1.73	681.00	22.3%	1.34	535.00	17.5%	1.42	289.00	9.4%	2.63
130	880.00	28.8%	1.01	637.00	21%	1.40	945.00	30.9%	2.07	677.00	22.1%	1.58	536.00	17.5%	1.67	304.00	9.9%	2.94
140	854.00	27.9%	1.21	627.00	20%	1.65	955.00	31.2%	2.36	673.00	22.0%	1.84	535.00	17.5%	1.94	315.00	10.4%	3.26
150	831.00	27.2%	1.43	615.00	20%	1.92	965.00	31.5%	2.66	670.00	21.9%	2.12	534.00	17.4%	2.22	331.00	10.8%	3.60
160	808.00	26.4%	1.67	611.00	20%	2.21	974.00	31.8%	2.99	666.00	21.8%	2.42	534.00	17.4%	2.53	342.00	11.2%	3.95
170	785.00	25.7%	1.94	604.00	20%	2.53	981.00	32.1%	3.33	663.00	21.7%	2.74	534.00	17.4%	2.86	353.00	11.5%	4.32
180	763.00	24.9%	2.24	597.00	20%	2.87	987.00	32.3%	3.70	659.00	21.5%	3.08	534.00	17.4%	3.21	363.00	11.9%	4.72
190	744.00	24.3%	2.56	592.00	19%	3.22	993.00	32.4%	4.08	657.00	21.5%	3.44	534.00	17.4%	3.57	373.00	12.2%	5.12
200	726.00	23.7%	2.91	587.00	19%	3.60	998.00	32.6%	4.48	654.00	21.4%	3.83	534.00	17.4%	3.96	381.00	12.4%	5.54
210	710.00	23.2%	3.28	583.00	19%	4.00	1003.00	32.8%	4.89	651.00	21.3%	4.22	534.00	17.4%	4.37	390.00	12.7%	5.98
220	695.00	22.7%	3.68	578.00	19%	4.42	1007.00	32.9%	5.33	649.00	21.2%	4.66	533.00	17.4%	4.80	397.00	13.0%	6.44
230	681.00	22.3%	4.10	574.00	19%	4.87	1010.00	33.0%	5.79	647.00	21.1%	5.10	533.00	17.4%	5.24	404.00	13.2%	6.92
240	669.00	21.9%	4.55	571.00	19%	5.33	1013.00	33.1%	6.26	645.00	21.1%	5.56	533.00	17.4%	5.71	411.00	13.4%	7.42
250	659.00	21.5%	5.01	569.00	19%	5.81	1015.00	33.2%	6.76	643.00	21.0%	6.05	533.00	17.4%	6.20	417.00	13.6%	7.93
260	649.00	21.2%	5.51	566.00	18%	6.32	1017.00	33.2%	7.28	641.00	20.9%	6.55	533.00	17.4%	6.71	422.00	13.8%	8.46
270	640.00	20.9%	6.02	563.00	18%	6.84	1019.00	33.3%	7.81	639.00	20.8%	7.06	532.00	17.4%	7.24	429.00	14.0%	9.01
280	632.00	20.7%	6.55	561.00	18%	7.39	1020.00	33.3%	8.37	637.00	20.8%	7.63	532.00	17.4%	7.79	433.00	14.1%	9.58
290	624.00	20.4%	7.12	559.00	18%	7.96	1022.00	33.4%	8.94	636.00	20.8%	8.20	532.00	17.4%	8.36	437.00	14.3%	10.17
300	618.00	20.2%	7.70	557.00	18%	8.54	1023.00	33.4%	9.53	634.00	20.7%	8.78	532.00	17.4%	8.95	442.00	14.4%	10.78
310	612.00	20.0%	8.30	555.00	18%	9.15	1023.00	33.4%	10.15	633.00	20.7%	9.39	531.00	17.4%	9.56	446.00	14.6%	11.41
320	606.00	19.8%	8.93	553.00	18%	9.78	1024.00	33.5%	10.78	631.00	20.6%	10.02	531.00	17.4%	10.20	449.00	14.7%	12.06
330	601.00	19.6%	9.58	552.00	18%	10.44	1024.00	33.5%	11.44	630.00	20.6%	10.68	531.00	17.4%	10.85	453.00	14.8%	12.73
340	597.00	19.5%	10.24	550.00	18%	11.11	1024.00	33.5%	12.12	629.00	20.6%	11.35	531.00	17.4%	11.52	456.00	14.9%	13.42
350	593.00	19.4%	10.93	549.00	18%	11.80	1024.00	33.5%	12.81	627.00	20.5%	12.04	530.00	17.3%	12.22	459.00	15.0%	14.12
360	588.00	19.2%	11.65	548.00	18%	12.52	1024.00	33.5%	13.53	626.00	20.5%	12.78	530.00	17.3%	12.94	462.00	15.1%	14.86
370	586.00	19.1%	12.38	546.00	18%	13.26	1023.00	33.4%	14.27	625.00	20.4%	13.49	530.00	17.3%	13.67	464.00	15.2%	15.60
380	582.00	19.0%	13.13	545.00	18%	14.01	1023.00	33.4%	15.03	624.00	20.4%	14.25	529.00	17.3%	14.43	467.00	15.3%	16.37
390	578.00	18.9%	13.91	544.00	18%	14.79	1023.00	33.4%	15.81	623.00	20.4%	15.03	529.00	17.3%	15.21	469.00	15.3%	17.18
400	574.00	18.8%	14.71	543.00	18%	15.58	1022.00	33.4%	16.61	621.00	20.3%	15.83	529.00	17.3%	16.01	471.00	15.4%	17.98
410	573.00	18.7%	15.53	542.00	18%	16.41	1021.00	33.4%	17.44	620.00	20.3%	16.65	528.00	17.3%	16.84	473.00	15.5%	18.81
420	570.00	18.6%	16.38	541.00	18%	17.26	1020.00	33.3%	18.28	619.00	20.2%	17.50	528.00	17.3%	17.68	475.00	15.5%	19.66
430	568.00	18.6%	17.24	540.00	18%	18.13	1020.00	33.3%	19.15	618.00	20.2%	18.36	528.00	17.3%	18.55	477.00	15.6%	20.54
440	565.00	18.5%	18.13	539.00	18%	19.01	1019.00	33.3%	20.04	617.00	20.2%	19.25	527.00	17.2%	19.44	479.00	15.7%	21.43
450	563.00	18.4%	19.04	538.00	18%	19.92	1018.00	33.3%	20.95	616.00	20.1%	20.18	527.00	17.2%	20.35	480.00	15.7%	22.35
460	561.00	18.3%	19.97	537.00	18%	20.85	1017.00	33.2%	21.88	615.00	20.1%	21.09	527.00	17.2%	21.28	481.00	15.7%	23.29
470	559.00	18.3%	20.92	536.00	18%	21.81	1015.00	33.2%	22.84	614.00	20.1%	22.05	526.00	17.2%	22.24	483.00	15.8%	24.25
480	557.00	18.2%	21.90	536.00	18%	22.79	1014.00	33.1%	23.81	613.00	20.0%	23.02	526.00	17.2%	23.22	484.00	15.8%	25.23
490	555.00	18.1%	22.90	535.00	17%	23.79	1013.00	33.1%	24.81	612.00	20.0%	24.02	525.00	17.2%	24.22	485.00	15.8%	26.24
500	554.00	18.1%	23.92	534.00	17%	24.81	1012.00	33.1%	25.83	611.00	20.							

LINNET ACSR 336.4 KCMIL															
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70															
Propiedades físicas del conductor: Tensión de rotura (daN): 6271.99 Peso (daN/m): 0.6741															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 12%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1190.00	19.0%	0.01	987.00	15%	0.01	911.00	14.5%	0.02	901.00	14.4%	0.01	854.00	10.4%	0.01
20	1188.00	18.9%	0.03	992.00	15%	0.04	933.00	14.9%	0.07	903.00	14.4%	0.04	860.00	10.5%	0.05
30	1190.00	19.0%	0.06	990.00	15%	0.08	964.00	15.4%	0.15	906.00	14.4%	0.10	872.00	10.7%	0.11
40	1188.00	18.9%	0.11	943.00	15%	0.14	996.00	15.9%	0.25	909.00	14.5%	0.17	884.00	10.9%	0.20
50	1188.00	18.9%	0.18	940.00	15%	0.22	1033.00	16.5%	0.38	915.00	14.6%	0.26	900.00	11.2%	0.30
60	1190.00	19.0%	0.25	939.00	15%	0.32	1068.00	17.0%	0.62	920.00	14.7%	0.37	916.00	11.4%	0.42
70	1190.00	19.0%	0.35	939.00	15%	0.44	1102.00	17.6%	0.68	930.00	14.8%	0.50	933.00	11.7%	0.56
80	1190.00	19.0%	0.45	940.00	15%	0.57	1136.00	18.1%	0.96	940.00	15.0%	0.64	950.00	12.0%	0.72
90	1159.00	18.5%	0.59	922.00	15%	0.74	1151.00	18.4%	1.07	930.00	14.8%	0.82	952.00	12.0%	0.91
100	1126.00	18.0%	0.75	904.00	14%	0.93	1163.00	18.5%	1.29	920.00	14.7%	1.03	951.00	12.0%	1.12
110	1093.00	17.4%	0.93	887.00	14%	1.15	1174.00	18.7%	1.54	911.00	14.5%	1.25	952.00	12.0%	1.36
120	1061.00	16.9%	1.14	873.00	14%	1.39	1183.00	18.8%	1.81	903.00	14.4%	1.50	951.00	12.0%	1.62
130	1030.00	16.4%	1.38	860.00	14%	1.66	1190.00	19.0%	2.10	895.00	14.3%	1.77	951.00	12.0%	1.90
140	1003.00	16.0%	1.65	848.00	14%	1.95	1196.00	19.1%	2.41	888.00	14.2%	2.07	951.00	12.0%	2.20
150	978.00	15.6%	1.94	838.00	13%	2.26	1201.00	19.1%	2.74	883.00	14.1%	2.39	951.00	12.0%	2.53
160	955.00	15.2%	2.26	828.00	13%	2.61	1204.00	19.2%	3.10	877.00	14.0%	2.73	950.00	12.0%	2.88
170	936.00	14.9%	2.60	821.00	13%	2.97	1208.00	19.3%	3.48	872.00	13.9%	3.10	950.00	12.0%	3.25
180	917.00	14.6%	2.96	814.00	13%	3.36	1210.00	19.3%	3.88	867.00	13.8%	3.49	950.00	12.0%	3.64
190	900.00	14.3%	3.38	808.00	13%	3.77	1212.00	19.3%	4.30	863.00	13.8%	3.90	950.00	12.0%	4.06
200	887.00	14.1%	3.80	802.00	13%	4.20	1213.00	19.3%	4.74	859.00	13.7%	4.34	949.00	11.9%	4.50
210	874.00	13.9%	4.25	797.00	13%	4.66	1214.00	19.4%	5.20	856.00	13.6%	4.80	949.00	11.9%	4.96
220	863.00	13.8%	4.73	793.00	13%	5.15	1215.00	19.4%	5.69	852.00	13.6%	5.28	949.00	11.9%	5.45
230	853.00	13.6%	5.23	789.00	13%	5.65	1215.00	19.4%	6.20	849.00	13.5%	5.79	949.00	11.9%	5.96
240	844.00	13.5%	5.75	786.00	13%	6.18	1215.00	19.4%	6.74	846.00	13.5%	6.32	948.00	11.9%	6.50
250	837.00	13.3%	6.30	783.00	12%	6.74	1215.00	19.4%	7.29	844.00	13.5%	6.87	948.00	11.9%	7.05
260	830.00	13.2%	6.87	780.00	12%	7.31	1214.00	19.4%	7.87	842.00	13.4%	7.45	947.00	11.9%	7.63
270	823.00	13.1%	7.47	777.00	12%	7.82	1213.00	19.3%	8.48	839.00	13.4%	8.05	947.00	11.9%	8.23
280	817.00	13.0%	8.10	774.00	12%	8.54	1212.00	19.3%	9.10	837.00	13.3%	8.68	946.00	11.9%	8.86
290	812.00	12.9%	8.74	772.00	12%	9.19	1210.00	19.3%	9.76	835.00	13.3%	9.33	946.00	11.9%	9.51
300	807.00	12.8%	9.41	770.00	12%	9.86	1209.00	19.3%	10.43	833.00	13.3%	10.00	946.00	11.9%	10.19
310	802.00	12.8%	10.11	768.00	12%	10.56	1208.00	19.3%	11.13	831.00	13.2%	10.70	945.00	11.8%	10.89
320	798.00	12.7%	10.83	766.00	12%	11.28	1206.00	19.3%	11.85	830.00	13.2%	11.42	945.00	11.9%	11.61
330	795.00	12.7%	11.57	764.00	12%	12.03	1205.00	19.2%	12.59	828.00	13.2%	12.16	944.00	11.9%	12.35
340	791.00	12.6%	12.34	763.00	12%	12.80	1203.00	19.2%	13.86	826.00	13.2%	12.93	944.00	11.9%	13.12
350	788.00	12.6%	13.13	761.00	12%	13.59	1201.00	19.1%	14.16	824.00	13.1%	13.73	943.00	11.8%	13.92
360	785.00	12.5%	13.95	760.00	12%	14.41	1199.00	19.1%	14.98	823.00	13.1%	14.55	943.00	11.8%	14.74
370	782.00	12.5%	14.79	758.00	12%	15.26	1197.00	19.1%	15.82	821.00	13.1%	15.39	942.00	11.8%	15.58
380	779.00	12.4%	15.66	757.00	12%	16.12	1196.00	19.1%	16.69	820.00	13.1%	16.26	941.00	11.8%	16.45
390	776.00	12.4%	16.55	755.00	12%	17.02	1194.00	19.0%	17.58	818.00	13.0%	17.15	941.00	11.8%	17.39
400	774.00	12.3%	17.47	754.00	12%	17.85	1192.00	19.0%	18.49	817.00	13.0%	18.07	940.00	11.8%	18.27
410	772.00	12.3%	18.41	753.00	12%	18.87	1190.00	19.0%	19.44	816.00	13.0%	19.01	940.00	11.8%	19.21
420	769.00	12.3%	19.38	751.00	12%	19.84	1188.00	18.9%	20.40	814.00	13.0%	19.98	939.00	11.8%	20.18
430	767.00	12.2%	20.37	750.00	12%	20.84	1186.00	18.9%	21.40	813.00	13.0%	20.97	938.00	11.8%	21.17
440	765.00	12.2%	21.39	749.00	12%	21.86	1184.00	18.9%	22.42	811.00	12.9%	21.99	938.00	11.8%	22.19
450	763.00	12.2%	22.44	748.00	12%	22.90	1181.00	18.8%	23.46	810.00	12.9%	23.04	937.00	11.8%	23.24
460	761.00	12.1%	23.51	747.00	12%	23.97	1179.00	18.8%	24.53	809.00	12.9%	24.11	936.00	11.7%	24.31
470	759.00	12.1%	24.61	745.00	12%	25.08	1177.00	18.8%	25.63	807.00	12.9%	25.21	935.00	11.7%	25.41
480	757.00	12.1%	25.73	744.00	12%	26.20	1175.00	18.7%	26.76	806.00	12.9%	26.33	935.00	11.7%	26.54
490	756.00	12.1%	26.88	743.00	12%	27.35	1173.00	18.7%	27.90	805.00	12.8%	27.48	934.00	11.7%	27.69
500	754.00	12.0%	28.06	742.00	12%	28.53	1171.00	18.7%	29.08	803.00	12.8%	28.66	933.00	11.7%	28.87
510	752.00	12.0%	29.26	740.00	12%	29.74	1168.00	18.6%	30.29	802.00	12.8%	29.86	932.00	11.7%	30.07
520	750.00	12.0%	30.50	739.00	12%	30.97	1166.00	18.6%	31.52	801.00	12.8%	31.10	931.00	11.7%	31.30
530	749.00	11.9%	31.76	738.00	12%	32.23	1164.00	18.6%	32.77	799.00	12.7%	32.36	931.00	11.7%	32.56
540	747.00	11.9%	33.05	737.00	12%	33.52	1161.00	18.5%	34.07	798.00	12.7%	33.65	930.00	11.6%	33.85
550	746.00	11.9%	34.37	736.00	12%	34.83	1159.00	18.5%	35.38	797.00	12.7%	34.96	929.00	11.6%	35.17
560	744.00	11.9%	35.70	735.00	12%	36.17	1157.00	18.4%	36.72	795.00	12.7%	36.30	928.00	11.6%	36.51
570	743.00	11.8%	37.08	734.00	12%	37.54	1155.00	18.4%	38.09	794.00	12.7%	37.68	927.00	11.6%	37.88
580	741.00	11.8%	38.49	732.00	12%	38.95	1152.00	18.4%	39.49	792.00	12.6%	39.08	926.00	11.6%	39.28
590	739.00	11.8%	39.91	731.00	12%	40.37	1150.00	18.3%	40.92	791.00	12.6%	40.50	925.00	11.6%	40.71
600	738.00	11.8%	41.36	730.00	12%	41.84	1148.00	18.3%	42.37	790.00	12.6%	41.97	924.00	11.5%	42.17

AMES AAAC 77.47 KCMIL																		
Clima: Templado																		
Altitud: 1000 msnm - 2500 msnm																		
Temperatura máxima (°C): 34																		
Temperatura media (°C): 21																		
Temperatura mínima (°C): 10																		
Temperatura coincidente (°C): 12																		
Velocidad del viento máxima (km/h): 120																		
Velocidad del viento promedio (km/h): 70																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1245.5																		
Peso (daN/m): 0.1060																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 23.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	292.00	23.4%	0.00	223.00	17.9%	0.01	217.00	17.4%	0.03	212.00	17.0%	0.01	161.00	12.9%	0.01	9.00	0.7%	0.15
20	292.00	23.4%	0.02	223.00	17.9%	0.02	230.00	18.5%	0.11	214.00	17.2%	0.05	161.00	12.9%	0.03	17.00	1.4%	0.32
30	292.00	23.4%	0.04	223.00	17.9%	0.05	246.00	19.8%	0.22	217.00	17.4%	0.10	162.00	13.0%	0.07	24.00	1.9%	0.49
40	292.00	23.4%	0.07	222.00	17.8%	0.10	262.00	21.0%	0.37	220.00	17.7%	0.17	163.00	13.1%	0.13	32.00	2.6%	0.67
50	292.00	23.4%	0.11	222.00	17.8%	0.15	279.00	22.4%	0.53	223.00	17.9%	0.27	165.00	13.2%	0.20	39.00	3.1%	0.86
60	292.00	23.4%	0.16	222.00	17.8%	0.21	295.00	23.7%	0.71	227.00	18.2%	0.37	166.00	13.3%	0.29	45.00	3.6%	1.05
70	292.00	23.4%	0.22	222.00	17.8%	0.29	311.00	25.0%	0.91	232.00	18.6%	0.49	168.00	13.5%	0.39	52.00	4.2%	1.26
80	292.00	23.4%	0.29	222.00	17.8%	0.38	325.00	26.1%	1.13	236.00	18.9%	0.63	170.00	13.6%	0.50	58.00	4.7%	1.47
90	292.00	23.4%	0.37	222.00	17.8%	0.48	340.00	27.3%	1.35	240.00	19.3%	0.78	172.00	13.8%	0.62	64.00	5.1%	1.69
100	292.00	23.4%	0.45	222.00	17.8%	0.60	353.00	28.3%	1.59	245.00	19.7%	0.93	174.00	14.0%	0.76	69.00	5.5%	1.91
110	289.00	23.2%	0.56	220.00	17.7%	0.73	365.00	29.3%	1.85	247.00	19.8%	1.11	174.00	14.0%	0.92	74.00	5.9%	2.15
120	284.00	22.8%	0.67	217.00	17.4%	0.88	375.00	30.1%	2.12	248.00	19.9%	1.31	174.00	14.0%	1.10	79.00	6.3%	2.42
130	280.00	22.5%	0.80	215.00	17.3%	1.04	386.00	31.0%	2.41	250.00	20.1%	1.52	174.00	14.0%	1.29	83.00	6.7%	2.69
140	276.00	22.2%	0.94	212.00	17.0%	1.22	395.00	31.7%	2.71	252.00	20.2%	1.74	174.00	14.0%	1.49	88.00	7.1%	2.97
150	272.00	21.8%	1.10	210.00	16.9%	1.42	404.00	32.4%	3.02	253.00	20.3%	1.98	174.00	14.0%	1.71	92.00	7.4%	3.25
160	267.00	21.4%	1.27	208.00	16.7%	1.64	413.00	33.2%	3.34	255.00	20.5%	2.23	174.00	14.0%	1.95	95.00	7.6%	3.57
170	263.00	21.1%	1.46	206.00	16.5%	1.86	421.00	33.8%	3.68	256.00	20.6%	2.49	174.00	14.0%	2.20	99.00	7.9%	3.88
180	258.00	20.7%	1.67	203.00	16.3%	2.11	430.00	34.4%	4.03	257.00	20.6%	2.77	174.00	14.0%	2.47	102.00	8.2%	4.21
190	254.00	20.4%	1.89	202.00	16.2%	2.37	437.00	35.1%	4.39	258.00	20.7%	3.06	174.00	14.0%	2.75	105.00	8.4%	4.55
200	249.00	20.0%	2.13	200.00	16.1%	2.66	444.00	35.6%	4.76	259.00	20.8%	3.37	174.00	14.0%	3.05	108.00	8.7%	4.90
210	245.00	19.7%	2.39	198.00	15.9%	2.95	450.00	36.1%	5.15	260.00	20.9%	3.70	174.00	14.0%	3.36	111.00	8.9%	5.27
220	241.00	19.3%	2.66	197.00	15.8%	3.26	457.00	36.7%	5.55	261.00	21.0%	4.03	174.00	14.0%	3.69	114.00	9.2%	5.65
230	237.00	19.0%	2.96	195.00	15.7%	3.60	462.00	37.1%	5.96	261.00	21.0%	4.39	174.00	14.0%	4.04	116.00	9.3%	6.04
240	233.00	18.7%	3.27	194.00	15.6%	3.95	468.00	37.6%	6.39	262.00	21.0%	4.75	174.00	14.0%	4.40	119.00	9.6%	6.44
250	230.00	18.5%	3.60	192.00	15.4%	4.31	473.00	38.0%	6.82	263.00	21.1%	5.13	174.00	14.0%	4.77	121.00	9.7%	6.86
260	227.00	18.2%	3.96	191.00	15.3%	4.69	478.00	38.4%	7.28	263.00	21.1%	5.53	174.00	14.0%	5.16	123.00	9.9%	7.29
270	224.00	18.0%	4.32	190.00	15.3%	5.09	483.00	38.8%	7.74	263.00	21.1%	5.94	174.00	14.0%	5.57	125.00	10.0%	7.73
280	221.00	17.7%	4.72	189.00	15.2%	5.50	488.00	39.2%	8.22	264.00	21.2%	6.37	174.00	14.0%	5.99	127.00	10.2%	8.19
290	218.00	17.5%	5.12	188.00	15.1%	5.93	492.00	39.5%	8.71	264.00	21.2%	6.81	174.00	14.0%	6.43	129.00	10.4%	8.66
300	215.00	17.3%	5.54	187.00	15.0%	6.37	496.00	39.8%	9.22	264.00	21.2%	7.27	174.00	14.0%	6.88	131.00	10.5%	9.15

AZUSA AAAC 123.3 KCML																								
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70																								
Propiedades físicas del conductor: Tensión de rotura (daN): 1983.91 Peso (daN/m): 0.1688																								
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 22.5% Operación diaria (EDS): 13%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final								
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	446.00	22.5%	0.00	342.00	17.2%	0.01	329.00	16.6%	0.02	324.00	16.3%	0.01	242.00	12.2%	0.01	13.00	0.7%	0.16						
20	446.00	22.5%	0.02	341.00	17.2%	0.02	344.00	17.3%	0.09	326.00	16.4%	0.04	243.00	12.2%	0.03	26.00	1.2%	0.32						
30	445.00	22.4%	0.04	341.00	17.2%	0.06	363.00	18.3%	0.19	329.00	16.6%	0.09	244.00	12.3%	0.08	38.00	1.9%	0.50						
40	446.00	22.5%	0.08	341.00	17.2%	0.10	383.00	19.3%	0.32	332.00	16.7%	0.16	247.00	12.5%	0.14	49.00	2.5%	0.68						
50	446.00	22.5%	0.12	340.00	17.1%	0.16	404.00	20.4%	0.47	337.00	17.0%	0.24	249.00	12.6%	0.21	60.00	3.0%	0.87						
60	445.00	22.4%	0.17	339.00	17.1%	0.22	424.00	21.4%	0.64	341.00	17.2%	0.34	252.00	12.7%	0.30	71.00	3.6%	1.07						
70	446.00	22.5%	0.23	339.00	17.1%	0.31	444.00	22.4%	0.82	345.00	17.4%	0.45	255.00	12.9%	0.41	81.00	4.1%	1.28						
80	445.00	22.4%	0.30	338.00	17.0%	0.40	482.00	23.3%	1.01	350.00	17.6%	0.58	258.00	13.0%	0.52	90.00	4.5%	1.50						
90	439.00	22.1%	0.39	334.00	16.8%	0.51	478.00	24.1%	1.23	351.00	17.7%	0.73	257.00	13.0%	0.66	99.00	5.0%	1.73						
100	432.00	21.8%	0.49	329.00	16.6%	0.64	492.00	24.8%	1.46	352.00	17.7%	0.90	257.00	13.0%	0.82	107.00	5.4%	1.98						
110	425.00	21.4%	0.60	325.00	16.4%	0.79	506.00	25.5%	1.74	353.00	17.8%	1.09	257.00	13.0%	0.99	114.00	5.7%	2.23						
120	418.00	21.1%	0.73	321.00	16.2%	0.95	518.00	26.1%	1.97	354.00	17.8%	1.27	257.00	13.0%	1.18	121.00	6.1%	2.50						
130	411.00	20.7%	0.87	317.00	16.0%	1.13	531.00	26.8%	2.24	355.00	17.9%	1.48	258.00	13.0%	1.39	128.00	6.5%	2.78						
140	404.00	20.4%	1.03	313.00	15.8%	1.32	542.00	27.3%	2.53	356.00	17.9%	1.71	257.00	13.0%	1.61	135.00	6.8%	3.07						
150	396.00	20.0%	1.20	309.00	15.6%	1.54	552.00	27.8%	2.83	357.00	18.0%	1.95	257.00	13.0%	1.85	141.00	7.1%	3.38						
160	388.00	19.6%	1.39	305.00	15.4%	1.77	562.00	28.3%	3.15	357.00	18.0%	2.20	258.00	13.0%	2.10	146.00	7.4%	3.70						
170	381.00	19.2%	1.60	302.00	15.2%	2.02	571.00	28.8%	3.48	358.00	18.0%	2.48	257.00	13.0%	2.37	151.00	7.6%	4.03						
180	374.00	18.8%	1.83	298.00	15.0%	2.29	580.00	29.2%	3.82	358.00	18.0%	2.77	257.00	13.0%	2.66	156.00	7.9%	4.37						
190	366.00	18.4%	2.08	296.00	14.9%	2.58	588.00	29.6%	4.17	358.00	18.0%	3.07	257.00	13.0%	2.96	161.00	8.1%	4.73						
200	359.00	18.1%	2.35	293.00	14.8%	2.88	596.00	30.0%	4.55	358.00	18.0%	3.40	257.00	13.0%	3.28	166.00	8.4%	5.10						
210	353.00	17.8%	2.64	290.00	14.6%	3.21	603.00	30.4%	4.93	359.00	18.1%	3.73	257.00	13.0%	3.62	170.00	8.6%	5.48						
220	347.00	17.5%	2.95	288.00	14.5%	3.55	610.00	30.7%	5.33	358.00	18.0%	4.09	257.00	13.0%	3.97	174.00	8.8%	5.88						
230	341.00	17.2%	3.28	286.00	14.4%	3.91	616.00	31.0%	5.74	358.00	18.0%	4.46	257.00	13.0%	4.34	178.00	9.0%	6.30						
240	335.00	16.9%	3.63	284.00	14.3%	4.29	622.00	31.4%	6.17	358.00	18.0%	4.84	257.00	13.0%	4.73	181.00	9.1%	6.73						
250	330.00	16.6%	4.00	282.00	14.2%	4.68	627.00	31.6%	6.62	358.00	18.0%	5.25	257.00	13.0%	5.14	184.00	9.3%	7.17						
260	326.00	16.4%	4.38	280.00	14.1%	5.09	632.00	31.9%	7.07	358.00	18.0%	5.67	257.00	13.0%	5.56	187.00	9.4%	7.62						
270	321.00	16.2%	4.80	279.00	14.1%	5.52	637.00	32.1%	7.55	358.00	18.0%	6.11	257.00	13.0%	6.09	190.00	9.6%	8.10						
280	317.00	16.0%	5.22	277.00	14.0%	5.97	641.00	32.3%	8.03	358.00	18.0%	6.56	257.00	13.0%	6.45	193.00	9.7%	8.58						
290	313.00	15.8%	5.67	276.00	13.9%	6.44	645.00	32.5%	8.54	357.00	18.0%	7.03	257.00	13.0%	6.92	196.00	9.9%	9.08						
300	310.00	15.6%	6.13	275.00	13.9%	6.92	649.00	32.7%	9.05	357.00	18.0%	7.52	257.00	13.0%	7.41	199.00	10.0%	9.60						
310	307.00	15.3%	6.62	274.00	13.8%	7.42	653.00	32.9%	9.58	357.00	18.0%	8.02	257.00	13.0%	7.91	200.00	10.1%	10.13						
320	304.00	15.3%	7.12	273.00	13.8%	7.93	656.00	33.1%	10.13	356.00	17.9%	8.54	256.00	12.9%	8.44	203.00	10.2%	10.67						
330	301.00	15.2%	7.65	272.00	13.7%	8.47	659.00	33.2%	10.70	356.00	17.9%	9.08	256.00	12.9%	8.98	205.00	10.3%	11.25						
340	298.00	15.0%	8.18	271.00	13.7%	9.02	662.00	33.4%	11.27	356.00	17.9%	9.63	256.00	12.9%	9.53	207.00	10.4%	11.82						
350	296.00	14.9%	8.75	270.00	13.6%	9.59	665.00	33.5%	11.87	355.00	17.9%	10.21	256.00	12.9%	10.10	209.00	10.5%	12.42						
360	294.00	14.8%	9.33	269.00	13.6%	10.18	667.00	33.6%	12.48	355.00	17.9%	10.80	256.00	12.9%	10.70	210.00	10.6%	13.03						
370	291.00	14.7%	9.92	268.00	13.5%	10.78	670.00	33.8%	13.11	354.00	17.8%	11.40	256.00	12.9%	11.30	212.00	10.7%	13.66						
380	290.00	14.6%	10.54	268.00	13.5%	11.40	672.00	33.9%	13.75	354.00	17.8%	12.03	256.00	12.9%	11.93	214.00	10.8%	14.30						
390	288.00	14.5%	11.17	267.00	13.5%	12.04	674.00	34.0%	14.41	354.00	17.8%	12.67	256.00	12.9%	12.57	215.00	10.8%	14.95						
400	286.00	14.4%	11.82	266.00	13.4%	12.70	676.00	34.1%	15.08	353.00	17.8%	13.32	256.00	12.9%	13.23	216.00	10.9%	15.63						
410	284.00	14.3%	12.49	266.00	13.4%	13.37	677.00	34.1%	15.78	353.00	17.8%	14.00	256.00	12.9%	13.91	218.00	11.0%	16.33						
420	283.00	14.3%	13.17	265.00	13.4%	14.06	679.00	34.2%	16.48	352.00	17.7%	14.69	255.00	12.9%	14.60	219.00	11.0%	17.03						
430	282.00	14.2%	13.88	265.00	13.4%	14.78	681.00	34.3%	17.21	352.00	17.7%	15.40	255.00	12.9%	15.31	220.00	11.1%	17.76						
440	280.00	14.1%	14.60	264.00	13.3%	15.50	681.00	34.3%	17.95	352.00	17.7%	16.13	255.00	12.9%	16.04	221.00	11.1%	18.50						
450	279.00	14.1%	15.35	263.00	13.3%	16.25	683.00	34.4%	18.71	351.00	17.7%	16.88	255.00	12.9%	16.79	222.00	11.2%	19.27						
460	278.00	14.0%	16.10	263.00	13.3%	17.01	684.00	34.5%	19.49	351.00	17.7%	17.64	255.00	12.9%	17.55	223.00	11.2%	20.04						
470	277.00	14.0%	16.88	262.00	13.2%	17.80	685.00	34.5%	20.28	350.00	17.6%	18.42	255.00	12.9%	18.34	224.00	11.3%	20.84						
480	276.00	13.9%	17.68	262.00	13.2%	18.59	686.00	34.6%	21.09	350.00	17.6%	19.22	255.00	12.9%	19.14	225.00	11.3%	21.65						
490	275.00	13.9%	18.49	262.00	13.2%	19.41	686.00	34.6%	21.92	349.00	17.6%	20.04	254.00	12.8%	19.96	226.00	11.4%	22.48						
500	274.00	13.8%	19.32	261.00	13.2%	20.25	687.00	34.6%	22.76	349.00	17.6%	20.												

ANAREIM AAAC 155.4 KCML

Clima: Templado
 Altitud: 1000 msnm - 2500 msnm
 Temperatura máxima (°C): 34
 Temperatura media (°C): 21
 Temperatura mínima (°C): 10
 Temperatura coincidente (°C): 12
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2397.59
 Peso (daN/m): 0.2129
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	539.00	22.5%	0.00	415.00	17.3%	0.01	398.00	16.6%	0.02	393.00	16.4%	0.01	290.00	12.1%	0.01	16.00	0.7%	0.16
20	539.00	22.5%	0.02	415.00	17.3%	0.03	414.00	17.2%	0.09	395.00	16.5%	0.04	291.00	12.1%	0.04	32.00	1.2%	0.33
30	539.00	22.5%	0.04	414.00	17.3%	0.06	435.00	18.1%	0.18	398.00	16.6%	0.09	293.00	12.2%	0.08	47.00	2.0%	0.51
40	539.00	22.5%	0.08	413.00	17.2%	0.10	458.00	19.1%	0.30	401.00	16.7%	0.15	296.00	12.3%	0.14	61.00	2.5%	0.70
50	539.00	22.5%	0.12	413.00	17.2%	0.16	481.00	20.1%	0.45	405.00	16.8%	0.24	299.00	12.5%	0.22	75.00	3.1%	0.89
60	539.00	22.5%	0.18	412.00	17.2%	0.23	504.00	21.0%	0.61	410.00	17.1%	0.34	303.00	12.6%	0.32	88.00	3.7%	1.09
70	539.00	22.5%	0.24	411.00	17.1%	0.32	526.00	21.9%	0.78	416.00	17.4%	0.45	307.00	12.8%	0.42	100.00	4.2%	1.31
80	539.00	22.5%	0.32	411.00	17.1%	0.41	548.00	22.9%	0.97	421.00	17.6%	0.57	311.00	13.0%	0.55	112.00	4.7%	1.52
90	531.00	22.1%	0.41	405.00	16.9%	0.53	564.00	23.5%	1.18	421.00	17.6%	0.72	311.00	13.0%	0.69	122.00	5.1%	1.76
100	522.00	21.8%	0.51	399.00	16.6%	0.67	579.00	24.1%	1.41	421.00	17.6%	0.89	311.00	13.0%	0.86	132.00	5.5%	2.01
110	513.00	21.4%	0.63	393.00	16.4%	0.82	594.00	24.6%	1.65	422.00	17.6%	1.07	311.00	13.0%	1.03	142.00	5.9%	2.28
120	503.00	21.0%	0.76	387.00	16.1%	0.95	608.00	25.0%	1.91	422.00	17.6%	1.27	311.00	13.0%	1.23	150.00	6.3%	2.55
130	494.00	20.6%	0.91	382.00	15.9%	1.18	620.00	25.9%	2.18	422.00	17.6%	1.48	311.00	13.0%	1.45	159.00	6.6%	2.84
140	484.00	20.2%	1.08	377.00	15.7%	1.38	632.00	26.6%	2.46	422.00	17.6%	1.71	311.00	13.0%	1.68	166.00	6.9%	3.14
150	473.00	19.7%	1.27	372.00	15.5%	1.61	644.00	26.9%	2.76	422.00	17.6%	1.96	311.00	13.0%	1.92	174.00	7.3%	3.45
160	463.00	19.3%	1.47	367.00	15.3%	1.86	654.00	27.3%	3.08	422.00	17.6%	2.22	311.00	13.0%	2.19	181.00	7.5%	3.77
170	454.00	18.9%	1.69	363.00	15.1%	2.12	663.00	27.7%	3.40	421.00	17.6%	2.51	311.00	13.0%	2.47	187.00	7.8%	4.11
180	444.00	18.5%	1.94	359.00	15.0%	2.41	672.00	28.0%	3.75	420.00	17.5%	2.81	311.00	13.0%	2.78	193.00	8.0%	4.47
190	435.00	18.1%	2.21	355.00	14.8%	2.71	680.00	28.4%	4.11	420.00	17.5%	3.12	311.00	13.0%	3.09	199.00	8.3%	4.84
200	427.00	17.8%	2.49	352.00	14.7%	3.03	688.00	28.7%	4.48	420.00	17.5%	3.45	311.00	13.0%	3.43	204.00	8.5%	5.22
210	419.00	17.5%	2.80	349.00	14.6%	3.37	695.00	29.0%	4.87	419.00	17.5%	3.80	311.00	13.0%	3.78	209.00	8.7%	5.62
220	412.00	17.2%	3.13	346.00	14.4%	3.73	701.00	29.2%	5.27	419.00	17.5%	4.17	311.00	13.0%	4.15	214.00	8.9%	6.03
230	405.00	16.9%	3.48	344.00	14.3%	4.10	707.00	29.5%	5.69	418.00	17.4%	4.55	311.00	13.0%	4.53	218.00	9.1%	6.45
240	398.00	16.6%	3.85	341.00	14.2%	4.50	712.00	29.7%	6.13	417.00	17.4%	4.96	310.00	12.9%	4.94	222.00	9.3%	6.90
250	392.00	16.3%	4.24	339.00	14.1%	4.91	718.00	29.9%	6.58	417.00	17.4%	5.38	310.00	12.9%	5.36	226.00	9.4%	7.35
260	387.00	16.1%	4.66	337.00	14.1%	5.34	722.00	30.1%	7.04	416.00	17.4%	5.82	310.00	12.9%	5.80	230.00	9.6%	7.83
270	382.00	15.9%	5.08	335.00	14.0%	5.79	727.00	30.3%	7.52	416.00	17.4%	6.27	310.00	12.9%	6.26	234.00	9.8%	8.31
280	377.00	15.7%	5.54	333.00	13.9%	6.26	731.00	30.5%	8.02	415.00	17.3%	6.74	310.00	12.9%	6.73	237.00	9.9%	8.82
290	373.00	15.6%	6.01	332.00	13.8%	6.75	734.00	30.6%	8.54	415.00	17.3%	7.23	310.00	12.9%	7.23	240.00	10.0%	9.34
300	369.00	15.4%	6.50	331.00	13.8%	7.25	738.00	30.8%	9.07	414.00	17.3%	7.74	310.00	12.9%	7.74	243.00	10.1%	9.88
310	366.00	15.2%	7.01	329.00	13.7%	7.78	741.00	30.9%	9.62	413.00	17.2%	8.27	310.00	12.9%	8.26	246.00	10.3%	10.43
320	362.00	15.1%	7.54	328.00	13.7%	8.32	744.00	31.0%	10.18	413.00	17.2%	8.81	310.00	12.9%	8.81	248.00	10.3%	11.00
330	359.00	15.0%	8.09	327.00	13.6%	8.88	746.00	31.1%	10.76	412.00	17.2%	9.37	310.00	12.9%	9.37	251.00	10.5%	11.58
340	356.00	14.8%	8.66	326.00	13.6%	9.46	749.00	31.2%	11.35	411.00	17.1%	9.95	309.00	12.9%	9.95	253.00	10.6%	12.18
350	353.00	14.7%	9.25	325.00	13.6%	10.05	751.00	31.3%	11.97	411.00	17.1%	10.54	309.00	12.9%	10.55	255.00	10.6%	12.80
360	350.00	14.6%	9.85	324.00	13.5%	10.67	753.00	31.4%	12.60	410.00	17.1%	11.16	309.00	12.9%	11.17	257.00	10.7%	13.44
370	346.00	14.5%	10.48	323.00	13.5%	11.30	755.00	31.5%	13.25	410.00	17.1%	11.80	309.00	12.9%	11.80	259.00	10.8%	14.09
380	346.00	14.4%	11.12	322.00	13.4%	11.94	757.00	31.6%	13.91	409.00	17.1%	12.44	309.00	12.9%	12.44	261.00	10.9%	14.76
390	344.00	14.3%	11.79	321.00	13.4%	12.62	758.00	31.6%	14.59	408.00	17.0%	13.12	309.00	12.9%	13.13	263.00	11.0%	15.45
400	342.00	14.3%	12.47	321.00	13.4%	13.36	759.00	31.7%	15.29	408.00	17.0%	13.80	309.00	12.9%	13.82	264.00	11.0%	16.15
410	340.00	14.2%	13.17	320.00	13.3%	14.01	761.00	31.7%	16.01	407.00	17.0%	14.51	309.00	12.9%	14.52	266.00	11.1%	16.88
420	338.00	14.1%	13.89	319.00	13.3%	14.73	762.00	31.8%	16.74	407.00	17.0%	15.23	308.00	12.8%	15.25	267.00	11.1%	17.61
430	337.00	14.1%	14.63	319.00	13.3%	15.46	763.00	31.8%	17.48	406.00	16.9%	15.98	308.00	12.8%	15.99	269.00	11.2%	18.37
440	335.00	14.0%	15.39	318.00	13.3%	16.24	763.00	31.8%	18.26	405.00	16.9%	16.74	308.00	12.8%	16.76	270.00	11.3%	19.15
450	334.00	13.9%	16.16	317.00	13.2%	17.02	764.00	31.9%	19.05	405.00	16.9%	17.52	308.00	12.8%	17.54	271.00	11.3%	19.94
460	333.00	13.9%	16.96	317.00	13.2%	17.82	765.00	31.9%	19.86	404.00	16.9%	18.31	308.00	12.8%	18.34	272.00	11.3%	20.75
470	331.00	13.8%	17.78	316.00	13.2%	18.63	765.00	31.9%	20.68	404.00	16.9%	19.13	308.00	12.8%	19.16	273.00	11.4%	21.58
480	330.00	13.8%	18.61	316.00	13.2%	19.47	766.00	31.9%	21.52	403.00	16.9%	19.97	307.00	12.8%	19.99	274.00	11.4%	22.43
490	329.00	13.7%	19.46	315.00	13.1%	20.32	766.00	31.9%	22.38	403.00	16.9%	20.82	307.00	12.8%	20.85	275.00	11.5%	23.29
500	328.00	13.7%	20.33	315.00	13.1%	21.20	766.00	31.9%	23.26	402.00	16.8%	21.69	307.00	12.8%	21.73	276.00	11.5%	24.18
510	327.00	13.6%	21.23	314.00	13.1%	22.09	766.00	31.9%	24.16	402.00	16.9%	22.59	307.00	12.8%	22.62	277.00	11.6%	25.08
520	326.00	13.6%	22.14	314.00	13.1%	23.01	766.00	31.9%	25.06	401.00	16.7%	23.50	307.00	12.8%	23.54	278.00	11.6%	25.00
530	325.00	13.6%	23.06	313.00	13.1%	23.93	767.00	32.0%	26.01	401.00	16.7%	24.43	306.00	12.8%	24.46	278.00	11.6%	26.94
540	324.00	13.5%	24.02	313.00	13.1%	24.89	767.00	32.0%	26.97	400.00	16.7%	25.38	306.00	12.8%	25.42	279.00	11.6%	27.90
550	323.00	13.5%	24.98	312.00	13.0%	25.85	767.00	32.0%	27.94	399.00	16.6%	26.35	306.00	12.8%	26.39	280.00	11.7%	28.87
560	322.00	13.4%	25.97	312.00	13.0%	26.84	766.00	31.9%	28.93	399.00	16.6%	27.34	306.00	12.8%	27.38	280.00	11.7%	29.88
570	321.00	13.4%	26.98	311.00	13.0%	27.86	766.00	31.9%	29.95	398.00	16.6%	28.35	306.00	12.8%	28.39	281.00	11.7%	30.90
580	321.00	13.4%	28.00	311.00	13.0%	28.88	766.00	31.9%	30.97	398.00	16.6%	29.37	305.00	12.7%	29.42	282.00	11.8%	31.92
590	320.00	13.3%	29.05	311.00	13.0%	29.93	766.00	31.9%	32.03	397.00	16.6%	30.42	305.00	12.7%	30.47	282.00	11.8%	32.98
600	319.00	13.3%	30.12	310.00	12.9%	31.00	765.00	31.9%	33.10	397.00	16.6%	31.49	305.00	12.7%	31.53	283.00	11.8%	

BUTTE AAAC 312.8 KCML																															
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70																															
Propiedades físicas del conductor: Tensión de rotura (daN): 4993.04 Peso (daN/m): 0.4284																															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%																															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final															
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		
10	929.00	19.0%	0.01	744.00	15%	0.01	707.00	14%	0.02	701.00	14%	0.01	503.00	10.3%	0.01	32.00	1%	0.17													
20	929.00	19.0%	0.02	743.00	15%	0.03	727.00	15%	0.07	702.00	14%	0.04	506.00	10.3%	0.04	62.00	1%	0.36													
30	929.00	19.0%	0.05	740.00	15%	0.07	754.00	15%	0.16	705.00	14%	0.09	511.00	10.4%	0.09	91.00	2%	0.53													
40	929.00	19.0%	0.09	739.00	15%	0.12	785.00	16%	0.27	710.00	15%	0.15	518.00	10.6%	0.17	118.00	2%	0.72													
50	929.00	19.0%	0.14	735.00	15%	0.18	817.00	17%	0.39	714.00	15%	0.23	526.00	10.7%	0.25	144.00	3%	0.93													
60	929.00	19.0%	0.21	734.00	15%	0.26	848.00	17%	0.54	720.00	15%	0.33	535.00	10.9%	0.36	169.00	3%	1.14													
70	929.00	19.0%	0.28	733.00	15%	0.36	879.00	18%	0.70	725.00	15%	0.45	545.00	11.1%	0.48	193.00	4%	1.36													
80	929.00	19.0%	0.37	733.00	15%	0.47	910.00	19%	0.88	733.00	15%	0.58	555.00	11.3%	0.62	218.00	4%	1.59													
90	925.00	18.9%	0.47	729.00	15%	0.59	936.00	19%	1.07	738.00	15%	0.72	562.00	11.5%	0.77	237.00	5%	1.83													
100	905.00	18.5%	0.59	716.00	15%	0.75	954.00	19%	1.29	733.00	15%	0.89	562.00	11.5%	0.95	256.00	5%	2.09													
110	885.00	18.1%	0.73	704.00	14%	0.92	970.00	20%	1.53	729.00	15%	1.09	562.00	11.5%	1.15	274.00	6%	2.37													
120	865.00	17.7%	0.89	692.00	14%	1.11	985.00	20%	1.78	724.00	15%	1.30	562.00	11.5%	1.37	290.00	6%	2.66													
130	845.00	17.3%	1.07	680.00	14%	1.33	999.00	20%	2.04	720.00	15%	1.53	562.00	11.5%	1.61	305.00	6%	2.97													
140	824.00	16.8%	1.27	668.00	14%	1.57	1010.00	21%	2.33	715.00	15%	1.78	561.00	11.5%	1.87	319.00	7%	3.29													
150	805.00	16.5%	1.50	660.00	13%	1.83	1021.00	21%	2.83	712.00	15%	2.05	561.00	11.5%	2.15	333.00	7%	3.62													
160	787.00	16.1%	1.74	652.00	13%	2.10	1032.00	21%	2.95	709.00	14%	2.33	561.00	11.5%	2.44	345.00	7%	3.97													
170	769.00	15.7%	2.01	644.00	13%	2.40	1040.00	21%	3.29	705.00	14%	2.64	561.00	11.5%	2.76	357.00	7%	4.34													
180	753.00	15.4%	2.31	636.00	13%	2.73	1048.00	21%	3.64	702.00	14%	2.97	561.00	11.5%	3.09	369.00	8%	4.72													
190	738.00	15.1%	2.62	630.00	13%	3.07	1055.00	22%	4.01	699.00	14%	3.32	561.00	11.5%	3.45	378.00	8%	5.12													
200	724.00	14.8%	2.96	624.00	13%	3.43	1061.00	22%	4.40	696.00	14%	3.69	561.00	11.5%	3.82	387.00	8%	5.54													
210	711.00	14.5%	3.32	619.00	13%	3.82	1067.00	22%	4.81	693.00	14%	4.08	561.00	11.5%	4.22	396.00	8%	5.97													
220	699.00	14.3%	3.71	615.00	13%	4.22	1072.00	22%	5.24	691.00	14%	4.48	561.00	11.5%	4.63	405.00	8%	6.42													
230	689.00	14.1%	4.11	611.00	12%	4.64	1076.00	22%	5.68	688.00	14%	4.91	560.00	11.4%	5.06	412.00	8%	6.88													
240	679.00	13.9%	4.55	607.00	12%	5.09	1080.00	22%	6.14	686.00	14%	5.36	560.00	11.4%	5.51	419.00	8%	7.36													
250	670.00	13.7%	5.00	603.00	12%	5.56	1083.00	22%	6.62	684.00	14%	5.83	560.00	11.4%	5.98	426.00	9%	7.87													
260	662.00	13.5%	5.47	600.00	12%	6.04	1086.00	22%	7.12	682.00	14%	6.31	560.00	11.4%	6.47	433.00	9%	8.38													
270	655.00	13.4%	5.97	597.00	12%	6.55	1089.00	22%	7.64	680.00	14%	6.82	560.00	11.4%	6.98	439.00	9%	8.92													
280	648.00	13.2%	6.45	594.00	12%	7.07	1091.00	22%	8.17	678.00	14%	7.35	559.00	11.4%	7.51	444.00	9%	9.47													
290	642.00	13.1%	7.02	592.00	12%	7.62	1093.00	22%	8.73	676.00	14%	7.90	559.00	11.4%	8.06	449.00	9%	10.05													
300	636.00	13.0%	7.58	589.00	12%	8.19	1094.00	22%	9.31	675.00	14%	8.48	559.00	11.4%	8.64	454.00	9%	10.64													
310	631.00	12.9%	8.16	587.00	12%	8.77	1096.00	22%	9.90	673.00	14%	9.05	559.00	11.4%	9.22	459.00	9%	11.25													
320	627.00	12.8%	8.76	585.00	12%	9.38	1097.00	22%	10.52	671.00	14%	9.66	558.00	11.4%	9.83	463.00	9%	11.88													
330	622.00	12.7%	9.39	584.00	12%	10.01	1098.00	22%	11.15	670.00	14%	10.29	558.00	11.4%	10.46	467.00	10%	12.52													
340	618.00	12.6%	10.03	582.00	12%	10.66	1098.00	22%	11.80	669.00	14%	10.93	558.00	11.4%	11.11	470.00	10%	13.19													
350	614.00	12.5%	10.69	580.00	12%	11.32	1099.00	22%	12.48	667.00	14%	11.60	558.00	11.4%	11.78	474.00	10%	13.88													
360	611.00	12.5%	11.38	579.00	12%	12.01	1099.00	22%	13.17	666.00	14%	12.29	557.00	11.4%	12.48	477.00	10%	14.58													
370	608.00	12.4%	12.08	577.00	12%	12.74	1099.00	22%	13.88	665.00	14%	13.00	557.00	11.4%	13.19	480.00	10%	15.31													
380	605.00	12.4%	12.81	576.00	12%	13.45	1099.00	22%	14.62	663.00	14%	13.73	557.00	11.4%	13.92	483.00	10%	16.06													
390	602.00	12.3%	13.55	575.00	12%	14.20	1099.00	22%	15.47	662.00	14%	14.48	556.00	11.4%	14.67	486.00	10%	16.81													
400	598.00	12.2%	14.33	573.00	12%	14.97	1098.00	22%	16.14	661.00	14%	15.25	556.00	11.4%	15.45	489.00	10%	17.60													
410	597.00	12.2%	15.12	572.00	12%	15.76	1098.00	22%	16.94	660.00	13%	16.04	556.00	11.4%	16.24	490.00	10%	18.41													
420	594.00	12.1%	15.92	571.00	12%	16.57	1098.00	22%	17.75	659.00	13%	16.85	555.00	11.3%	17.05	493.00	10%	19.23													
430	592.00	12.1%	16.76	570.00	12%	17.41	1097.00	22%	18.60	657.00	13%	17.69	555.00	11.3%	17.88	495.00	10%	20.07													
440	590.00	12.1%	17.61	569.00	12%	18.27	1096.00	22%	19.44	656.00	13%	18.54	555.00	11.3%	18.74	497.00															

CANTON AAAC 336.4 KCML															
Clima: Templado Altitud: 1000 msnm - 2500 msnm Temperatura máxima (°C): 34 Temperatura media (°C): 21 Temperatura mínima (°C): 10 Temperatura coincidente (°C): 12 Velocidad del viento máxima (km/h): 120 Velocidad del viento promedio (km/h): 70															
Propiedades físicas del conductor: Tensión de rotura (daN): 5916.13 Peso (daN/m): 0.5404															
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%															
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1123.00	19.0%	0.01	905.00	15%	0.01	857.00	14%	0.02	849.00	14%	0.01	601.00	10.2%	0.01
20	1123.00	19.0%	0.02	902.00	15%	0.03	878.00	15%	0.07	852.00	14%	0.04	606.00	10.2%	0.04
30	1123.00	19.0%	0.05	899.00	15%	0.07	908.00	15%	0.15	855.00	14%	0.09	612.00	10.3%	0.10
40	1123.00	19.0%	0.10	895.00	15%	0.12	942.00	16%	0.25	858.00	15%	0.15	622.00	10.5%	0.17
50	1123.00	19.0%	0.15	893.00	15%	0.19	977.00	17%	0.38	862.00	15%	0.24	633.00	10.7%	0.27
60	1123.00	19.0%	0.22	890.00	15%	0.27	1010.00	17%	0.52	869.00	15%	0.33	645.00	10.9%	0.38
70	1110.00	18.8%	0.30	878.00	15%	0.38	1038.00	18%	0.69	866.00	15%	0.46	650.00	11.0%	0.51
80	1086.00	18.4%	0.40	861.00	15%	0.50	1059.00	19%	0.97	859.00	15%	0.60	650.00	11.0%	0.67
90	1060.00	17.9%	0.52	842.00	14%	0.65	1078.00	18%	1.07	851.00	14%	0.76	650.00	11.0%	0.84
100	1032.00	17.4%	0.65	824.00	14%	0.82	1093.00	18%	1.30	842.00	14%	0.95	650.00	11.0%	1.04
110	1005.00	17.0%	0.81	806.00	14%	1.01	1108.00	19%	1.54	834.00	14%	1.15	650.00	11.0%	1.26
120	978.00	16.5%	0.99	793.00	13%	1.23	1121.00	19%	1.80	827.00	14%	1.38	650.00	11.0%	1.50
130	949.00	16.0%	1.20	777.00	13%	1.47	1131.00	19%	2.08	819.00	14%	1.63	649.00	11.0%	1.76
140	925.00	15.6%	1.43	765.00	13%	1.73	1142.00	19%	2.38	813.00	14%	1.91	649.00	11.0%	2.04
150	902.00	15.2%	1.69	754.00	13%	2.02	1150.00	19%	2.69	808.00	14%	2.20	649.00	11.0%	2.34
160	879.00	14.9%	1.97	744.00	13%	2.32	1158.00	20%	3.03	802.00	14%	2.51	649.00	11.0%	2.67
170	859.00	14.5%	2.27	734.00	12%	2.66	1165.00	20%	3.38	797.00	13%	2.85	649.00	11.0%	3.01
180	841.00	14.2%	2.60	727.00	12%	3.01	1170.00	20%	3.76	793.00	13%	3.21	649.00	11.0%	3.27
190	822.00	13.9%	2.97	719.00	12%	3.39	1174.00	20%	4.16	788.00	13%	3.60	648.00	11.0%	3.76
200	808.00	13.7%	3.35	713.00	12%	3.79	1179.00	20%	4.57	785.00	13%	3.99	648.00	11.0%	4.17
210	794.00	13.4%	3.75	708.00	12%	4.21	1182.00	20%	5.01	781.00	13%	4.42	648.00	11.0%	4.60
220	782.00	13.2%	4.18	702.00	12%	4.66	1185.00	20%	5.47	778.00	13%	4.87	648.00	11.0%	5.05
230	770.00	13.0%	4.64	698.00	12%	5.13	1187.00	20%	5.94	774.00	13%	5.34	648.00	11.0%	5.52
240	761.00	12.9%	5.12	694.00	12%	5.61	1189.00	20%	6.44	772.00	13%	5.82	647.00	10.9%	6.01
250	752.00	12.7%	5.62	690.00	12%	6.12	1190.00	20%	6.96	769.00	13%	6.34	647.00	10.9%	6.53
260	744.00	12.6%	6.14	687.00	12%	6.66	1192.00	20%	7.50	767.00	13%	6.87	647.00	10.9%	7.07
270	737.00	12.5%	6.69	683.00	12%	7.21	1192.00	20%	8.06	764.00	13%	7.42	646.00	10.9%	7.63
280	730.00	12.3%	7.26	681.00	12%	7.79	1193.00	20%	8.64	762.00	13%	8.00	646.00	10.9%	8.20
290	724.00	12.2%	7.86	678.00	11%	8.39	1193.00	20%	9.24	760.00	13%	8.60	646.00	10.9%	8.81
300	718.00	12.1%	8.47	676.00	11%	9.01	1193.00	20%	9.87	757.00	13%	9.22	645.00	10.9%	9.43
310	713.00	12.1%	9.11	674.00	11%	9.65	1193.00	20%	10.51	756.00	13%	9.86	645.00	10.9%	10.07
320	709.00	12.0%	9.77	671.00	11%	10.32	1193.00	20%	11.18	754.00	13%	10.53	645.00	10.9%	10.74
330	705.00	11.9%	10.46	670.00	11%	11.00	1192.00	20%	11.87	752.00	13%	11.22	645.00	10.9%	11.43
340	700.00	11.8%	11.17	668.00	11%	11.71	1191.00	20%	12.58	750.00	13%	11.93	644.00	10.9%	12.14
350	697.00	11.8%	11.89	666.00	11%	12.45	1190.00	20%	13.32	749.00	13%	12.66	644.00	10.9%	12.88
360	693.00	11.7%	12.65	664.00	11%	13.20	1189.00	20%	14.08	747.00	13%	13.42	643.00	10.9%	13.63
370	690.00	11.7%	13.42	663.00	11%	13.98	1188.00	20%	14.86	746.00	13%	14.19	643.00	10.9%	14.41
380	687.00	11.6%	14.22	661.00	11%	14.78	1187.00	20%	15.65	744.00	13%	14.99	643.00	10.9%	15.21
390	684.00	11.6%	15.04	660.00	11%	15.60	1186.00	20%	16.48	743.00	13%	15.81	642.00	10.9%	16.04
400	682.00	11.5%	15.89	659.00	11%	16.45	1185.00	20%	17.32	741.00	13%	16.66	642.00	10.9%	16.89
410	679.00	11.5%	16.75	657.00	11%	17.32	1183.00	20%	18.19	740.00	13%	17.53	641.00	10.8%	17.76
420	677.00	11.4%	17.65	656.00	11%	18.21	1182.00	20%	19.08	738.00	12%	18.42	641.00	10.8%	18.65
430	676.00	11.4%	18.56	655.00	11%	19.13	1180.00	20%	20.00	737.00	12%	19.34	640.00	10.8%	19.57
440	672.00	11.4%	19.50	654.00	11%	20.06	1179.00	20%	20.94	736.00	12%	20.27	640.00	10.8%	20.50
450	670.00	11.3%	20.46	652.00	11%	21.03	1177.00	20%	21.90	735.00	12%	21.24	639.00	10.8%	21.47
460	668.00	11.3%	21.44	651.00	11%	22.01	1175.00	20%	22.88	733.00	12%	22.22	639.00	10.8%	22.45
470	667.00	11.3%	22.45	650.00	11%	23.02	1174.00	20%	23.89	732.00	12%	23.23	638.00	10.8%	23.46
480	665.00	11.2%	23.49	649.00	11%	24.06	1172.00	20%	24.93	731.00	12%	24.26	638.00	10.8%	24.50
490	663.00	11.2%	24.55	648.00	11%	25.12	1170.00	20%	25.98	729.00	12%	25.13	637.00	10.8%	25.56
500	661.00	11.2%	25.62	647.00	11%	26.20	1168.00	20%	27.06	728.00	12%	26.41	636.00	10.8%	26.64
510	660.00	11.2%	26.73	646.00	11%	27.31	1166.00	20%	28.17	727.00	12%	27.51	636.00	10.8%	27.75
520	658.00	11.1%	27.86	645.00	11%	28.43	1165.00	20%	29.30	726.00	12%	28.64	635.00	10.7%	28.98
530	657.00	11.1%	29.02	644.00	11%	29.59	1163.00	20%	30.45	725.00	12%	29.80	635.00	10.7%	30.03
540	655.00	11.1%	30.19	643.00	11%	30.77	1161.00	20%	31.63	724.00	12%	30.97	634.00	10.7%	31.21
550	654.00	11.1%	31.40	642.00	11%	31.97	1159.00	20%	32.83	722.00	12%	32.18	633.00	10.7%	32.42
560	652.00	11.0%	32.64	641.00	11%	33.21	1157.00	20%	34.07	721.00	12%	33.42	633.00	10.7%	33.65
570	651.00	11.0%	33.89	640.00	11%	34.46	1155.00	20%	35.32	720.00	12%	34.66	632.00	10.7%	34.91
580	649.00	11.0%	35.17	639.00	11%	35.75	1153.00	19%	36.60	719.00	12%	35.95	631.00	10.7%	36.19
590	648.00	11.0%	36.48	638.00	11%	37.06	1151.00	19%	37.91	717.00	12%	37.26	630.00	10.6%	37.50
600	647.00	10.9%	37.81	637.00	11%	38.38	1149.00	19%	39.24	716.00	12%	38.58	630.00	10.6%	38.83



ANEXO B3: Clima frío



ANEXO B3.1: Zona 1 (Velocidad de viento máxima 60 km/h)

SPARROW ACSR 2 AWG

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 60
Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
Tensión de rotura (daN): 1267.74
Peso (daN/m): 0.1330
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 23%
Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	291.00	23.0%	0.01	202.00	15.9%	0.01	196.00	15.5%	0.01	196.00	15.5%	0.01	172.00	13.6%	0.01	25.00	2.0%	0.07
20	291.00	23.0%	0.02	201.00	15.9%	0.03	197.00	15.5%	0.04	196.00	15.5%	0.04	173.00	13.6%	0.04	37.00	2.9%	0.18
30	291.00	23.0%	0.05	202.00	15.9%	0.07	199.00	15.7%	0.10	197.00	15.5%	0.08	174.00	13.7%	0.09	46.00	3.6%	0.32
40	291.00	23.0%	0.09	202.00	15.9%	0.13	202.00	15.9%	0.17	198.00	15.6%	0.14	176.00	13.9%	0.15	55.00	4.3%	0.49
50	290.00	22.9%	0.14	202.00	15.9%	0.21	204.00	16.1%	0.26	199.00	15.7%	0.22	177.00	14.0%	0.23	62.00	4.9%	0.67
60	287.00	22.6%	0.21	201.00	15.9%	0.30	206.00	16.2%	0.37	198.00	15.6%	0.32	177.00	14.0%	0.34	69.00	5.4%	0.87
70	282.00	22.2%	0.29	199.00	15.7%	0.41	206.00	16.2%	0.50	197.00	15.5%	0.44	177.00	14.0%	0.46	75.00	5.9%	1.09
80	277.00	21.8%	0.38	197.00	15.5%	0.54	207.00	16.3%	0.64	196.00	15.5%	0.57	177.00	14.0%	0.60	80.00	6.3%	1.32
90	273.00	21.5%	0.49	196.00	15.5%	0.69	208.00	16.4%	0.81	196.00	15.5%	0.72	177.00	14.0%	0.76	86.00	6.8%	1.57
100	267.00	21.1%	0.62	194.00	15.3%	0.86	209.00	16.5%	0.99	195.00	15.4%	0.90	177.00	14.0%	0.94	90.00	7.1%	1.84
110	261.00	20.6%	0.77	193.00	15.2%	1.04	209.00	16.5%	1.19	194.00	15.3%	1.09	177.00	14.0%	1.14	95.00	7.5%	2.12
120	255.00	20.1%	0.84	192.00	15.1%	1.25	209.00	16.5%	1.41	193.00	15.2%	1.30	177.00	14.0%	1.35	99.00	7.8%	2.42
130	250.00	19.7%	1.13	190.00	15.0%	1.48	210.00	16.6%	1.65	192.00	15.1%	1.53	177.00	14.0%	1.59	103.00	8.1%	2.74
140	244.00	19.2%	1.33	189.00	14.9%	1.72	210.00	16.6%	1.90	192.00	15.1%	1.78	177.00	14.0%	1.84	106.00	8.4%	3.07
150	238.00	18.8%	1.56	188.00	14.8%	1.99	211.00	16.6%	2.17	191.00	15.1%	2.05	177.00	14.0%	2.11	110.00	8.7%	3.41
160	234.00	18.5%	1.82	187.00	14.8%	2.28	211.00	16.6%	2.47	191.00	15.1%	2.34	177.00	14.0%	2.41	113.00	8.9%	3.77
170	230.00	18.1%	2.09	186.00	14.7%	2.58	211.00	16.6%	2.78	190.00	15.0%	2.65	177.00	14.0%	2.72	116.00	9.2%	4.15
180	225.00	17.7%	2.39	185.00	14.6%	2.91	211.00	16.6%	3.11	190.00	15.0%	2.97	177.00	14.0%	3.05	119.00	9.4%	4.54
190	221.00	17.4%	2.71	185.00	14.6%	3.25	211.00	16.6%	3.46	189.00	14.9%	3.32	177.00	14.0%	3.39	121.00	9.5%	4.95
200	218.00	17.2%	3.06	184.00	14.5%	3.62	211.00	16.6%	3.83	189.00	14.9%	3.69	177.00	14.0%	3.76	124.00	9.8%	5.38
210	214.00	16.9%	3.42	183.00	14.4%	4.00	211.00	16.6%	4.22	188.00	14.8%	4.07	177.00	14.0%	4.15	126.00	9.9%	5.82
220	212.00	16.7%	3.81	183.00	14.4%	4.40	210.00	16.6%	4.62	188.00	14.8%	4.47	177.00	14.0%	4.56	129.00	10.1%	6.28
230	209.00	16.5%	4.22	183.00	14.4%	4.82	210.00	16.6%	5.05	188.00	14.8%	4.90	177.00	14.0%	4.98	130.00	10.3%	6.75
240	206.00	16.2%	4.65	182.00	14.4%	5.27	210.00	16.6%	5.49	187.00	14.8%	5.34	177.00	14.0%	5.43	132.00	10.4%	7.25
250	204.00	16.1%	5.10	182.00	14.4%	5.73	210.00	16.6%	5.96	187.00	14.8%	5.81	177.00	14.0%	5.89	134.00	10.6%	7.76
260	202.00	15.9%	5.57	181.00	14.3%	6.21	210.00	16.6%	6.44	187.00	14.8%	6.29	177.00	14.0%	6.37	136.00	10.7%	8.28
270	200.00	15.8%	6.06	181.00	14.3%	6.71	210.00	16.6%	6.94	186.00	14.7%	6.79	177.00	14.0%	6.88	138.00	10.9%	8.82
280	196.00	15.7%	6.57	181.00	14.3%	7.23	210.00	16.6%	7.46	186.00	14.7%	7.31	176.00	13.9%	7.40	139.00	11.0%	9.39
290	197.00	15.5%	7.10	180.00	14.2%	7.77	210.00	16.6%	8.00	186.00	14.7%	7.85	176.00	13.9%	7.94	141.00	11.1%	9.96
300	196.00	15.5%	7.66	180.00	14.2%	8.33	209.00	16.5%	8.56	186.00	14.7%	8.41	176.00	13.9%	8.50	142.00	11.2%	10.55
310	194.00	15.3%	8.23	180.00	14.2%	8.91	209.00	16.5%	9.14	185.00	14.6%	8.99	176.00	13.9%	9.08	144.00	11.4%	11.15
320	193.00	15.2%	8.83	179.00	14.1%	9.51	209.00	16.5%	9.74	185.00	14.6%	9.59	176.00	13.9%	9.68	145.00	11.4%	11.77
330	192.00	15.1%	9.44	179.00	14.1%	10.13	209.00	16.5%	10.36	185.00	14.6%	10.21	176.00	13.9%	10.30	146.00	11.5%	12.41
340	191.00	15.1%	10.08	179.00	14.1%	10.77	209.00	16.5%	11.00	185.00	14.6%	10.85	176.00	13.9%	10.94	147.00	11.6%	13.07
350	190.00	15.0%	10.73	179.00	14.1%	11.43	208.00	16.4%	11.66	185.00	14.6%	11.51	176.00	13.9%	11.60	149.00	11.8%	13.74
360	189.00	14.9%	11.40	178.00	14.0%	12.10	208.00	16.4%	12.34	184.00	14.5%	12.18	176.00	13.9%	12.28	150.00	11.8%	14.43
370	188.00	14.8%	12.10	178.00	14.0%	12.81	208.00	16.4%	13.04	184.00	14.5%	12.88	176.00	13.9%	12.98	151.00	11.9%	15.15
380	188.00	14.8%	12.82	178.00	14.0%	13.53	208.00	16.4%	13.76	184.00	14.5%	13.60	176.00	13.9%	13.70	152.00	12.0%	15.88
390	187.00	14.8%	13.56	178.00	14.0%	14.26	208.00	16.4%	14.50	184.00	14.5%	14.34	176.00	13.9%	14.44	152.00	12.0%	16.64
400	186.00	14.7%	14.32	178.00	14.0%	15.02	207.00	16.3%	15.26	184.00	14.5%	15.10	176.00	13.8%	15.20	153.00	12.1%	17.41
410	186.00	14.7%	15.09	177.00	14.0%	15.81	207.00	16.3%	16.04	183.00	14.4%	15.88	176.00	13.8%	15.98	154.00	12.1%	18.20
420	185.00	14.6%	15.89	177.00	14.0%	16.60	207.00	16.3%	16.83	183.00	14.4%	16.68	176.00	13.8%	16.78	155.00	12.2%	19.01
430	184.00	14.5%	16.71	177.00	14.0%	17.43	207.00	16.3%	17.66	183.00	14.4%	17.50	176.00	13.8%	17.60	156.00	12.3%	19.84
440	184.00	14.5%	17.55	177.00	14.0%	18.27	206.00	16.2%	18.50	183.00	14.4%	18.34	176.00	13.8%	18.45	156.00	12.3%	20.69
450	183.00	14.4%	18.41	177.00	14.0%	19.13	206.00	16.2%	19.36	183.00	14.4%	19.21	176.00	13.8%	19.31	157.00	12.4%	21.57
460	183.00	14.4%	19.30	176.00	13.9%	20.01	206.00	16.2%	20.25	182.00	14.4%	20.09	176.00	13.8%	20.19	157.00	12.4%	22.46
470	182.00	14.4%	20.19	176.00	13.9%	20.92	206.00	16.2%	21.15	182.00	14.4%	20.99	176.00	13.8%	21.10	158.00	12.5%	23.37
480	182.00	14.4%	21.12	176.00	13.9%	21.84	206.00	16.2%	22.07	182.00	14.4%	21.92	176.00	13.8%	22.02	158.00	12.5%	24.30
490	182.00	14.4%	22.07	176.00	13.9%	22.79	205.00	16.2%	23.02	182.00	14.4%	22.87	174.00	13.7%	22.97	159.00	12.6%	25.26
500	181.00	14.3%	23.04	176.00	13.9%	23.76	205.00	16.2%	23.99	182.00	14.4%	23.83	174.00	13.7%	23.94	159.00	12.6%	26.24
510	181.00	14.3%	24.03	175.00	13.8%	24.75	205.00	16.2%	24.98	181.00	14.3%	24.83	174.00	13.7%	24.93	160.00	12.6%	27.23
520	180.00	14.2%	25.03	175.00	13.8%	25.75	205.00	16.2%	25.98	181.00	14.3%	25.83	174.00	13.7%	25.94	160.00	12.6%	28.24
530	180.00	14.2%	26.06	175.00	13.8%	26.78	204.00	16.1%	27.02	181.00	14.3%	26.86	174.00	13.7%	26.97	160.00	12.6%	29.28
540	179.00	14.1%	27.12	175.00	13.8%	27.84	204.00	16.1%	28.07	181.00	14.3%	27.92	174.00	13.7%	28.02	161.00	12.7%	30.34
550	179.00	14.1%	28.20	175.00	13.8%	28.92	204.00	16.1%	29.14	181.00	14.3%	29.00	174.00	13.7%	29.10	161.00	12.7%	31.43
560	179.00	14.1%	29.29	175.00	13.8%	30.01	204.00	16.1%	30.24	181.00	14.3%	30.09	173.00	13.6%	30.20	161.00	12.7%	32.53
570	178.00	14.0%	30.41	174.00	13.7%	31.13	203.00	16.0%	31.36	180.00	14.2%	31.21	173.00	13.6%	31.31	161.00	12.7%	33.65
580	178.00	14.0%	31.55	174.00	13.7%	32.28	203.00	16.0%	32.50	180.00	14.2%	32.36	173.00	13.6%	32.46	162.00	12.8%	34.80
590	178.00	14.0%	32.72	174.00	13.7%	33.44	203.00	16.0%	33.66	180.00	14.2%	33.52	173.00	13.6%	33.62	162.00	12.8%	35.97
600	177.00	14.0%	33.90	174.00	13.7%	34.62	203.00	16.0%	34.85	180.00	14.2%	34.70	173.00	13.6%	34.81	162.00	12.8%	37.16

RAVEN ACSR 110 AWG																		
Clima: Frío																		
Altitud: 2500 msnm - 3500 msnm																		
Temperatura máxima (°C): 27																		
Temperatura media (°C): 9																		
Temperatura mínima (°C): 4																		
Temperatura coincidente (°C): 5																		
Velocidad del viento máxima (km/h): 60																		
Velocidad del viento promedio (km/h): 40																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1948.32																		
Peso (daN/m): 0.2118																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 22.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final		Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	
	daN	UTS		daN	UTS	m	daN	UTS	daN	UTS	m	daN	UTS	m	daN	UTS	m	
10	434.00	22.3%	0.01	318.00	16.3%	0.01	309.00	15.9%	0.01	309.00	15.9%	0.01	272.00	14.0%	0.01	44.00	2.3%	0.06
20	432.00	22.2%	0.02	317.00	16.2%	0.03	309.00	15.9%	0.04	308.00	15.8%	0.04	272.00	14.0%	0.04	61.00	3.1%	0.17
30	430.00	22.1%	0.06	316.00	16.2%	0.08	311.00	16.0%	0.09	308.00	15.8%	0.08	272.00	14.0%	0.09	75.00	3.8%	0.32
40	426.00	21.9%	0.10	314.00	16.1%	0.14	311.00	16.0%	0.16	307.00	15.8%	0.14	272.00	14.0%	0.16	88.00	4.5%	0.48
50	421.00	21.6%	0.16	311.00	16.0%	0.21	311.00	16.0%	0.25	305.00	15.7%	0.22	272.00	14.0%	0.24	99.00	5.1%	0.67
60	416.00	21.4%	0.23	309.00	15.9%	0.31	311.00	16.0%	0.36	304.00	15.6%	0.33	272.00	14.0%	0.35	109.00	5.6%	0.87
70	409.00	21.0%	0.32	306.00	15.7%	0.42	311.00	16.0%	0.49	301.00	15.4%	0.45	272.00	14.0%	0.48	119.00	6.1%	1.10
80	402.00	20.6%	0.42	303.00	15.6%	0.56	311.00	16.0%	0.63	300.00	15.4%	0.58	272.00	14.0%	0.62	127.00	6.5%	1.33
90	395.00	20.3%	0.54	301.00	15.4%	0.71	312.00	16.0%	0.80	298.00	15.3%	0.74	272.00	14.0%	0.79	135.00	6.9%	1.59
100	387.00	19.9%	0.69	298.00	15.3%	0.89	312.00	16.0%	0.98	297.00	15.2%	0.92	273.00	14.0%	0.97	143.00	7.3%	1.86
110	380.00	19.5%	0.84	296.00	15.2%	1.08	312.00	16.0%	1.19	295.00	15.1%	1.12	272.00	14.0%	1.18	150.00	7.7%	2.14
120	372.00	19.1%	1.02	294.00	15.1%	1.30	312.00	16.0%	1.41	294.00	15.1%	1.34	272.00	14.0%	1.40	156.00	8.0%	2.46
130	364.00	18.7%	1.23	292.00	15.0%	1.53	311.00	16.0%	1.65	293.00	15.0%	1.58	272.00	14.0%	1.64	162.00	8.3%	2.77
140	357.00	18.3%	1.45	290.00	14.9%	1.79	311.00	16.0%	1.91	292.00	15.0%	1.84	272.00	14.0%	1.91	167.00	8.6%	3.10
150	350.00	18.0%	1.70	288.00	14.8%	2.07	311.00	16.0%	2.20	290.00	14.9%	2.11	272.00	14.0%	2.19	172.00	8.8%	3.46
160	344.00	17.7%	1.97	287.00	14.7%	2.36	310.00	15.9%	2.50	290.00	14.9%	2.41	272.00	14.0%	2.49	177.00	9.1%	3.83
170	338.00	17.3%	2.26	286.00	14.7%	2.68	310.00	15.9%	2.82	289.00	14.8%	2.73	272.00	14.0%	2.81	182.00	9.3%	4.21
180	333.00	17.1%	2.58	284.00	14.6%	3.02	310.00	15.9%	3.16	288.00	14.8%	3.07	272.00	14.0%	3.16	186.00	9.5%	4.62
190	328.00	16.8%	2.92	283.00	14.5%	3.38	309.00	15.9%	3.52	287.00	14.7%	3.43	272.00	14.0%	3.52	190.00	9.8%	5.04
200	323.00	16.6%	3.28	282.00	14.5%	3.75	309.00	15.9%	3.90	286.00	14.7%	3.81	272.00	14.0%	3.90	194.00	10.0%	5.47
210	318.00	16.4%	3.66	281.00	14.4%	4.15	309.00	15.9%	4.30	286.00	14.7%	4.21	272.00	14.0%	4.30	197.00	10.1%	5.92
220	315.00	16.2%	4.07	281.00	14.4%	4.57	308.00	15.8%	4.72	285.00	14.6%	4.63	272.00	14.0%	4.72	201.00	10.3%	6.39
230	312.00	16.0%	4.49	280.00	14.4%	5.01	308.00	15.8%	5.16	284.00	14.6%	5.07	272.00	14.0%	5.16	204.00	10.5%	6.88
240	308.00	15.9%	4.94	279.00	14.3%	5.47	307.00	15.8%	5.62	284.00	14.6%	5.53	271.00	13.9%	5.63	207.00	10.6%	7.39
250	306.00	15.7%	5.41	278.00	14.3%	5.95	307.00	15.8%	6.10	283.00	14.5%	6.01	271.00	13.9%	6.11	209.00	10.7%	7.91
260	303.00	15.6%	5.90	278.00	14.3%	6.45	307.00	15.8%	6.60	283.00	14.5%	6.51	271.00	13.9%	6.61	212.00	10.9%	8.45
270	301.00	15.4%	6.42	277.00	14.2%	6.87	306.00	15.7%	7.12	282.00	14.5%	7.03	271.00	13.9%	7.13	214.00	11.0%	9.02
280	299.00	15.3%	6.95	277.00	14.2%	7.51	306.00	15.7%	7.66	282.00	14.5%	7.57	271.00	13.9%	7.67	217.00	11.1%	9.59
290	297.00	15.2%	7.50	276.00	14.2%	8.07	306.00	15.7%	8.22	282.00	14.5%	8.13	271.00	13.9%	8.23	219.00	11.2%	10.19
300	296.00	15.2%	8.07	276.00	14.2%	8.65	305.00	15.7%	8.80	281.00	14.4%	8.70	271.00	13.9%	8.81	221.00	11.3%	10.80
310	294.00	15.1%	8.67	276.00	14.2%	9.25	305.00	15.7%	9.40	281.00	14.4%	9.31	271.00	13.9%	9.41	223.00	11.4%	11.44
320	292.00	15.0%	9.29	275.00	14.1%	9.87	305.00	15.7%	10.02	281.00	14.4%	9.93	271.00	13.9%	10.04	225.00	11.5%	12.08
330	291.00	14.9%	9.93	275.00	14.1%	10.51	304.00	15.6%	10.67	280.00	14.4%	10.57	270.00	13.9%	10.68	227.00	11.7%	12.74
340	290.00	14.9%	10.59	274.00	14.1%	11.17	304.00	15.6%	11.33	280.00	14.4%	11.23	270.00	13.9%	11.34	229.00	11.8%	13.42
350	288.00	14.8%	11.27	274.00	14.1%	11.86	304.00	15.6%	12.02	280.00	14.4%	11.92	270.00	13.9%	12.03	230.00	11.8%	14.12
360	287.00	14.7%	11.97	274.00	14.1%	12.56	303.00	15.6%	12.72	279.00	14.3%	12.62	270.00	13.9%	12.73	232.00	11.9%	14.84
370	286.00	14.7%	12.70	273.00	14.0%	13.28	303.00	15.6%	13.45	279.00	14.3%	13.35	270.00	13.9%	13.46	233.00	14.0%	15.58
380	285.00	14.6%	13.44	273.00	14.0%	14.04	303.00	15.6%	14.19	279.00	14.3%	14.10	270.00	13.9%	14.21	235.00	12.1%	16.34
390	284.00	14.6%	14.20	273.00	14.0%	14.80	302.00	15.5%	14.96	278.00	14.3%	14.86	270.00	13.9%	14.97	236.00	12.1%	17.12
400	283.00	14.5%	14.99	272.00	14.0%	15.59	302.00	15.5%	15.75	278.00	14.3%	15.65	269.00	13.8%	15.76	237.00	12.2%	17.92
410	282.00	14.5%	15.80	272.00	14.0%	16.41	302.00	15.5%	16.56	278.00	14.3%	16.46	269.00	13.8%	16.58	238.00	12.2%	18.74
420	282.00	14.5%	16.63	272.00	14.0%	17.23	301.00	15.4%	17.39	277.00	14.2%	17.29	269.00	13.8%	17.40	239.00	12.3%	19.58
430	281.00	14.4%	17.48	271.00	13.9%	18.08	301.00	15.4%	18.24	277.00	14.2%	18.14	269.00	13.8%	18.26	240.00	12.3%	20.44
440	280.00	14.4%	18.35	271.00	13.9%	18.96	301.00	15.4%	19.12	277.00	14.2%	19.02	269.00	13.8%	19.13	241.00	12.4%	21.33
450	279.00	14.3%	19.25	271.00	13.9%	19.86	300.00	15.4%	20.01	277.00	14.2%	19.92	268.00	13.8%	20.03	242.00	12.4%	22.23
460	278.00	14.3%	20.16	271.00	13.9%	20.77	300.00	15.4%	20.93	276.00	14.2%	20.83	268.00	13.8%	20.95	243.00	12.5%	23.15
470	278.00	14.3%	21.10	270.00	13.9%	21.71	300.00	15.4%	21.87	276.00	14.2%	21.77	268.00	13.8%	21.89	244.00	12.5%	24.10
480	277.00	14.2%	22.06	270.00	13.9%	22.67	299.00	15.3%	22.83	276.00	14.2%	22.73	268.00	13.8%	22.85	244.00	12.5%	25.07
490	277.00	14.2%	23.04	270.00	13.9%	23.66	299.00	15.3%	23.81	275.00	14.1%	23.71	268.00	13.8%	23.83	245.00	12.6%	26.06
500	276.00	14.2%	24.05	269.00	13.8%	24.66	299.00	15.3%	24.81	275.00	14.1%	24.72	267.00	13.7%	24.84	246.00	12.6%	27.07
510	276.00	14.2%	25.08	269.00	13.8%	25.69	298.00	15.3%	25.84	275.00	14.1%	25.75	267.00	13.7%	25.86	246.00	12.6%	28.10

QUAL ACSR 2/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2362.01
 Peso (daN/m): 0.2667

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	529.00	22.4%	0.01	388.00	16.4%	0.01	377.00	16.0%	0.01	377.00	16.0%	0.01	330.00	14.0%	0.01	51.00	2.2%	0.07
20	527.00	22.2%	0.03	386.00	16.2%	0.03	377.00	16.0%	0.04	376.00	15.9%	0.04	330.00	14.0%	0.04	73.00	3.1%	0.16
30	523.00	22.1%	0.06	384.00	16.3%	0.08	377.00	16.0%	0.09	374.00	15.8%	0.08	330.00	14.0%	0.09	91.00	3.9%	0.33
40	518.00	21.9%	0.10	382.00	16.2%	0.14	377.00	16.0%	0.16	372.00	15.7%	0.15	330.00	14.0%	0.16	107.00	4.5%	0.50
50	512.00	21.7%	0.16	379.00	16.0%	0.22	377.00	16.0%	0.25	371.00	15.7%	0.23	330.00	14.0%	0.25	121.00	5.1%	0.69
60	504.00	21.3%	0.24	375.00	15.9%	0.32	376.00	15.9%	0.36	367.00	15.5%	0.34	330.00	14.0%	0.36	134.00	5.7%	0.89
70	496.00	21.0%	0.33	372.00	15.7%	0.44	376.00	15.9%	0.49	366.00	15.5%	0.46	330.00	14.0%	0.49	146.00	6.2%	1.12
80	486.00	20.6%	0.44	366.00	15.6%	0.58	376.00	15.9%	0.64	363.00	15.4%	0.60	330.00	14.0%	0.65	157.00	6.6%	1.36
90	477.00	20.2%	0.57	364.00	15.4%	0.74	375.00	15.9%	0.81	361.00	15.3%	0.77	330.00	14.0%	0.82	167.00	7.1%	1.62
100	467.00	19.8%	0.71	361.00	15.3%	0.92	375.00	15.9%	1.00	359.00	15.2%	0.95	330.00	14.0%	1.01	176.00	7.5%	1.90
110	457.00	19.3%	0.86	359.00	15.2%	1.12	374.00	15.8%	1.21	357.00	15.1%	1.16	330.00	14.0%	1.22	184.00	7.8%	2.19
120	447.00	18.9%	1.07	356.00	15.1%	1.35	373.00	15.8%	1.44	355.00	15.0%	1.39	330.00	14.0%	1.45	192.00	8.1%	2.50
130	436.00	18.5%	1.29	353.00	14.9%	1.60	372.00	15.7%	1.70	353.00	14.9%	1.64	330.00	14.0%	1.71	199.00	8.4%	2.83
140	426.00	18.1%	1.53	351.00	14.9%	1.86	371.00	15.7%	1.97	351.00	14.9%	1.91	330.00	14.0%	1.98	206.00	8.7%	3.17
150	420.00	17.8%	1.79	349.00	14.8%	2.15	371.00	15.7%	2.26	350.00	14.8%	2.19	330.00	14.0%	2.27	213.00	9.0%	3.53
160	411.00	17.4%	2.07	347.00	14.7%	2.46	370.00	15.7%	2.57	349.00	14.8%	2.50	330.00	14.0%	2.59	219.00	9.3%	3.91
170	405.00	17.1%	2.38	345.00	14.6%	2.79	370.00	15.7%	2.90	348.00	14.7%	2.84	330.00	14.0%	2.92	224.00	9.5%	4.30
180	399.00	16.9%	2.71	344.00	14.6%	3.14	369.00	15.6%	3.26	347.00	14.7%	3.19	330.00	14.0%	3.28	229.00	9.7%	4.71
190	392.00	16.6%	3.07	343.00	14.5%	3.51	369.00	15.6%	3.63	346.00	14.6%	3.56	330.00	14.0%	3.65	234.00	9.9%	5.15
200	387.00	16.4%	3.45	341.00	14.4%	3.91	368.00	15.6%	4.03	345.00	14.6%	3.95	329.00	13.9%	4.05	239.00	10.1%	5.59
210	382.00	16.2%	3.85	341.00	14.4%	4.32	368.00	15.6%	4.44	344.00	14.6%	4.37	329.00	13.9%	4.46	243.00	10.3%	6.06
220	378.00	16.0%	4.27	340.00	14.4%	4.75	367.00	15.5%	4.88	344.00	14.6%	4.80	329.00	13.9%	4.90	247.00	10.5%	6.54
230	374.00	15.8%	4.72	339.00	14.4%	5.21	366.00	15.5%	5.33	343.00	14.5%	5.26	329.00	13.9%	5.36	251.00	10.6%	7.05
240	370.00	15.7%	5.19	338.00	14.3%	5.69	366.00	15.5%	5.81	342.00	14.5%	5.74	329.00	13.9%	5.84	254.00	10.8%	7.57
250	368.00	15.6%	5.67	337.00	14.3%	6.19	366.00	15.5%	6.31	342.00	14.5%	6.24	329.00	13.9%	6.34	257.00	10.9%	8.10
260	364.00	15.4%	6.19	336.00	14.2%	6.70	365.00	15.5%	6.83	341.00	14.4%	6.75	329.00	13.9%	6.86	261.00	11.0%	8.66
270	362.00	15.3%	6.72	336.00	14.2%	7.25	364.00	15.4%	7.37	341.00	14.4%	7.30	329.00	13.9%	7.40	263.00	11.1%	9.24
280	359.00	15.2%	7.28	335.00	14.2%	7.81	364.00	15.4%	7.93	340.00	14.4%	7.86	328.00	13.9%	7.97	266.00	11.3%	9.84
290	357.00	15.1%	7.85	335.00	14.2%	8.39	364.00	15.4%	8.51	340.00	14.4%	8.44	328.00	13.9%	8.55	269.00	11.4%	10.45
300	355.00	15.0%	8.46	334.00	14.1%	8.99	363.00	15.4%	9.12	339.00	14.4%	9.04	328.00	13.9%	9.15	271.00	11.5%	11.09
310	353.00	14.9%	9.08	333.00	14.1%	9.62	363.00	15.4%	9.74	339.00	14.4%	9.67	328.00	13.9%	9.78	273.00	11.6%	11.74
320	352.00	14.9%	9.72	333.00	14.1%	10.27	362.00	15.3%	10.39	338.00	14.3%	10.32	328.00	13.9%	10.43	275.00	11.6%	12.42
330	350.00	14.8%	10.38	333.00	14.1%	10.93	362.00	15.3%	11.06	338.00	14.3%	10.98	328.00	13.9%	11.09	278.00	11.8%	13.10
340	349.00	14.8%	11.07	332.00	14.1%	11.63	361.00	15.3%	11.75	337.00	14.3%	11.68	327.00	13.8%	11.79	280.00	11.9%	13.81
350	347.00	14.7%	11.78	332.00	14.1%	12.33	361.00	15.3%	12.46	337.00	14.3%	12.38	327.00	13.8%	12.50	282.00	11.9%	14.53
360	346.00	14.6%	12.51	331.00	14.0%	13.07	360.00	15.2%	13.19	337.00	14.3%	13.12	327.00	13.8%	13.23	283.00	12.0%	15.28
370	345.00	14.6%	13.26	331.00	14.0%	13.82	360.00	15.2%	13.95	336.00	14.2%	13.87	327.00	13.8%	13.95	285.00	12.1%	16.05
380	344.00	14.6%	14.04	330.00	14.0%	14.60	360.00	15.2%	14.72	336.00	14.2%	14.65	327.00	13.8%	14.77	287.00	12.2%	16.84
390	342.00	14.5%	14.84	330.00	14.0%	15.40	359.00	15.2%	15.52	335.00	14.2%	15.45	327.00	13.8%	15.56	289.00	12.2%	17.65
400	341.00	14.4%	15.66	330.00	14.0%	16.22	359.00	15.2%	16.34	335.00	14.2%	16.27	326.00	13.8%	16.38	289.00	12.2%	18.48
410	340.00	14.4%	16.50	329.00	13.9%	17.06	359.00	15.2%	17.19	335.00	14.2%	17.12	326.00	13.8%	17.23	291.00	12.3%	19.33
420	340.00	14.4%	17.36	329.00	13.9%	17.92	358.00	15.2%	18.05	334.00	14.1%	17.98	326.00	13.8%	18.09	292.00	12.4%	20.20
430	338.00	14.4%	18.25	328.00	13.9%	18.81	357.00	15.1%	18.94	334.00	14.1%	18.87	326.00	13.8%	18.98	293.00	12.4%	21.10
440	338.00	14.3%	19.16	328.00	13.9%	19.72	357.00	15.1%	19.85	334.00	14.1%	19.78	325.00	13.8%	19.89	294.00	12.4%	22.02
450	337.00	14.3%	20.09	328.00	13.9%	20.66	357.00	15.1%	20.78	333.00	14.1%	20.71	325.00	13.8%	20.83	295.00	12.5%	22.96
460	336.00	14.2%	21.04	327.00	13.8%	21.61	356.00	15.1%	21.73	333.00	14.1%	21.66	325.00	13.8%	21.78	296.00	12.5%	23.92
470	335.00	14.2%	22.02	327.00	13.8%	22.59	356.00	15.1%	22.71	333.00	14.1%	22.64	325.00	13.8%	22.76	297.00	12.6%	24.91
480	335.00	14.2%	23.02	327.00	13.8%	23.59	355.00	15.0%	23.71	332.00	14.1%	23.64	324.00	13.7%	23.76	298.00	12.6%	25.91
490	334.00	14.1%	24.04	326.00	13.8%	24.61	355.00	15.0%	24.74	332.00	14.1%	24.67	324.00	13.7%	24.78	299.00	12.6%	26.94
500	333.00	14.1%	25.09	326.00	13.8%	25.66	354.00	15.0%	25.79	331.00	14.0%	25.72	324.00	13.7%	25.83	299.00	12.7%	28.00
510	333.00	14.1%	26.16	326.00	13.8%	26.73	354.00	15.0%	26.86	331.00	14.0%	26.79	323.00	13.7%	26.90	300.00	12.7%	29.07
520	332.00	14.1%	27.25	325.00	13.8%	27.83	354.00	15.0%	27.95	331.00	14.0%	27.88	323.00	13.7%	27.90	301.00	12.7%	30.17
530	331.00	14.0%	28.37	325.00	13.8%	28.95	353.00	14.9%	29.07	330.00	14.0%	29.00	323.00	13.7%	29.12	301.00	12.7%	31.30
540	331.00	14.0%	29.52	324.00	13.7%	30.09	353.00	14.9%	30.21	330.00	14.0%	30.14	323.00	13.7%	30.26	301.00	12.7%	32.45
550	330.00	14.0%	30.68	324.00	13.7%	31.25	352.00	14.9%	31.37	329.00	13.9%	31.31	322.00	13.6%	31.43	301.00	12.7%	33.62
560	329.00	13.9%	31.87	324.00	13.7%	32.45	352.00	14.9%	32.57	329.00	13.9%	32.50	322.00	13.6%	32.62	302.00	12.8%	34.81
570	329.00	13.9%	33.09	323.00	13.7%	33.67	351.00	14.9%	33.78	329.00	13.9%	33.72	322.00	13.6%	33.83	302.00	12.8%	36.03
580	328.00	13.9%	34.33	323.00	13.7%	34.91	351.00	14.9%	35.02	328.00	13.9%	34.96	321.00	13.6%	35.07	302.00	12.8%	37.28
590	328.00	13.9%	35.59	322.00	13.6%	36.17	350.00	14.8%	36.29	328.00	13.9%	36.22	321.00	13.6%	36.34	303.00	12.8%	38.54
600	327.00	13.8%	36.88	322.0														

PENGUIN ACSR 4/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	808.00	22%	0.01	591.00	16%	0.01	574.00	15%	0.01	572.00	15%	0.01	501.00	13.5%	0.01	74.00	2%	0.07
20	804.00	22%	0.03	588.00	16%	0.04	573.00	15%	0.04	572.00	15%	0.04	500.00	13.5%	0.04	110.00	3%	0.19
30	798.00	21%	0.06	585.00	16%	0.08	572.00	15%	0.09	569.00	15%	0.09	501.00	13.5%	0.10	139.00	4%	0.34
40	787.00	21%	0.11	580.00	16%	0.15	569.00	15%	0.16	565.00	15%	0.15	501.00	13.5%	0.17	164.00	4%	0.52
50	777.00	21%	0.17	576.00	16%	0.23	568.00	15%	0.25	562.00	15%	0.24	501.00	13.5%	0.26	187.00	5%	0.71
60	764.00	21%	0.25	569.00	15%	0.34	566.00	15%	0.37	557.00	15%	0.35	500.00	13.5%	0.38	207.00	6%	0.92
70	749.00	20%	0.35	562.00	15%	0.46	563.00	15%	0.50	553.00	15%	0.48	500.00	13.5%	0.52	226.00	6%	1.15
80	733.00	20%	0.46	557.00	15%	0.61	562.00	15%	0.65	549.00	15%	0.63	500.00	13.5%	0.68	243.00	7%	1.40
90	717.00	19%	0.60	551.00	15%	0.78	559.00	15%	0.83	544.00	15%	0.80	500.00	13.5%	0.86	258.00	7%	1.66
100	700.00	19%	0.76	547.00	15%	0.97	557.00	15%	1.03	541.00	15%	1.00	501.00	13.5%	1.06	273.00	7%	1.95
110	685.00	18%	0.94	542.00	15%	1.18	555.00	15%	1.25	538.00	14%	1.21	501.00	13.5%	1.28	286.00	8%	2.24
120	668.00	18%	1.14	537.00	14%	1.42	554.00	15%	1.48	535.00	14%	1.45	501.00	13.5%	1.53	299.00	8%	2.56
130	653.00	18%	1.37	534.00	14%	1.68	552.00	15%	1.75	532.00	14%	1.71	501.00	13.5%	1.79	310.00	8%	2.90
140	638.00	17%	1.63	530.00	14%	1.96	549.00	15%	2.04	529.00	14%	2.00	500.00	13.5%	2.08	320.00	9%	3.25
150	626.00	17%	1.91	527.00	14%	2.27	548.00	15%	2.34	527.00	14%	2.30	500.00	13.5%	2.39	330.00	9%	3.62
160	614.00	17%	2.21	525.00	14%	2.59	547.00	15%	2.67	525.00	14%	2.62	500.00	13.5%	2.72	339.00	9%	4.01
170	604.00	16%	2.54	522.00	14%	2.94	546.00	15%	3.01	523.00	14%	2.97	500.00	13.5%	3.07	347.00	9%	4.42
180	594.00	16%	2.89	520.00	14%	3.31	545.00	15%	3.38	522.00	14%	3.34	500.00	13.5%	3.44	355.00	10%	4.86
190	585.00	16%	3.27	518.00	14%	3.70	543.00	15%	3.78	520.00	14%	3.74	500.00	13.5%	3.83	362.00	10%	5.29
200	578.00	16%	3.67	516.00	14%	4.11	542.00	15%	4.19	519.00	14%	4.15	499.00	13.4%	4.25	369.00	10%	5.76
210	571.00	15%	4.10	515.00	14%	4.54	541.00	15%	4.63	518.00	14%	4.59	499.00	13.4%	4.69	375.00	10%	6.24
220	565.00	15%	4.55	514.00	14%	5.00	540.00	15%	5.09	516.00	14%	5.04	499.00	13.4%	5.15	381.00	10%	6.74
230	560.00	15%	5.02	512.00	14%	5.48	539.00	15%	5.57	516.00	14%	5.52	499.00	13.4%	5.63	387.00	10%	7.26
240	554.00	15%	5.51	511.00	14%	5.99	538.00	14%	6.07	514.00	14%	6.02	499.00	13.4%	6.13	392.00	11%	7.80
250	550.00	15%	6.03	510.00	14%	6.51	538.00	14%	6.59	514.00	14%	6.55	499.00	13.4%	6.66	397.00	11%	8.36
260	546.00	15%	6.57	509.00	14%	7.05	536.00	14%	7.14	513.00	14%	7.09	498.00	13.4%	7.20	401.00	11%	8.95
270	542.00	15%	7.12	508.00	14%	7.62	536.00	14%	7.71	512.00	14%	7.66	498.00	13.4%	7.77	405.00	11%	9.55
280	539.00	15%	7.72	507.00	14%	8.21	535.00	14%	8.30	511.00	14%	8.25	498.00	13.3%	8.36	410.00	11%	10.17
290	536.00	14%	8.32	506.00	14%	8.82	534.00	14%	8.91	511.00	14%	8.86	498.00	13.4%	8.98	413.00	11%	10.81
300	534.00	14%	8.96	506.00	14%	9.46	534.00	14%	9.54	510.00	14%	9.50	497.00	13.4%	9.61	417.00	11%	11.47
310	531.00	14%	9.61	504.00	14%	10.12	533.00	14%	10.20	509.00	14%	10.16	497.00	13.4%	10.27	420.00	11%	12.16
320	529.00	14%	10.29	504.00	14%	10.79	532.00	14%	10.88	508.00	14%	10.84	497.00	13.4%	10.95	423.00	11%	12.86
330	526.00	14%	10.99	503.00	14%	11.50	531.00	14%	11.58	506.00	14%	11.54	496.00	13.4%	11.65	426.00	11%	13.59
340	524.00	14%	11.71	503.00	14%	12.22	531.00	14%	12.31	507.00	14%	12.27	496.00	13.4%	12.38	429.00	12%	14.33
350	523.00	14%	12.46	502.00	14%	12.97	530.00	14%	13.06	507.00	14%	13.01	496.00	13.4%	13.13	432.00	12%	15.09
360	520.00	14%	13.23	501.00	13%	13.74	529.00	14%	13.83	506.00	14%	13.79	495.00	13.3%	13.90	434.00	12%	15.88
370	518.00	14%	14.02	500.00	13%	14.54	529.00	14%	14.62	505.00	14%	14.58	495.00	13.3%	14.70	436.00	12%	16.68
380	517.00	14%	14.84	500.00	13%	15.35	528.00	14%	15.44	505.00	14%	15.40	495.00	13.3%	15.51	439.00	12%	17.51
390	516.00	14%	15.67	499.00	13%	16.19	527.00	14%	16.28	504.00	14%	16.23	494.00	13.3%	16.35	444.00	12%	18.36
400	514.00	14%	16.54	499.00	13%	17.06	527.00	14%	17.15	504.00	14%	17.10	494.00	13.3%	17.22	445.00	12%	19.24
410	513.00	14%	17.42	498.00	13%	17.94	526.00	14%	18.03	503.00	14%	17.99	494.00	13.3%	18.10	444.00	12%	20.13
420	512.00	14%	18.33	498.00	13%	18.85	525.00	14%	18.94	503.00	14%	18.90	493.00	13.3%	19.02	446.00	12%	21.04
430	510.00	14%	19.27	497.00	13%	19.78	525.00	14%	19.88	502.00	14%	19.84	493.00	13.3%	19.95	447.00	12%	21.99
440	509.00	14%	20.23	496.00	13%	20.75	524.00	14%	20.83	501.00	13%	20.79	493.00	13.3%	20.91	448.00	12%	22.95
450	508.00	14%	21.21	496.00	13%	21.73	524.00	14%	21.81	501.00	13%	21.78	492.00	13.2%	21.89	450.00	12%	23.95
460	507.00	14%	22.22	495.00	13%	22.74	523.00	14%	22.82	500.00	13%	22.78	492.00	13.2%	22.90	451.00	12%	24.96
470	506.00	14%	23.24	495.00	13%	23.77	522.00	14%	23.85	500.00	13%	23.81	491.00	13.2%	23.93	453.00	12%	25.99
480	504.00	14%	24.30	494.00	13%	24.83	522.00	14%	24.91	499.00	13%	24.87	491.00	13.2%	24.99	453.00	12%	27.06
490	503.00	14%	25.39	493.00	13%	25.91	521.00	14%	25.99	498.00	13%	25.95	490.00	13.2%	26.07	454.00	12%	28.15
500	502.00	14%	26.49	493.00	13%	27.01	520.00	14%	27.10	498.00	13%	27.05	490.00	13.2%	27.17	455.00	12%	29.25
510	501.00	13%	27.62	492.00	13%	28.14	520.00	14%	28.23	497.00	13%	28.19	489.00	13.2%	28.30	456.00	12%	30.39
520	500.00	13%	28.77	492.00	13%	29.30	519.00	14%	29.38	497.00	13%	29.34	489.00	13.2%	29.46	457.00	12%	31.55
530	500.00	13%	29.95	491.00	13%	30.47	518.00	14%	30.56	496.00	13%	30.52	488.00	13.1%	30.64	457.00	12%	32.73
540	499.00	13%	31.16	490.00	13%	31.68	518.00	14%	31.76	496.00	13%	31.72	488.00	13.1%	31.85	458.00	12%	33.94
550	498.00	13%	32.39	490.00	13%	32.92	517.00	14%	33.00	495.00	13%	32.96	487.00	13.1%	33.08	459.00	12%	35.18
560	497.00	13%	33.65	489.00	13%	34.17	516.00	14%	34.26	494.00	13%	34.21	487.00	13.1%	34.34	459.00	12%	36.43
570	496.00	13%	34.93	489.00	13%	35.45	515.00	14%	35.54	494.00	13%	35.50	486.00	13.1%	35.62	460.00	12%	37.72
580	495.00	13%	36.25	488.00	13%	36.77	515.00	14%	36.85	493.00	13%	36.82	486.00	13.1%	36.93	460.00	12%	39.04
590	494.00	13%	37.58	487.00	13%	38.10	514.00	14%	38.19	492.00	13%	38.14	485.00	13.1%	38.26	460.00	12%	40.38
600	493.00	13%	38.94	487.00	13%	39.46	513.00	14%	39.55	492.00	13%	39.51	485.00	13.1%	39.63	460.00	12%	41.74

WAXWING ACSR 266.8 KCMIL

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 60
Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
Tensión de rotura (daN): 3060.38
Peso (daN/m): 0.4224

Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 33%
Operación diaria (EDS): 17%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	997.00	32.0%	0.01	638.00	21%	0.01	618.00	20.2%	0.01	618.00	20.2%	0.01	535.00	17.5%	0.01	70.00	2.3%	0.08
20	994.00	32.4%	0.02	635.00	21%	0.03	618.00	20.2%	0.04	616.00	20.1%	0.04	535.00	17.5%	0.04	95.00	3.1%	0.22
30	987.00	32.3%	0.05	632.00	21%	0.08	616.00	20.1%	0.09	613.00	20.0%	0.08	535.00	17.5%	0.09	116.00	3.8%	0.41
40	979.00	32.0%	0.09	628.00	21%	0.13	615.00	20.1%	0.15	610.00	19.9%	0.14	535.00	17.5%	0.16	136.00	4.4%	0.62
50	967.00	31.6%	0.14	622.00	20%	0.21	613.00	20.0%	0.24	606.00	19.8%	0.22	535.00	17.5%	0.25	153.00	5.0%	0.86
60	953.00	31.1%	0.20	616.00	20%	0.31	612.00	20.0%	0.34	603.00	19.7%	0.32	535.00	17.5%	0.36	169.00	5.5%	1.12
70	939.00	30.7%	0.28	611.00	20%	0.42	610.00	19.9%	0.47	598.00	19.5%	0.44	535.00	17.5%	0.48	184.00	6.0%	1.41
80	921.00	30.1%	0.37	604.00	20%	0.56	607.00	19.8%	0.61	593.00	19.4%	0.58	535.00	17.5%	0.63	199.00	6.5%	1.71
90	903.00	29.5%	0.47	599.00	20%	0.71	605.00	19.8%	0.77	589.00	19.2%	0.74	535.00	17.5%	0.80	216.00	7.1%	1.98
100	882.00	28.8%	0.60	593.00	19%	0.89	603.00	19.7%	0.96	585.00	19.1%	0.92	535.00	17.5%	0.99	234.00	7.6%	2.26
110	860.00	28.1%	0.74	587.00	19%	1.09	601.00	19.6%	1.16	581.00	19.0%	1.12	535.00	17.5%	1.19	250.00	8.2%	2.55
120	838.00	27.4%	0.91	582.00	19%	1.31	599.00	19.6%	1.38	578.00	18.9%	1.34	535.00	17.5%	1.42	266.00	8.7%	2.86
130	817.00	26.7%	1.09	578.00	19%	1.55	597.00	19.5%	1.63	574.00	18.8%	1.58	535.00	17.5%	1.67	281.00	9.2%	3.18
140	795.00	26.0%	1.30	573.00	19%	1.81	595.00	19.4%	1.89	571.00	18.7%	1.85	534.00	17.4%	1.94	295.00	9.6%	3.51
150	775.00	25.3%	1.53	569.00	19%	2.09	593.00	19.4%	2.18	569.00	18.6%	2.13	534.00	17.4%	2.22	309.00	10.1%	3.86
160	755.00	24.7%	1.79	567.00	19%	2.39	592.00	19.3%	2.48	567.00	18.5%	2.43	534.00	17.4%	2.53	320.00	10.5%	4.23
170	736.00	24.0%	2.07	564.00	18%	2.71	591.00	19.3%	2.81	565.00	18.5%	2.75	534.00	17.4%	2.86	331.00	10.8%	4.61
180	719.00	23.5%	2.36	561.00	18%	3.05	589.00	19.2%	3.15	563.00	18.4%	3.10	534.00	17.4%	3.20	342.00	11.2%	5.01
190	704.00	23.0%	2.71	559.00	18%	3.41	588.00	19.2%	3.51	561.00	18.3%	3.46	534.00	17.4%	3.57	352.00	11.5%	5.42
200	689.00	22.5%	3.07	555.00	18%	3.80	586.00	19.1%	3.90	559.00	18.2%	3.85	534.00	17.4%	3.96	361.00	11.8%	5.86
210	676.00	22.1%	3.45	555.00	18%	4.20	585.00	19.1%	4.31	557.00	18.2%	4.25	534.00	17.4%	4.37	370.00	12.1%	6.31
220	664.00	21.7%	3.85	553.00	18%	4.63	585.00	19.1%	4.73	556.00	18.2%	4.67	533.00	17.4%	4.79	378.00	12.4%	6.77
230	654.00	21.4%	4.27	551.00	18%	5.07	584.00	19.1%	5.17	555.00	18.1%	5.12	533.00	17.4%	5.24	386.00	12.6%	7.25
240	644.00	21.0%	4.73	550.00	18%	5.54	582.00	19.0%	5.65	554.00	18.1%	5.59	533.00	17.4%	5.71	393.00	12.8%	7.76
250	635.00	20.7%	5.20	548.00	18%	6.02	581.00	19.0%	6.13	552.00	18.0%	6.08	533.00	17.4%	6.20	399.00	13.0%	8.28
260	628.00	20.5%	5.69	547.00	18%	6.53	581.00	19.0%	6.64	552.00	18.0%	6.58	533.00	17.4%	6.71	406.00	13.3%	8.81
270	620.00	20.3%	6.21	546.00	18%	7.06	580.00	19.0%	7.17	551.00	18.0%	7.11	532.00	17.4%	7.24	411.00	13.4%	9.37
280	614.00	20.1%	6.75	545.00	18%	7.61	579.00	18.9%	7.71	550.00	18.0%	7.66	532.00	17.3%	7.79	417.00	13.6%	9.95
290	608.00	19.9%	7.31	544.00	18%	8.18	578.00	18.9%	8.29	549.00	17.9%	8.23	532.00	17.4%	8.36	422.00	13.8%	10.54
300	602.00	19.7%	7.90	543.00	18%	8.77	577.00	18.9%	8.88	548.00	17.9%	8.82	532.00	17.4%	8.95	427.00	14.0%	11.16
310	597.00	19.5%	8.50	542.00	18%	9.38	576.00	18.8%	9.49	547.00	17.9%	9.43	531.00	17.4%	9.56	431.00	14.1%	11.79
320	593.00	19.4%	9.13	541.00	18%	10.01	575.00	18.8%	10.12	546.00	17.8%	10.06	531.00	17.4%	10.19	435.00	14.2%	12.44
330	589.00	19.2%	9.78	540.00	18%	10.66	575.00	18.8%	10.77	546.00	17.8%	10.71	531.00	17.4%	10.85	439.00	14.3%	13.12
340	585.00	19.1%	10.45	539.00	18%	11.34	574.00	18.8%	11.45	545.00	17.9%	11.39	531.00	17.4%	11.52	443.00	14.5%	13.81
350	582.00	19.0%	11.14	538.00	18%	12.03	573.00	18.7%	12.14	544.00	17.9%	12.09	530.00	17.3%	12.22	446.00	14.6%	14.52
360	579.00	18.9%	11.84	538.00	18%	12.75	573.00	18.7%	12.85	544.00	17.8%	12.80	530.00	17.3%	12.93	450.00	14.7%	15.25
370	576.00	18.8%	12.58	537.00	18%	13.48	572.00	18.7%	13.59	543.00	17.8%	13.53	530.00	17.3%	13.67	453.00	14.8%	16.00
380	573.00	18.7%	13.34	536.00	18%	14.24	571.00	18.7%	14.35	542.00	17.7%	14.30	529.00	17.3%	14.43	456.00	14.9%	16.78
390	570.00	18.6%	14.11	536.00	18%	15.02	571.00	18.7%	15.13	542.00	17.7%	15.07	529.00	17.3%	15.21	458.00	15.0%	17.57
400	568.00	18.6%	14.92	535.00	17%	15.85	570.00	18.6%	15.95	541.00	17.6%	15.89	529.00	17.3%	16.02	461.00	15.1%	18.39
410	565.00	18.5%	15.74	534.00	17%	16.65	569.00	18.6%	16.76	540.00	17.6%	16.70	528.00	17.3%	16.84	463.00	15.1%	19.23
420	563.00	18.4%	16.58	534.00	17%	17.49	569.00	18.6%	17.60	540.00	17.6%	17.55	528.00	17.3%	17.68	465.00	15.2%	20.08
430	561.00	18.3%	17.45	533.00	17%	18.35	568.00	18.6%	18.47	539.00	17.6%	18.41	528.00	17.3%	18.55	467.00	15.3%	20.96
440	559.00	18.3%	18.33	533.00	17%	19.25	567.00	18.5%	19.36	539.00	17.6%	19.30	527.00	17.2%	19.44	469.00	15.3%	21.86
450	557.00	18.2%	19.24	532.00	17%	20.16	567.00	18.5%	20.27	538.00	17.6%	20.21	527.00	17.2%	20.35	471.00	15.4%	22.78
460	555.00	18.1%	20.17	531.00	17%	21.09	566.00	18.5%	21.20	539.00	17.6%	21.14	527.00	17.2%	21.28	473.00	15.5%	23.71
470	554.00	18.1%	21.12	531.00	17%	22.04	565.00	18.5%	22.15	537.00	17.5%	22.10	526.00	17.2%	22.24	474.00	15.5%	24.68
480	552.00	18.0%	22.11	530.00	17%	23.02	564.00	18.4%	23.13	536.00	17.5%	23.08	526.00	17.2%	23.22	476.00	15.6%	25.67
490	550.00	18.0%	23.10	530.00	17%	24.02	564.00	18.4%	24.13	536.00	17.5%	24.07	526.00	17.2%	24.22	477.00	15.6%	26.67
500	549.00	17.9%	24.13	529.00	17%	25.05	563.00	18.4%	25.16	535.00	17.5%	25.10	525.00	17.2%	25.24	478.00	15.6%	27.71
510	547.00	17.9%	25.17	528.00	17%	26.09	563.00	18.4%	26.20	535.00	17.5%	26.15	524.00	17.1%	26.29	480.00	15.7%	28.76
520	546.00	17.8%	26.24	528.00	17%	27.16	562.00	18.3%	27.27	534.00	17.4%	27.21	524.00	17.1%	27.36	481.00	15.7%	29.83
530	545.00	17.8%	27.33	527.00	17%	28.26	561.00	18.3%	28.36	533.00	17.4%	28.30	524.00	17.1%	28.44	482.00	15.7%	30.93
540	543.00	17.7%	28.44	527.00	17%	29.36	561.00	18.3%	29.47	533.00	17.4%	29.42	523.00	17.1%	29.56	483.00	15.8%	32.05
550	542.00	17.7%	29.58	526.00	17%	30.51	560.00	18.2%	30.61	532.00	17.4%	30.55	523.00	17.1%	30.70	484.00	15.8%	33.20
560	541.00	17.7%	30.74	526.00	17%	31.66	559.00	18.2%	31.77	532.00	17.4%	31.71	522.00	17.1%	31.86	485.00	15.8%	34.35
570	540.00	17.6%	31.92	525.00	17%	32.84	558.00	18.2%	32.95	531.00	17.4%	32.90	522.00	17.1%	33.04	485.00	15.8%	35.55
580	538.00	17.6%	33.13	524.00	17%	34.06	558.00	18.2%	34.16	530.00	17.3%	34.11	521.00	17.0%	34.25	486.00	15.9%	36.75
590	537.00	17.5%	34.37	523.00	17%	35.29	557.00	18.2%	35.40	530.00	17.3%	35.34	521.00	17.0%	35.49	486.00	15.9%	38.00
600	536.00	17.5%	35.63	523.00	17%	36.55	556.00	18.2%	36.65	529.00	17.3%	36.60	520.00	17.0%	36.74	487.00	15.9%	39.26

LINNET ACSR 336.4 KCMIL

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 100
Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
Tensión de rotura (daN): 6271.99
Peso (daN/m): 0.6741
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 12%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1191.00	19.0%	0.01	852.00	14%	0.01	826.00	13.2%	0.01	824.00	13.1%	0.01	715.00	11.4%	0.01	117.00	1.9%	0.07
20	1191.00	19.0%	0.03	854.00	14%	0.04	833.00	13.2%	0.04	826.00	13.2%	0.04	720.00	11.5%	0.05	174.00	2.8%	0.19
30	1191.00	19.0%	0.06	856.00	14%	0.09	832.00	13.3%	0.10	830.00	13.2%	0.09	728.00	11.6%	0.10	227.00	3.5%	0.34
40	1191.00	19.0%	0.11	857.00	14%	0.16	841.00	13.4%	0.17	834.00	13.3%	0.16	739.00	11.8%	0.18	264.00	4.2%	0.51
50	1191.00	19.0%	0.18	861.00	14%	0.24	847.00	13.5%	0.26	840.00	13.4%	0.25	752.00	12.0%	0.28	302.00	4.8%	0.70
60	1165.00	18.6%	0.26	852.00	14%	0.36	845.00	13.5%	0.38	833.00	13.3%	0.37	752.00	12.0%	0.40	334.00	5.3%	0.91
70	1144.00	18.2%	0.36	842.00	13%	0.49	839.00	13.4%	0.52	826.00	13.2%	0.51	752.00	12.0%	0.55	362.00	5.8%	1.14
80	1115.00	17.8%	0.48	833.00	13%	0.65	834.00	13.2%	0.68	819.00	13.1%	0.67	752.00	12.0%	0.72	389.00	6.2%	1.39
90	1087.00	17.3%	0.63	825.00	13%	0.83	829.00	13.2%	0.87	813.00	13.0%	0.85	752.00	12.0%	0.91	411.00	6.6%	1.66
100	1059.00	16.9%	0.80	817.00	13%	1.03	825.00	13.2%	1.08	807.00	12.9%	1.06	752.00	12.0%	1.12	433.00	6.9%	1.95
110	1030.00	16.4%	0.99	810.00	13%	1.26	820.00	13.1%	1.31	801.00	12.8%	1.29	752.00	12.0%	1.36	453.00	7.2%	2.25
120	1004.00	16.0%	1.21	803.00	13%	1.51	813.00	13.0%	1.56	787.00	12.7%	1.54	752.00	12.0%	1.62	471.00	7.5%	2.58
130	977.00	15.6%	1.46	796.00	13%	1.79	813.00	13.0%	1.84	783.00	12.6%	1.82	751.00	12.0%	1.90	488.00	7.8%	2.92
140	955.00	15.2%	1.73	791.00	13%	2.09	810.00	12.9%	2.14	788.00	12.6%	2.12	751.00	12.0%	2.20	503.00	8.0%	3.29
150	934.00	14.9%	2.03	788.00	13%	2.41	807.00	12.9%	2.46	785.00	12.5%	2.44	751.00	12.0%	2.53	517.00	8.2%	3.67
160	916.00	14.6%	2.35	784.00	13%	2.75	805.00	12.8%	2.81	782.00	12.5%	2.79	751.00	12.0%	2.88	531.00	8.5%	4.07
170	900.00	14.3%	2.71	781.00	12%	3.12	802.00	12.8%	3.18	780.00	12.4%	3.15	750.00	12.0%	3.25	543.00	8.7%	4.49
180	886.00	14.1%	3.06	776.00	12%	3.51	801.00	12.8%	3.57	777.00	12.4%	3.55	750.00	12.0%	3.64	554.00	8.8%	4.93
190	874.00	13.9%	3.48	775.00	12%	3.93	799.00	12.7%	3.99	776.00	12.4%	3.96	750.00	12.0%	4.06	565.00	9.0%	5.39
200	862.00	13.7%	3.91	772.00	12%	4.37	797.00	12.7%	4.43	774.00	12.3%	4.40	749.00	11.9%	4.50	575.00	9.2%	5.87
210	852.00	13.6%	4.36	770.00	12%	4.83	795.00	12.7%	4.89	772.00	12.3%	4.86	749.00	11.9%	4.96	584.00	9.3%	6.37
220	842.00	13.4%	4.85	768.00	12%	5.32	794.00	12.7%	5.38	770.00	12.3%	5.35	749.00	11.9%	5.45	592.00	9.4%	6.89
230	835.00	13.3%	5.35	766.00	12%	5.82	792.00	12.6%	5.89	769.00	12.3%	5.86	749.00	11.9%	5.96	600.00	9.6%	7.44
240	827.00	13.2%	5.87	765.00	12%	6.35	791.00	12.6%	6.42	767.00	12.2%	6.39	748.00	11.9%	6.49	607.00	9.7%	8.00
250	821.00	13.1%	6.42	763.00	12%	6.91	790.00	12.6%	6.97	766.00	12.2%	6.95	748.00	11.9%	7.05	614.00	9.8%	8.59
260	815.00	13.0%	7.00	762.00	12%	7.49	788.00	12.6%	7.55	765.00	12.2%	7.52	747.00	11.9%	7.63	621.00	9.9%	9.19
270	810.00	12.9%	7.60	760.00	12%	8.09	787.00	12.5%	8.16	763.00	12.2%	8.13	747.00	11.9%	8.24	625.00	10.0%	9.83
280	805.00	12.8%	8.22	759.00	12%	8.72	786.00	12.5%	8.78	762.00	12.1%	8.75	747.00	11.9%	8.86	632.00	10.1%	10.48
290	800.00	12.8%	8.87	758.00	12%	9.37	785.00	12.5%	9.43	761.00	12.1%	9.40	746.00	11.9%	9.51	637.00	10.2%	11.15
300	796.00	12.7%	9.54	756.00	12%	10.04	784.00	12.5%	10.10	760.00	12.1%	10.08	746.00	11.9%	10.19	642.00	10.2%	11.85
310	793.00	12.6%	10.23	753.00	12%	10.74	783.00	12.5%	10.80	759.00	12.1%	10.77	745.00	11.8%	10.89	646.00	10.3%	12.56
320	789.00	12.6%	10.95	754.00	12%	11.46	782.00	12.5%	11.52	758.00	12.1%	11.50	745.00	11.9%	11.61	650.00	10.4%	13.31
330	786.00	12.5%	11.70	753.00	12%	12.21	781.00	12.5%	12.27	757.00	12.1%	12.24	744.00	11.9%	12.35	654.00	10.4%	14.07
340	783.00	12.5%	12.46	752.00	12%	12.98	780.00	12.4%	13.04	756.00	12.1%	13.01	744.00	11.9%	13.13	657.00	10.5%	14.86
350	780.00	12.4%	13.26	751.00	12%	13.77	779.00	12.4%	13.83	755.00	12.0%	13.81	743.00	11.8%	13.92	661.00	10.5%	15.67
360	778.00	12.4%	14.08	750.00	12%	14.59	778.00	12.4%	14.65	754.00	12.0%	14.63	743.00	11.8%	14.74	664.00	10.6%	16.50
370	776.00	12.4%	14.92	749.00	12%	15.43	777.00	12.4%	15.50	754.00	12.0%	15.47	742.00	11.8%	15.58	667.00	10.6%	17.36
380	773.00	12.3%	15.79	748.00	12%	16.30	776.00	12.4%	16.37	753.00	12.0%	16.34	741.00	11.8%	16.45	669.00	10.7%	18.24
390	770.00	12.3%	16.68	747.00	12%	17.20	775.00	12.4%	17.26	752.00	12.0%	17.23	741.00	11.8%	17.39	672.00	10.7%	19.15
400	768.00	12.2%	17.60	746.00	12%	18.12	774.00	12.3%	18.19	751.00	12.0%	18.15	740.00	11.8%	18.27	674.00	10.7%	20.08
410	766.00	12.2%	18.54	746.00	12%	19.06	773.00	12.3%	19.12	750.00	12.0%	19.09	740.00	11.8%	19.21	676.00	10.8%	21.03
420	764.00	12.2%	19.50	745.00	12%	20.03	772.00	12.3%	20.09	749.00	11.9%	20.06	739.00	11.8%	20.18	678.00	10.8%	22.01
430	762.00	12.1%	20.50	744.00	12%	21.02	771.00	12.3%	21.08	748.00	11.9%	21.06	738.00	11.8%	21.17	680.00	10.8%	23.01
440	761.00	12.1%	21.52	743.00	12%	22.04	770.00	12.3%	22.10	747.00	11.9%	22.08	738.00	11.8%	22.20	681.00	10.9%	24.05
450	759.00	12.1%	22.57	742.00	12%	23.09	769.00	12.3%	23.15	746.00	11.9%	23.13	737.00	11.8%	23.24	683.00	10.9%	25.10
460	757.00	12.1%	23.64	741.00	12%	24.16	768.00	12.2%	24.22	746.00	11.9%	24.20	736.00	11.7%	24.31	684.00	10.9%	26.18
470	755.00	12.0%	24.74	740.00	12%	25.26	767.00	12.2%	25.32	745.00	11.9%	25.29	735.00	11.7%	25.41	685.00	10.9%	27.29
480	754.00	12.0%	25.86	739.00	12%	26.38	766.00	12.2%	26.44	744.00	11.9%	26.42	735.00	11.7%	26.53	686.00	10.9%	28.42
490	752.00	12.0%	27.01	738.00	12%	27.54	765.00	12.2%	27.60	743.00	11.8%	27.57	734.00	11.7%	27.69	687.00	11.0%	29.58
500	751.00	12.0%	28.19	737.00	12%	28.71	764.00	12.2%	28.78	742.00	11.8%	28.75	733.00	11.7%	28.86	688.00	11.0%	30.76
510	749.00	11.9%	29.40	736.00	12%	29.92	763.00	12.2%	29.98	741.00	11.8%	29.95	732.00	11.7%	30.07	689.00	11.0%	31.97
520	747.00	11.9%	30.63	735.00	12%	31.19	762.00	12.1%	31.21	740.00	11.8%	31.19	731.00	11.7%	31.30	690.00	11.0%	33.21
530	746.00	11.9%	31.89	734.00	12%	32.41	761.00	12.1%	32.47	739.00	11.8%	32.45	731.00	11.7%	32.56	690.00	11.0%	34.48
540	744.00	11.9%	33.18	733.00	12%	33.70	760.00	12.1%	33.76	738.00	11.8%	33.74	730.00	11.6%	33.85	691.00	11.0%	35.77
550	743.00	11.8%	34.49	732.00	12%	35.01	759.00	12.1%	35.07	737.00	11.8%	35.05	729.00	11.6%	35.17	691.00	11.0%	37.09
560	742.00	11.8%	35.83	731.00	12%	36.35	757.00	12.1%	36.42	736.00	11.7%	36.39	728.00	11.6%	36.51	692.00	11.0%	38.43
570	740.00	11.8%	37.20	730.00	12%	37.72	756.00	12.1%	37.78	735.00	11.7%	37.76	727.00	11.6%	37.88	692.00	11.0%	39.81
580	739.00	11.8%	38.61	729.00	12%	39.13	755.00	12.0%	39.19	734.00	11.7%	39.16	726.00	11.6%	39.28	693.00	11.0%	41.21
590	737.00	11.8%	40.03	728.00	12%	40.56	754.00	12.0%	40.61	733.00	11.7%	40.59	725.00	11.6%	40.71	693.00	11.0%	42.65
600	736.00	11.7%	41.50	727.00	12%	42.02	753.00	12.0%	42.08	731.00	11.7%	42.06	724.00	11.5%	42.17	693.00	11.0%	44.11

AMES AAAC 77.47 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	284.00	22.8%	0.00	203.00	16.3%	0.01	197.00	15.8%	0.01	197.00	15.8%	0.01	174.00	14.0%	0.01	7.00	0.6%	0.18
20	284.00	22.8%	0.02	202.00	16.2%	0.03	196.00	15.9%	0.04	197.00	15.8%	0.03	174.00	14.0%	0.03	15.00	1.2%	0.36
30	283.00	22.7%	0.04	202.00	16.2%	0.06	199.00	16.0%	0.08	197.00	15.8%	0.07	174.00	14.0%	0.07	21.00	1.7%	0.56
40	282.00	22.6%	0.08	201.00	16.1%	0.11	200.00	16.1%	0.15	197.00	15.8%	0.12	174.00	14.0%	0.12	28.00	2.2%	0.76
50	280.00	22.5%	0.12	200.00	16.1%	0.17	201.00	16.1%	0.23	196.00	15.7%	0.18	174.00	14.0%	0.19	34.00	2.7%	0.97
60	278.00	22.3%	0.17	199.00	16.0%	0.24	203.00	16.3%	0.33	196.00	15.7%	0.26	174.00	14.0%	0.27	40.00	3.2%	1.18
70	276.00	22.2%	0.24	198.00	15.9%	0.33	204.00	16.4%	0.44	196.00	15.7%	0.36	174.00	14.0%	0.37	46.00	3.7%	1.41
80	273.00	21.9%	0.31	197.00	15.8%	0.43	205.00	16.5%	0.57	195.00	15.7%	0.47	174.00	14.0%	0.49	52.00	4.2%	1.64
90	270.00	21.7%	0.40	196.00	15.7%	0.55	207.00	16.6%	0.71	195.00	15.7%	0.60	174.00	14.0%	0.62	57.00	4.6%	1.89
100	267.00	21.4%	0.50	195.00	15.7%	0.68	208.00	16.7%	0.87	194.00	15.6%	0.74	174.00	14.0%	0.76	62.00	5.0%	2.14
110	264.00	21.2%	0.61	194.00	15.6%	0.83	209.00	16.8%	1.04	194.00	15.6%	0.89	174.00	14.0%	0.92	67.00	5.4%	2.41
120	260.00	20.9%	0.73	193.00	15.5%	0.98	210.00	16.9%	1.22	193.00	15.5%	1.06	174.00	14.0%	1.10	71.00	5.7%	2.68
130	257.00	20.6%	0.87	192.00	15.4%	1.17	211.00	16.9%	1.42	193.00	15.5%	1.25	174.00	14.0%	1.29	76.00	6.1%	2.97
140	253.00	20.3%	1.03	190.00	15.3%	1.37	212.00	17.0%	1.64	193.00	15.5%	1.45	174.00	14.0%	1.49	80.00	6.4%	3.26
150	250.00	20.1%	1.19	189.00	15.2%	1.58	213.00	17.1%	1.87	192.00	15.4%	1.67	174.00	14.0%	1.71	84.00	6.7%	3.57
160	246.00	19.8%	1.38	188.00	15.1%	1.80	214.00	17.2%	2.11	192.00	15.4%	1.90	174.00	14.0%	1.95	87.00	7.0%	3.88
170	242.00	19.4%	1.58	187.00	15.0%	2.04	214.00	17.2%	2.37	191.00	15.3%	2.15	174.00	14.0%	2.20	91.00	7.3%	4.21
180	238.00	19.2%	1.80	187.00	15.0%	2.30	215.00	17.3%	2.64	191.00	15.3%	2.41	174.00	14.0%	2.47	94.00	7.6%	4.55
190	235.00	18.9%	2.04	186.00	14.9%	2.58	216.00	17.3%	2.93	191.00	15.3%	2.69	174.00	14.0%	2.75	98.00	7.9%	4.91
200	232.00	18.6%	2.29	185.00	14.9%	2.87	216.00	17.3%	3.24	190.00	15.3%	2.98	174.00	14.0%	3.05	101.00	8.1%	5.27
210	228.00	18.3%	2.56	184.00	14.8%	3.18	216.00	17.3%	3.55	190.00	15.3%	3.29	174.00	14.0%	3.36	104.00	8.4%	5.65
220	225.00	18.1%	2.85	184.00	14.8%	3.50	217.00	17.4%	3.89	190.00	15.3%	3.62	174.00	14.0%	3.69	106.00	8.5%	6.03
230	222.00	17.8%	3.16	183.00	14.7%	3.83	217.00	17.4%	4.23	189.00	15.2%	3.96	174.00	14.0%	4.04	109.00	8.8%	6.43
240	219.00	17.6%	3.48	182.00	14.6%	4.19	217.00	17.4%	4.60	189.00	15.2%	4.32	174.00	14.0%	4.39	112.00	9.0%	6.85
250	217.00	17.4%	3.83	182.00	14.6%	4.56	217.00	17.4%	4.98	189.00	15.2%	4.69	174.00	14.0%	4.77	114.00	9.2%	7.28
260	214.00	17.2%	4.19	181.00	14.5%	4.95	218.00	17.5%	5.37	188.00	15.1%	5.08	174.00	14.0%	5.16	116.00	9.3%	7.71
270	212.00	17.0%	4.56	181.00	14.5%	5.35	218.00	17.5%	5.78	188.00	15.1%	5.48	174.00	14.0%	5.57	119.00	9.6%	8.17
280	210.00	16.9%	4.95	180.00	14.5%	5.76	218.00	17.5%	6.20	188.00	15.1%	5.90	174.00	14.0%	5.99	121.00	9.7%	8.63
290	208.00	16.7%	5.37	180.00	14.5%	6.20	218.00	17.5%	6.64	188.00	15.1%	6.34	174.00	14.0%	6.43	123.00	9.9%	9.11
300	206.00	16.5%	5.81	180.00	14.5%	6.65	218.00	17.5%	7.09	187.00	15.0%	6.79	174.00	14.0%	6.88	124.00	10.0%	9.61

AZUSA AAAC 123.3 KCML

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1983.91
 Peso (daN/m): 0.1688

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	425.00	21.4%	0.00	303.00	15.3%	0.01	294.00	14.8%	0.01	294.00	14.8%	0.01	258.00	13.0%	0.01	12.00	0.6%	0.18
20	424.00	21.4%	0.02	302.00	15.2%	0.03	294.00	14.8%	0.04	294.00	14.8%	0.03	258.00	13.0%	0.03	23.00	1.2%	0.37
30	422.00	21.3%	0.05	301.00	15.2%	0.06	295.00	14.9%	0.08	293.00	14.8%	0.07	258.00	13.0%	0.07	33.00	1.7%	0.57
40	420.00	21.2%	0.08	300.00	15.1%	0.11	296.00	14.9%	0.14	292.00	14.7%	0.12	258.00	13.0%	0.13	43.00	2.2%	0.78
50	418.00	21.0%	0.13	299.00	15.1%	0.15	297.00	15.0%	0.22	291.00	14.7%	0.19	258.00	13.0%	0.20	53.00	2.7%	0.99
60	413.00	20.8%	0.18	297.00	15.0%	0.26	298.00	15.0%	0.32	291.00	14.7%	0.28	258.00	13.0%	0.29	63.00	3.2%	1.21
70	409.00	20.6%	0.25	295.00	14.9%	0.35	299.00	15.1%	0.43	290.00	14.6%	0.38	258.00	13.0%	0.40	72.00	3.6%	1.45
80	404.00	20.4%	0.33	292.00	14.7%	0.46	300.00	15.1%	0.56	288.00	14.5%	0.49	258.00	13.0%	0.52	80.00	4.0%	1.69
90	399.00	20.1%	0.43	291.00	14.7%	0.59	301.00	15.2%	0.70	288.00	14.5%	0.63	258.00	13.0%	0.66	88.00	4.4%	1.94
100	393.00	19.8%	0.54	289.00	14.6%	0.73	302.00	15.2%	0.86	286.00	14.4%	0.77	258.00	13.0%	0.82	96.00	4.8%	2.20
110	387.00	19.5%	0.66	287.00	14.5%	0.89	303.00	15.3%	1.04	285.00	14.4%	0.94	258.00	13.0%	0.99	103.00	5.2%	2.47
120	382.00	19.3%	0.80	285.00	14.4%	1.07	303.00	15.3%	1.23	284.00	14.3%	1.12	258.00	13.0%	1.18	110.00	5.5%	2.76
130	375.00	18.9%	0.95	282.00	14.2%	1.26	303.00	15.3%	1.44	283.00	14.3%	1.32	258.00	13.0%	1.39	117.00	5.9%	3.05
140	369.00	18.6%	1.12	281.00	14.2%	1.47	304.00	15.3%	1.66	282.00	14.2%	1.54	257.00	13.0%	1.61	123.00	6.2%	3.36
150	363.00	18.3%	1.31	279.00	14.1%	1.70	304.00	15.3%	1.91	281.00	14.2%	1.77	257.00	13.0%	1.84	129.00	6.5%	3.68
160	357.00	18.0%	1.51	277.00	14.0%	1.95	304.00	15.3%	2.16	280.00	14.1%	2.02	257.00	13.0%	2.10	135.00	6.8%	4.01
170	351.00	17.7%	1.74	276.00	13.9%	2.21	304.00	15.3%	2.44	279.00	14.1%	2.29	257.00	13.0%	2.37	140.00	7.1%	4.35
180	346.00	17.4%	1.98	275.00	13.9%	2.49	305.00	15.4%	2.72	279.00	14.1%	2.57	257.00	13.0%	2.66	145.00	7.4%	4.71
190	340.00	17.1%	2.24	274.00	13.8%	2.78	305.00	15.4%	3.03	278.00	14.0%	2.87	257.00	13.0%	2.96	150.00	7.6%	5.07
200	334.00	16.8%	2.53	272.00	13.7%	3.10	305.00	15.4%	3.35	277.00	14.0%	3.19	257.00	13.0%	3.28	155.00	7.8%	5.46
210	329.00	16.6%	2.83	271.00	13.7%	3.43	305.00	15.4%	3.69	276.00	13.9%	3.52	257.00	13.0%	3.62	159.00	8.0%	5.85
220	325.00	16.4%	3.15	270.00	13.6%	3.78	305.00	15.4%	4.04	276.00	13.9%	3.87	257.00	13.0%	3.97	163.00	8.2%	6.26
230	320.00	16.1%	3.49	269.00	13.6%	4.15	305.00	15.4%	4.41	275.00	13.9%	4.24	257.00	13.0%	4.35	167.00	8.4%	6.68
240	316.00	15.9%	3.84	269.00	13.6%	4.53	305.00	15.4%	4.80	275.00	13.9%	4.62	257.00	13.0%	4.73	171.00	8.6%	7.12
250	313.00	15.8%	4.22	268.00	13.5%	4.93	305.00	15.4%	5.20	274.00	13.8%	5.02	257.00	13.0%	5.14	175.00	8.8%	7.57
260	309.00	15.6%	4.62	267.00	13.5%	5.35	304.00	15.3%	5.62	273.00	13.8%	5.44	257.00	13.0%	5.56	178.00	9.0%	8.04
270	306.00	15.4%	5.04	266.00	13.4%	5.79	304.00	15.3%	6.06	273.00	13.8%	5.88	257.00	13.0%	5.99	181.00	9.1%	8.51
280	303.00	15.3%	5.47	266.00	13.4%	6.24	304.00	15.3%	6.52	272.00	13.7%	6.33	257.00	13.0%	6.45	184.00	9.3%	9.01
290	300.00	15.1%	5.93	265.00	13.4%	6.70	304.00	15.3%	6.99	272.00	13.7%	6.80	257.00	13.0%	6.92	187.00	9.4%	9.52
300	297.00	15.0%	6.40	264.00	13.3%	7.19	304.00	15.3%	7.47	272.00	13.7%	7.28	257.00	13.0%	7.41	189.00	9.5%	10.04
310	295.00	14.9%	6.88	264.00	13.3%	7.69	303.00	15.3%	7.98	271.00	13.7%	7.79	257.00	13.0%	7.91	192.00	9.7%	10.58
320	292.00	14.7%	7.40	263.00	13.3%	8.21	303.00	15.3%	8.50	271.00	13.7%	8.31	256.00	12.9%	8.44	194.00	9.8%	11.13
330	290.00	14.6%	7.92	263.00	13.3%	8.75	303.00	15.3%	9.04	271.00	13.7%	8.85	256.00	12.9%	8.97	197.00	9.9%	11.70
340	288.00	14.5%	8.46	263.00	13.3%	9.30	303.00	15.3%	9.59	270.00	13.6%	9.40	256.00	12.9%	9.53	199.00	10.0%	12.29
350	287.00	14.5%	9.03	262.00	13.2%	9.87	303.00	15.3%	10.16	270.00	13.6%	9.97	256.00	12.9%	10.10	201.00	10.1%	12.89
360	285.00	14.4%	9.61	262.00	13.2%	10.47	302.00	15.2%	10.75	269.00	13.6%	10.57	256.00	12.9%	10.70	203.00	10.2%	13.51
370	283.00	14.3%	10.21	261.00	13.2%	11.07	302.00	15.2%	11.36	269.00	13.6%	11.17	256.00	12.9%	11.30	205.00	10.3%	14.13
380	282.00	14.2%	10.82	261.00	13.2%	11.69	302.00	15.2%	11.98	269.00	13.6%	11.79	256.00	12.9%	11.93	207.00	10.4%	14.78
390	280.00	14.1%	11.46	261.00	13.2%	12.33	301.00	15.2%	12.63	269.00	13.6%	12.44	256.00	12.9%	12.57	208.00	10.5%	15.45
400	278.00	14.1%	12.11	260.00	13.1%	12.99	301.00	15.2%	13.28	268.00	13.5%	13.09	256.00	12.9%	13.23	210.00	10.6%	16.13
410	278.00	14.0%	12.78	260.00	13.1%	13.66	301.00	15.2%	13.96	268.00	13.5%	13.77	256.00	12.9%	13.90	211.00	10.6%	16.82
420	277.00	14.0%	13.47	260.00	13.1%	14.36	301.00	15.2%	14.66	268.00	13.5%	14.46	256.00	12.9%	14.60	213.00	10.7%	17.54
430	276.00	13.9%	14.17	259.00	13.1%	15.07	301.00	15.2%	15.36	268.00	13.5%	15.17	256.00	12.9%	15.31	214.00	10.8%	18.27
440	275.00	13.9%	14.90	259.00	13.1%	15.80	300.00	15.1%	16.09	267.00	13.5%	15.90	256.00	12.9%	16.04	215.00	10.8%	19.02
450	274.00	13.8%	15.64	259.00	13.1%	16.54	300.00	15.1%	16.84	267.00	13.5%	16.65	256.00	12.9%	16.79	217.00	10.9%	19.78
460	273.00	13.8%	16.41	258.00	13.0%	17.31	300.00	15.1%	17.61	267.00	13.5%	17.41	256.00	12.9%	17.56	218.00	11.0%	20.57
470	272.00	13.7%	17.18	258.00	13.0%	18.09	299.00	15.1%	18.38	266.00	13.4%	18.19	256.00	12.9%	18.34	219.00	11.0%	21.36
480	271.00	13.7%	17.98	258.00	13.0%	18.89	299.00	15.1%	19.18	266.00	13.4%	18.99	256.00	12.9%	19.14	220.00	11.1%	22.18
490	270.00	13.6%	18.79	258.00	13.0%	19.71	299.00	15.1%	20.00	266.00	13.4%	19.81	254.00	12.8%	19.96	221.00	11.1%	23.01
500	269.00	13.6%	19.63	257.00	13.0%	20.54	299.00	15.1%	20.84	266.00	13.4%	20.65	254.00	12.8%	20.79	222.00	11.2%	23.86
510	269.00	13.6%	20.48	257.00	13.0%	21.40	298.00	15.0%	21.69	265.00	13.4%	21.50	254.00	12.8%	21.65	223.00	11.2%	24.72
520	268.00	13.5%	21.35	257.00	13.0%	22.27	298.00	15.0%	22.56	265.00	13.4%	22.37	254.00	12.8%	22.52	224.00	11.3%	25.61
530	267.00	13.5%	22.23	257.00	13.0%	23.16	298.00	15.0%	23.45	265.00	13.4%	23.26	254.00	12.8%	23.41	224.00	11.3%	26.51
540	267.00	13.5%	23.14	256.00	12.9%	24.07	297.00	15.0%	24.36	265.00	13.4%	24.17	254.00	12.8%	24.32	225.00	11.3%	27.43
550	266.00	13.4%	24.06	256.00	12.9%	24.99	297.00	15.0%	25.29	264.00	13.3%	25.10	254.00	12.8%	25.24	226.00	11.4%	28.36
560	265.00	13.4%	25.01	256.00	12.9%	25.94	297.00	15.0%	26.23	264.00	13.3%	26.04	253.00	12.8%	26.19	227.00	11.4%	29.32
570	265.00	13.4%	25.97	256.00	12.9%	26.90	297.00	15.0%	27.20	264.00	13.3%	27.00	253.00	12.8%	27.15	227.00	11.4%	30.30
580	264.00	13.3%	26.95	255.00	12.9%	27.89	296.00	14.9%	28.18	264.00	13.3%	27.99	253.00	12.8%	28.14	228.00	11.5%	31.29
590	264.00	13.3%	27.95	255.00	12.9%	28.89	296.00	14.9%	29.18	263.00	13.3%	28.99	253.00	12.8%	29.14	228.00	11.5%	32.30
600	263.00	13.3%	28.97	255.00	12.9%	29.90	296.00	14.9%	30.20	263.00	13.3%	30.01	253.00	12.8%	30.16	229.00	11.5%	33.32

ANAREIM AAAC 155.4 KCML																			
Clima: Frío																			
Altitud: 2500 msnm - 3500 msnm																			
Temperatura máxima (°C): 27																			
Temperatura media (°C): 9																			
Temperatura mínima (°C): 4																			
Temperatura coincidente (°C): 5																			
Velocidad del viento máxima (km/h): 60																			
Velocidad del viento promedio (km/h): 40																			
Propiedades físicas del conductor:																			
Tensión de rotura (daN): 2397.59																			
Peso (daN/m): 0.2129																			
Condición de tensionado: (% límite de tensión de rotura)																			
Temperatura mínima: 22.5%																			
Operación diaria (EDS): 13%																			
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	
10	517.00	21.6%	0.01	369.00	15.4%	0.01	357.00	14.9%	0.01	357.00	14.9%	0.01	312.00	13.0%	0.01	14.00	0.6%	0.19	
20	516.00	21.4%	0.02	367.00	15.2%	0.02	357.00	14.9%	0.04	356.00	14.8%	0.03	312.00	13.0%	0.03	28.00	1.2%	0.38	
30	513.00	21.4%	0.05	366.00	15.3%	0.07	359.00	15.0%	0.08	356.00	14.8%	0.07	312.00	13.0%	0.08	41.00	1.7%	0.58	
40	509.00	21.2%	0.08	364.00	15.2%	0.12	359.00	15.0%	0.14	354.00	14.6%	0.13	312.00	13.0%	0.14	54.00	2.3%	0.79	
50	505.00	21.1%	0.13	362.00	15.1%	0.18	360.00	15.0%	0.22	353.00	14.7%	0.20	312.00	13.0%	0.21	66.00	2.8%	1.01	
60	501.00	20.9%	0.19	360.00	15.0%	0.27	360.00	15.0%	0.32	353.00	14.7%	0.28	312.00	13.0%	0.31	78.00	3.3%	1.23	
70	495.00	20.6%	0.26	358.00	14.9%	0.36	361.00	15.1%	0.43	351.00	14.6%	0.39	312.00	13.0%	0.42	89.00	3.7%	1.47	
80	488.00	20.4%	0.35	355.00	14.8%	0.48	361.00	15.1%	0.57	349.00	14.6%	0.51	311.00	13.0%	0.55	100.00	4.2%	1.71	
90	481.00	20.1%	0.45	352.00	14.7%	0.61	362.00	15.1%	0.71	347.00	14.5%	0.65	311.00	13.0%	0.69	110.00	4.6%	1.97	
100	474.00	19.8%	0.56	349.00	14.6%	0.76	362.00	15.1%	0.88	345.00	14.4%	0.80	311.00	13.0%	0.85	119.00	5.0%	2.24	
110	466.00	19.4%	0.69	346.00	14.4%	0.93	362.00	15.1%	1.06	344.00	14.3%	0.97	311.00	13.0%	1.03	128.00	5.3%	2.51	
120	458.00	19.1%	0.84	344.00	14.3%	1.12	363.00	15.1%	1.25	342.00	14.3%	1.16	311.00	13.0%	1.23	137.00	5.7%	2.80	
130	450.00	18.8%	1.00	341.00	14.2%	1.32	362.00	15.1%	1.47	340.00	14.2%	1.37	311.00	13.0%	1.45	145.00	6.0%	3.11	
140	442.00	18.4%	1.18	339.00	14.1%	1.54	362.00	15.1%	1.70	339.00	14.1%	1.60	311.00	13.0%	1.68	153.00	6.4%	3.42	
150	433.00	18.1%	1.38	336.00	14.0%	1.78	362.00	15.1%	1.95	338.00	14.1%	1.84	311.00	13.0%	1.93	160.00	6.7%	3.74	
160	426.00	17.8%	1.60	335.00	14.0%	2.04	362.00	15.1%	2.21	337.00	14.1%	2.10	311.00	13.0%	2.19	167.00	7.0%	4.08	
170	419.00	17.5%	1.84	333.00	13.9%	2.31	362.00	15.1%	2.50	335.00	14.0%	2.38	311.00	13.0%	2.47	174.00	7.3%	4.43	
180	411.00	17.1%	2.10	331.00	13.8%	2.60	362.00	15.1%	2.79	334.00	13.9%	2.67	311.00	13.0%	2.77	180.00	7.6%	4.80	
190	405.00	16.9%	2.37	330.00	13.8%	2.92	362.00	15.1%	3.11	333.00	13.9%	2.99	311.00	13.0%	3.09	186.00	7.8%	5.18	
200	398.00	16.6%	2.68	328.00	13.7%	3.24	361.00	15.1%	3.45	332.00	13.8%	3.32	311.00	13.0%	3.43	191.00	8.0%	5.57	
210	392.00	16.3%	3.00	327.00	13.6%	3.59	361.00	15.1%	3.80	332.00	13.8%	3.67	311.00	13.0%	3.78	197.00	8.2%	5.98	
220	386.00	16.1%	3.34	325.00	13.6%	3.96	360.00	15.0%	4.17	331.00	13.8%	4.03	311.00	13.0%	4.15	201.00	8.4%	6.40	
230	381.00	15.9%	3.69	325.00	13.6%	4.34	360.00	15.0%	4.55	330.00	13.8%	4.42	311.00	13.0%	4.53	206.00	8.6%	6.84	
240	377.00	15.7%	4.07	324.00	13.5%	4.74	360.00	15.0%	4.95	329.00	13.7%	4.81	311.00	13.0%	4.94	211.00	8.8%	7.28	
250	372.00	15.5%	4.47	323.00	13.5%	5.16	360.00	15.0%	5.38	329.00	13.7%	5.24	310.00	12.9%	5.36	215.00	9.0%	7.75	
260	368.00	15.3%	4.89	322.00	13.4%	5.60	359.00	15.0%	5.82	328.00	13.7%	5.68	310.00	12.9%	5.80	219.00	9.1%	8.23	
270	364.00	15.2%	5.32	321.00	13.4%	6.05	359.00	15.0%	6.27	327.00	13.6%	6.13	310.00	12.9%	6.26	223.00	9.2%	8.73	
280	361.00	15.1%	5.79	320.00	13.3%	6.52	358.00	14.9%	6.75	327.00	13.6%	6.60	310.00	12.9%	6.73	226.00	9.4%	9.24	
290	358.00	14.9%	6.26	320.00	13.3%	7.01	358.00	14.9%	7.24	326.00	13.6%	7.09	310.00	12.9%	7.22	230.00	9.6%	9.76	
300	354.00	14.8%	6.76	319.00	13.2%	7.52	358.00	14.9%	7.74	326.00	13.6%	7.60	310.00	12.9%	7.73	233.00	9.7%	10.31	
310	352.00	14.7%	7.28	318.00	13.2%	8.04	358.00	14.9%	8.27	325.00	13.6%	8.13	310.00	12.9%	8.26	236.00	9.8%	10.87	
320	349.00	14.6%	7.81	318.00	13.3%	8.59	357.00	14.9%	8.81	325.00	13.6%	8.67	310.00	12.9%	8.81	239.00	10.0%	11.44	
330	347.00	14.5%	8.36	317.00	13.2%	9.15	357.00	14.9%	9.38	324.00	13.5%	9.23	310.00	12.9%	9.37	241.00	10.1%	12.03	
340	345.00	14.4%	8.93	317.00	13.2%	9.73	356.00	14.8%	9.96	324.00	13.5%	9.81	310.00	12.9%	9.95	244.00	10.2%	12.64	
350	343.00	14.3%	9.52	316.00	13.2%	10.32	356.00	14.8%	10.56	324.00	13.5%	10.41	309.00	12.9%	10.55	246.00	10.3%	13.26	
360	341.00	14.2%	10.13	316.00	13.2%	10.94	356.00	14.8%	11.17	323.00	13.5%	11.02	309.00	12.9%	11.17	249.00	10.4%	13.90	
370	339.00	14.1%	10.76	315.00	13.1%	11.57	355.00	14.8%	11.81	323.00	13.5%	11.66	309.00	12.9%	11.80	251.00	10.5%	14.56	
380	337.00	14.1%	11.41	315.00	13.1%	12.23	355.00	14.8%	12.46	322.00	13.4%	12.31	309.00	12.9%	12.46	253.00	10.6%	15.24	
390	336.00	14.0%	12.07	314.00	13.1%	12.89	355.00	14.8%	13.13	322.00	13.4%	12.98	309.00	12.9%	13.13	255.00	10.6%	15.93	
400	334.00	13.9%	12.75	314.00	13.2%	13.58	354.00	14.8%	13.81	322.00	13.4%	13.67	309.00	12.9%	13.81	257.00	10.7%	16.64	
410	333.00	13.9%	13.46	314.00	13.1%	14.29	354.00	14.8%	14.52	321.00	13.4%	14.38	309.00	12.9%	14.52	258.00	10.8%	17.36	
420	332.00	13.8%	14.18	313.00	13.1%	15.02	354.00	14.8%	15.25	321.00	13.4%	15.10	308.00	12.8%	15.25	260.00	10.8%	18.11	
430	330.00	13.8%	14.92	313.00	13.1%	15.76	353.00	14.7%	15.99	321.00	13.4%	15.85	308.00	12.8%	15.99	261.00	10.8%	18.87	
440	329.00	13.7%	15.68	312.00	13.0%	16.52	353.00	14.7%	16.75	320.00	13.3%	16.61	308.00	12.8%	16.76	263.00	11.0%	19.64	
450	328.00	13.7%	16.45	312.00	13.0%	17.30	353.00	14.7%	17.54	320.00	13.3%	17.39	308.00	12.8%	17.54	264.00	11.0%	20.44	
460	327.00	13.6%	17.25	312.00	13.0%	18.10	352.00	14.7%	18.34	320.00	13.3%	18.19	308.00	12.8%	18.34	266.00	11.1%	21.26	
470	326.00	13.6%	18.07	311.00	13.0%	18.92	352.00	14.7%	19.15	319.00	13.3%	19.00	308.00	12.8%	19.16	267.00	11.1%	22.08	
480	325.00	13.6%	18.90	311.00	13.0%	19.76	352.00												

ALLIANCE AAAC 246.9 KCMIIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	793.00	20.8%	0.01	566.00	15%	0.01	548.00	14%	0.01	548.00	14%	0.01	476.00	12.5%	0.01	22.00	1%	0.19
20	791.00	20.8%	0.02	565.00	15%	0.03	548.00	14%	0.04	547.00	14%	0.03	476.00	12.5%	0.04	44.00	1%	0.38
30	787.00	20.7%	0.05	563.00	15%	0.07	548.00	14%	0.08	546.00	14%	0.07	476.00	12.5%	0.08	65.00	2%	0.59
40	780.00	20.5%	0.09	559.00	15%	0.12	548.00	14%	0.14	543.00	14%	0.13	476.00	12.5%	0.14	85.00	2%	0.80
50	773.00	20.3%	0.14	555.00	15%	0.19	547.00	14%	0.22	541.00	14%	0.20	476.00	12.5%	0.22	104.00	3%	1.02
60	766.00	20.1%	0.20	552.00	14%	0.28	547.00	14%	0.32	538.00	14%	0.29	476.00	12.5%	0.32	122.00	3%	1.25
70	755.00	19.8%	0.27	547.00	14%	0.38	546.00	14%	0.43	535.00	14%	0.40	476.00	12.5%	0.44	140.00	4%	1.49
80	745.00	19.6%	0.36	543.00	14%	0.50	546.00	14%	0.56	532.00	14%	0.52	476.00	12.5%	0.57	158.00	4%	1.73
90	732.00	19.2%	0.47	538.00	14%	0.64	544.00	14%	0.71	528.00	14%	0.67	476.00	12.5%	0.72	172.00	5%	1.99
100	720.00	18.9%	0.59	533.00	14%	0.79	543.00	14%	0.87	525.00	14%	0.83	476.00	12.5%	0.89	187.00	5%	2.27
110	707.00	18.6%	0.72	528.00	14%	0.97	542.00	14%	1.06	522.00	14%	1.00	476.00	12.5%	1.08	201.00	5%	2.55
120	694.00	18.2%	0.88	524.00	14%	1.16	541.00	14%	1.28	519.00	14%	1.20	476.00	12.5%	1.28	214.00	6%	2.85
130	681.00	17.9%	1.05	520.00	14%	1.37	540.00	14%	1.48	517.00	14%	1.42	476.00	12.5%	1.50	227.00	6%	3.15
140	667.00	17.5%	1.24	516.00	14%	1.61	538.00	14%	1.72	514.00	13%	1.65	475.00	12.5%	1.75	239.00	6%	3.47
150	654.00	17.2%	1.45	513.00	13%	1.86	537.00	14%	1.98	512.00	13%	1.90	475.00	12.5%	2.00	250.00	7%	3.80
160	642.00	16.9%	1.69	510.00	13%	2.13	536.00	14%	2.25	509.00	13%	2.18	475.00	12.5%	2.28	261.00	7%	4.15
170	630.00	16.5%	1.94	507.00	13%	2.41	535.00	14%	2.54	507.00	13%	2.47	475.00	12.5%	2.57	271.00	7%	4.51
180	619.00	16.3%	2.21	504.00	13%	2.72	534.00	14%	2.85	505.00	13%	2.77	475.00	12.5%	2.89	281.00	7%	4.89
190	609.00	16.0%	2.51	502.00	13%	3.04	533.00	14%	3.18	504.00	13%	3.10	475.00	12.5%	3.22	290.00	8%	5.28
200	599.00	15.7%	2.82	500.00	13%	3.38	532.00	14%	3.52	503.00	13%	3.44	475.00	12.5%	3.56	298.00	8%	5.68
210	590.00	15.5%	3.16	498.00	13%	3.75	531.00	14%	3.89	501.00	13%	3.81	474.00	12.4%	3.93	306.00	8%	6.10
220	582.00	15.3%	3.52	496.00	13%	4.13	530.00	14%	4.27	499.00	13%	4.19	474.00	12.4%	4.32	314.00	8%	6.53
230	574.00	15.1%	3.90	495.00	13%	4.53	530.00	14%	4.67	499.00	13%	4.59	474.00	12.4%	4.72	321.00	8%	6.98
240	567.00	14.9%	4.30	493.00	13%	4.94	529.00	14%	5.09	497.00	13%	5.01	474.00	12.4%	5.14	328.00	9%	7.44
250	561.00	14.7%	4.71	492.00	13%	5.38	528.00	14%	5.53	496.00	13%	5.44	474.00	12.4%	5.58	334.00	9%	7.93
260	555.00	14.6%	5.16	490.00	13%	5.84	527.00	14%	5.98	495.00	13%	5.90	474.00	12.4%	6.04	340.00	9%	8.42
270	550.00	14.4%	5.61	489.00	13%	6.31	527.00	14%	6.46	494.00	13%	6.37	474.00	12.4%	6.51	346.00	9%	8.93
280	544.00	14.3%	6.09	488.00	13%	6.80	526.00	14%	6.95	494.00	13%	6.86	473.00	12.4%	7.01	351.00	9%	9.46
290	540.00	14.2%	6.59	487.00	13%	7.31	525.00	14%	7.46	493.00	13%	7.37	473.00	12.4%	7.52	356.00	9%	10.01
300	535.00	14.1%	7.11	486.00	13%	7.84	524.00	14%	8.00	492.00	13%	7.91	473.00	12.4%	8.05	361.00	9%	10.57
310	530.00	14.0%	7.65	485.00	13%	8.39	524.00	14%	8.54	491.00	13%	8.45	473.00	12.4%	8.60	365.00	10%	11.15
320	528.00	13.9%	8.21	484.00	13%	8.95	523.00	14%	9.11	490.00	13%	9.02	473.00	12.4%	9.17	369.00	10%	11.74
330	524.00	13.8%	8.79	483.00	13%	9.54	522.00	14%	9.70	490.00	13%	9.61	473.00	12.4%	9.76	373.00	10%	12.36
340	521.00	13.7%	9.39	483.00	13%	10.14	522.00	14%	10.30	489.00	13%	10.21	472.00	12.4%	10.36	377.00	10%	12.98
350	519.00	13.6%	10.00	482.00	13%	10.77	521.00	14%	10.92	488.00	13%	10.83	472.00	12.4%	10.98	381.00	10%	13.63
360	516.00	13.6%	10.64	481.00	13%	11.41	521.00	14%	11.57	488.00	13%	11.48	472.00	12.4%	11.63	384.00	10%	14.30
370	513.00	13.5%	11.29	480.00	13%	12.07	520.00	14%	12.23	487.00	13%	12.13	472.00	12.4%	12.29	387.00	10%	14.98
380	511.00	13.4%	11.97	480.00	13%	12.75	520.00	14%	12.90	487.00	13%	12.81	472.00	12.4%	12.97	390.00	10%	15.68
390	509.00	13.4%	12.66	479.00	13%	13.44	519.00	14%	13.60	486.00	13%	13.51	471.00	12.4%	13.67	393.00	10%	16.40
400	507.00	13.3%	13.38	478.00	13%	14.16	518.00	14%	14.32	486.00	13%	14.23	471.00	12.4%	14.39	396.00	10%	17.13
410	505.00	13.3%	14.11	478.00	13%	14.90	518.00	14%	15.06	485.00	13%	14.97	471.00	12.4%	15.13	398.00	10%	17.89
420	503.00	13.2%	14.86	477.00	13%	15.66	517.00	14%	15.81	484.00	13%	15.72	471.00	12.4%	15.89	401.00	11%	18.66
430	501.00	13.2%	15.64	477.00	13%	16.43	517.00	14%	16.59	484.00	13%	16.50	470.00	12.3%	16.66	403.00	11%	19.45
440	499.00	13.1%	16.43	476.00	13%	17.23	516.00	14%	17.38	483.00	13%	17.29	470.00	12.3%	17.45	405.00	11%	20.26
450	498.00	13.1%	17.24	476.00	13%	18.04	515.00	14%	18.20	483.00	13%	18.11	470.00	12.3%	18.27	407.00	11%	21.09
460	496.00	13.0%	18.07	475.00	12%	18.88	515.00	14%	19.03	482.00	13%	18.94	469.00	12.3%	19.10	409.00	11%	21.94
470	495.00	13.0%	18.92	475.00	12%	19.73	514.00	13%	19.88	482.00	13%	19.80	469.00	12.3%	19.96	411.00	11%	22.80
480	493.00	12.9%	19.79	474.00	12%	20.60	514.00	13%	20.76	481.00	13%	20.67	469.00	12.3%	20.83	413.00	11%	23.69
490	492.00	12.9%	20.68	474.00	12%	21.49	513.00	13%	21.65	481.00	13%	21.56	469.00	12.3%	21.72	414.00	11%	24.59
500	491.00	12.9%	21.59	473.00	12%	22.41	513.00	13%	22.56	480.00	13%	22.47	469.00	12.3%	22.64	416.00	11%	25.51
510	490.00	12.9%	22.53	473.00	12%	23.34	512.00	13%	23.50	480.00	13%	23.41	468.00	12.3%	23.57	417.00	11%	26.46
520	488.00	12.8%	23.48	472.00	12%	24.29	512.00	13%	24.45	480.00	13%	24.36	468.00	12.3%	24.52	419.00	11%	27.42
530	487.00	12.8%	24.45	472.00	12%	25.27	511.00	13%	25.42	479.00	13%	25.33	467.00	12.3%	25.50	420.00	11%	28.40
540	486.00	12.8%	25.44	471.00	12%	26.26	511.00	13%	26.41	479.00	13%	26.33	467.00	12.3%	26.49	421.00	11%	29.41
550	485.00	12.7%	26.45	471.00	12%	27.27	510.00	13%	27.43	478.00	13%	27.34	467.00	12.3%	27.50	422.00	11%	30.43
560	484.00	12.7%	27.49	470.00	12%	28.31	509.00	13%	28.46	477.00	13%	28.38	466.00	12.2%	28.54	423.00	11%	31.47
570	483.00	12.7%	28.54	470.00	12%	29.36	509.00	13%	29.51	477.00	13%	29.43	466.00	12.2%	29.59	424.00	11%	32.53
580	482.00	12.7%	29.62	469.00	12%	30.43	508.00	13%	30.59	477.00	13%	30.50	466.00	12.2%	30.67	425.00	11%	33.62
590	481.00	12.6%	30.71	469.00	12%	31.53	508.00	13%	31.68	476.00	13%	31.60	465.00	12.2%	31.76	426.00	11%	34.72
600	480.00	12.6%	31.82	468.00	12%	32.65	507.00	13%	32.80	476.00	13%	32.71	465.00	12.2%	32.88	427.00	11%	35.84

BUTTE AAAC 312.8 KCML																										
Clima: Frío Altitud: 2500 msnm - 3500 msnm Temperatura máxima (°C): 27 Temperatura media (°C): 9 Temperatura mínima (°C): 4 Temperatura coincidente (°C): 5 Velocidad del viento máxima (km/h): 60 Velocidad del viento promedio (km/h): 40 Propiedades físicas del conductor: Tensión de rotura (daN): 4993.04 Peso (daN/m): 0.4284 Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%																										
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final										
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha								
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS									
10	912.00	18.0%	0.01	673.00	14%	0.01	651.00	13%	0.01	651.00	13%	0.01	563.00	11.5%	0.01	28.00	1%	0.19								
20	909.00	18.0%	0.02	671.00	14%	0.03	651.00	13%	0.04	649.00	13%	0.03	563.00	11.5%	0.04	55.00	1%	0.39								
30	903.00	18.5%	0.05	667.00	14%	0.07	651.00	13%	0.08	648.00	13%	0.08	563.00	11.5%	0.09	81.00	2%	0.59								
40	895.00	18.3%	0.10	662.00	14%	0.13	648.00	13%	0.15	643.00	13%	0.14	563.00	11.5%	0.15	106.00	2%	0.81								
50	887.00	18.1%	0.15	658.00	13%	0.20	648.00	13%	0.23	640.00	13%	0.21	563.00	11.5%	0.24	130.00	3%	1.03								
60	875.00	17.9%	0.22	652.00	13%	0.30	646.00	13%	0.33	636.00	13%	0.31	562.00	11.5%	0.34	153.00	3%	1.26								
70	862.00	17.6%	0.30	646.00	13%	0.41	644.00	13%	0.45	631.00	13%	0.43	562.00	11.5%	0.47	174.00	4%	1.51								
80	848.00	17.3%	0.40	640.00	13%	0.54	642.00	13%	0.59	627.00	13%	0.56	562.00	11.5%	0.61	195.00	4%	1.76								
90	831.00	17.0%	0.52	633.00	13%	0.69	639.00	13%	0.75	623.00	13%	0.71	562.00	11.5%	0.77	214.00	4%	2.03								
100	816.00	16.7%	0.66	626.00	13%	0.86	637.00	13%	0.93	618.00	13%	0.89	562.00	11.5%	0.95	232.00	5%	2.31								
110	800.00	16.3%	0.81	622.00	13%	1.04	635.00	13%	1.12	614.00	13%	1.08	562.00	11.5%	1.15	249.00	5%	2.60								
120	784.00	16.0%	0.98	616.00	13%	1.25	633.00	13%	1.34	610.00	13%	1.29	562.00	11.5%	1.37	265.00	5%	2.91								
130	768.00	15.7%	1.18	611.00	12%	1.48	631.00	13%	1.57	607.00	12%	1.52	562.00	11.5%	1.61	281.00	6%	3.23								
140	753.00	15.4%	1.39	607.00	12%	1.73	630.00	13%	1.83	604.00	12%	1.77	562.00	11.5%	1.87	295.00	6%	3.56								
150	739.00	15.1%	1.63	603.00	12%	2.00	628.00	13%	2.10	601.00	12%	2.04	562.00	11.5%	2.15	309.00	6%	3.91								
160	725.00	14.8%	1.89	600.00	12%	2.29	626.00	13%	2.39	599.00	12%	2.33	562.00	11.5%	2.44	322.00	7%	4.27								
170	712.00	14.6%	2.17	596.00	12%	2.60	624.00	13%	2.71	596.00	12%	2.65	561.00	11.5%	2.76	334.00	7%	4.65								
180	700.00	14.3%	2.46	593.00	12%	2.93	623.00	13%	3.04	594.00	12%	2.98	561.00	11.5%	3.09	345.00	7%	5.04								
190	689.00	14.1%	2.81	590.00	12%	3.28	622.00	13%	3.39	592.00	12%	3.33	561.00	11.5%	3.45	355.00	7%	5.45								
200	680.00	13.9%	3.15	588.00	12%	3.65	620.00	13%	3.76	591.00	12%	3.70	561.00	11.5%	3.82	365.00	7%	5.87								
210	670.00	13.7%	3.53	586.00	12%	4.04	619.00	13%	4.15	589.00	12%	4.09	561.00	11.5%	4.21	374.00	8%	6.31								
220	662.00	13.5%	3.92	583.00	12%	4.45	618.00	13%	4.57	587.00	12%	4.50	561.00	11.5%	4.63	383.00	8%	6.77								
230	654.00	13.4%	4.33	582.00	12%	4.87	617.00	13%	5.00	585.00	12%	4.93	560.00	11.4%	5.06	392.00	8%	7.24								
240	647.00	13.2%	4.77	580.00	12%	5.32	616.00	13%	5.44	584.00	12%	5.38	560.00	11.4%	5.51	399.00	8%	7.73								
250	641.00	13.1%	5.23	579.00	12%	5.79	615.00	13%	5.91	583.00	12%	5.85	560.00	11.4%	5.98	407.00	9%	8.24								
260	635.00	13.0%	5.70	577.00	12%	6.28	614.00	13%	6.40	582.00	12%	6.33	560.00	11.4%	6.47	414.00	9%	8.77								
270	630.00	12.9%	6.20	576.00	12%	6.79	613.00	13%	6.91	581.00	12%	6.84	560.00	11.4%	6.98	420.00	9%	9.31								
280	625.00	12.8%	6.73	574.00	12%	7.32	612.00	13%	7.44	580.00	12%	7.38	559.00	11.4%	7.51	426.00	9%	9.87								
290	621.00	12.7%	7.26	573.00	12%	7.86	611.00	12%	7.99	579.00	12%	7.92	559.00	11.4%	8.06	432.00	9%	10.45								
300	616.00	12.6%	7.83	572.00	12%	8.43	610.00	12%	8.56	578.00	12%	8.49	559.00	11.4%	8.63	437.00	9%	11.05								
310	613.00	12.5%	8.41	571.00	12%	9.02	610.00	12%	9.14	577.00	12%	9.08	559.00	11.4%	9.22	442.00	9%	11.66								
320	609.00	12.4%	9.01	570.00	12%	9.63	609.00	12%	9.76	576.00	12%	9.69	558.00	11.4%	9.83	447.00	9%	12.30								
330	606.00	12.4%	9.64	569.00	12%	10.26	608.00	12%	10.39	575.00	12%	10.32	558.00	11.4%	10.47	451.00	9%	12.95								
340	603.00	12.3%	10.28	569.00	12%	10.90	607.00	12%	11.03	575.00	12%	10.96	558.00	11.4%	11.11	456.00	9%	13.62								
350	600.00	12.3%	10.95	567.00	12%	11.58	606.00	12%	11.70	574.00	12%	11.64	558.00	11.4%	11.78	460.00	9%	14.31								
360	598.00	12.2%	11.63	567.00	12%	12.27	606.00	12%	12.39	573.00	12%	12.33	557.00	11.4%	12.47	463.00	9%	15.02								
370	596.00	12.2%	12.34	566.00	12%	12.98	605.00	12%	13.10	572.00	12%	13.04	557.00	11.4%	13.19	467.00	10%	15.75								
380	593.00	12.1%	13.07	565.00	12%	13.70	604.00	12%	13.83	572.00	12%	13.77	557.00	11.4%	13.92	470.00	10%	16.49								
390	591.00	12.1%	13.81	564.00	12%	14.46	603.00	12%	14.59	571.00	12%	14.52	556.00	11.4%	14.67	473.00	10%	17.27								
400	588.00	12.0%	14.58	564.00	12%	15.23	603.00	12%	15.36	571.00	12%	15.29	556.00	11.4%	15.44	476.00	10%	18.05								
410	587.00	12.0%	15.38	563.00	12%	16.02	602.00	12%	16.15	570.00	12%	16.08	556.00	11.4%	16.24	479.00	10%	18.86								
420	585.00	12.0%	16.19	562.00	11%	16.84	601.00	12%	16.97	569.00	12%	16.90	555.00	11.3%	17.05	481.00	10%	19.69								
430	583.00	11.9%	17.02	562.00	11%	17.67	600.00	12%	17.80	568.00	12%	17.73	555.00	11.3%	17.88	484.00	10%	20.54								
440	581.00	11.9%	17.87	561.00	11%	18.53	600.00	12%	18.65	568.00	12%	18.58	555.00	11.3%	18.74	486.00	10%	21.40								
450	580.00	11.9%	18.75	560.00	11%	19.40	599.00	12%	19.53	567.00	12%	19.46	554.00	11.3%	19.62	488.00	10%	22.29								
460	578.00	11.8%	19.64	560.00	11%	20.30	599.00	12%	20.42	567.00	12%	20.35	554.00	11.3%	20.52	490.00	10%	23.20								
470	577.00	11.8%	20.56	559.00	11%	21.22	598.00	12%	21.35	566.00	12%	21.28	553.00	11.3%	21.44	492.00	10%	24.13								
480	575.00	11.8%	21.50	558.00	11%	22.16	597.00	12%	22.29	565.00	12%	22.22	553.00	11.3%	22.38	494.00	10%	25.08								
490	574.00	11.7%	22.46	558.00	11%	23.12	596.00	12%	23.25	565.00	12%	23.18	553.00	11.3%	23.34	496.00	10%	26.05								
500	573.00	11.7%	23.44	557.00	11%	24.10	596.00	12%	24.23	564.00	12%	24.16	552.00	11.3%	24.32	497.00	10%	27.04								
510	572.00	11.7%	24.45	557.00	11%	25.11	595.00	12%	25.24	564.00	12%	25.17	552.00	11.3%	25.33	499.00	10%	28.06								
520	570.00	11.6%	25.47	556.00	11%	26.14	594.00	12%	26.26	563.00	12%	26.20	551.00	11.3%	26.35	500.00	10%	29.09								
530	569.00	11.6%	26.53	555.00	11%	27.19	594.00	12%	27.31	562.00	11%	27.25	551.00	11.3%	27.41	501.00	10%	30.15								
540	568.00	11.6%	27.59	555.00	11%	28.26	593.00	12%	28.38	562.00	11%	28.32	550.00	11.2%	28.48	502.00	10%	31.23								
550	567.00	11.6%	28.69	554.00	11%	29.35	592.00	12%	29.48	561.00	11%	29.42	550.00	11.2%	29.57	503.00	10%	32.33								
560	566.00	11.6%	29.80	553.00	11%	30.47	592.00	12%	30.59	560.00	11%	30.53	550.00	11.2%	30.69	504.00	10%	33.45								
570	565.00	11.5%	30.94	553.00	11%	31.61	591.00	12%	31.73	560.00	11%	31.67	549.00	11.2%	31.83	505.00	10%	34.60								
580	564.00	11.5%	32.10	552.00	11%	32.77	590.00	12%	32.90	559.00	11%	32.83	548.00	11.2%	32.99	506.00	10%	35.76								
590	562.00	11.5%	33.29	551.00	11%	33.96	589.00	12%	34.08	559.00	11%	34.01	548.00	11.2%	34.17	507.00	10%	36.95								
600	561.00	11.5%	34.49	551.00	11%	35.16	589.00	12%	35.28	558.00	11%	35.22	548.00	11.2%	35.38	508.00	10%	38.16								

CANTON AAAC 336.4 KCML

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 60
Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
Tensión de rotura (daN): 5916.13
Peso (daN/m): 0.5404

Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1065.00	18.0%	0.01	790.00	13%	0.01	762.00	13%	0.01	762.00	13%	0.01	651.00	11.0%	0.01	35.00	1%	0.20
20	1059.00	17.8%	0.03	786.00	13%	0.03	750.00	13%	0.04	750.00	13%	0.04	651.00	11.0%	0.04	68.00	1%	0.40
30	1052.00	17.8%	0.06	780.00	13%	0.08	758.00	13%	0.09	754.00	13%	0.08	651.00	11.0%	0.09	100.00	2%	0.61
40	1040.00	17.6%	0.10	773.00	13%	0.14	756.00	13%	0.16	750.00	13%	0.15	651.00	11.0%	0.17	131.00	2%	0.83
50	1023.00	17.3%	0.16	767.00	13%	0.22	752.00	13%	0.24	745.00	13%	0.23	651.00	11.0%	0.26	160.00	3%	1.06
60	1010.00	17.1%	0.24	757.00	13%	0.32	748.00	13%	0.35	737.00	12%	0.34	651.00	11.0%	0.37	188.00	3%	1.30
70	989.00	16.7%	0.33	747.00	13%	0.44	744.00	13%	0.48	730.00	12%	0.46	650.00	11.0%	0.51	214.00	4%	1.55
80	970.00	16.4%	0.45	739.00	12%	0.58	740.00	13%	0.63	725.00	12%	0.61	649.00	11.0%	0.67	239.00	4%	1.81
90	948.00	16.0%	0.58	730.00	12%	0.75	736.00	12%	0.80	717.00	12%	0.78	649.00	11.0%	0.84	262.00	4%	2.09
100	926.00	15.7%	0.73	722.00	12%	0.94	732.00	12%	1.00	711.00	12%	0.97	649.00	11.0%	1.04	284.00	5%	2.38
110	905.00	15.3%	0.90	715.00	12%	1.14	729.00	12%	1.21	708.00	12%	1.17	649.00	11.0%	1.26	305.00	5%	2.68
120	886.00	15.0%	1.10	709.00	12%	1.37	727.00	12%	1.44	702.00	12%	1.41	650.00	11.0%	1.50	324.00	5%	3.00
130	865.00	14.6%	1.32	703.00	12%	1.62	723.00	12%	1.70	698.00	12%	1.66	649.00	11.0%	1.76	342.00	6%	3.34
140	847.00	14.3%	1.56	698.00	12%	1.90	721.00	12%	1.98	695.00	12%	1.94	650.00	11.0%	2.04	359.00	6%	3.69
150	829.00	14.0%	1.83	692.00	12%	2.20	718.00	12%	2.28	691.00	12%	2.23	649.00	11.0%	2.34	375.00	6%	4.05
160	813.00	13.7%	2.13	689.00	12%	2.51	716.00	12%	2.60	687.00	12%	2.56	649.00	11.0%	2.67	390.00	7%	4.44
170	799.00	13.5%	2.45	685.00	12%	2.85	714.00	12%	2.94	685.00	12%	2.89	649.00	11.0%	3.01	404.00	7%	4.84
180	785.00	13.3%	2.79	682.00	12%	3.21	712.00	12%	3.30	682.00	12%	3.26	649.00	11.0%	3.38	417.00	7%	5.25
190	774.00	13.1%	3.15	679.00	11%	3.59	710.00	12%	3.69	680.00	11%	3.64	649.00	11.0%	3.76	429.00	7%	5.69
200	763.00	12.9%	3.54	676.00	11%	4.00	708.00	12%	4.09	678.00	11%	4.05	649.00	11.0%	4.17	440.00	7%	6.14
210	753.00	12.7%	3.96	673.00	11%	4.43	705.00	12%	4.52	676.00	11%	4.47	649.00	11.0%	4.60	451.00	8%	6.62
220	745.00	12.6%	4.39	671.00	11%	4.87	705.00	12%	4.97	674.00	11%	4.92	648.00	11.0%	5.05	461.00	8%	7.10
230	737.00	12.5%	4.85	669.00	11%	5.34	703.00	12%	5.44	673.00	11%	5.39	648.00	11.0%	5.52	470.00	8%	7.61
240	730.00	12.3%	5.33	668.00	11%	5.83	702.00	12%	5.93	671.00	11%	5.88	648.00	11.0%	6.01	479.00	8%	8.14
250	723.00	12.2%	5.84	666.00	11%	6.35	700.00	12%	6.44	670.00	11%	6.40	647.00	10.9%	6.53	487.00	9%	8.68
260	718.00	12.1%	6.37	664.00	11%	6.88	699.00	12%	6.98	669.00	11%	6.93	647.00	10.9%	7.07	494.00	9%	9.25
270	713.00	12.1%	6.92	663.00	11%	7.44	698.00	12%	7.53	667.00	11%	7.49	647.00	10.9%	7.62	502.00	9%	9.84
280	708.00	12.0%	7.49	661.00	11%	8.02	697.00	12%	8.12	666.00	11%	8.07	646.00	10.9%	8.21	508.00	9%	10.44
290	703.00	11.9%	8.08	660.00	11%	8.62	696.00	12%	8.71	665.00	11%	8.67	646.00	10.9%	8.81	514.00	9%	11.07
300	699.00	11.8%	8.70	659.00	11%	9.24	695.00	12%	9.34	664.00	11%	9.29	646.00	10.9%	9.43	520.00	9%	11.71
310	696.00	11.8%	9.34	658.00	11%	9.88	694.00	12%	9.98	663.00	11%	9.94	645.00	10.9%	10.08	525.00	9%	12.38
320	692.00	11.7%	10.01	657.00	11%	10.55	693.00	12%	10.64	662.00	11%	10.60	645.00	10.9%	10.74	531.00	9%	13.07
330	689.00	11.6%	10.69	656.00	11%	11.24	692.00	12%	11.34	661.00	11%	11.29	645.00	10.9%	11.43	535.00	9%	13.78
340	686.00	11.6%	11.40	655.00	11%	11.95	691.00	12%	12.04	660.00	11%	12.00	644.00	10.9%	12.14	540.00	9%	14.50
350	683.00	11.5%	12.13	654.00	11%	12.68	690.00	12%	12.78	659.00	11%	12.73	644.00	10.9%	12.88	544.00	9%	15.26
360	681.00	11.5%	12.89	653.00	11%	13.44	689.00	12%	13.54	658.00	11%	13.49	643.00	10.9%	13.64	548.00	9%	16.03
370	678.00	11.5%	13.66	652.00	11%	14.22	688.00	12%	14.32	658.00	11%	14.27	643.00	10.9%	14.41	551.00	9%	16.82
380	676.00	11.4%	14.46	651.00	11%	15.02	687.00	12%	15.12	657.00	11%	15.07	642.00	10.9%	15.21	555.00	9%	17.64
390	674.00	11.4%	15.29	650.00	11%	15.84	686.00	12%	15.94	656.00	11%	15.90	642.00	10.9%	16.04	558.00	9%	18.48
400	674.00	11.4%	16.12	649.00	11%	16.69	686.00	12%	16.78	655.00	11%	16.74	642.00	10.9%	16.88	561.00	9%	19.33
410	670.00	11.3%	16.99	648.00	11%	17.56	685.00	12%	17.65	655.00	11%	17.61	641.00	10.8%	17.75	564.00	10%	20.21
420	668.00	11.3%	17.89	648.00	11%	18.45	684.00	12%	18.55	654.00	11%	18.50	641.00	10.8%	18.65	566.00	10%	21.11
430	666.00	11.3%	18.80	647.00	11%	19.36	683.00	12%	19.46	653.00	11%	19.42	640.00	10.8%	19.56	569.00	10%	22.04
440	664.00	11.2%	19.74	646.00	11%	20.30	682.00	12%	20.40	652.00	11%	20.35	640.00	10.8%	20.50	571.00	10%	22.99
450	663.00	11.2%	20.70	645.00	11%	21.27	681.00	12%	21.36	651.00	11%	21.32	639.00	10.8%	21.47	573.00	10%	23.96
460	661.00	11.2%	21.69	644.00	11%	22.25	681.00	12%	22.35	651.00	11%	22.31	639.00	10.8%	22.45	575.00	10%	24.96
470	659.00	11.1%	22.70	643.00	11%	23.27	680.00	11%	23.36	650.00	11%	23.32	638.00	10.8%	23.46	577.00	10%	25.98
480	658.00	11.1%	23.73	643.00	11%	24.30	679.00	11%	24.39	649.00	11%	24.35	638.00	10.8%	24.50	578.00	10%	27.02
490	657.00	11.1%	24.79	642.00	11%	25.36	678.00	11%	25.45	648.00	11%	25.41	637.00	10.8%	25.56	580.00	10%	28.08
500	655.00	11.1%	25.87	641.00	11%	26.44	677.00	11%	26.53	648.00	11%	26.49	636.00	10.8%	26.64	582.00	10%	29.17
510	654.00	11.1%	26.98	640.00	11%	27.54	676.00	11%	27.64	647.00	11%	27.59	636.00	10.8%	27.74	583.00	10%	30.29
520	652.00	11.0%	28.11	640.00	11%	28.68	675.00	11%	28.77	646.00	11%	28.73	635.00	10.7%	28.88	584.00	10%	31.42
530	651.00	11.0%	29.26	639.00	11%	29.83	674.00	11%	29.93	645.00	11%	29.88	635.00	10.7%	30.03	585.00	10%	32.58
540	650.00	11.0%	30.44	638.00	11%	31.01	674.00	11%	31.10	645.00	11%	31.06	634.00	10.7%	31.21	586.00	10%	33.77
550	649.00	11.0%	31.65	637.00	11%	32.22	673.00	11%	32.31	644.00	11%	32.27	633.00	10.7%	32.42	587.00	10%	34.98
560	647.00	10.9%	32.88	636.00	11%	33.45	672.00	11%	33.54	643.00	11%	33.50	633.00	10.7%	33.65	588.00	10%	36.22
570	646.00	10.9%	34.13	636.00	11%	34.70	671.00	11%	34.80	642.00	11%	34.75	632.00	10.7%	34.90	589.00	10%	37.47
580	645.00	10.9%	35.42	635.00	11%	35.98	670.00	11%	36.08	641.00	11%	36.04	631.00	10.7%	36.19	590.00	10%	38.76
590	644.00	10.9%	36.73	634.00	11%	37.29	669.00	11%	37.39	640.00	11%	37.35	630.00	10.6%	37.50	590.00	10%	40.07
600	642.00	10.9%	38.06	633.00	11%	38.63	668.00	11%	38.72	640.00	11%	38.68	630.00	10.6%	38.83	591.00	10%	41.41



ANEXO B3.2: Zona 2 (Velocidad de viento máxima 80 km/h)

SPARROW ACSR 2 AWG

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 80
Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
Tensión de rotura (daN): 1267.74
Peso (daN/m): 0.1330
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 23%
Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	291.00	23.0%	0.01	202.00	15.9%	0.01	197.00	15.5%	0.02	196.00	15.5%	0.01	172.00	13.6%	0.01	25.00	2.0%	0.07
20	291.00	23.0%	0.02	201.00	15.9%	0.03	200.00	15.8%	0.06	196.00	15.5%	0.04	173.00	13.6%	0.04	37.00	2.9%	0.18
30	291.00	23.0%	0.05	202.00	15.9%	0.07	206.00	16.2%	0.13	198.00	15.6%	0.09	174.00	13.7%	0.09	46.00	3.6%	0.32
40	291.00	23.0%	0.09	202.00	15.9%	0.13	211.00	16.6%	0.22	199.00	15.7%	0.15	176.00	13.9%	0.15	55.00	4.3%	0.49
50	290.00	22.9%	0.14	202.00	15.9%	0.21	217.00	17.1%	0.33	201.00	15.9%	0.24	177.00	14.0%	0.23	62.00	4.9%	0.67
60	287.00	22.6%	0.21	201.00	15.9%	0.30	222.00	17.5%	0.45	201.00	15.9%	0.34	177.00	14.0%	0.34	69.00	5.4%	0.87
70	282.00	22.2%	0.29	199.00	15.7%	0.41	226.00	17.8%	0.60	200.00	15.8%	0.46	177.00	14.0%	0.46	75.00	5.9%	1.09
80	277.00	21.8%	0.38	197.00	15.5%	0.54	230.00	18.1%	0.77	200.00	15.8%	0.60	177.00	14.0%	0.60	80.00	6.3%	1.32
90	273.00	21.5%	0.49	196.00	15.5%	0.69	234.00	18.5%	0.95	200.00	15.8%	0.76	177.00	14.0%	0.76	86.00	6.8%	1.57
100	267.00	21.1%	0.62	194.00	15.3%	0.86	237.00	18.7%	1.15	200.00	15.8%	0.93	177.00	14.0%	0.94	90.00	7.1%	1.84
110	261.00	20.6%	0.77	193.00	15.2%	1.04	240.00	18.9%	1.37	200.00	15.8%	1.13	177.00	14.0%	1.14	95.00	7.5%	2.12
120	255.00	20.1%	0.84	192.00	15.1%	1.25	243.00	19.2%	1.60	199.00	15.7%	1.34	177.00	14.0%	1.35	99.00	7.8%	2.42
130	250.00	19.7%	1.13	190.00	15.0%	1.48	245.00	19.3%	1.85	199.00	15.7%	1.58	177.00	14.0%	1.59	103.00	8.1%	2.74
140	244.00	19.2%	1.33	189.00	14.9%	1.72	247.00	19.5%	2.12	199.00	15.7%	1.83	177.00	14.0%	1.84	106.00	8.4%	3.07
150	238.00	18.8%	1.56	188.00	14.8%	1.99	249.00	19.6%	2.41	198.00	15.6%	2.10	177.00	14.0%	2.11	110.00	8.7%	3.41
160	234.00	18.5%	1.82	187.00	14.8%	2.28	251.00	19.8%	2.71	198.00	15.6%	2.39	177.00	14.0%	2.41	113.00	8.9%	3.77
170	230.00	18.1%	2.09	186.00	14.7%	2.58	252.00	19.9%	3.03	198.00	15.6%	2.70	177.00	14.0%	2.72	116.00	9.2%	4.15
180	225.00	17.7%	2.39	185.00	14.6%	2.91	253.00	20.0%	3.37	198.00	15.6%	3.03	177.00	14.0%	3.05	119.00	9.4%	4.54
190	221.00	17.4%	2.71	185.00	14.6%	3.25	255.00	20.1%	3.73	197.00	15.5%	3.37	177.00	14.0%	3.39	121.00	9.5%	4.95
200	218.00	17.2%	3.06	184.00	14.5%	3.62	255.00	20.1%	4.10	197.00	15.5%	3.74	177.00	14.0%	3.76	124.00	9.8%	5.38
210	214.00	16.9%	3.42	183.00	14.4%	4.00	256.00	20.2%	4.50	197.00	15.5%	4.13	177.00	14.0%	4.15	126.00	9.9%	5.82
220	212.00	16.7%	3.81	183.00	14.4%	4.40	257.00	20.3%	4.91	196.00	15.5%	4.53	177.00	14.0%	4.56	128.00	10.1%	6.28
230	209.00	16.5%	4.22	183.00	14.4%	4.82	257.00	20.3%	5.34	196.00	15.5%	4.96	177.00	14.0%	4.98	130.00	10.3%	6.75
240	206.00	16.2%	4.65	182.00	14.4%	5.27	258.00	20.4%	5.79	196.00	15.5%	5.40	177.00	14.0%	5.43	132.00	10.4%	7.25
250	204.00	16.1%	5.10	182.00	14.4%	5.73	258.00	20.4%	6.25	196.00	15.5%	5.86	177.00	14.0%	5.89	134.00	10.6%	7.76
260	202.00	15.9%	5.57	181.00	14.3%	6.21	259.00	20.4%	6.74	195.00	15.4%	6.34	177.00	14.0%	6.37	136.00	10.7%	8.28
270	200.00	15.8%	6.06	181.00	14.3%	6.71	259.00	20.4%	7.25	195.00	15.4%	6.85	177.00	14.0%	6.88	138.00	10.9%	8.82
280	199.00	15.7%	6.57	181.00	14.3%	7.23	259.00	20.4%	7.77	195.00	15.4%	7.37	176.00	13.9%	7.40	139.00	11.0%	9.39
290	197.00	15.5%	7.10	180.00	14.2%	7.77	259.00	20.4%	8.31	195.00	15.4%	7.91	176.00	13.9%	7.94	141.00	11.1%	9.96
300	196.00	15.5%	7.66	180.00	14.2%	8.33	259.00	20.4%	8.88	195.00	15.4%	8.47	176.00	13.9%	8.50	142.00	11.2%	10.55
310	194.00	15.3%	8.23	180.00	14.2%	8.91	259.00	20.4%	9.46	194.00	15.3%	9.05	176.00	13.9%	9.08	144.00	11.4%	11.15
320	193.00	15.2%	8.83	179.00	14.1%	9.51	259.00	20.4%	10.06	194.00	15.3%	9.66	176.00	13.9%	9.68	145.00	11.4%	11.77
330	192.00	15.1%	9.44	179.00	14.1%	10.13	259.00	20.4%	10.68	194.00	15.3%	10.27	176.00	13.9%	10.30	146.00	11.5%	12.41
340	191.00	15.1%	10.08	179.00	14.1%	10.77	259.00	20.4%	11.33	194.00	15.3%	10.90	176.00	13.9%	10.94	147.00	11.6%	13.07
350	190.00	15.0%	10.73	179.00	14.1%	11.43	259.00	20.4%	11.99	193.00	15.2%	11.56	176.00	13.9%	11.60	149.00	11.8%	13.74
360	189.00	14.9%	11.40	178.00	14.0%	12.10	259.00	20.4%	12.66	193.00	15.2%	12.24	176.00	13.9%	12.28	150.00	11.8%	14.43
370	188.00	14.8%	12.10	178.00	14.0%	12.81	259.00	20.4%	13.37	193.00	15.2%	12.94	176.00	13.9%	12.98	151.00	11.9%	15.15
380	188.00	14.8%	12.82	178.00	14.0%	13.53	259.00	20.4%	14.08	193.00	15.2%	13.66	176.00	13.9%	13.70	152.00	12.0%	15.88
390	187.00	14.8%	13.56	178.00	14.0%	14.26	259.00	20.4%	14.82	193.00	15.2%	14.40	176.00	13.9%	14.44	152.00	12.0%	16.64
400	186.00	14.7%	14.32	178.00	14.0%	15.02	259.00	20.4%	15.58	192.00	15.1%	15.16	176.00	13.8%	15.20	153.00	12.1%	17.41
410	186.00	14.7%	15.09	177.00	14.0%	15.81	258.00	20.4%	16.36	192.00	15.1%	15.94	176.00	13.8%	15.98	154.00	12.1%	18.20
420	185.00	14.6%	15.89	177.00	14.0%	16.60	258.00	20.4%	17.16	192.00	15.1%	16.74	176.00	13.8%	16.78	155.00	12.2%	19.01
430	184.00	14.5%	16.71	177.00	14.0%	17.43	258.00	20.4%	17.99	192.00	15.1%	17.56	176.00	13.8%	17.60	156.00	12.3%	19.84
440	184.00	14.5%	17.55	177.00	14.0%	18.27	258.00	20.4%	18.83	192.00	15.1%	18.40	176.00	13.8%	18.45	156.00	12.3%	20.69
450	183.00	14.4%	18.41	177.00	14.0%	19.13	258.00	20.4%	19.69	191.00	15.1%	19.26	176.00	13.8%	19.31	157.00	12.4%	21.57
460	183.00	14.4%	19.30	176.00	13.9%	20.01	257.00	20.3%	20.57	191.00	15.1%	20.15	175.00	13.8%	20.19	157.00	12.4%	22.46
470	182.00	14.4%	20.19	176.00	13.9%	20.92	257.00	20.3%	21.47	191.00	15.1%	21.05	175.00	13.8%	21.10	158.00	12.5%	23.37
480	182.00	14.4%	21.12	176.00	13.9%	21.84	257.00	20.3%	22.40	191.00	15.1%	21.97	175.00	13.8%	22.02	158.00	12.5%	24.30
490	182.00	14.4%	22.07	176.00	13.9%	22.79	256.00	20.2%	23.35	191.00	15.1%	22.92	174.00	13.7%	22.97	159.00	12.6%	25.26
500	181.00	14.3%	23.04	176.00	13.9%	23.76	256.00	20.2%	24.31	190.00	15.0%	23.89	174.00	13.7%	23.94	159.00	12.6%	26.24
510	181.00	14.3%	24.03	175.00	13.8%	24.75	256.00	20.2%	25.30	190.00	15.0%	24.88	174.00	13.7%	24.93	160.00	12.6%	27.23
520	180.00	14.2%	25.03	175.00	13.8%	25.75	256.00	20.2%	26.31	190.00	15.0%	25.89	174.00	13.7%	25.94	160.00	12.6%	28.24
530	180.00	14.2%	26.06	175.00	13.8%	26.78	255.00	20.1%	27.34	190.00	15.0%	26.92	174.00	13.7%	26.97	160.00	12.6%	29.28
540	179.00	14.1%	27.12	175.00	13.8%	27.84	255.00	20.1%	28.40	189.00	14.9%	27.97	174.00	13.7%	28.02	161.00	12.7%	30.34
550	179.00	14.1%	28.20	175.00	13.8%	28.92	255.00	20.1%	29.47	189.00	14.9%	29.05	174.00	13.7%	29.10	161.00	12.7%	31.43
560	179.00	14.1%	29.29	175.00	13.8%	30.01	254.00	20.0%	30.57	189.00	14.8%	30.14	173.00	13.6%	30.20	161.00	12.7%	32.53
570	178.00	14.0%	30.41	174.00	13.7%	31.13	254.00	20.0%	31.69	189.00	14.9%	31.27	173.00	13.6%	31.31	161.00	12.7%	33.65
580	178.00	14.0%	31.55	174.00	13.7%	32.28	254.00	20.0%	32.83	189.00	14.9%	32.41	173.00	13.6%	32.46	162.00	12.8%	34.80
590	178.00	14.0%	32.72	174.00	13.7%	33.44	253.00	20.0%	33.99	188.00	14.8%	33.57	173.00	13.6%	33.62	162.00	12.8%	35.97
600	177.00	14.0%	33.90	174.00	13.7%	34.62	253.00	20.0%	35.17	188.00	14.8%	34.76	173.00	13.6%	34.81	162.00	12.8%	37.16

RAVEN ACSR 110 AWG																		
Clima: Frío																		
Altitud: 2500 msnm - 3500 msnm																		
Temperatura máxima (°C): 27																		
Temperatura media (°C): 9																		
Temperatura mínima (°C): 4																		
Temperatura coincidente (°C): 5																		
Velocidad del viento máxima (km/h): 80																		
Velocidad del viento promedio (km/h): 50																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1948.32																		
Peso (daN/m): 0.2118																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 22.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	434.00	22.3%	0.01	318.00	16.3%	0.01	310.00	15.9%	0.01	309.00	15.9%	0.01	272.00	14.0%	0.01	44.00	2.3%	0.06
20	432.00	22.2%	0.02	317.00	16.2%	0.03	313.00	16.1%	0.05	309.00	15.9%	0.04	272.00	14.0%	0.04	61.00	3.1%	0.17
30	430.00	22.1%	0.06	316.00	16.2%	0.08	317.00	16.3%	0.11	309.00	15.9%	0.08	272.00	14.0%	0.09	75.00	3.8%	0.32
40	426.00	21.9%	0.10	314.00	16.1%	0.14	321.00	16.5%	0.20	308.00	15.8%	0.15	272.00	14.0%	0.16	88.00	4.5%	0.48
50	421.00	21.6%	0.16	311.00	16.0%	0.21	326.00	16.7%	0.30	308.00	15.8%	0.23	272.00	14.0%	0.24	99.00	5.1%	0.67
60	416.00	21.4%	0.23	309.00	15.9%	0.31	330.00	16.9%	0.42	306.00	15.7%	0.34	272.00	14.0%	0.35	109.00	5.6%	0.87
70	409.00	21.0%	0.32	306.00	15.7%	0.42	334.00	17.1%	0.57	305.00	15.7%	0.46	272.00	14.0%	0.48	119.00	6.1%	1.10
80	402.00	20.6%	0.42	303.00	15.6%	0.56	337.00	17.3%	0.73	304.00	15.6%	0.60	272.00	14.0%	0.62	127.00	6.5%	1.33
90	395.00	20.3%	0.54	301.00	15.4%	0.71	341.00	17.5%	0.91	303.00	15.6%	0.76	272.00	14.0%	0.79	135.00	6.9%	1.59
100	387.00	19.9%	0.69	298.00	15.3%	0.89	344.00	17.7%	1.10	302.00	15.5%	0.94	273.00	14.0%	0.97	143.00	7.3%	1.86
110	380.00	19.5%	0.84	296.00	15.2%	1.08	347.00	17.8%	1.32	301.00	15.4%	1.14	272.00	14.0%	1.18	150.00	7.7%	2.14
120	372.00	19.2%	1.02	294.00	15.1%	1.30	349.00	17.9%	1.55	301.00	15.4%	1.38	272.00	14.0%	1.40	156.00	8.0%	2.46
130	364.00	18.7%	1.23	292.00	15.0%	1.53	351.00	18.0%	1.81	299.00	15.3%	1.61	272.00	14.0%	1.64	162.00	8.3%	2.77
140	357.00	18.3%	1.45	290.00	14.9%	1.79	353.00	18.1%	2.08	299.00	15.3%	1.87	272.00	14.0%	1.91	167.00	8.6%	3.10
150	350.00	18.0%	1.70	288.00	14.8%	2.07	354.00	18.2%	2.37	298.00	15.3%	2.15	272.00	14.0%	2.19	172.00	8.8%	3.46
160	344.00	17.7%	1.97	287.00	14.7%	2.36	356.00	18.3%	2.67	297.00	15.2%	2.45	272.00	14.0%	2.49	177.00	9.1%	3.83
170	338.00	17.3%	2.26	286.00	14.7%	2.68	357.00	18.3%	3.00	297.00	15.2%	2.76	272.00	14.0%	2.81	182.00	9.3%	4.21
180	333.00	17.1%	2.58	284.00	14.6%	3.02	358.00	18.4%	3.35	296.00	15.2%	3.11	272.00	14.0%	3.16	186.00	9.6%	4.62
190	328.00	16.8%	2.92	283.00	14.5%	3.38	358.00	18.4%	3.71	295.00	15.1%	3.46	272.00	14.0%	3.52	190.00	9.8%	5.04
200	323.00	16.6%	3.28	282.00	14.5%	3.75	359.00	18.4%	4.10	295.00	15.1%	3.84	272.00	14.0%	3.90	194.00	10.0%	5.47
210	318.00	16.4%	3.66	281.00	14.4%	4.15	359.00	18.4%	4.50	294.00	15.1%	4.24	272.00	14.0%	4.30	197.00	10.1%	5.92
220	315.00	16.2%	4.07	281.00	14.4%	4.57	360.00	18.5%	4.92	294.00	15.1%	4.66	272.00	14.0%	4.72	201.00	10.3%	6.39
230	312.00	16.0%	4.49	280.00	14.4%	5.01	360.00	18.5%	5.37	293.00	15.0%	5.10	272.00	14.0%	5.16	204.00	10.5%	6.88
240	308.00	15.8%	4.94	279.00	14.3%	5.47	360.00	18.5%	5.83	293.00	15.0%	5.56	271.00	13.9%	5.63	207.00	10.6%	7.39
250	306.00	15.7%	5.41	278.00	14.3%	5.95	360.00	18.5%	6.31	292.00	15.0%	6.04	271.00	13.9%	6.11	209.00	10.7%	7.91
260	303.00	15.6%	5.90	278.00	14.3%	6.45	360.00	18.5%	6.81	292.00	15.0%	6.54	271.00	13.9%	6.61	212.00	10.9%	8.45
270	301.00	15.4%	6.42	277.00	14.2%	6.97	360.00	18.5%	7.24	291.00	14.9%	7.06	271.00	13.9%	7.13	214.00	11.0%	9.02
280	299.00	15.3%	6.95	277.00	14.2%	7.51	360.00	18.5%	7.88	291.00	14.9%	7.69	271.00	13.9%	7.67	217.00	11.1%	9.59
290	297.00	15.2%	7.50	276.00	14.2%	8.07	360.00	18.5%	8.44	291.00	14.9%	8.16	271.00	13.9%	8.23	219.00	11.2%	10.19
300	296.00	15.2%	8.07	276.00	14.2%	8.65	360.00	18.5%	9.02	290.00	14.9%	8.74	271.00	13.9%	8.81	221.00	11.3%	10.80
310	294.00	15.1%	8.67	276.00	14.2%	9.25	360.00	18.5%	9.62	290.00	14.9%	9.34	271.00	13.9%	9.41	223.00	11.4%	11.44
320	292.00	15.0%	9.29	275.00	14.1%	9.87	360.00	18.5%	10.24	290.00	14.9%	9.96	271.00	13.9%	10.04	225.00	11.5%	12.08
330	291.00	14.9%	9.93	275.00	14.1%	10.51	359.00	18.4%	10.89	289.00	14.8%	10.61	270.00	13.9%	10.68	227.00	11.7%	12.74
340	290.00	14.9%	10.59	274.00	14.1%	11.17	359.00	18.4%	11.55	289.00	14.8%	11.27	270.00	13.9%	11.34	229.00	11.8%	13.42
350	288.00	14.8%	11.27	274.00	14.1%	11.86	359.00	18.4%	12.23	289.00	14.8%	11.95	270.00	13.9%	12.03	230.00	11.8%	14.12
360	287.00	14.7%	11.97	274.00	14.1%	12.56	358.00	18.4%	12.94	288.00	14.8%	12.66	270.00	13.9%	12.73	232.00	11.9%	14.84
370	286.00	14.7%	12.70	273.00	14.0%	13.29	358.00	18.4%	13.67	288.00	14.8%	13.39	270.00	13.9%	13.46	233.00	14.0%	15.58
380	285.00	14.6%	13.44	273.00	14.0%	14.04	358.00	18.4%	14.41	287.00	14.7%	14.13	270.00	13.9%	14.21	235.00	12.1%	16.34
390	284.00	14.6%	14.20	273.00	14.0%	14.80	358.00	18.4%	15.19	287.00	14.7%	14.89	270.00	13.9%	14.97	236.00	12.1%	17.12
400	283.00	14.5%	14.99	272.00	14.0%	15.59	357.00	18.3%	15.97	287.00	14.7%	15.69	269.00	13.8%	15.76	237.00	12.2%	17.92
410	282.00	14.5%	15.80	272.00	14.0%	16.41	357.00	18.3%	16.78	286.00	14.7%	16.50	269.00	13.8%	16.58	238.00	12.2%	18.74
420	282.00	14.5%	16.63	272.00	14.0%	17.23	356.00	18.3%	17.61	286.00	14.7%	17.33	269.00	13.8%	17.40	239.00	12.3%	19.58
430	281.00	14.4%	17.48	271.00	13.9%	18.08	356.00	18.3%	18.46	286.00	14.7%	18.18	268.00	13.8%	18.26	240.00	12.3%	20.44
440	280.00	14.4%	18.35	271.00	13.9%	18.96	356.00	18.3%	19.34	286.00	14.7%	19.06	268.00	13.8%	19.13	241.00	12.4%	21.33
450	279.00	14.3%	19.25	271.00	13.9%	19.86	355.00	18.2%	20.23	285.00	14.6%	19.95	268.00	13.8%	20.03	242.00	12.4%	22.23
460	278.00	14.3%	20.16	271.00	13.9%	20.77	355.00	18.2%	21.15	285.00	14.6%	20.86	268.00	13.8%	20.95	243.00	12.5%	23.15
470	278.00	14.3%	21.10	270.00	13.9%	21.71	354.00	18.2%	22.08	285.00	14.6%	21.81	268.00	13.8%	21.89	244.00	12.5%	24.10
480	277.00	14.2%	22.06	270.00	13.9%	22.67	354.00	18.2%	23.05	284.00	14.6%	22.77	268.00	13.8%	22.85	244.00	12.5%	25.07
490	277.00	14.2%	23.04	270.00	13.9%	23.66	353.00	18.1%	24.03	284.00	14.6%	23.75	268.00	13.8%	23.83	245.00	12.6%	26.06
500</																		

QUAL ACSR 2/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2362.01
 Peso (daN/m): 0.2667

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	529.00	22.4%	0.01	388.00	16.4%	0.01	378.00	16.0%	0.01	377.00	16.0%	0.01	330.00	14.0%	0.01	51.00	2.2%	0.07
20	527.00	22.2%	0.03	386.00	16.2%	0.03	380.00	16.1%	0.05	377.00	16.0%	0.04	330.00	14.0%	0.04	73.00	3.1%	0.16
30	523.00	22.1%	0.06	384.00	16.3%	0.08	383.00	16.2%	0.11	375.00	15.9%	0.09	330.00	14.0%	0.09	91.00	3.9%	0.33
40	518.00	21.9%	0.10	382.00	16.2%	0.14	388.00	16.4%	0.19	374.00	15.8%	0.15	330.00	14.0%	0.16	107.00	4.5%	0.50
50	512.00	21.7%	0.16	379.00	16.0%	0.22	393.00	16.6%	0.30	373.00	15.8%	0.24	330.00	14.0%	0.25	121.00	5.1%	0.69
60	504.00	21.3%	0.24	375.00	15.9%	0.32	395.00	16.7%	0.42	371.00	15.7%	0.35	330.00	14.0%	0.36	134.00	5.7%	0.89
70	496.00	21.0%	0.33	372.00	15.7%	0.44	400.00	16.9%	0.56	369.00	15.6%	0.47	330.00	14.0%	0.49	146.00	6.2%	1.12
80	486.00	20.6%	0.44	366.00	15.6%	0.58	403.00	17.1%	0.72	368.00	15.6%	0.62	330.00	14.0%	0.65	157.00	6.6%	1.36
90	477.00	20.2%	0.57	364.00	15.4%	0.74	407.00	17.2%	0.90	366.00	15.5%	0.78	330.00	14.0%	0.82	167.00	7.1%	1.62
100	467.00	19.8%	0.71	361.00	15.3%	0.92	410.00	17.4%	1.10	365.00	15.5%	0.97	330.00	14.0%	1.01	176.00	7.5%	1.90
110	457.00	19.3%	0.88	359.00	15.2%	1.12	412.00	17.4%	1.32	363.00	15.4%	1.18	330.00	14.0%	1.22	184.00	7.8%	2.19
120	447.00	18.9%	1.07	356.00	15.1%	1.35	414.00	17.5%	1.56	362.00	15.3%	1.41	330.00	14.0%	1.45	192.00	8.1%	2.50
130	436.00	18.5%	1.29	353.00	14.9%	1.60	415.00	17.6%	1.82	360.00	15.2%	1.66	330.00	14.0%	1.71	199.00	8.4%	2.83
140	428.00	18.1%	1.53	351.00	14.9%	1.86	416.00	17.6%	2.10	359.00	15.2%	1.93	330.00	14.0%	1.98	206.00	8.7%	3.17
150	420.00	17.8%	1.79	349.00	14.8%	2.15	418.00	17.7%	2.40	358.00	15.2%	2.22	330.00	14.0%	2.27	213.00	9.0%	3.53
160	411.00	17.4%	2.07	347.00	14.7%	2.46	418.00	17.7%	2.72	357.00	15.1%	2.53	330.00	14.0%	2.59	219.00	9.3%	3.91
170	405.00	17.1%	2.38	345.00	14.6%	2.79	419.00	17.7%	3.05	356.00	15.1%	2.86	330.00	14.0%	2.92	224.00	9.5%	4.30
180	399.00	16.9%	2.71	344.00	14.6%	3.14	420.00	17.8%	3.41	355.00	15.0%	3.21	330.00	14.0%	3.28	229.00	9.7%	4.71
190	392.00	16.6%	3.07	343.00	14.5%	3.51	420.00	17.8%	3.79	354.00	15.0%	3.59	330.00	14.0%	3.65	234.00	9.9%	5.15
200	387.00	16.4%	3.45	341.00	14.4%	3.91	420.00	17.8%	4.18	353.00	14.9%	3.98	329.00	13.9%	4.05	239.00	10.1%	5.59
210	382.00	16.2%	3.85	341.00	14.4%	4.32	420.00	17.8%	4.60	353.00	14.9%	4.39	329.00	13.9%	4.46	243.00	10.3%	6.06
220	378.00	16.0%	4.27	340.00	14.4%	4.75	420.00	17.8%	5.04	352.00	14.9%	4.83	329.00	13.9%	4.90	247.00	10.5%	6.54
230	374.00	15.8%	4.72	339.00	14.4%	5.21	420.00	17.8%	5.50	351.00	14.9%	5.29	329.00	13.9%	5.36	251.00	10.6%	7.05
240	370.00	15.7%	5.19	338.00	14.3%	5.69	420.00	17.8%	5.98	351.00	14.9%	5.77	329.00	13.9%	5.84	254.00	10.8%	7.57
250	368.00	15.6%	5.67	337.00	14.3%	6.19	420.00	17.8%	6.48	350.00	14.8%	6.26	329.00	13.9%	6.34	257.00	10.9%	8.10
260	364.00	15.4%	6.19	336.00	14.2%	6.70	420.00	17.8%	7.00	350.00	14.8%	6.78	329.00	13.9%	6.86	261.00	11.0%	8.66
270	362.00	15.3%	6.72	336.00	14.2%	7.25	420.00	17.8%	7.54	349.00	14.8%	7.32	329.00	13.9%	7.40	263.00	11.1%	9.24
280	359.00	15.2%	7.28	335.00	14.2%	7.81	419.00	17.7%	8.10	349.00	14.8%	7.89	328.00	13.9%	7.97	266.00	11.3%	9.84
290	357.00	15.1%	7.85	335.00	14.2%	8.39	419.00	17.7%	8.68	348.00	14.7%	8.47	328.00	13.9%	8.55	269.00	11.4%	10.45
300	355.00	15.0%	8.46	334.00	14.1%	8.99	419.00	17.7%	9.29	348.00	14.7%	9.07	328.00	13.9%	9.15	271.00	11.5%	11.09
310	353.00	14.9%	9.08	333.00	14.1%	9.62	418.00	17.7%	9.92	347.00	14.7%	9.70	328.00	13.9%	9.78	273.00	11.6%	11.74
320	352.00	14.9%	9.72	333.00	14.1%	10.27	418.00	17.7%	10.56	347.00	14.7%	10.34	328.00	13.9%	10.43	275.00	11.6%	12.42
330	350.00	14.8%	10.38	333.00	14.1%	10.93	418.00	17.7%	11.23	347.00	14.7%	11.01	328.00	13.9%	11.09	278.00	11.8%	13.10
340	349.00	14.8%	11.07	332.00	14.1%	11.63	417.00	17.7%	11.92	346.00	14.6%	11.70	327.00	13.8%	11.79	280.00	11.9%	13.81
350	347.00	14.7%	11.78	332.00	14.1%	12.33	417.00	17.7%	12.63	346.00	14.6%	12.41	327.00	13.8%	12.50	282.00	11.9%	14.53
360	346.00	14.6%	12.51	331.00	14.0%	13.07	416.00	17.6%	13.37	345.00	14.6%	13.15	327.00	13.8%	13.23	283.00	12.0%	15.28
370	345.00	14.6%	13.26	331.00	14.0%	13.86	416.00	17.6%	14.12	345.00	14.6%	13.90	327.00	13.8%	13.99	285.00	12.1%	16.05
380	344.00	14.6%	14.04	330.00	14.0%	14.60	415.00	17.6%	14.90	344.00	14.6%	14.68	327.00	13.8%	14.77	287.00	12.2%	16.84
390	342.00	14.5%	14.84	330.00	14.0%	15.40	415.00	17.6%	15.70	344.00	14.6%	15.48	327.00	13.8%	15.56	289.00	12.2%	17.65
400	341.00	14.4%	15.66	330.00	14.0%	16.22	414.00	17.5%	16.51	344.00	14.5%	16.30	326.00	13.8%	16.38	289.00	12.2%	18.48
410	340.00	14.4%	16.50	329.00	13.9%	17.06	414.00	17.5%	17.36	343.00	14.5%	17.14	326.00	13.8%	17.23	291.00	12.3%	19.33
420	340.00	14.4%	17.36	329.00	13.9%	17.92	413.00	17.5%	18.22	343.00	14.5%	18.00	326.00	13.8%	18.09	292.00	12.4%	20.20
430	338.00	14.4%	18.25	328.00	13.9%	18.81	413.00	17.5%	19.11	343.00	14.5%	18.89	326.00	13.8%	18.88	293.00	12.4%	21.10
440	338.00	14.3%	19.16	328.00	13.9%	19.72	412.00	17.4%	20.02	342.00	14.5%	19.80	325.00	13.8%	19.89	294.00	12.4%	22.02
450	337.00	14.3%	20.09	328.00	13.9%	20.66	412.00	17.4%	20.95	342.00	14.5%	20.74	325.00	13.8%	20.83	295.00	12.5%	22.96
460	336.00	14.2%	21.04	327.00	13.8%	21.61	411.00	17.4%	21.91	341.00	14.4%	21.69	325.00	13.8%	21.78	296.00	12.5%	23.92
470	335.00	14.2%	22.02	327.00	13.8%	22.59	411.00	17.4%	22.88	341.00	14.4%	22.67	325.00	13.8%	22.76	297.00	12.6%	24.91
480	335.00	14.2%	23.02	327.00	13.8%	23.59	410.00	17.4%	23.88	341.00	14.4%	23.67	324.00	13.7%	23.76	298.00	12.6%	25.91
490	334.00	14.1%	24.04	326.00	13.8%	24.61	410.00	17.4%	24.91	340.00	14.4%	24.69	324.00	13.7%	24.78	299.00	12.6%	26.94
500	333.00	14.1%	25.09	326.00	13.8%	25.66	409.00	17.3%	25.95	340.00	14.4%	25.74	324.00	13.7%	25.83	299.00	12.7%	28.00
510	333.00	14.1%	26.16	326.00	13.8%	26.73	409.00	17.3%	27.03	339.00	14.4%	26.81	323.00	13.7%	26.90	300.00	12.7%	29.07
520	332.00	14.1%	27.25	325.00	13.8%	27.83	408.00	17.3%	28.12	339.00	14.4%	27.90	323.00	13.7%	28.00	301.00	12.7%	30.17
530	331.00	14.0%	28.37	325.00	13.8%	28.95	407.00	17.2%	29.24	339.00	14.4%	29.03	323.00	13.7%	29.12	301.00	12.7%	31.30
540	331.00	14.0%	29.52	324.00	13.7%	30.09	407.00	17.2%	30.38	338.00	14.3%	30.17	323.00	13.7%	30.26	301.00	12.7%	32.45
550	330.00	14.0%	30.68	324.00	13.7%	31.25	406.00	17.2%	31.55	338.00	14.3%	31.33	322.00	13.6%	31.43	301.00	12.7%	33.62
560	329.00	13.9%	31.87	324.00	13.7%	32.45	406.00	17.2%	32.73	337.00	14.3%	32.52	322.00	13.6%	32.62	302.00	12.8%	34.81
570	329.00	13.9%	33.09	323.00	13.7%	33.67	405.00	17.1%	33.95	337.00	14.3%	33.74	322.00	13.6%	33.83	302.00	12.8%	36.03
580	328.00	13.9%	34.33	323.00	13.7%	34.91	405.00	17.1%	35.19	337.00	14.3%	34.98	321.00	13.6%	35.07	302.00	12.8%	37.28
590	328.00	13.9%	35.59	322.00	13.6%	36.17	404.00	17.1%	36.46	336.00	14.2%	36.24	321.00	13.6%	36.34	303.00	12.8%	38.54
600	327.00	13.8%	36.88	322.00	13.6%	37.45	403.00	17.1%	37.74	336.00	14.2%	37.53	321.00	13.6%	37.62	303.00</		

PENGUIN ACSR 4/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	808.00	22%	0.01	591.00	16%	0.01	575.00	15%	0.01	574.00	15%	0.01	501.00	13.5%	0.01	74.00	2%	0.07
20	804.00	22%	0.03	589.00	16%	0.04	576.00	16%	0.05	572.00	15%	0.04	500.00	13.5%	0.04	110.00	3%	0.19
30	798.00	21%	0.06	585.00	16%	0.08	580.00	16%	0.10	569.00	15%	0.09	501.00	13.5%	0.10	139.00	4%	0.34
40	787.00	21%	0.11	580.00	16%	0.15	581.00	16%	0.19	566.00	15%	0.16	501.00	13.5%	0.17	164.00	4%	0.52
50	777.00	21%	0.17	576.00	16%	0.23	586.00	16%	0.29	563.00	15%	0.25	501.00	13.5%	0.26	187.00	5%	0.71
60	764.00	21%	0.25	569.00	15%	0.34	589.00	16%	0.41	560.00	15%	0.36	500.00	13.5%	0.38	207.00	6%	0.92
70	749.00	20%	0.35	562.00	15%	0.46	590.00	16%	0.55	557.00	15%	0.49	500.00	13.5%	0.52	226.00	6%	1.15
80	733.00	20%	0.46	557.00	15%	0.61	593.00	16%	0.71	553.00	15%	0.64	500.00	13.5%	0.68	243.00	7%	1.40
90	717.00	19%	0.60	551.00	15%	0.78	594.00	16%	0.90	550.00	15%	0.81	500.00	13.5%	0.86	258.00	7%	1.66
100	700.00	19%	0.76	547.00	15%	0.97	596.00	16%	1.10	547.00	15%	1.01	501.00	13.5%	1.06	273.00	7%	1.95
110	685.00	18%	0.94	542.00	15%	1.18	597.00	16%	1.32	544.00	15%	1.23	501.00	13.5%	1.28	286.00	8%	2.24
120	668.00	18%	1.14	537.00	14%	1.42	598.00	16%	1.57	542.00	15%	1.46	501.00	13.5%	1.53	299.00	8%	2.56
130	653.00	18%	1.37	534.00	14%	1.68	599.00	16%	1.83	539.00	15%	1.72	501.00	13.5%	1.79	310.00	8%	2.90
140	638.00	17%	1.63	530.00	14%	1.96	598.00	16%	2.12	537.00	14%	2.01	500.00	13.5%	2.08	320.00	9%	3.25
150	626.00	17%	1.91	527.00	14%	2.27	599.00	16%	2.43	535.00	14%	2.31	500.00	13.5%	2.39	330.00	9%	3.62
160	614.00	17%	2.21	525.00	14%	2.59	599.00	16%	2.76	533.00	14%	2.64	500.00	13.5%	2.72	339.00	9%	4.01
170	604.00	16%	2.54	522.00	14%	2.94	599.00	16%	3.11	531.00	14%	2.99	500.00	13.5%	3.07	347.00	9%	4.42
180	594.00	16%	2.89	520.00	14%	3.31	598.00	16%	3.48	530.00	14%	3.36	500.00	13.5%	3.44	355.00	10%	4.85
190	585.00	16%	3.27	518.00	14%	3.70	598.00	16%	3.88	529.00	14%	3.75	500.00	13.5%	3.83	362.00	10%	5.29
200	578.00	16%	3.67	516.00	14%	4.11	597.00	16%	4.30	527.00	14%	4.17	499.00	13.4%	4.25	369.00	10%	5.76
210	571.00	15%	4.10	515.00	14%	4.54	597.00	16%	4.73	526.00	14%	4.60	499.00	13.4%	4.69	375.00	10%	6.24
220	565.00	15%	4.55	514.00	14%	5.00	596.00	16%	5.19	525.00	14%	5.06	499.00	13.4%	5.15	381.00	10%	6.74
230	560.00	15%	5.02	512.00	14%	5.48	596.00	16%	5.67	524.00	14%	5.54	499.00	13.4%	5.63	387.00	10%	7.26
240	554.00	15%	5.51	511.00	14%	5.99	595.00	16%	6.17	523.00	14%	6.04	499.00	13.4%	6.13	392.00	11%	7.80
250	550.00	15%	6.03	510.00	14%	6.51	595.00	16%	6.70	522.00	14%	6.56	499.00	13.4%	6.66	397.00	11%	8.36
260	546.00	15%	6.57	509.00	14%	7.05	594.00	16%	7.24	521.00	14%	7.11	498.00	13.4%	7.20	401.00	11%	8.95
270	542.00	15%	7.12	508.00	14%	7.62	593.00	16%	7.82	520.00	14%	7.68	498.00	13.4%	7.77	406.00	11%	9.55
280	539.00	15%	7.72	507.00	14%	8.21	592.00	16%	8.40	520.00	14%	8.27	498.00	13.3%	8.36	410.00	11%	10.17
290	536.00	14%	8.32	506.00	14%	8.82	592.00	16%	9.01	519.00	14%	8.88	498.00	13.4%	8.98	413.00	11%	10.81
300	534.00	14%	8.96	506.00	14%	9.46	591.00	16%	9.65	518.00	14%	9.52	497.00	13.4%	9.61	417.00	11%	11.47
310	531.00	14%	9.61	504.00	14%	10.12	590.00	16%	10.31	517.00	14%	10.18	497.00	13.4%	10.27	420.00	11%	12.16
320	529.00	14%	10.29	504.00	14%	10.79	590.00	16%	10.99	517.00	14%	10.85	497.00	13.4%	10.95	423.00	11%	12.86
330	526.00	14%	10.99	503.00	14%	11.50	589.00	16%	11.69	516.00	14%	11.56	496.00	13.4%	11.65	426.00	11%	13.59
340	524.00	14%	11.71	503.00	14%	12.22	588.00	16%	12.41	516.00	14%	12.28	496.00	13.4%	12.38	429.00	12%	14.33
350	523.00	14%	12.46	502.00	14%	12.97	588.00	16%	13.16	515.00	14%	13.03	496.00	13.4%	13.13	432.00	12%	15.09
360	520.00	14%	13.23	501.00	13%	13.74	587.00	16%	13.93	514.00	14%	13.80	495.00	13.3%	13.90	434.00	12%	15.88
370	518.00	14%	14.02	500.00	13%	14.54	586.00	16%	14.73	514.00	14%	14.60	495.00	13.3%	14.70	436.00	12%	16.68
380	517.00	14%	14.84	500.00	13%	15.35	585.00	16%	15.54	513.00	14%	15.41	495.00	13.3%	15.51	439.00	12%	17.51
390	516.00	14%	15.67	499.00	13%	16.19	584.00	16%	16.38	513.00	14%	16.25	494.00	13.3%	16.35	444.00	12%	18.36
400	514.00	14%	16.54	499.00	13%	17.06	584.00	16%	17.25	512.00	14%	17.12	494.00	13.3%	17.22	445.00	12%	19.24
410	513.00	14%	17.42	498.00	13%	17.94	583.00	16%	18.13	511.00	14%	18.00	494.00	13.3%	18.10	444.00	12%	20.13
420	512.00	14%	18.33	498.00	13%	18.85	582.00	16%	19.04	511.00	14%	18.91	493.00	13.3%	19.02	446.00	12%	21.04
430	510.00	14%	19.27	497.00	13%	19.78	581.00	16%	19.98	510.00	14%	19.85	493.00	13.3%	19.95	447.00	12%	21.99
440	509.00	14%	20.23	496.00	13%	20.75	581.00	16%	20.94	510.00	14%	20.81	493.00	13.3%	20.91	448.00	12%	22.95
450	508.00	14%	21.21	496.00	13%	21.73	580.00	16%	21.92	509.00	14%	21.79	492.00	13.2%	21.89	450.00	12%	23.95
460	507.00	14%	22.22	495.00	13%	22.74	579.00	16%	22.93	508.00	14%	22.80	492.00	13.2%	22.90	451.00	12%	24.96
470	506.00	14%	23.24	495.00	13%	23.77	578.00	16%	23.95	508.00	14%	23.83	491.00	13.2%	23.93	453.00	12%	25.99
480	504.00	14%	24.30	494.00	13%	24.83	577.00	16%	25.02	507.00	14%	24.89	491.00	13.2%	24.99	453.00	12%	27.06
490	503.00	14%	25.39	493.00	13%	25.91	576.00	16%	26.10	506.00	14%	25.07	490.00	13.2%	26.07	454.00	12%	28.15
500	502.00	14%	26.49	493.00	13%	27.01	576.00	16%	27.20	506.00	14%	27.07	490.00	13.2%	27.17	455.00	12%	29.25
510	501.00	13%	27.62	492.00	13%	28.14	575.00	15%	28.33	505.00	14%	28.20	489.00	13.2%	28.30	456.00	12%	30.39
520	500.00	13%	28.77	492.00	13%	29.30	574.00	15%	29.48	505.00	14%	29.35	489.00	13.2%	29.46	457.00	12%	31.55
530	500.00	13%	29.95	491.00	13%	30.47	573.00	15%	30.66	504.00	14%	30.53	488.00	13.1%	30.64	457.00	12%	32.73
540	499.00	13%	31.16	490.00	13%	31.68	572.00	15%	31.87	503.00	14%	31.74	488.00	13.1%	31.85	458.00	12%	33.94
550	498.00	13%	32.39	490.00	13%	32.92	572.00	15%	33.10	503.00	14%	32.97	487.00	13.1%	33.08	459.00	12%	35.18
560	497.00	13%	33.65	489.00	13%	34.17	571.00	15%	34.36	502.00	14%	34.23	487.00	13.1%	34.34	459.00	12%	36.43
570	496.00	13%	34.93	489.00	13%	35.45	570.00	15%	35.64	502.00	14%	35.51	486.00	13.1%	35.62	460.00	12%	37.72
580	495.00	13%	36.25	488.00	13%	36.77	569.00	15%	36.95	501.00	13%	36.83	486.00	13.1%	36.93	460.00	12%	39.04
590	494.00	13%	37.58	487.00	13%	38.10	568.00	15%	38.29	500.00	13%	38.16	485.00	13.1%	38.26	460.00	12%	40.38
600	493.00	13%	38.94	487.00	13%	39.46	567.00	15%	39.65	499.00	13%	39.52	485.00	13.1%	39.63	460.00	12%	41.74

WAXWING ACSR 266.8 KCMIL																								
Clima: Frío Altitud: 2500 msnm - 3500 msnm Temperatura máxima (°C): 27 Temperatura media (°C): 9 Temperatura mínima (°C): 4 Temperatura coincidente (°C): 5 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50																								
Propiedades físicas del conductor: Tensión de rotura (daN): 3060.38 Peso (daN/m): 0.4224																								
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 33% Operación diaria (EDS): 17%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final								
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha						
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	997.00	32.6%	0.01	638.00	21%	0.01	619.00	20.2%	0.01	618.00	20.2%	0.01	535.00	17.5%	0.01	70.00	2.3%	0.08						
20	994.00	32.4%	0.02	635.00	21%	0.03	621.00	20.3%	0.05	616.00	20.1%	0.04	535.00	17.5%	0.04	95.00	3.1%	0.22						
30	987.00	32.3%	0.05	632.00	21%	0.08	624.00	20.4%	0.10	615.00	20.1%	0.08	535.00	17.5%	0.09	116.00	3.8%	0.41						
40	979.00	32.0%	0.09	628.00	21%	0.13	628.00	20.5%	0.18	612.00	20.0%	0.15	535.00	17.5%	0.16	136.00	4.4%	0.62						
50	967.00	31.6%	0.14	622.00	20%	0.21	631.00	20.6%	0.27	609.00	19.9%	0.23	535.00	17.5%	0.25	153.00	5.0%	0.86						
60	953.00	31.1%	0.20	616.00	20%	0.31	635.00	20.7%	0.39	606.00	19.5%	0.33	535.00	17.5%	0.36	169.00	5.5%	1.12						
70	939.00	30.7%	0.28	611.00	20%	0.42	639.00	20.9%	0.52	603.00	19.7%	0.45	535.00	17.5%	0.48	184.00	6.0%	1.41						
80	921.00	30.1%	0.37	604.00	20%	0.56	642.00	21.0%	0.68	598.00	19.5%	0.59	535.00	17.5%	0.63	199.00	6.5%	1.71						
90	903.00	29.5%	0.47	599.00	20%	0.71	644.00	21.0%	0.85	595.00	19.4%	0.75	535.00	17.5%	0.80	216.00	7.1%	1.98						
100	882.00	28.8%	0.60	593.00	19%	0.89	646.00	21.1%	1.04	592.00	19.3%	0.93	535.00	17.5%	0.99	234.00	7.6%	2.26						
110	860.00	28.1%	0.74	587.00	19%	1.09	648.00	21.2%	1.25	588.00	19.2%	1.14	535.00	17.5%	1.19	250.00	8.2%	2.55						
120	838.00	27.4%	0.91	582.00	19%	1.31	649.00	21.2%	1.48	586.00	19.1%	1.36	535.00	17.5%	1.42	266.00	8.7%	2.86						
130	817.00	26.7%	1.09	578.00	19%	1.55	650.00	21.2%	1.73	583.00	19.0%	1.60	535.00	17.5%	1.67	281.00	9.2%	3.18						
140	795.00	26.0%	1.30	573.00	19%	1.81	651.00	21.3%	2.00	580.00	19.0%	1.86	534.00	17.4%	1.94	295.00	9.6%	3.51						
150	775.00	25.3%	1.53	569.00	19%	2.09	652.00	21.3%	2.29	578.00	18.9%	2.15	534.00	17.4%	2.22	309.00	10.1%	3.86						
160	755.00	24.7%	1.79	567.00	19%	2.39	652.00	21.3%	2.60	576.00	18.8%	2.45	534.00	17.4%	2.53	320.00	10.5%	4.23						
170	736.00	24.0%	2.07	564.00	18%	2.71	652.00	21.3%	2.93	574.00	18.8%	2.77	534.00	17.4%	2.86	331.00	10.8%	4.61						
180	719.00	23.5%	2.36	561.00	18%	3.05	652.00	21.3%	3.27	572.00	18.7%	3.12	534.00	17.4%	3.20	342.00	11.2%	5.01						
190	704.00	23.0%	2.71	559.00	18%	3.41	652.00	21.3%	3.64	571.00	18.7%	3.48	534.00	17.4%	3.57	352.00	11.5%	5.42						
200	689.00	22.5%	3.07	555.00	18%	3.80	652.00	21.3%	4.03	569.00	18.6%	3.87	534.00	17.4%	3.96	361.00	11.8%	5.86						
210	676.00	22.1%	3.45	555.00	18%	4.20	651.00	21.3%	4.44	568.00	18.6%	4.27	534.00	17.4%	4.37	370.00	12.1%	6.31						
220	664.00	21.7%	3.85	553.00	18%	4.63	651.00	21.3%	4.86	566.00	18.5%	4.70	533.00	17.4%	4.79	378.00	12.4%	6.77						
230	654.00	21.4%	4.27	551.00	18%	5.07	651.00	21.3%	5.31	566.00	18.5%	5.14	533.00	17.4%	5.24	386.00	12.6%	7.25						
240	644.00	21.0%	4.73	550.00	18%	5.54	651.00	21.3%	5.78	564.00	18.4%	5.61	533.00	17.4%	5.71	393.00	12.8%	7.76						
250	635.00	20.7%	5.20	548.00	18%	6.02	650.00	21.2%	6.27	563.00	18.4%	6.09	533.00	17.4%	6.20	399.00	13.0%	8.28						
260	628.00	20.5%	5.69	547.00	18%	6.53	649.00	21.2%	6.77	562.00	18.4%	6.60	533.00	17.4%	6.71	406.00	13.3%	8.81						
270	620.00	20.3%	6.21	546.00	18%	7.06	649.00	21.2%	7.30	561.00	18.3%	7.13	532.00	17.4%	7.24	411.00	13.4%	9.37						
280	614.00	20.1%	6.75	545.00	18%	7.61	648.00	21.2%	7.85	560.00	18.3%	7.68	532.00	17.4%	7.79	417.00	13.6%	9.95						
290	608.00	19.9%	7.31	544.00	18%	8.18	647.00	21.1%	8.42	559.00	18.3%	8.25	532.00	17.4%	8.36	422.00	13.8%	10.54						
300	602.00	19.7%	7.90	543.00	18%	8.77	647.00	21.1%	9.01	559.00	18.3%	8.84	532.00	17.4%	8.95	427.00	14.0%	11.16						
310	597.00	19.5%	8.50	542.00	18%	9.38	646.00	21.1%	9.63	558.00	18.2%	9.45	531.00	17.4%	9.56	431.00	14.1%	11.79						
320	593.00	19.4%	9.13	541.00	18%	10.01	645.00	21.1%	10.26	557.00	18.2%	10.08	531.00	17.4%	10.19	435.00	14.2%	12.44						
330	589.00	19.2%	9.78	540.00	18%	10.66	645.00	21.1%	10.91	556.00	18.2%	10.74	531.00	17.4%	10.85	439.00	14.3%	13.12						
340	585.00	19.1%	10.45	539.00	18%	11.34	644.00	21.0%	11.58	556.00	18.2%	11.41	531.00	17.4%	11.52	443.00	14.5%	13.81						
350	582.00	19.0%	11.14	538.00	18%	12.03	643.00	21.0%	12.28	555.00	18.1%	12.10	530.00	17.3%	12.22	446.00	14.6%	14.52						
360	579.00	18.9%	11.84	538.00	18%	12.75	643.00	21.0%	12.99	554.00	18.1%	12.82	530.00	17.3%	12.93	450.00	14.7%	15.25						
370	576.00	18.8%	12.58	537.00	18%	13.48	642.00	21.0%	13.73	554.00	18.1%	13.56	530.00	17.3%	13.67	453.00	14.8%	16.00						
380	573.00	18.7%	13.34	536.00	18%	14.24	641.00	20.9%	14.49	553.00	18.1%	14.32	529.00	17.3%	14.43	456.00	14.9%	16.78						
390	570.00	18.6%	14.11	536.00	18%	15.02	640.00	20.9%	15.27	552.00	18.0%	15.10	529.00	17.3%	15.21	458.00	15.0%	17.57						
400	568.00	18.6%	14.92	535.00	17%	15.85	640.00	20.9%	16.07	552.00	18.0%	15.90	529.00	17.3%	16.02	461.00	15.1%	18.39						
410	565.00	18.5%	15.74	534.00	17%	16.65	639.00	20.9%	16.90	551.00	18.0%	16.72	528.00	17.3%	16.84	463.00	15.1%	19.23						
420	563.00	18.4%	16.58	534.00	17%	17.49	638.00	20.8%	17.74	550.00	18.0%	17.57	528.00	17.3%	17.68	465.00	15.2%	20.08						
430	561.00	18.3%	17.45	533.00	17%	18.36	637.00	20.8%	18.61	550.00	18.0%	18.43	528.00	17.3%	18.55	467.00	15.3%	20.96						
440	559.00	18.3%	18.33	533.00	17%	19.25	636.00	20.8%	19.49	549.00	17.9%	19.32	527.00	17.2%	19.44	469.00	15.3%	21.86						
450	557.00	18.2%	19.24	532.00	17%	20.16	636.00	20.8%	20.40	548.00	17.9%	20.23	527.00	17.2%	20.35	471.00	15.4%	22.78						
460	555.00	18.1%	20.17	531.00	17%	21.09	635.00	20.7%	21.33	548.00	17.9%	21.16	527.00	17.2%	21.28	473.00	15.5%	23.71						
470	554.00	18.1%	21.12	531.00	17%	22.04	634.00	20.7%	22.29	547.00	17.9%	22.12	526.00	17.2%	22.24	474.00	15.5%	24.68						
480	552.00	18.0%	22.11	530.00	17%	23.02	633.00	20.7%	23.27	547.00	17.9%	23.10	526.00	17.2%	23.22	476.00	15.6%	25.67						
490	550.00	18.0%	23.10	530.00	17%	24.02	632.00	20.7%	24.26	546.00	17.8%	24.10	525.00	17.2%	24.22	477.00	15.6%	26.67						
500	549.00	17.9%	24.13	529.00	17%	25.05	631.00	20.6%	25.29	545.00	17.8%	25.12	525.00	17.2%	25.24	478.00	15.6%	27.71			</			

LINNET ACSR 336.4 KCMIL

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 80
Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
Tensión de rotura (daN): 6271.99
Peso (daN/m): 0.6741
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 12%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1191.00	19.0%	0.01	852.00	14%	0.01	826.00	13.2%	0.01	824.00	13.1%	0.01	715.00	11.4%	0.01	117.00	1.9%	0.07
20	1191.00	19.0%	0.03	854.00	14%	0.04	833.00	13.3%	0.05	829.00	13.2%	0.04	720.00	11.5%	0.05	174.00	2.8%	0.19
30	1191.00	19.0%	0.06	856.00	14%	0.09	842.00	13.4%	0.11	830.00	13.2%	0.09	728.00	11.6%	0.10	227.00	3.5%	0.34
40	1191.00	19.0%	0.11	857.00	14%	0.16	855.00	13.6%	0.19	836.00	13.3%	0.17	739.00	11.8%	0.18	264.00	4.2%	0.51
50	1191.00	19.0%	0.18	861.00	14%	0.24	868.00	13.8%	0.29	842.00	13.4%	0.26	752.00	12.0%	0.28	302.00	4.8%	0.70
60	1165.00	18.6%	0.26	852.00	14%	0.36	859.00	13.9%	0.41	838.00	13.4%	0.37	752.00	12.0%	0.40	334.00	5.3%	0.91
70	1144.00	18.2%	0.36	842.00	13%	0.49	869.00	13.9%	0.56	831.00	13.2%	0.51	752.00	12.0%	0.55	362.00	5.8%	1.14
80	1115.00	17.8%	0.48	833.00	13%	0.65	869.00	13.9%	0.72	825.00	13.2%	0.67	752.00	12.0%	0.72	389.00	6.2%	1.39
90	1087.00	17.3%	0.63	825.00	13%	0.83	859.00	13.9%	0.91	819.00	13.1%	0.86	752.00	12.0%	0.91	411.00	6.6%	1.66
100	1059.00	16.9%	0.80	817.00	13%	1.03	867.00	13.8%	1.13	814.00	13.0%	1.06	752.00	12.0%	1.12	433.00	6.9%	1.95
110	1030.00	16.4%	0.99	810.00	13%	1.26	866.00	13.8%	1.36	808.00	12.9%	1.29	752.00	12.0%	1.36	453.00	7.2%	2.25
120	1004.00	16.0%	1.21	803.00	13%	1.51	866.00	13.8%	1.62	805.00	12.9%	1.55	752.00	12.0%	1.62	471.00	7.5%	2.58
130	977.00	15.6%	1.46	796.00	13%	1.79	863.00	13.8%	1.90	799.00	12.7%	1.83	751.00	12.0%	1.90	488.00	7.8%	2.92
140	955.00	15.2%	1.73	791.00	13%	2.09	862.00	13.7%	2.20	796.00	12.7%	2.13	751.00	12.0%	2.20	503.00	8.0%	3.29
150	934.00	14.9%	2.03	788.00	13%	2.41	862.00	13.7%	2.53	793.00	12.6%	2.46	751.00	12.0%	2.53	517.00	8.2%	3.67
160	916.00	14.6%	2.35	784.00	13%	2.75	860.00	13.7%	2.87	790.00	12.6%	2.79	751.00	12.0%	2.88	531.00	8.5%	4.07
170	900.00	14.3%	2.71	781.00	12%	3.12	859.00	13.7%	3.24	788.00	12.6%	3.16	750.00	12.0%	3.25	543.00	8.7%	4.49
180	886.00	14.1%	3.06	776.00	12%	3.51	858.00	13.7%	3.64	786.00	12.5%	3.56	750.00	12.0%	3.64	554.00	8.8%	4.93
190	874.00	13.9%	3.48	775.00	12%	3.93	857.00	13.7%	4.05	784.00	12.5%	3.97	750.00	12.0%	4.06	565.00	9.0%	5.39
200	862.00	13.7%	3.91	772.00	12%	4.37	855.00	13.6%	4.50	782.00	12.5%	4.41	749.00	11.9%	4.50	575.00	9.2%	5.87
210	852.00	13.6%	4.36	770.00	12%	4.83	854.00	13.6%	4.96	780.00	12.4%	4.87	749.00	11.9%	4.96	584.00	9.3%	6.37
220	842.00	13.4%	4.85	768.00	12%	5.32	853.00	13.6%	5.44	779.00	12.4%	5.36	749.00	11.9%	5.45	592.00	9.4%	6.89
230	835.00	13.3%	5.35	766.00	12%	5.82	851.00	13.6%	5.95	777.00	12.4%	5.87	749.00	11.9%	5.96	600.00	9.6%	7.44
240	827.00	13.2%	5.87	765.00	12%	6.35	850.00	13.6%	6.48	776.00	12.4%	6.40	748.00	11.9%	6.49	607.00	9.7%	8.00
250	821.00	13.1%	6.42	763.00	12%	6.91	849.00	13.5%	7.04	774.00	12.3%	6.96	748.00	11.9%	7.05	614.00	9.8%	8.59
260	815.00	13.0%	7.00	762.00	12%	7.49	848.00	13.5%	7.62	773.00	12.3%	7.53	747.00	11.9%	7.63	621.00	9.9%	9.19
270	810.00	12.9%	7.60	760.00	12%	8.09	847.00	13.5%	8.22	772.00	12.3%	8.14	747.00	11.9%	8.24	628.00	10.0%	9.83
280	805.00	12.8%	8.22	759.00	12%	8.72	845.00	13.5%	8.85	771.00	12.3%	8.76	747.00	11.9%	8.86	632.00	10.1%	10.48
290	800.00	12.8%	8.87	758.00	12%	9.37	844.00	13.5%	9.50	770.00	12.3%	9.41	746.00	11.9%	9.51	637.00	10.2%	11.15
300	796.00	12.7%	9.54	756.00	12%	10.04	843.00	13.4%	10.17	769.00	12.3%	10.09	746.00	11.9%	10.19	642.00	10.2%	11.85
310	793.00	12.6%	10.23	755.00	12%	10.74	842.00	13.4%	10.87	768.00	12.2%	10.78	745.00	11.9%	10.89	646.00	10.3%	12.56
320	789.00	12.6%	10.95	754.00	12%	11.46	841.00	13.4%	11.59	767.00	12.2%	11.51	745.00	11.9%	11.61	650.00	10.4%	13.31
330	786.00	12.5%	11.70	753.00	12%	12.21	840.00	13.4%	12.34	766.00	12.2%	12.25	744.00	11.9%	12.35	654.00	10.4%	14.07
340	783.00	12.5%	12.46	752.00	12%	12.98	839.00	13.4%	13.11	765.00	12.2%	13.02	744.00	11.9%	13.13	657.00	10.5%	14.86
350	780.00	12.4%	13.26	751.00	12%	13.77	837.00	13.3%	13.90	764.00	12.2%	13.82	743.00	11.8%	13.92	661.00	10.5%	15.67
360	778.00	12.4%	14.08	750.00	12%	14.59	836.00	13.3%	14.72	763.00	12.2%	14.64	743.00	11.8%	14.74	664.00	10.6%	16.50
370	776.00	12.4%	14.92	749.00	12%	15.43	835.00	13.3%	15.56	762.00	12.1%	15.48	742.00	11.8%	15.58	667.00	10.6%	17.36
380	773.00	12.3%	15.79	748.00	12%	16.30	834.00	13.3%	16.43	761.00	12.1%	16.35	741.00	11.8%	16.45	669.00	10.7%	18.24
390	770.00	12.3%	16.68	747.00	12%	17.20	833.00	13.3%	17.33	760.00	12.1%	17.24	741.00	11.8%	17.36	672.00	10.7%	19.15
400	768.00	12.2%	17.60	746.00	12%	18.12	832.00	13.3%	18.24	759.00	12.1%	18.16	740.00	11.8%	18.27	674.00	10.7%	20.08
410	766.00	12.2%	18.54	746.00	12%	19.06	831.00	13.2%	19.19	758.00	12.1%	19.10	740.00	11.8%	19.21	676.00	10.8%	21.03
420	764.00	12.2%	19.50	745.00	12%	20.03	829.00	13.2%	20.16	757.00	12.1%	20.07	739.00	11.8%	20.18	678.00	10.8%	22.01
430	762.00	12.1%	20.50	744.00	12%	21.02	828.00	13.2%	21.15	756.00	12.1%	21.07	738.00	11.8%	21.17	680.00	10.8%	23.01
440	761.00	12.1%	21.52	743.00	12%	22.04	827.00	13.2%	22.17	755.00	12.0%	22.09	738.00	11.8%	22.20	681.00	10.9%	24.05
450	759.00	12.1%	22.57	742.00	12%	23.09	826.00	13.2%	23.22	754.00	12.0%	23.14	737.00	11.8%	23.24	683.00	10.9%	25.10
460	757.00	12.1%	23.64	741.00	12%	24.16	825.00	13.2%	24.29	754.00	12.0%	24.21	736.00	11.7%	24.31	684.00	10.9%	26.18
470	755.00	12.0%	24.74	740.00	12%	25.26	824.00	13.1%	25.39	753.00	12.0%	25.30	735.00	11.7%	25.41	685.00	10.9%	27.29
480	754.00	12.0%	25.86	739.00	12%	26.38	823.00	13.1%	26.51	752.00	12.0%	26.43	735.00	11.7%	26.53	686.00	10.9%	28.42
490	752.00	12.0%	27.01	738.00	12%	27.54	821.00	13.1%	27.67	751.00	12.0%	27.58	734.00	11.7%	27.69	687.00	11.0%	29.58
500	751.00	12.0%	28.19	737.00	12%	28.71	820.00	13.1%	28.84	750.00	12.0%	28.76	733.00	11.7%	28.86	688.00	11.0%	30.76
510	749.00	11.9%	29.40	736.00	12%	29.92	819.00	13.1%	30.05	749.00	11.9%	29.96	732.00	11.7%	30.07	689.00	11.0%	31.97
520	747.00	11.9%	30.63	735.00	12%	31.15	818.00	13.0%	31.27	748.00	11.9%	31.19	731.00	11.7%	31.30	690.00	11.0%	33.21
530	746.00	11.9%	31.89	734.00	12%	32.41	816.00	13.0%	32.53	747.00	11.9%	32.45	731.00	11.7%	32.56	690.00	11.0%	34.48
540	744.00	11.9%	33.18	733.00	12%	33.70	815.00	13.0%	33.82	746.00	11.9%	33.74	730.00	11.6%	33.85	691.00	11.0%	35.77
550	743.00	11.8%	34.49	732.00	12%	35.01	814.00	13.0%	35.14	745.00	11.9%	35.06	729.00	11.6%	35.17	691.00	11.0%	37.09
560	742.00	11.8%	35.83	731.00	12%	36.35	812.00	12.9%	36.48	744.00	11.9%	36.40	728.00	11.6%	36.51	692.00	11.0%	38.43
570	740.00	11.8%	37.20	730.00	12%	37.72	811.00	12.9%	37.85	743.00	11.8%	37.77	727.00	11.6%	37.88	692.00	11.0%	39.81
580	739.00	11.8%	38.61	729.00	12%	39.13	810.00	12.9%	39.25	741.00	11.9%	39.17	726.00	11.6%	39.28	692.00	11.0%	41.21
590	737.00	11.8%	40.03	728.00	12%	40.56	809.00	12.9%	40.67	740.00	11.9%	40.60	725.00	11.6%	40.71	693.00	11.0%	42.65
600	736.00	11.7%	41.50	727.00	12%	42.02	807.00	12.9%	42.14	739.00	11.8%	42.07	724.00	11.5%	42.17	693.00	11.0%	44.11

AMES AAAC 77.47 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	284.00	22.8%	0.00	203.00	16.3%	0.01	198.00	15.9%	0.01	187.00	15.8%	0.01	174.00	14.0%	0.01	7.00	0.6%	0.18
20	284.00	22.8%	0.02	202.00	16.2%	0.03	200.00	16.1%	0.05	197.00	15.8%	0.03	174.00	14.0%	0.03	15.00	1.2%	0.36
30	283.00	22.7%	0.04	202.00	16.2%	0.06	204.00	16.4%	0.12	198.00	15.9%	0.07	174.00	14.0%	0.07	21.00	1.7%	0.56
40	282.00	22.6%	0.08	201.00	16.1%	0.11	208.00	16.7%	0.21	198.00	15.9%	0.13	174.00	14.0%	0.12	28.00	2.2%	0.76
50	280.00	22.5%	0.12	200.00	16.1%	0.17	213.00	17.1%	0.31	198.00	15.9%	0.20	174.00	14.0%	0.19	34.00	2.7%	0.97
60	278.00	22.3%	0.17	199.00	16.0%	0.24	217.00	17.4%	0.43	199.00	16.0%	0.29	174.00	14.0%	0.27	40.00	3.2%	1.18
70	276.00	22.2%	0.24	198.00	15.9%	0.33	222.00	17.8%	0.57	199.00	16.0%	0.39	174.00	14.0%	0.37	46.00	3.7%	1.41
80	273.00	21.9%	0.31	197.00	15.8%	0.43	227.00	18.2%	0.73	199.00	16.0%	0.51	174.00	14.0%	0.49	52.00	4.2%	1.64
90	270.00	21.7%	0.40	196.00	15.7%	0.55	231.00	18.5%	0.90	199.00	16.0%	0.64	174.00	14.0%	0.62	57.00	4.6%	1.89
100	267.00	21.4%	0.50	195.00	15.7%	0.68	235.00	18.9%	1.08	200.00	16.1%	0.79	174.00	14.0%	0.76	62.00	5.0%	2.14
110	264.00	21.2%	0.61	194.00	15.6%	0.83	239.00	19.2%	1.28	200.00	16.1%	0.95	174.00	14.0%	0.92	67.00	5.4%	2.41
120	260.00	20.9%	0.73	193.00	15.5%	0.98	243.00	19.5%	1.49	200.00	16.1%	1.13	174.00	14.0%	1.10	71.00	5.7%	2.68
130	257.00	20.6%	0.87	192.00	15.4%	1.17	246.00	19.8%	1.71	200.00	16.1%	1.32	174.00	14.0%	1.29	76.00	6.1%	2.97
140	253.00	20.3%	1.03	190.00	15.3%	1.37	249.00	20.0%	1.95	200.00	16.1%	1.53	174.00	14.0%	1.49	80.00	6.4%	3.26
150	250.00	20.1%	1.19	189.00	15.2%	1.58	252.00	20.2%	2.20	200.00	16.1%	1.75	174.00	14.0%	1.71	84.00	6.7%	3.57
160	246.00	19.8%	1.38	188.00	15.1%	1.80	255.00	20.5%	2.46	200.00	16.1%	1.98	174.00	14.0%	1.95	87.00	7.0%	3.88
170	242.00	19.4%	1.58	187.00	15.0%	2.04	258.00	20.7%	2.74	200.00	16.1%	2.24	174.00	14.0%	2.20	91.00	7.3%	4.21
180	238.00	19.2%	1.80	187.00	15.0%	2.30	260.00	20.9%	3.04	201.00	16.1%	2.50	174.00	14.0%	2.47	94.00	7.6%	4.55
190	235.00	18.9%	2.04	186.00	14.9%	2.58	262.00	21.0%	3.34	200.00	16.1%	2.79	174.00	14.0%	2.75	98.00	7.9%	4.91
200	232.00	18.6%	2.29	185.00	14.9%	2.87	264.00	21.2%	3.66	200.00	16.1%	3.09	174.00	14.0%	3.05	101.00	8.1%	5.27
210	228.00	18.3%	2.56	184.00	14.8%	3.18	266.00	21.4%	4.00	200.00	16.1%	3.40	174.00	14.0%	3.36	104.00	8.4%	5.65
220	225.00	18.1%	2.85	184.00	14.8%	3.50	268.00	21.5%	4.34	200.00	16.1%	3.72	174.00	14.0%	3.69	106.00	8.5%	6.03
230	222.00	17.8%	3.16	183.00	14.7%	3.83	269.00	21.6%	4.71	200.00	16.1%	4.07	174.00	14.0%	4.04	109.00	8.8%	6.43
240	219.00	17.6%	3.48	182.00	14.6%	4.19	271.00	21.8%	5.08	200.00	16.1%	4.43	174.00	14.0%	4.39	112.00	9.0%	6.85
250	217.00	17.4%	3.83	182.00	14.6%	4.56	272.00	21.8%	5.48	200.00	16.1%	4.81	174.00	14.0%	4.77	114.00	9.2%	7.28
260	214.00	17.2%	4.19	181.00	14.5%	4.95	273.00	21.9%	5.88	200.00	16.1%	5.20	174.00	14.0%	5.16	116.00	9.3%	7.71
270	212.00	17.0%	4.56	181.00	14.5%	5.35	274.00	22.0%	6.30	200.00	16.1%	5.60	174.00	14.0%	5.57	119.00	9.6%	8.17
280	210.00	16.9%	4.95	180.00	14.5%	5.76	275.00	22.1%	6.73	200.00	16.1%	6.02	174.00	14.0%	5.99	121.00	9.7%	8.63
290	208.00	16.7%	5.37	180.00	14.5%	6.20	276.00	22.2%	7.18	199.00	16.0%	6.45	174.00	14.0%	6.43	123.00	9.9%	9.11
300	206.00	16.5%	5.81	180.00	14.5%	6.65	277.00	22.2%	7.65	199.00	16.0%	6.91	174.00	14.0%	6.88	124.00	10.0%	9.61

AZUSA AAAC 123.3 KCML

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1983.91
 Peso (daN/m): 0.1688

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	425.00	21.4%	0.00	303.00	15.3%	0.01	295.00	14.9%	0.01	294.00	14.8%	0.01	258.00	13.0%	0.01	12.00	0.6%	0.18
20	424.00	21.4%	0.02	302.00	15.2%	0.03	298.00	15.0%	0.05	294.00	14.8%	0.03	258.00	13.0%	0.03	23.00	1.2%	0.37
30	422.00	21.3%	0.05	301.00	15.2%	0.06	301.00	15.2%	0.11	294.00	14.8%	0.07	258.00	13.0%	0.07	33.00	1.7%	0.57
40	420.00	21.2%	0.08	300.00	15.1%	0.11	306.00	15.4%	0.19	294.00	14.8%	0.13	258.00	13.0%	0.13	43.00	2.2%	0.78
50	418.00	21.0%	0.13	299.00	15.1%	0.18	310.00	15.6%	0.29	294.00	14.8%	0.20	258.00	13.0%	0.20	53.00	2.7%	0.99
60	413.00	20.8%	0.18	297.00	15.0%	0.26	316.00	15.9%	0.40	293.00	14.8%	0.29	258.00	13.0%	0.29	63.00	3.2%	1.21
70	409.00	20.6%	0.25	295.00	14.9%	0.35	321.00	16.2%	0.54	293.00	14.8%	0.40	258.00	13.0%	0.40	72.00	3.6%	1.45
80	404.00	20.4%	0.33	292.00	14.7%	0.46	326.00	16.4%	0.69	293.00	14.8%	0.52	258.00	13.0%	0.52	80.00	4.0%	1.69
90	399.00	20.1%	0.43	291.00	14.7%	0.59	330.00	16.6%	0.85	293.00	14.8%	0.66	258.00	13.0%	0.66	88.00	4.4%	1.94
100	393.00	19.8%	0.54	289.00	14.6%	0.73	334.00	16.8%	1.03	292.00	14.7%	0.81	258.00	13.0%	0.82	96.00	4.8%	2.20
110	387.00	19.5%	0.66	287.00	14.5%	0.89	339.00	17.1%	1.22	292.00	14.7%	0.98	258.00	13.0%	0.99	103.00	5.2%	2.47
120	382.00	19.3%	0.80	285.00	14.4%	1.07	342.00	17.2%	1.43	291.00	14.7%	1.16	258.00	13.0%	1.18	110.00	5.5%	2.76
130	375.00	18.9%	0.95	282.00	14.2%	1.26	345.00	17.4%	1.66	291.00	14.7%	1.37	258.00	13.0%	1.39	117.00	5.9%	3.05
140	369.00	18.6%	1.12	281.00	14.2%	1.47	349.00	17.6%	1.90	291.00	14.7%	1.58	257.00	13.0%	1.61	123.00	6.2%	3.36
150	363.00	18.3%	1.31	279.00	14.1%	1.70	351.00	17.7%	2.16	290.00	14.6%	1.82	257.00	13.0%	1.84	129.00	6.5%	3.68
160	357.00	18.0%	1.51	277.00	14.0%	1.95	354.00	17.8%	2.43	289.00	14.6%	2.07	257.00	13.0%	2.10	135.00	6.8%	4.01
170	351.00	17.7%	1.74	276.00	13.9%	2.21	356.00	17.9%	2.71	289.00	14.6%	2.34	257.00	13.0%	2.37	140.00	7.1%	4.35
180	346.00	17.4%	1.98	275.00	13.9%	2.49	358.00	18.0%	3.01	289.00	14.6%	2.62	257.00	13.0%	2.66	145.00	7.4%	4.71
190	340.00	17.1%	2.24	274.00	13.8%	2.78	360.00	18.1%	3.33	288.00	14.5%	2.93	257.00	13.0%	2.96	150.00	7.6%	5.07
200	334.00	16.8%	2.53	272.00	13.7%	3.10	362.00	18.2%	3.66	288.00	14.5%	3.25	257.00	13.0%	3.28	155.00	7.8%	5.46
210	329.00	16.6%	2.83	271.00	13.7%	3.43	363.00	18.2%	4.01	287.00	14.5%	3.58	257.00	13.0%	3.62	159.00	8.0%	5.85
220	325.00	16.4%	3.15	270.00	13.6%	3.78	364.00	18.3%	4.37	287.00	14.5%	3.93	257.00	13.0%	3.97	163.00	8.2%	6.26
230	320.00	16.1%	3.49	269.00	13.6%	4.15	365.00	18.4%	4.75	286.00	14.4%	4.30	257.00	13.0%	4.35	167.00	8.4%	6.68
240	316.00	15.9%	3.84	269.00	13.6%	4.53	367.00	18.5%	5.14	286.00	14.4%	4.69	257.00	13.0%	4.73	171.00	8.6%	7.12
250	313.00	15.8%	4.22	268.00	13.5%	4.93	368.00	18.5%	5.55	286.00	14.4%	5.09	257.00	13.0%	5.14	175.00	8.8%	7.57
260	309.00	15.6%	4.62	267.00	13.5%	5.35	368.00	18.5%	5.98	285.00	14.4%	5.51	257.00	13.0%	5.56	178.00	9.0%	8.04
270	306.00	15.4%	5.04	266.00	13.4%	5.79	369.00	18.6%	6.42	285.00	14.4%	5.95	257.00	13.0%	5.99	181.00	9.1%	8.51
280	303.00	15.3%	5.47	266.00	13.4%	6.24	369.00	18.6%	6.88	284.00	14.3%	6.40	257.00	13.0%	6.45	184.00	9.3%	9.01
290	300.00	15.1%	5.93	265.00	13.4%	6.70	370.00	18.7%	7.36	284.00	14.3%	6.87	257.00	13.0%	6.92	187.00	9.4%	9.52
300	297.00	15.0%	6.40	264.00	13.3%	7.19	370.00	18.7%	7.85	284.00	14.3%	7.36	257.00	13.0%	7.41	189.00	9.5%	10.04
310	295.00	14.9%	6.88	264.00	13.3%	7.69	371.00	18.7%	8.36	283.00	14.3%	7.86	257.00	13.0%	7.91	192.00	9.7%	10.58
320	292.00	14.7%	7.40	263.00	13.3%	8.21	371.00	18.7%	8.88	283.00	14.3%	8.38	256.00	12.9%	8.44	194.00	9.8%	11.13
330	290.00	14.6%	7.92	263.00	13.3%	8.75	371.00	18.7%	9.43	283.00	14.3%	8.92	256.00	12.9%	8.97	197.00	9.9%	11.70
340	288.00	14.5%	8.46	263.00	13.3%	9.30	372.00	18.8%	9.98	282.00	14.2%	9.47	256.00	12.9%	9.53	199.00	10.0%	12.29
350	287.00	14.5%	9.03	262.00	13.2%	9.87	372.00	18.8%	10.56	282.00	14.2%	10.05	256.00	12.9%	10.10	201.00	10.1%	12.89
360	285.00	14.4%	9.61	262.00	13.2%	10.47	372.00	18.8%	11.15	282.00	14.2%	10.64	256.00	12.9%	10.70	203.00	10.2%	13.51
370	283.00	14.3%	10.21	261.00	13.2%	11.07	372.00	18.8%	11.76	282.00	14.2%	11.24	256.00	12.9%	11.30	205.00	10.3%	14.13
380	282.00	14.2%	10.82	261.00	13.2%	11.69	372.00	18.8%	12.39	281.00	14.2%	11.86	256.00	12.9%	11.93	207.00	10.4%	14.78
390	280.00	14.1%	11.46	261.00	13.2%	12.33	372.00	18.8%	13.03	281.00	14.2%	12.51	256.00	12.9%	12.57	208.00	10.5%	15.45
400	278.00	14.0%	12.11	260.00	13.1%	12.99	372.00	18.8%	13.69	281.00	14.2%	13.10	256.00	12.9%	13.23	210.00	10.6%	16.13
410	278.00	14.0%	12.78	260.00	13.1%	13.66	372.00	18.8%	14.36	280.00	14.1%	13.84	256.00	12.9%	13.90	211.00	10.6%	16.82
420	277.00	14.0%	13.47	260.00	13.1%	14.36	372.00	18.8%	15.06	280.00	14.1%	14.53	256.00	12.9%	14.60	213.00	10.7%	17.54
430	276.00	13.9%	14.17	259.00	13.1%	15.07	372.00	18.8%	15.77	280.00	14.1%	15.24	256.00	12.9%	15.31	214.00	10.8%	18.27
440	275.00	13.9%	14.90	259.00	13.1%	15.80	371.00	18.7%	16.50	279.00	14.1%	15.97	256.00	12.9%	16.04	215.00	10.8%	19.02
450	274.00	13.8%	15.64	259.00	13.1%	16.54	371.00	18.7%	17.25	279.00	14.1%	16.72	256.00	12.9%	16.79	217.00	10.9%	19.78
460	273.00	13.8%	16.41	258.00	13.0%	17.31	371.00	18.7%	18.02	279.00	14.1%	17.48	256.00	12.9%	17.56	218.00	11.0%	20.57
470	272.00	13.7%	17.18	258.00	13.0%	18.09	371.00	18.7%	18.80	279.00	14.1%	18.26	256.00	12.9%	18.34	219.00	11.0%	21.36
480	271.00	13.7%	17.98	258.00	13.0%	18.89	371.00	18.7%	19.60	278.00	14.0%	19.06	256.00	12.9%	19.14	220.00	11.1%	22.18
490	270.00	13.6%	18.79	258.00	13.0%	19.71	370.00	18.7%	20.42	278.00	14.0%	19.88	254.00	12.8%	19.86	221.00	11.1%	23.01
500	269.00	13.6%	19.63	257.00	13.0%	20.54	370.00	18.7%	21.25	278.00	14.0%	20.72	254.00	12.8%	20.79	222.00	11.2%	23.86
510	269.00	13.6%	20.48	257.00	13.0%	21.40	370.00	18.7%	22.10	278.00	14.0%	21.57	254.00	12.8%	21.65	223.00	11.2%	24.72
520	268.00	13.5%	21.35	257.00	13.0%	22.27	370.00	18.7%	22.98	277.00	14.0%	22.44	254.00	12.8%	22.52	224.00	11.3%	25.61
530	267.00	13.5%	22.23	257.00	13.0%	23.16	369.00	18.6%	23.87	277.00	14.0%	23.33	254.00	12.8%	23.41	224.00	11.3%	26.51
540	267.00	13.5%	23.14	256.00	12.9%	24.07	369.00	18.6%	24.78	277.00	14.0%	24.24	254.00	12.8%	24.32	225.00	11.3%	27.43
550	266.00	13.4%	24.06	256.00	12.9%	24.99	369.00	18.6%	25.70	277.00	14.0%	25.17	254.00	12.8%	25.24	226.00	11.4%	28.36
560	265.00	13.4%	25.01	256.00	12.9%	25.94	368.00	18.5%	26.64	276.00	13.9%	26.11	253.00	12.8%	26.19	227.00	11.4%	29.32
570	265.00	13.4%	25.97	256.00	12.9%	26.90	368.00	18.5%	27.61	276.00	13.9%	27.08	253.00	12.8%	27.15	227.00	11.4%	30.30
580	264.00	13.3%	26.96	255.00	12.9%	27.89	368.00	18.5%	28.59	276.00	13.9%	28.06	253.00	12.8%	28.14	228.00	11.5%	31.29
590	264.00	13.3%	27.95	255.00	12.9%	28.89	367.00	18.5%	29.60	275.00	13.9%	29.06	253.00	12.8%	29.14	228.00	11.5%	32.30
600	263.00	13.3%	28.97	255.00	12.9%	29.90	367.00											

ANAREIM AAAC 155.4 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 60
 Velocidad del viento promedio (km/h): 40

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2397.59
 Peso (daN/m): 0.2129

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	517.00	21.0%	0.01	369.00	15.4%	0.01	358.00	14.9%	0.01	357.00	14.9%	0.01	312.00	13.0%	0.01	14.00	0.6%	0.19
20	516.00	21.4%	0.02	367.00	15.2%	0.03	360.00	15.0%	0.05	357.00	14.9%	0.03	312.00	13.0%	0.03	28.00	1.2%	0.38
30	513.00	21.4%	0.05	365.00	15.3%	0.07	365.00	15.2%	0.11	356.00	14.8%	0.07	312.00	13.0%	0.08	41.00	1.7%	0.58
40	509.00	21.2%	0.08	364.00	15.2%	0.12	369.00	15.4%	0.18	356.00	14.8%	0.13	312.00	13.0%	0.14	54.00	2.3%	0.79
50	505.00	21.1%	0.13	362.00	15.1%	0.18	374.00	15.6%	0.28	356.00	14.8%	0.21	312.00	13.0%	0.21	66.00	2.8%	1.01
60	501.00	20.9%	0.19	360.00	15.0%	0.27	380.00	15.8%	0.39	355.00	14.8%	0.30	312.00	13.0%	0.31	78.00	3.3%	1.23
70	495.00	20.6%	0.26	358.00	14.9%	0.36	385.00	16.1%	0.53	355.00	14.8%	0.40	312.00	13.0%	0.42	89.00	3.7%	1.47
80	488.00	20.4%	0.35	355.00	14.8%	0.48	399.00	16.2%	0.87	353.00	14.7%	0.53	311.00	13.0%	0.55	100.00	4.2%	1.71
90	481.00	20.1%	0.45	352.00	14.7%	0.61	394.00	16.4%	0.84	353.00	14.7%	0.67	311.00	13.0%	0.69	110.00	4.6%	1.97
100	474.00	19.8%	0.56	349.00	14.6%	0.76	398.00	16.6%	1.02	352.00	14.7%	0.83	311.00	13.0%	0.85	119.00	5.0%	2.24
110	466.00	19.4%	0.69	346.00	14.4%	0.93	401.00	16.7%	1.22	351.00	14.6%	1.01	311.00	13.0%	1.03	128.00	5.3%	2.51
120	458.00	19.1%	0.84	344.00	14.3%	1.12	405.00	16.9%	1.42	350.00	14.6%	1.20	311.00	13.0%	1.23	137.00	5.7%	2.80
130	450.00	18.8%	1.00	341.00	14.2%	1.32	408.00	17.0%	1.66	348.00	14.5%	1.41	311.00	13.0%	1.45	145.00	6.0%	3.11
140	442.00	18.4%	1.18	339.00	14.1%	1.54	411.00	17.1%	1.90	348.00	14.5%	1.64	311.00	13.0%	1.68	153.00	6.4%	3.42
150	433.00	18.1%	1.38	336.00	14.0%	1.78	413.00	17.2%	2.16	346.00	14.4%	1.88	311.00	13.0%	1.93	160.00	6.7%	3.74
160	426.00	17.8%	1.60	335.00	14.0%	2.04	415.00	17.3%	2.44	346.00	14.4%	2.14	311.00	13.0%	2.19	167.00	7.0%	4.08
170	419.00	17.5%	1.84	333.00	13.9%	2.31	417.00	17.4%	2.73	345.00	14.4%	2.42	311.00	13.0%	2.47	174.00	7.3%	4.43
180	411.00	17.1%	2.10	331.00	13.8%	2.60	419.00	17.5%	3.04	345.00	14.4%	2.72	311.00	13.0%	2.77	180.00	7.6%	4.80
190	405.00	16.9%	2.37	330.00	13.8%	2.92	421.00	17.6%	3.36	344.00	14.3%	3.03	311.00	13.0%	3.09	186.00	7.8%	5.18
200	398.00	16.6%	2.68	328.00	13.7%	3.24	422.00	17.6%	3.70	343.00	14.3%	3.37	311.00	13.0%	3.43	191.00	8.0%	5.57
210	392.00	16.3%	3.00	327.00	13.6%	3.59	423.00	17.6%	4.06	342.00	14.3%	3.72	311.00	13.0%	3.78	197.00	8.2%	5.98
220	386.00	16.1%	3.34	325.00	13.6%	3.96	424.00	17.7%	4.44	342.00	14.3%	4.09	311.00	13.0%	4.15	201.00	8.4%	6.40
230	381.00	15.9%	3.69	325.00	13.6%	4.34	425.00	17.7%	4.83	341.00	14.2%	4.47	311.00	13.0%	4.53	206.00	8.6%	6.84
240	377.00	15.7%	4.07	324.00	13.5%	4.74	426.00	17.8%	5.24	341.00	14.2%	4.87	311.00	13.0%	4.94	211.00	8.8%	7.28
250	372.00	15.5%	4.47	323.00	13.5%	5.16	426.00	17.8%	5.67	340.00	14.2%	5.29	310.00	12.9%	5.36	215.00	9.0%	7.75
260	368.00	15.3%	4.89	322.00	13.4%	5.60	427.00	17.8%	6.11	339.00	14.1%	5.73	310.00	12.9%	5.80	219.00	9.1%	8.23
270	364.00	15.2%	5.32	321.00	13.4%	6.05	427.00	17.8%	6.56	339.00	14.1%	6.18	310.00	12.9%	6.26	223.00	9.2%	8.73
280	361.00	15.1%	5.79	320.00	13.3%	6.52	427.00	17.8%	7.04	339.00	14.1%	6.66	310.00	12.9%	6.73	226.00	9.4%	9.24
290	358.00	14.9%	6.26	320.00	13.3%	7.01	428.00	17.9%	7.53	338.00	14.1%	7.15	310.00	12.9%	7.22	230.00	9.6%	9.76
300	354.00	14.8%	6.76	319.00	13.2%	7.52	428.00	17.9%	8.05	338.00	14.1%	7.65	310.00	12.9%	7.73	233.00	9.7%	10.31
310	350.00	14.7%	7.28	318.00	13.2%	8.04	428.00	17.9%	8.58	337.00	14.1%	8.18	310.00	12.9%	8.26	236.00	9.8%	10.87
320	349.00	14.6%	7.81	318.00	13.3%	8.59	428.00	17.9%	9.12	337.00	14.1%	8.72	310.00	12.9%	8.81	239.00	10.0%	11.44
330	347.00	14.5%	8.36	317.00	13.2%	9.15	428.00	17.9%	9.69	336.00	14.0%	9.29	310.00	12.9%	9.37	241.00	10.1%	12.03
340	345.00	14.4%	8.93	317.00	13.2%	9.73	428.00	17.9%	10.27	336.00	14.0%	9.87	310.00	12.9%	9.95	244.00	10.2%	12.64
350	343.00	14.3%	9.52	316.00	13.2%	10.32	428.00	17.9%	10.87	336.00	14.0%	10.47	309.00	12.9%	10.55	246.00	10.3%	13.26
360	341.00	14.2%	10.13	316.00	13.2%	10.94	428.00	17.9%	11.48	335.00	14.0%	11.08	309.00	12.9%	11.17	249.00	10.4%	13.90
370	339.00	14.1%	10.76	315.00	13.1%	11.57	428.00	17.9%	12.12	335.00	14.0%	11.71	309.00	12.9%	11.80	251.00	10.5%	14.56
380	337.00	14.1%	11.41	315.00	13.1%	12.23	427.00	17.8%	12.78	334.00	13.9%	12.37	309.00	12.9%	12.46	253.00	10.6%	15.24
390	336.00	14.0%	12.07	314.00	13.1%	12.89	427.00	17.8%	13.44	334.00	13.9%	13.03	309.00	12.9%	13.13	255.00	10.6%	15.93
400	334.00	13.9%	12.75	314.00	13.2%	13.58	427.00	17.8%	14.16	334.00	13.9%	13.72	309.00	12.9%	13.81	257.00	10.7%	16.64
410	333.00	13.9%	13.46	314.00	13.1%	14.29	427.00	17.8%	14.84	333.00	13.9%	14.43	309.00	12.9%	14.52	258.00	10.8%	17.36
420	332.00	13.8%	14.18	313.00	13.1%	15.02	427.00	17.8%	15.57	333.00	13.9%	15.16	308.00	12.8%	15.25	260.00	10.8%	18.11
430	330.00	13.8%	14.92	313.00	13.1%	15.76	426.00	17.8%	16.31	333.00	13.8%	15.90	308.00	12.8%	15.98	261.00	10.8%	18.87
440	329.00	13.7%	15.68	312.00	13.0%	16.52	426.00	17.8%	17.07	332.00	13.8%	16.66	308.00	12.8%	16.76	263.00	11.0%	19.64
450	328.00	13.7%	16.45	312.00	13.0%	17.30	426.00	17.8%	17.85	332.00	13.8%	17.44	308.00	12.8%	17.54	264.00	11.0%	20.44
460	327.00	13.6%	17.25	312.00	13.0%	18.10	425.00	17.7%	18.66	332.00	13.8%	18.24	308.00	12.8%	18.34	266.00	11.1%	21.25
470	326.00	13.6%	18.07	311.00	13.0%	18.92	425.00	17.7%	19.47	331.00	13.8%	19.06	308.00	12.8%	19.16	267.00	11.1%	22.08
480	325.00	13.6%	18.90	311.00	13.0%	19.76	425.00	17.7%	20.31	331.00	13.8%	19.90	307.00	12.8%	19.99	268.00	11.2%	22.94
490	324.00	13.5%	19.76	311.00	13.0%	20.61	424.00	17.7%	21.17	331.00	13.8%	20.75	307.00	12.8%	20.85	269.00	11.2%	23.81
500	323.00	13.5%	20.62	310.00	12.9%	21.49	424.00	17.7%	22.04	330.00	13.8%	21.62	307.00	12.8%	21.72	270.00	11.3%	24.69
510	322.00	13.4%	21.52	310.00	12.9%	22.38	423.00	17.6%	22.93	330.00	13.8%	22.52	307.00	12.8%	22.62	271.00	11.3%	25.60
520	322.00	13.4%	22.43	310.00	12.9%	23.29	423.00	17.6%	23.85	330.00	13.8%	23.43	307.00	12.8%	23.53	272.00	11.3%	26.52
530	321.00	13.4%	23.38	310.00	12.9%	24.22	423.00	17.6%	24.78	329.00	13.7%	24.36	306.00	12.8%	24.47	273.00	11.4%	27.46
540	320.00	13.3%	24.31	309.00	12.9%	25.18	422.00	17.6%	25.73	329.00	13.7%	25.31	306.00	12.8%	25.42	274.00	11.4%	28.42
550	319.00	13.3%	25.28	309.00	12.9%	26.15	422.00	17.6%	26.70	329.00	13.7%	26.29	306.00	12.8%	26.39	275.00	11.5%	29.41
560	319.00	13.3%	26.26	308.00	12.9%	27.13	421.00	17.6%	27.69	328.00	13.7%	27.28	306.00	12.8%	27.38	276.00	11.5%	30.40
570	318.00	13.3%	27.28	308.00	12.8%	28.15	421.00	17.6%	28.70	328.00	13.7%	28.29	306.00	12.8%	28.39	276.00	11.5%	31.43
580	317.00	13.2%	28.30	308.00	12.8%	29.17	420.00	17.5%	29.72	328.00	13.7%	29.31	305.00	12.7%	29.42	277.00	11.6%	32.46
590	317.00	13.2%	29.35	308.00	12.8%	30.23	420.00	17.5%	30.78	327.00	13.6%	30.37	305.00	12.7%	30.47	278.00	11.6%	33.52
600	316.00	13.2%	30.42	307.00	12.8%	31.29	4											

ALLIANCE AAAC 246.9 KCMIIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 80
 Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	793.00	20.8%	0.01	566.00	15%	0.01	549.00	14%	0.01	548.00	14%	0.01	476.00	12.5%	0.01	22.00	1%	0.19
20	791.00	20.8%	0.02	565.00	15%	0.03	552.00	14%	0.04	549.00	14%	0.03	476.00	12.5%	0.04	44.00	1%	0.38
30	787.00	20.7%	0.05	563.00	15%	0.07	556.00	15%	0.10	547.00	14%	0.07	476.00	12.5%	0.08	65.00	2%	0.59
40	780.00	20.5%	0.09	559.00	15%	0.12	559.00	15%	0.17	545.00	14%	0.13	476.00	12.5%	0.14	85.00	2%	0.80
50	773.00	20.3%	0.14	555.00	15%	0.19	564.00	15%	0.26	543.00	14%	0.21	476.00	12.5%	0.22	104.00	3%	1.02
60	766.00	20.1%	0.20	552.00	14%	0.28	568.00	15%	0.37	541.00	14%	0.30	476.00	12.5%	0.32	122.00	3%	1.25
70	755.00	19.8%	0.27	547.00	14%	0.38	573.00	15%	0.50	538.00	14%	0.41	476.00	12.5%	0.44	140.00	4%	1.49
80	745.00	19.6%	0.36	543.00	14%	0.50	577.00	15%	0.64	537.00	14%	0.54	476.00	12.5%	0.57	158.00	4%	1.73
90	732.00	19.2%	0.47	538.00	14%	0.64	580.00	15%	0.80	535.00	14%	0.68	476.00	12.5%	0.72	172.00	5%	1.99
100	720.00	18.9%	0.59	533.00	14%	0.79	584.00	15%	0.98	532.00	14%	0.84	476.00	12.5%	0.89	187.00	5%	2.27
110	707.00	18.6%	0.72	528.00	14%	0.97	586.00	15%	1.18	530.00	14%	1.02	476.00	12.5%	1.08	201.00	5%	2.55
120	694.00	18.2%	0.88	524.00	14%	1.16	589.00	15%	1.39	527.00	14%	1.22	476.00	12.5%	1.28	214.00	6%	2.85
130	681.00	17.9%	1.05	520.00	14%	1.37	592.00	16%	1.62	526.00	14%	1.44	476.00	12.5%	1.50	227.00	6%	3.15
140	667.00	17.5%	1.24	516.00	14%	1.61	593.00	16%	1.86	523.00	14%	1.68	476.00	12.5%	1.75	239.00	6%	3.47
150	654.00	17.2%	1.45	513.00	13%	1.86	595.00	16%	2.13	521.00	14%	1.93	476.00	12.5%	2.00	250.00	7%	3.80
160	642.00	16.9%	1.69	510.00	13%	2.13	596.00	16%	2.41	519.00	14%	2.20	476.00	12.5%	2.28	261.00	7%	4.15
170	630.00	16.5%	1.94	507.00	13%	2.41	598.00	16%	2.70	518.00	14%	2.49	476.00	12.5%	2.57	271.00	7%	4.51
180	619.00	16.3%	2.21	504.00	13%	2.72	598.00	16%	3.02	516.00	14%	2.80	476.00	12.5%	2.89	281.00	7%	4.89
190	609.00	16.0%	2.51	502.00	13%	3.04	600.00	16%	3.35	515.00	14%	3.13	476.00	12.5%	3.22	290.00	8%	5.28
200	599.00	15.7%	2.82	500.00	13%	3.38	600.00	16%	3.70	513.00	13%	3.47	476.00	12.5%	3.56	298.00	8%	5.68
210	590.00	15.5%	3.16	498.00	13%	3.75	600.00	16%	4.07	512.00	13%	3.84	474.00	12.4%	3.93	306.00	8%	6.10
220	582.00	15.3%	3.52	496.00	13%	4.13	601.00	16%	4.46	511.00	13%	4.22	474.00	12.4%	4.32	314.00	8%	6.53
230	574.00	15.1%	3.90	495.00	13%	4.53	601.00	16%	4.86	510.00	13%	4.62	474.00	12.4%	4.72	321.00	8%	6.98
240	567.00	14.9%	4.30	493.00	13%	4.94	601.00	16%	5.28	509.00	13%	5.04	474.00	12.4%	5.14	328.00	9%	7.44
250	561.00	14.7%	4.71	492.00	13%	5.38	601.00	16%	5.72	508.00	13%	5.47	474.00	12.4%	5.58	334.00	9%	7.93
260	555.00	14.6%	5.16	490.00	13%	5.84	601.00	16%	6.18	507.00	13%	5.93	474.00	12.4%	6.04	340.00	9%	8.42
270	550.00	14.4%	5.61	489.00	13%	6.31	601.00	16%	6.66	506.00	13%	6.40	474.00	12.4%	6.51	346.00	9%	8.93
280	544.00	14.3%	6.09	488.00	13%	6.80	601.00	16%	7.15	505.00	13%	6.90	473.00	12.4%	7.01	351.00	9%	9.46
290	540.00	14.2%	6.59	487.00	13%	7.31	601.00	16%	7.66	505.00	13%	7.41	473.00	12.4%	7.52	356.00	9%	10.01
300	535.00	14.1%	7.11	486.00	13%	7.84	600.00	16%	8.20	504.00	13%	7.94	473.00	12.4%	8.05	361.00	9%	10.57
310	530.00	14.0%	7.65	485.00	13%	8.39	600.00	16%	8.74	503.00	13%	8.48	473.00	12.4%	8.60	365.00	10%	11.15
320	528.00	13.9%	8.21	484.00	13%	8.95	600.00	16%	9.31	502.00	13%	9.05	473.00	12.4%	9.17	369.00	10%	11.74
330	524.00	13.8%	8.79	483.00	13%	9.54	599.00	16%	9.90	501.00	13%	9.64	473.00	12.4%	9.76	373.00	10%	12.36
340	521.00	13.7%	9.39	483.00	13%	10.14	599.00	16%	10.50	501.00	13%	10.24	472.00	12.4%	10.36	377.00	10%	12.98
350	519.00	13.6%	10.00	482.00	13%	10.77	598.00	16%	11.13	500.00	13%	10.86	472.00	12.4%	10.98	381.00	10%	13.63
360	516.00	13.6%	10.64	481.00	13%	11.41	598.00	16%	11.77	500.00	13%	11.51	472.00	12.4%	11.63	384.00	10%	14.30
370	513.00	13.5%	11.29	480.00	13%	12.07	597.00	16%	12.43	499.00	13%	12.17	472.00	12.4%	12.29	387.00	10%	14.98
380	511.00	13.4%	11.97	480.00	13%	12.75	597.00	16%	13.11	499.00	13%	12.85	472.00	12.4%	12.97	390.00	10%	15.68
390	509.00	13.4%	12.66	479.00	13%	13.44	596.00	16%	13.81	498.00	13%	13.55	471.00	12.4%	13.67	393.00	10%	16.40
400	507.00	13.3%	13.38	478.00	13%	14.16	596.00	16%	14.53	497.00	13%	14.29	471.00	12.4%	14.39	396.00	10%	17.13
410	505.00	13.3%	14.11	478.00	13%	14.90	595.00	16%	15.27	497.00	13%	15.00	471.00	12.4%	15.13	398.00	10%	17.89
420	503.00	13.2%	14.86	477.00	13%	15.66	595.00	16%	16.02	496.00	13%	15.76	471.00	12.4%	15.89	401.00	11%	18.66
430	501.00	13.2%	15.64	477.00	13%	16.43	594.00	16%	16.80	496.00	13%	16.53	470.00	12.3%	16.66	403.00	11%	19.45
440	499.00	13.1%	16.43	476.00	13%	17.23	593.00	16%	17.59	495.00	13%	17.33	470.00	12.3%	17.45	405.00	11%	20.26
450	498.00	13.1%	17.24	476.00	13%	18.04	593.00	16%	18.41	495.00	13%	18.14	470.00	12.3%	18.27	407.00	11%	21.09
460	496.00	13.0%	18.07	475.00	12%	18.88	592.00	16%	19.24	494.00	13%	18.98	469.00	12.3%	19.10	409.00	11%	21.94
470	495.00	13.0%	18.92	475.00	12%	19.73	592.00	16%	20.09	494.00	13%	19.83	469.00	12.3%	19.96	411.00	11%	22.80
480	493.00	12.9%	19.79	474.00	12%	20.60	591.00	16%	20.97	493.00	13%	20.70	469.00	12.3%	20.83	413.00	11%	23.69
490	492.00	12.9%	20.68	474.00	12%	21.49	590.00	15%	21.86	493.00	13%	21.60	469.00	12.3%	21.72	414.00	11%	24.59
500	491.00	12.9%	21.59	473.00	12%	22.41	590.00	15%	22.77	492.00	13%	22.51	468.00	12.3%	22.64	416.00	11%	25.51
510	490.00	12.9%	22.53	473.00	12%	23.34	589.00	15%	23.70	492.00	13%	23.44	468.00	12.3%	23.57	417.00	11%	26.46
520	488.00	12.8%	23.48	472.00	12%	24.29	588.00	15%	24.65	491.00	13%	24.38	468.00	12.3%	24.52	419.00	11%	27.42
530	487.00	12.8%	24.45	472.00	12%	25.27	588.00	15%	25.63	491.00	13%	25.37	467.00	12.3%	25.50	420.00	11%	28.40
540	486.00	12.8%	25.44	471.00	12%	26.26	587.00	15%	26.62	490.00	13%	26.36	467.00	12.3%	26.49	421.00	11%	29.41
550	485.00	12.7%	26.45	471.00	12%	27.27	586.00	15%	27.63	490.00	13%	27.57	466.00	12.3%	27.50	422.00	11%	30.43
560	484.00	12.7%	27.49	470.00	12%	28.31	586.00	15%	28.67	489.00	13%	28.41	466.00	12.2%	28.54	423.00	11%	31.47
570	483.00	12.7%	28.54	470.00	12%	29.36	585.00	15%	29.72	489.00	13%	29.46	466.00	12.2%	29.59	424.00	11%	32.53
580	482.00	12.7%	29.62	469.00	12%	30.43	584.00	15%	30.79	488.00	13%	30.54	466.00	12.2%	30.67	425.00	11%	33.62
590	481.00	12.6%	30.71	469.00	12%	31.53	584.00	15%	31.89	488.00	13%	31.63	466.00	12.2%	31.76	426.00	11%	34.72
600	480.00	12.6%	31.82	468.00	12%	32.65	583.00	15%	33.00	487.00	13%	32.75	466.00	12.2%	32.88	427.00	11%	35.84

BUTTE AAAC 312.8 KCML																												
Clima: Frío Altitud: 2500 msnm - 3500 msnm Temperatura máxima (°C): 27 Temperatura media (°C): 9 Temperatura mínima (°C): 4 Temperatura coincidente (°C): 5 Velocidad del viento máxima (km/h): 80 Velocidad del viento promedio (km/h): 50																												
Propiedades físicas del conductor: Tensión de rotura (daN): 4993.04 Peso (daN/m): 0.4284																												
Condición de tensionado: (% límite de tensión de rotura) Temperatura mínima: 19% Operación diaria (EDS): 11%																												
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final							
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha					
	daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m	
10	912.00	18.0%	0.01		673.00	14%	0.01		651.00	13%	0.01		651.00	13%	0.01		563.00	11.5%	0.01		28.00	1%	0.19					
20	909.00	18.0%	0.02		671.00	14%	0.03		655.00	13%	0.04		651.00	13%	0.03		563.00	11.5%	0.04		55.00	1%	0.39					
30	903.00	18.5%	0.05		667.00	14%	0.07		658.00	13%	0.10		648.00	13%	0.08		563.00	11.5%	0.09		81.00	2%	0.59					
40	895.00	18.3%	0.10		662.00	14%	0.13		661.00	14%	0.17		645.00	13%	0.14		563.00	11.5%	0.15		106.00	2%	0.81					
50	887.00	18.1%	0.15		658.00	13%	0.20		666.00	14%	0.27		643.00	13%	0.22		563.00	11.5%	0.24		130.00	3%	1.03					
60	875.00	17.9%	0.22		652.00	13%	0.30		670.00	14%	0.38		640.00	13%	0.32		562.00	11.5%	0.34		153.00	3%	1.26					
70	862.00	17.6%	0.30		646.00	13%	0.41		673.00	14%	0.51		636.00	13%	0.43		562.00	11.5%	0.47		174.00	4%	1.51					
80	848.00	17.3%	0.40		640.00	13%	0.54		676.00	14%	0.66		633.00	13%	0.57		562.00	11.5%	0.61		195.00	4%	1.76					
90	831.00	17.0%	0.52		633.00	13%	0.69		679.00	14%	0.83		629.00	13%	0.73		562.00	11.5%	0.77		214.00	4%	2.03					
100	816.00	16.7%	0.66		626.00	13%	0.86		681.00	14%	1.02		625.00	13%	0.90		562.00	11.5%	0.95		232.00	5%	2.31					
110	800.00	16.3%	0.81		622.00	13%	1.04		684.00	14%	1.22		622.00	13%	1.09		562.00	11.5%	1.15		249.00	5%	2.60					
120	784.00	16.0%	0.98		616.00	13%	1.25		686.00	14%	1.44		616.00	13%	1.31		562.00	11.5%	1.37		265.00	5%	2.91					
130	768.00	15.7%	1.18		611.00	12%	1.48		687.00	14%	1.69		616.00	13%	1.54		562.00	11.5%	1.61		281.00	6%	3.23					
140	753.00	15.4%	1.39		607.00	12%	1.73		689.00	14%	1.95		613.00	13%	1.79		562.00	11.5%	1.87		295.00	6%	3.56					
150	739.00	15.1%	1.63		603.00	12%	2.00		689.00	14%	2.23		611.00	12%	2.07		562.00	11.5%	2.15		309.00	6%	3.81					
160	725.00	14.8%	1.89		600.00	12%	2.29		690.00	14%	2.52		609.00	12%	2.35		562.00	11.5%	2.44		322.00	7%	4.27					
170	712.00	14.6%	2.17		596.00	12%	2.60		691.00	14%	2.84		607.00	12%	2.67		561.00	11.5%	2.76		334.00	7%	4.65					
180	700.00	14.3%	2.46		593.00	12%	2.93		691.00	14%	3.18		604.00	12%	3.00		561.00	11.5%	3.09		345.00	7%	5.04					
190	689.00	14.1%	2.81		590.00	12%	3.28		691.00	14%	3.53		603.00	12%	3.35		561.00	11.5%	3.45		355.00	7%	5.45					
200	680.00	13.9%	3.15		588.00	12%	3.65		692.00	14%	3.91		601.00	12%	3.72		561.00	11.5%	3.82		365.00	7%	5.87					
210	670.00	13.7%	3.53		586.00	12%	4.04		691.00	14%	4.30		599.00	12%	4.11		561.00	11.5%	4.21		374.00	8%	6.31					
220	662.00	13.5%	3.92		583.00	12%	4.45		691.00	14%	4.71		598.00	12%	4.52		561.00	11.5%	4.63		383.00	8%	6.77					
230	654.00	13.4%	4.33		582.00	12%	4.87		691.00	14%	5.14		597.00	12%	4.95		560.00	11.4%	5.06		392.00	8%	7.24					
240	647.00	13.2%	4.77		580.00	12%	5.32		690.00	14%	5.60		596.00	12%	5.40		560.00	11.4%	5.51		399.00	8%	7.73					
250	641.00	13.1%	5.23		579.00	12%	5.79		690.00	14%	6.07		595.00	12%	5.87		560.00	11.4%	5.98		407.00	9%	8.24					
260	635.00	13.0%	5.70		577.00	12%	6.28		689.00	14%	6.56		593.00	12%	6.36		560.00	11.4%	6.47		414.00	9%	8.77					
270	630.00	12.9%	6.20		576.00	12%	6.79		689.00	14%	7.07		593.00	12%	6.87		560.00	11.4%	6.98		423.00	9%	9.31					
280	625.00	12.8%	6.73		574.00	12%	7.32		688.00	14%	7.60		592.00	12%	7.40		559.00	11.4%	7.51		428.00	9%	9.87					
290	621.00	12.7%	7.26		573.00	12%	7.86		688.00	14%	8.15		591.00	12%	7.94		559.00	11.4%	8.06		432.00	9%	10.45					
300	616.00	12.6%	7.83		572.00	12%	8.43		687.00	14%	8.72		590.00	12%	8.52		559.00	11.4%	8.63		437.00	9%	11.05					
310	613.00	12.5%	8.41		571.00	12%	9.02		687.00	14%	9.30		589.00	12%	9.10		559.00	11.4%	9.22		442.00	9%	11.66					
320	609.00	12.4%	9.01		570.00	12%	9.63		686.00	14%	9.91		588.00	12%	9.71		558.00	11.4%	9.83		447.00	9%	12.30					
330	606.00	12.4%	9.64		569.00	12%	10.26		685.00	14%	10.55		587.00	12%	10.34		558.00	11.4%	10.47		451.00	9%	12.95					
340	603.00	12.3%	10.28		569.00	12%	10.90		685.00	14%	11.19		587.00	12%	10.99		558.00	11.4%	11.11		456.00	9%	13.62					
350	600.00	12.3%	10.95		567.00	12%	11.58		684.00	14%	11.87		586.00	12%	11.66		558.00	11.4%	11.78		460.00	9%	14.31					
360	598.00	12.2%	11.63		567.00	12%	12.27		683.00	14%	12.55		585.00	12%	12.35		557.00	11.4%	12.47		463.00	9%	15.02					
370	596.00	12.2%	12.34		566.00	12%	12.96		682.00	14%	13.26		584.00	12%	13.06		557.00	11.4%	13.19		467.00	10%	15.75					
380	593.00	12.1%	13.07		565.00	12%	13.70		682.00	14%	13.99		584.00	12%	13.79		557.00	11.4%	13.92		470.00	10%	16.49					
390	591.00	12.1%	13.81		564.00	12%	14.46		681.00	14%	14.75		583.00	12%	14.55		556.00	11.4%	14.67		473.00	10%	17.27					
400	588.00	12.0%	14.58		564.00	12%	15.23		680.00	14%	15.32		582.00	12%	15.11		556.00	11.4%	15.44		476.00	10%	18.05					
410	587.00	12.0%	15.38		563.00	12%	16.02		679.00	14%	16.31		581.00	12%	16.11		556.00	11.4%	16.24		479.00	10%	18.86					
420	585.00	12.0%	16.19		562.00	11%	16.84		679.00	14%	17.13		581.00	12%	16.92		555.00	11.3%	17.05		481.00	10%	19.69					
430	583.00	11.9%	17.02		562.00	11%	17.67		678.00	14%	17.96		580.00	12%	17.76		555.00	11.3%	17.88		484.00	10%	20.54					
440	581.00	11.9%	17.87		561.00	11%	18.53		677.00	14%	18.81		579.00	12%	18.61		555.00	11.3%	18.74		486.00	10%	21.40					
450	580.00	11.9%	18.75		560.00	11%	19.40		676.00	14%	19.69		579.00	12%	19.49		554.00	11.3%	19.62		488.00	10%	22.29					
460	578.00	11.8%	19.64		560.00	11%	20.30		675.00	14%	20.59		578.00	12%	20.38		554.00	11.3%	20.52		490.00	10%	23.20					
470	577.00	11.8%	20.56		559.00	11%	21.22		675.00	14%	21.51		578.00	12%	21.30		553.											

CANTON AAAC 336.4 KCMIL

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 80
Velocidad del viento promedio (km/h): 50

Propiedades físicas del conductor:
Tensión de rotura (daN): 5916.13
Peso (daN/m): 0.5404
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1065.00	18.0%	0.01	790.00	13%	0.01	764.00	13%	0.01	762.00	13%	0.01	651.00	11.0%	0.01	35.00	1%	0.20
20	1059.00	17.8%	0.03	786.00	13%	0.03	764.00	13%	0.05	750.00	13%	0.04	651.00	11.0%	0.04	68.00	1%	0.40
30	1052.00	17.8%	0.06	780.00	13%	0.08	767.00	13%	0.10	756.00	13%	0.08	651.00	11.0%	0.09	100.00	2%	0.61
40	1040.00	17.6%	0.10	773.00	13%	0.14	769.00	13%	0.18	752.00	13%	0.15	651.00	11.0%	0.17	131.00	2%	0.83
50	1023.00	17.3%	0.16	767.00	13%	0.22	773.00	13%	0.28	749.00	13%	0.24	651.00	11.0%	0.26	160.00	3%	1.06
60	1010.00	17.1%	0.24	757.00	13%	0.32	777.00	13%	0.39	743.00	13%	0.34	651.00	11.0%	0.37	188.00	3%	1.30
70	989.00	16.7%	0.33	747.00	13%	0.44	778.00	13%	0.53	735.00	12%	0.47	650.00	11.0%	0.51	214.00	4%	1.55
80	970.00	16.4%	0.45	739.00	12%	0.58	779.00	13%	0.69	730.00	12%	0.62	649.00	11.0%	0.67	239.00	4%	1.81
90	948.00	16.0%	0.58	730.00	12%	0.75	780.00	13%	0.87	725.00	12%	0.79	649.00	11.0%	0.84	262.00	4%	2.09
100	926.00	15.7%	0.73	722.00	12%	0.94	781.00	13%	1.07	719.00	12%	0.98	649.00	11.0%	1.04	284.00	5%	2.38
110	905.00	15.3%	0.90	715.00	12%	1.14	782.00	13%	1.29	715.00	12%	1.19	649.00	11.0%	1.26	305.00	5%	2.68
120	886.00	15.0%	1.10	709.00	12%	1.37	783.00	13%	1.53	711.00	12%	1.42	650.00	11.0%	1.50	324.00	5%	3.00
130	865.00	14.6%	1.32	703.00	12%	1.62	783.00	13%	1.79	707.00	12%	1.68	649.00	11.0%	1.76	342.00	6%	3.34
140	847.00	14.3%	1.56	698.00	12%	1.90	783.00	13%	2.07	704.00	12%	1.95	650.00	11.0%	2.04	359.00	6%	3.69
150	829.00	14.0%	1.83	692.00	12%	2.20	783.00	13%	2.37	701.00	12%	2.25	649.00	11.0%	2.34	375.00	6%	4.05
160	813.00	13.7%	2.13	689.00	12%	2.51	782.00	13%	2.70	698.00	12%	2.57	649.00	11.0%	2.67	390.00	7%	4.44
170	799.00	13.5%	2.45	685.00	12%	2.85	782.00	13%	3.04	695.00	12%	2.91	649.00	11.0%	3.01	404.00	7%	4.84
180	786.00	13.3%	2.79	682.00	12%	3.21	781.00	13%	3.41	693.00	12%	3.27	649.00	11.0%	3.38	417.00	7%	5.25
190	774.00	13.1%	3.15	679.00	11%	3.59	780.00	13%	3.79	691.00	12%	3.66	649.00	11.0%	3.76	429.00	7%	5.69
200	763.00	12.9%	3.54	676.00	11%	4.00	779.00	13%	4.20	689.00	12%	4.06	649.00	11.0%	4.17	440.00	7%	6.14
210	753.00	12.7%	3.96	673.00	11%	4.43	778.00	13%	4.63	687.00	12%	4.49	648.00	11.0%	4.60	451.00	8%	6.62
220	745.00	12.6%	4.39	671.00	11%	4.87	778.00	13%	5.08	685.00	12%	4.94	648.00	11.0%	5.05	461.00	8%	7.10
230	737.00	12.5%	4.85	669.00	11%	5.34	777.00	13%	5.55	684.00	12%	5.41	648.00	11.0%	5.52	470.00	8%	7.61
240	730.00	12.3%	5.33	668.00	11%	5.83	776.00	13%	6.04	683.00	12%	5.90	648.00	11.0%	6.01	479.00	8%	8.14
250	723.00	12.2%	5.84	666.00	11%	6.35	775.00	13%	6.56	681.00	12%	6.41	647.00	10.9%	6.53	487.00	9%	8.68
260	718.00	12.1%	6.37	664.00	11%	6.88	774.00	13%	7.09	680.00	11%	6.95	647.00	10.9%	7.07	494.00	8%	9.25
270	713.00	12.1%	6.92	663.00	11%	7.44	773.00	13%	7.65	678.00	11%	7.50	647.00	10.9%	7.62	502.00	9%	9.84
280	708.00	12.0%	7.49	661.00	11%	8.02	772.00	13%	8.23	677.00	11%	8.08	646.00	10.9%	8.21	508.00	9%	10.44
290	703.00	11.9%	8.08	660.00	11%	8.62	771.00	13%	8.82	676.00	11%	8.68	646.00	10.9%	8.81	514.00	9%	11.07
300	699.00	11.8%	8.70	659.00	11%	9.24	770.00	13%	9.45	675.00	11%	9.31	646.00	10.9%	9.43	520.00	9%	11.71
310	696.00	11.8%	9.34	658.00	11%	9.88	769.00	13%	10.10	674.00	11%	9.95	645.00	10.9%	10.08	525.00	9%	12.38
320	692.00	11.7%	10.01	657.00	11%	10.55	768.00	13%	10.76	673.00	11%	10.62	645.00	10.9%	10.74	531.00	9%	13.07
330	689.00	11.6%	10.69	656.00	11%	11.24	767.00	13%	11.45	672.00	11%	11.30	645.00	10.9%	11.43	535.00	9%	13.78
340	686.00	11.6%	11.40	655.00	11%	11.95	766.00	13%	12.16	671.00	11%	12.02	644.00	10.9%	12.14	540.00	9%	14.50
350	683.00	11.5%	12.13	654.00	11%	12.68	765.00	13%	12.89	670.00	11%	12.75	644.00	10.9%	12.88	544.00	9%	15.26
360	681.00	11.5%	12.89	653.00	11%	13.44	764.00	13%	13.65	669.00	11%	13.51	643.00	10.9%	13.64	548.00	9%	16.03
370	678.00	11.5%	13.66	652.00	11%	14.22	763.00	13%	14.43	668.00	11%	14.29	643.00	10.9%	14.41	551.00	9%	16.82
380	676.00	11.4%	14.46	651.00	11%	15.02	762.00	13%	15.23	668.00	11%	15.09	642.00	10.9%	15.21	555.00	9%	17.64
390	674.00	11.4%	15.29	650.00	11%	15.84	761.00	13%	16.06	667.00	11%	15.91	642.00	10.9%	16.04	558.00	9%	18.48
400	674.00	11.4%	16.12	649.00	11%	16.69	760.00	13%	16.90	666.00	11%	16.75	642.00	10.9%	16.88	561.00	9%	19.33
410	670.00	11.3%	16.99	648.00	11%	17.56	759.00	13%	17.77	665.00	11%	17.62	641.00	10.8%	17.75	564.00	10%	20.21
420	668.00	11.3%	17.89	648.00	11%	18.45	758.00	13%	18.66	665.00	11%	18.52	641.00	10.8%	18.65	566.00	10%	21.11
430	666.00	11.3%	18.80	647.00	11%	19.36	757.00	13%	19.57	664.00	11%	19.43	640.00	10.8%	19.56	569.00	10%	22.04
440	664.00	11.2%	19.74	646.00	11%	20.30	756.00	13%	20.51	663.00	11%	20.37	640.00	10.8%	20.50	571.00	10%	22.99
450	663.00	11.2%	20.70	645.00	11%	21.27	755.00	13%	21.47	662.00	11%	21.34	639.00	10.8%	21.47	573.00	10%	23.96
460	661.00	11.2%	21.69	644.00	11%	22.25	754.00	13%	22.46	661.00	11%	22.32	639.00	10.8%	22.45	575.00	10%	24.96
470	659.00	11.1%	22.70	643.00	11%	23.27	753.00	13%	23.47	661.00	11%	23.33	638.00	10.8%	23.46	577.00	10%	25.98
480	658.00	11.1%	23.73	643.00	11%	24.30	752.00	13%	24.50	660.00	11%	24.36	638.00	10.8%	24.50	578.00	10%	27.02
490	657.00	11.1%	24.79	642.00	11%	25.36	751.00	13%	25.56	659.00	11%	25.43	637.00	10.8%	25.56	580.00	10%	28.08
500	655.00	11.1%	25.87	641.00	11%	26.44	750.00	13%	26.64	658.00	11%	26.50	636.00	10.8%	26.64	582.00	10%	29.17
510	654.00	11.1%	26.98	640.00	11%	27.54	749.00	13%	27.75	657.00	11%	27.61	636.00	10.8%	27.74	583.00	10%	30.29
520	652.00	11.0%	28.11	640.00	11%	28.68	747.00	13%	28.88	657.00	11%	28.75	635.00	10.7%	28.88	584.00	10%	31.42
530	651.00	11.0%	29.26	639.00	11%	29.83	746.00	13%	30.03	656.00	11%	29.90	635.00	10.7%	30.03	585.00	10%	32.58
540	650.00	11.0%	30.44	638.00	11%	31.01	745.00	13%	31.21	655.00	11%	31.08	634.00	10.7%	31.21	586.00	10%	33.77
550	649.00	11.0%	31.65	637.00	11%	32.22	744.00	13%	32.42	654.00	11%	32.29	633.00	10.7%	32.42	587.00	10%	34.98
560	647.00	10.9%	32.88	636.00	11%	33.45	743.00	13%	33.65	653.00	11%	33.52	633.00	10.7%	33.65	588.00	10%	36.22
570	646.00	10.9%	34.13	636.00	11%	34.70	742.00	13%	34.90	652.00	11%	34.77	632.00	10.7%	34.90	589.00	10%	37.47
580	645.00	10.9%	35.42	635.00	11%	35.98	741.00	13%	36.19	652.00	11%	36.05	631.00	10.7%	36.19	590.00	10%	38.76
590	644.00	10.9%	36.73	634.00	11%	37.29	740.00	13%	37.50	651.00	11%	37.36	630.00	10.6%	37.50	590.00	10%	40.07
600	642.00	10.9%	38.06	633.00	11%	38.63	739.00	12%	38.83	650.00	11%	38.70	630.00	10.6%	38.83	591.00	10%	41.41



ANEXO B3.3: Zona 3 (Velocidad de viento máxima 100 km/h)

SPARROW ACSR 2 AWG

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 100
Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
Tensión de rotura (daN): 1267.74
Peso (daN/m): 0.1330
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 23%
Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	291.00	23.0%	0.01	202.00	15.9%	0.01	199.00	15.7%	0.02	196.00	15.5%	0.01	172.00	13.6%	0.01	25.00	2.0%	0.07
20	291.00	23.0%	0.02	201.00	15.9%	0.03	207.00	16.3%	0.08	197.00	15.5%	0.04	173.00	13.6%	0.04	37.00	2.9%	0.18
30	291.00	23.0%	0.05	202.00	15.9%	0.07	217.00	17.1%	0.17	199.00	15.7%	0.10	174.00	13.7%	0.09	46.00	3.6%	0.32
40	291.00	23.0%	0.09	202.00	15.9%	0.13	228.00	18.0%	0.28	202.00	15.9%	0.17	176.00	13.9%	0.15	55.00	4.3%	0.49
50	290.00	22.9%	0.14	202.00	15.9%	0.21	239.00	18.9%	0.41	204.00	16.1%	0.26	177.00	14.0%	0.23	62.00	4.9%	0.67
60	287.00	22.6%	0.21	201.00	15.9%	0.30	248.00	19.6%	0.57	206.00	16.2%	0.37	177.00	14.0%	0.34	69.00	5.4%	0.87
70	282.00	22.2%	0.29	199.00	15.7%	0.41	257.00	20.3%	0.74	206.00	16.2%	0.50	177.00	14.0%	0.46	75.00	5.9%	1.09
80	277.00	21.8%	0.38	197.00	15.5%	0.54	264.00	20.8%	0.93	207.00	16.3%	0.64	177.00	14.0%	0.60	80.00	6.3%	1.32
90	273.00	21.5%	0.49	196.00	15.5%	0.69	272.00	21.5%	1.13	208.00	16.4%	0.81	177.00	14.0%	0.76	86.00	6.8%	1.57
100	267.00	21.1%	0.62	194.00	15.3%	0.86	279.00	22.0%	1.35	209.00	16.5%	0.99	177.00	14.0%	0.94	90.00	7.1%	1.84
110	261.00	20.6%	0.77	193.00	15.2%	1.04	285.00	22.5%	1.59	209.00	16.5%	1.19	177.00	14.0%	1.14	95.00	7.5%	2.12
120	255.00	20.1%	0.84	192.00	15.1%	1.25	290.00	22.9%	1.84	209.00	16.5%	1.41	177.00	14.0%	1.35	99.00	7.8%	2.42
130	250.00	19.7%	1.13	190.00	15.0%	1.48	296.00	23.3%	2.11	210.00	16.6%	1.65	177.00	14.0%	1.59	103.00	8.1%	2.74
140	244.00	19.2%	1.33	189.00	14.9%	1.72	300.00	23.7%	2.40	210.00	16.6%	1.90	177.00	14.0%	1.84	106.00	8.4%	3.07
150	238.00	18.8%	1.56	188.00	14.8%	1.99	304.00	24.0%	2.70	210.00	16.6%	2.18	177.00	14.0%	2.11	110.00	8.7%	3.41
160	234.00	18.5%	1.82	187.00	14.8%	2.28	308.00	24.3%	3.02	211.00	16.6%	2.47	177.00	14.0%	2.41	113.00	8.9%	3.77
170	230.00	18.1%	2.09	186.00	14.7%	2.58	311.00	24.5%	3.36	211.00	16.6%	2.78	177.00	14.0%	2.72	116.00	9.2%	4.15
180	225.00	17.7%	2.39	185.00	14.6%	2.91	314.00	24.8%	3.71	211.00	16.6%	3.11	177.00	14.0%	3.05	119.00	9.4%	4.54
190	221.00	17.4%	2.71	185.00	14.6%	3.25	317.00	25.0%	4.08	211.00	16.6%	3.46	177.00	14.0%	3.39	121.00	9.5%	4.95
200	218.00	17.2%	3.06	184.00	14.5%	3.62	320.00	25.2%	4.47	211.00	16.6%	3.83	177.00	14.0%	3.76	124.00	9.8%	5.38
210	214.00	16.9%	3.42	183.00	14.4%	4.00	322.00	25.4%	4.87	211.00	16.6%	4.22	177.00	14.0%	4.15	126.00	9.9%	5.82
220	212.00	16.7%	3.81	183.00	14.4%	4.40	324.00	25.6%	5.30	210.00	16.6%	4.62	177.00	14.0%	4.56	128.00	10.1%	6.28
230	209.00	16.5%	4.22	183.00	14.4%	4.82	326.00	25.7%	5.73	210.00	16.6%	5.05	177.00	14.0%	4.98	130.00	10.3%	6.75
240	206.00	16.2%	4.65	182.00	14.4%	5.27	327.00	25.8%	6.20	210.00	16.6%	5.49	177.00	14.0%	5.43	132.00	10.4%	7.25
250	204.00	16.1%	5.10	182.00	14.4%	5.73	329.00	25.9%	6.67	210.00	16.6%	5.96	177.00	14.0%	5.89	134.00	10.6%	7.76
260	202.00	15.9%	5.57	181.00	14.3%	6.21	330.00	26.0%	7.17	210.00	16.6%	6.44	177.00	14.0%	6.37	136.00	10.7%	8.28
270	200.00	15.8%	6.06	181.00	14.3%	6.71	331.00	26.1%	7.68	210.00	16.6%	6.94	177.00	14.0%	6.88	138.00	10.9%	8.82
280	199.00	15.7%	6.57	181.00	14.3%	7.23	332.00	26.2%	8.21	210.00	16.6%	7.46	176.00	13.9%	7.40	139.00	11.0%	9.39
290	197.00	15.5%	7.10	180.00	14.2%	7.77	333.00	26.3%	8.76	210.00	16.6%	8.00	176.00	13.9%	7.94	141.00	11.1%	9.96
300	196.00	15.5%	7.66	180.00	14.2%	8.33	334.00	26.3%	9.33	209.00	16.5%	8.56	176.00	13.9%	8.50	142.00	11.2%	10.55
310	194.00	15.3%	8.23	180.00	14.2%	8.91	335.00	26.4%	9.92	209.00	16.5%	9.14	176.00	13.9%	9.08	144.00	11.4%	11.15
320	193.00	15.2%	8.83	179.00	14.1%	9.51	335.00	26.4%	10.52	209.00	16.5%	9.74	176.00	13.9%	9.68	145.00	11.4%	11.77
330	192.00	15.1%	9.44	179.00	14.1%	10.13	336.00	26.5%	11.15	209.00	16.5%	10.36	176.00	13.9%	10.30	146.00	11.5%	12.41
340	191.00	15.1%	10.08	179.00	14.1%	10.77	336.00	26.5%	11.79	209.00	16.5%	11.00	176.00	13.9%	10.94	147.00	11.6%	13.07
350	190.00	15.0%	10.73	179.00	14.1%	11.43	337.00	26.6%	12.46	208.00	16.4%	11.66	176.00	13.9%	11.60	149.00	11.8%	13.74
360	189.00	14.9%	11.40	178.00	14.0%	12.10	337.00	26.6%	13.14	208.00	16.4%	12.34	176.00	13.9%	12.28	150.00	11.8%	14.43
370	188.00	14.8%	12.10	178.00	14.0%	12.81	337.00	26.6%	13.84	208.00	16.4%	13.04	176.00	13.9%	12.98	151.00	11.9%	15.15
380	188.00	14.8%	12.82	178.00	14.0%	13.53	337.00	26.6%	14.57	208.00	16.4%	13.76	176.00	13.9%	13.70	152.00	12.0%	15.88
390	187.00	14.8%	13.56	178.00	14.0%	14.26	337.00	26.6%	15.31	208.00	16.4%	14.50	176.00	13.9%	14.44	152.00	12.0%	16.64
400	186.00	14.7%	14.32	178.00	14.0%	15.02	337.00	26.6%	16.07	207.00	16.3%	15.26	176.00	13.8%	15.20	153.00	12.1%	17.41
410	186.00	14.7%	15.09	177.00	14.0%	15.81	337.00	26.6%	16.86	207.00	16.3%	16.04	176.00	13.8%	15.98	154.00	12.1%	18.20
420	185.00	14.6%	15.89	177.00	14.0%	16.60	338.00	26.7%	17.66	207.00	16.3%	16.84	176.00	13.8%	16.78	155.00	12.2%	19.01
430	184.00	14.5%	16.71	177.00	14.0%	17.43	337.00	26.6%	18.48	207.00	16.3%	17.66	176.00	13.8%	17.60	156.00	12.3%	19.84
440	184.00	14.5%	17.55	177.00	14.0%	18.27	337.00	26.6%	19.32	206.00	16.2%	18.50	176.00	13.8%	18.45	156.00	12.3%	20.69
450	183.00	14.4%	18.41	177.00	14.0%	19.13	337.00	26.6%	20.19	206.00	16.2%	19.36	176.00	13.8%	19.31	157.00	12.4%	21.57
460	183.00	14.4%	19.30	176.00	13.9%	20.01	337.00	26.6%	21.07	206.00	16.2%	20.24	176.00	13.8%	20.19	157.00	12.4%	22.46
470	182.00	14.4%	20.19	176.00	13.9%	20.92	337.00	26.6%	21.98	206.00	16.2%	21.15	176.00	13.8%	21.10	158.00	12.5%	23.37
480	182.00	14.4%	21.12	176.00	13.9%	21.84	337.00	26.6%	22.90	206.00	16.2%	22.07	176.00	13.8%	22.02	158.00	12.5%	24.30
490	182.00	14.4%	22.07	176.00	13.9%	22.79	337.00	26.6%	23.85	205.00	16.2%	23.02	174.00	13.7%	22.97	159.00	12.5%	25.26
500	181.00	14.3%	23.04	176.00	13.9%	23.76	336.00	26.5%	24.82	205.00	16.2%	23.99	174.00	13.7%	23.94	159.00	12.5%	26.24
510	181.00	14.3%	24.03	175.00	13.8%	24.75	336.00	26.5%	25.81	205.00	16.2%	24.98	174.00	13.7%	24.93	160.00	12.6%	27.23
520	180.00	14.2%	25.03	175.00	13.8%	25.75	336.00	26.5%	26.82	205.00	16.2%	25.98	174.00	13.7%	25.94	160.00	12.6%	28.24
530	180.00	14.2%	26.06	175.00	13.8%	26.78	336.00	26.5%	27.85	204.00	16.1%	27.01	174.00	13.7%	26.97	160.00	12.6%	29.28
540	179.00	14.1%	27.12	175.00	13.8%	27.84	335.00	26.4%	28.91	204.00	16.1%	28.07	174.00	13.7%	28.02	161.00	12.7%	30.34
550	179.00	14.1%	28.20	175.00	13.8%	28.92	335.00	26.4%	29.98	204.00	16.1%	29.15	174.00	13.7%	29.10	161.00	12.7%	31.43
560	179.00	14.1%	29.29	175.00	13.8%	30.01	335.00	26.4%	31.07	204.00	16.1%	30.24	173.00	13.6%	30.20	161.00	12.7%	32.53
570	178.00	14.0%	30.41	174.00	13.7%	31.13	334.00	26.3%	32.20	203.00	16.0%	31.36	173.00	13.6%	31.31	161.00	12.7%	33.65
580	178.00	14.0%	31.55	174.00	13.7%	32.28	334.00	26.3%	33.34	203.00	16.0%	32.50	173.00	13.6%	32.46	162.00	12.8%	34.80
590	178.00	14.0%	32.72	174.00	13.7%	33.44	334.00	26.3%	34.50	203.00	16.0%	33.67	173.00	13.6%	33.62	162.00	12.8%	35.97
600	177.00	14.0%	33.90	174.00	13.7%	34.62	333.00	26.3%	35.68	203.00	16.0%	34.85	173.00	13.6%	34.81	162.00	12.8%	37.16

RAVEN ACSR 110 AWG																		
Clima: Frío																		
Altitud: 2500 msnm - 3500 msnm																		
Temperatura máxima (°C): 27																		
Temperatura media (°C): 9																		
Temperatura mínima (°C): 4																		
Temperatura coincidente (°C): 5																		
Velocidad del viento máxima (km/h): 100																		
Velocidad del viento promedio (km/h): 60																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 1948.32																		
Peso (daN/m): 0.2118																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 22.5%																		
Operación diaria (EDS): 14%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	434.00	22.3%	0.01	318.00	16.3%	0.01	312.00	16.0%	0.02	309.00	15.9%	0.01	272.00	14.0%	0.01	44.00	2.3%	0.06
20	432.00	22.2%	0.02	317.00	16.2%	0.03	319.00	16.4%	0.07	309.00	15.9%	0.04	272.00	14.0%	0.04	61.00	3.1%	0.17
30	430.00	22.1%	0.06	316.00	16.2%	0.08	329.00	16.9%	0.15	311.00	16.0%	0.09	272.00	14.0%	0.09	75.00	3.8%	0.32
40	426.00	21.9%	0.10	314.00	16.1%	0.14	340.00	17.5%	0.25	311.00	16.0%	0.16	272.00	14.0%	0.16	88.00	4.5%	0.48
50	421.00	21.6%	0.16	311.00	16.0%	0.21	350.00	18.0%	0.37	311.00	16.0%	0.25	272.00	14.0%	0.24	99.00	5.1%	0.67
60	416.00	21.4%	0.23	309.00	15.9%	0.31	360.00	18.5%	0.52	311.00	16.0%	0.36	272.00	14.0%	0.35	109.00	5.6%	0.87
70	409.00	21.0%	0.32	306.00	15.7%	0.42	370.00	19.0%	0.68	311.00	16.0%	0.49	272.00	14.0%	0.48	119.00	6.1%	1.10
80	402.00	20.6%	0.42	303.00	15.6%	0.56	379.00	19.5%	0.96	311.00	16.0%	0.63	272.00	14.0%	0.62	127.00	6.5%	1.33
90	395.00	20.3%	0.54	301.00	15.4%	0.71	387.00	19.9%	1.06	312.00	16.0%	0.80	272.00	14.0%	0.79	135.00	6.9%	1.59
100	387.00	19.9%	0.69	298.00	15.3%	0.89	395.00	20.3%	1.27	312.00	16.0%	0.98	273.00	14.0%	0.97	143.00	7.3%	1.86
110	380.00	19.5%	0.84	296.00	15.2%	1.08	401.00	20.6%	1.50	312.00	16.0%	1.19	272.00	14.0%	1.18	150.00	7.7%	2.14
120	372.00	19.1%	1.02	294.00	15.1%	1.30	407.00	20.9%	1.75	312.00	16.0%	1.41	272.00	14.0%	1.40	156.00	8.0%	2.46
130	364.00	18.7%	1.23	292.00	15.0%	1.53	412.00	21.1%	2.02	311.00	16.0%	1.65	272.00	14.0%	1.64	162.00	8.3%	2.77
140	357.00	18.3%	1.45	290.00	14.9%	1.79	417.00	21.4%	2.30	311.00	16.0%	1.92	272.00	14.0%	1.91	167.00	8.6%	3.10
150	350.00	18.0%	1.70	288.00	14.8%	2.07	421.00	21.6%	2.61	310.00	15.9%	2.20	272.00	14.0%	2.19	172.00	8.8%	3.46
160	344.00	17.7%	1.97	287.00	14.7%	2.36	425.00	21.8%	2.92	310.00	15.9%	2.50	272.00	14.0%	2.49	177.00	9.1%	3.83
170	338.00	17.3%	2.26	286.00	14.7%	2.68	429.00	22.0%	3.26	310.00	15.9%	2.82	272.00	14.0%	2.81	182.00	9.3%	4.21
180	333.00	17.1%	2.58	284.00	14.6%	3.02	431.00	22.1%	3.62	310.00	15.9%	3.16	272.00	14.0%	3.15	186.00	9.6%	4.62
190	328.00	16.8%	2.92	283.00	14.5%	3.38	434.00	22.3%	3.99	309.00	15.9%	3.52	272.00	14.0%	3.52	190.00	9.8%	5.04
200	323.00	16.6%	3.28	282.00	14.5%	3.75	436.00	22.4%	4.38	309.00	15.9%	3.90	272.00	14.0%	3.90	194.00	10.0%	5.47
210	318.00	16.4%	3.66	281.00	14.4%	4.15	438.00	22.5%	4.80	309.00	15.9%	4.30	272.00	14.0%	4.30	197.00	10.1%	5.92
220	315.00	16.2%	4.07	281.00	14.4%	4.57	440.00	22.6%	5.23	308.00	15.8%	4.72	272.00	14.0%	4.72	201.00	10.3%	6.39
230	312.00	16.0%	4.49	280.00	14.4%	5.01	441.00	22.6%	5.68	308.00	15.8%	5.16	272.00	14.0%	5.16	204.00	10.5%	6.88
240	308.00	15.9%	4.94	279.00	14.3%	5.47	443.00	22.7%	6.15	307.00	15.8%	5.62	271.00	13.9%	5.63	207.00	10.6%	7.39
250	306.00	15.7%	5.41	278.00	14.3%	5.95	444.00	22.8%	6.63	307.00	15.8%	6.10	271.00	13.9%	6.11	209.00	10.7%	7.91
260	303.00	15.6%	5.90	278.00	14.3%	6.45	445.00	22.8%	7.14	307.00	15.8%	6.60	271.00	13.9%	6.61	212.00	10.9%	8.45
270	301.00	15.4%	6.42	277.00	14.2%	6.87	446.00	22.9%	7.67	306.00	15.7%	7.12	271.00	13.9%	7.13	214.00	11.0%	9.02
280	299.00	15.3%	6.95	277.00	14.2%	7.51	446.00	22.9%	8.21	306.00	15.7%	7.66	271.00	13.9%	7.67	217.00	11.1%	9.59
290	297.00	15.2%	7.50	276.00	14.2%	8.07	447.00	22.9%	8.78	306.00	15.7%	8.22	271.00	13.9%	8.23	219.00	11.2%	10.19
300	296.00	15.2%	8.07	276.00	14.2%	8.65	447.00	22.9%	9.36	305.00	15.7%	8.80	271.00	13.9%	8.81	221.00	11.3%	10.80
310	294.00	15.1%	8.67	276.00	14.2%	9.25	448.00	23.0%	9.96	305.00	15.7%	9.40	271.00	13.9%	9.41	223.00	11.4%	11.44
320	292.00	15.0%	9.29	275.00	14.1%	9.87	448.00	23.0%	10.59	305.00	15.7%	10.02	271.00	13.9%	10.04	225.00	11.5%	12.08
330	291.00	14.9%	9.93	275.00	14.1%	10.51	448.00	23.0%	11.24	304.00	15.6%	10.67	270.00	13.9%	10.68	227.00	11.7%	12.74
340	290.00	14.9%	10.59	274.00	14.1%	11.17	448.00	23.0%	11.90	304.00	15.6%	11.33	270.00	13.9%	11.34	229.00	11.8%	13.42
350	288.00	14.8%	11.27	274.00	14.1%	11.86	448.00	23.0%	12.59	304.00	15.6%	12.01	270.00	13.9%	12.03	230.00	11.8%	14.12
360	287.00	14.7%	11.97	274.00	14.1%	12.56	448.00	23.0%	13.30	303.00	15.6%	12.72	270.00	13.9%	12.73	232.00	11.9%	14.84
370	286.00	14.7%	12.70	273.00	14.0%	13.28	448.00	23.0%	14.02	303.00	15.6%	13.45	270.00	13.9%	13.46	233.00	14.0%	15.58
380	285.00	14.6%	13.44	273.00	14.0%	14.04	448.00	23.0%	14.77	303.00	15.6%	14.19	270.00	13.9%	14.21	235.00	12.1%	16.34
390	284.00	14.6%	14.20	273.00	14.0%	14.80	448.00	23.0%	15.54	302.00	15.5%	14.96	270.00	13.9%	14.97	236.00	12.1%	17.12
400	283.00	14.5%	14.99	272.00	14.0%	15.59	448.00	23.0%	16.33	302.00	15.5%	15.75	269.00	13.8%	15.76	237.00	12.2%	17.92
410	282.00	14.5%	15.80	272.00	14.0%	16.41	447.00	22.9%	17.14	302.00	15.5%	16.56	269.00	13.8%	16.58	238.00	12.2%	18.74
420	282.00	14.5%	16.63	272.00	14.0%	17.23	447.00	22.9%	17.97	301.00	15.4%	17.39	269.00	13.8%	17.40	239.00	12.3%	19.58
430	281.00	14.4%	17.48	271.00	13.9%	18.08	447.00	22.9%	18.82	301.00	15.4%	18.24	269.00	13.8%	18.26	240.00	12.3%	20.44
440	280.00	14.4%	18.35	271.00	13.9%	18.96	446.00	22.9%	19.70	301.00	15.4%	19.12	269.00	13.8%	19.13	241.00	12.4%	21.33
450	279.00	14.3%	19.25	271.00	13.9%	19.95	446.00	22.9%	20.60	300.00	15.4%	20.01	268.00	13.8%	20.03	242.00	12.4%	22.23
460	278.00	14.3%	20.16	271.00	13.9%	20.77	446.00	22.9%	21.51	300.00	15.4%	20.93	268.00	13.8%	20.95	243.00	12.5%	23.15
470	278.00	14.3%	21.10	270.00	13.9%	21.71	445.00	22.8%	22.45	300.00	15.4%	21.86	268.00	13.8%	21.89	244.00	12.5%	24.10
480	277.00	14.2%	22.06	270.00	13.9%	22.67	445.00	22.8%	23.41	299.00	15.3%	22.83	268.00	13.8%	22.85	244.00	12.5%	25.07
490	277.00	14.2%	23.04	270.00	13.9%	23.66	444.00	22.8%	24.39	299.00	15.3%	23.81	268.00	13.8%	23.83	245.00	12.6%	26.06
500	276.00	14.2%	24.05	269.00	13.8%	24.66	444.00	22.8%	25.40	299.00	15.3%	24.82	267.00	13.7%	24.84	246.00	12.6%	27.07
510	276.00	14.2%	25.08	269.00	1													

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 100
Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
Tensión de rotura (daN): 2362.01
Peso (daN/m): 0.2667

Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 22.5%
Operación diaria (EDS): 14%

QUAL ACSR 2/0 AWG

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	529.00	22.4%	0.01	388.00	16.4%	0.01	379.00	16.0%	0.02	377.00	16.0%	0.01	330.00	14.0%	0.01	51.00	2.2%	0.07
20	527.00	22.2%	0.03	386.00	16.2%	0.03	387.00	16.4%	0.06	377.00	16.0%	0.04	330.00	14.0%	0.04	73.00	3.1%	0.16
30	523.00	22.1%	0.06	384.00	16.3%	0.08	396.00	16.8%	0.14	377.00	16.0%	0.09	330.00	14.0%	0.09	91.00	3.9%	0.33
40	518.00	21.9%	0.10	382.00	16.2%	0.14	408.00	17.3%	0.24	377.00	16.0%	0.16	330.00	14.0%	0.16	107.00	4.5%	0.50
50	512.00	21.7%	0.16	379.00	16.0%	0.22	420.00	17.8%	0.36	377.00	16.0%	0.25	330.00	14.0%	0.25	121.00	5.1%	0.69
60	504.00	21.3%	0.24	375.00	15.9%	0.32	430.00	18.2%	0.50	376.00	15.9%	0.36	330.00	14.0%	0.36	134.00	5.7%	0.89
70	496.00	21.0%	0.33	372.00	15.7%	0.44	440.00	18.6%	0.66	376.00	15.9%	0.49	330.00	14.0%	0.49	146.00	6.2%	1.12
80	486.00	20.6%	0.44	366.00	15.6%	0.58	449.00	19.0%	0.94	376.00	15.9%	0.64	330.00	14.0%	0.65	157.00	6.6%	1.36
90	477.00	20.2%	0.57	364.00	15.4%	0.74	458.00	19.4%	1.04	375.00	15.9%	0.81	330.00	14.0%	0.82	167.00	7.1%	1.62
100	467.00	19.8%	0.71	361.00	15.3%	0.92	465.00	19.7%	1.25	375.00	15.9%	1.00	330.00	14.0%	1.01	176.00	7.5%	1.90
110	457.00	19.3%	0.86	359.00	15.2%	1.12	472.00	20.0%	1.49	374.00	15.8%	1.21	330.00	14.0%	1.22	184.00	7.8%	2.19
120	447.00	18.9%	1.07	356.00	15.1%	1.35	476.00	20.2%	1.74	373.00	15.8%	1.44	330.00	14.0%	1.45	192.00	8.1%	2.50
130	436.00	18.5%	1.29	353.00	14.9%	1.60	482.00	20.4%	2.01	372.00	15.7%	1.70	330.00	14.0%	1.71	199.00	8.4%	2.83
140	426.00	18.1%	1.53	351.00	14.9%	1.86	487.00	20.6%	2.30	371.00	15.7%	1.97	330.00	14.0%	1.98	206.00	8.7%	3.17
150	420.00	17.8%	1.79	349.00	14.8%	2.15	491.00	20.8%	2.60	371.00	15.7%	2.25	330.00	14.0%	2.27	213.00	9.0%	3.53
160	411.00	17.4%	2.07	347.00	14.7%	2.46	494.00	20.9%	2.93	370.00	15.7%	2.57	330.00	14.0%	2.59	219.00	9.3%	3.91
170	405.00	17.1%	2.38	345.00	14.6%	2.79	497.00	21.0%	3.28	370.00	15.7%	2.90	330.00	14.0%	2.92	224.00	9.5%	4.30
180	399.00	16.9%	2.71	344.00	14.6%	3.14	500.00	21.2%	3.64	369.00	15.6%	3.26	330.00	14.0%	3.28	229.00	9.7%	4.71
190	392.00	16.6%	3.07	343.00	14.5%	3.51	502.00	21.3%	4.02	369.00	15.6%	3.63	330.00	14.0%	3.65	234.00	9.9%	5.15
200	387.00	16.4%	3.45	341.00	14.4%	3.91	504.00	21.3%	4.43	368.00	15.6%	4.03	329.00	13.9%	4.05	239.00	10.1%	5.59
210	382.00	16.2%	3.85	341.00	14.4%	4.32	506.00	21.4%	4.85	368.00	15.6%	4.44	329.00	13.9%	4.46	243.00	10.3%	6.06
220	378.00	16.0%	4.27	340.00	14.4%	4.75	507.00	21.5%	5.29	367.00	15.5%	4.88	329.00	13.9%	4.90	247.00	10.5%	6.54
230	374.00	15.8%	4.72	339.00	14.4%	5.21	508.00	21.5%	5.76	366.00	15.5%	5.34	329.00	13.9%	5.36	251.00	10.6%	7.05
240	370.00	15.7%	5.19	338.00	14.3%	5.69	509.00	21.5%	6.24	366.00	15.5%	5.81	329.00	13.9%	5.84	254.00	10.8%	7.57
250	368.00	15.6%	5.67	337.00	14.3%	6.19	510.00	21.6%	6.74	366.00	15.5%	6.31	329.00	13.9%	6.34	257.00	10.9%	8.10
260	364.00	15.4%	6.19	336.00	14.2%	6.70	510.00	21.6%	7.27	365.00	15.5%	6.83	329.00	13.9%	6.86	261.00	11.0%	8.66
270	362.00	15.3%	6.72	336.00	14.2%	7.25	511.00	21.6%	7.81	364.00	15.4%	7.37	329.00	13.9%	7.40	263.00	11.1%	9.24
280	359.00	15.2%	7.28	335.00	14.2%	7.81	511.00	21.6%	8.38	364.00	15.4%	7.93	328.00	13.9%	7.97	266.00	11.3%	9.84
290	357.00	15.1%	7.85	335.00	14.2%	8.39	511.00	21.6%	8.96	364.00	15.4%	8.51	328.00	13.9%	8.55	269.00	11.4%	10.45
300	355.00	15.0%	8.46	334.00	14.1%	8.99	511.00	21.6%	9.57	363.00	15.4%	9.12	328.00	13.9%	9.15	271.00	11.5%	11.09
310	353.00	14.9%	9.08	333.00	14.1%	9.62	512.00	21.7%	10.20	362.00	15.3%	9.75	328.00	13.9%	9.78	273.00	11.6%	11.74
320	352.00	14.9%	9.72	333.00	14.1%	10.27	512.00	21.7%	10.85	362.00	15.3%	10.39	328.00	13.9%	10.43	275.00	11.6%	12.42
330	350.00	14.8%	10.38	333.00	14.1%	10.93	512.00	21.7%	11.51	362.00	15.3%	11.06	328.00	13.9%	11.09	278.00	11.8%	13.10
340	349.00	14.8%	11.07	332.00	14.1%	11.63	511.00	21.6%	12.21	361.00	15.3%	11.75	327.00	13.8%	11.79	280.00	11.9%	13.81
350	347.00	14.7%	11.78	332.00	14.1%	12.33	511.00	21.6%	12.91	361.00	15.3%	12.46	327.00	13.8%	12.50	282.00	11.9%	14.53
360	346.00	14.6%	12.51	331.00	14.0%	13.07	511.00	21.6%	13.65	360.00	15.2%	13.19	327.00	13.8%	13.23	283.00	12.0%	15.28
370	345.00	14.6%	13.26	331.00	14.0%	13.86	511.00	21.6%	14.40	360.00	15.2%	13.95	327.00	13.8%	13.99	285.00	12.1%	16.05
380	344.00	14.6%	14.04	330.00	14.0%	14.60	510.00	21.6%	15.18	360.00	15.2%	14.73	327.00	13.8%	14.77	287.00	12.2%	16.84
390	342.00	14.5%	14.84	330.00	14.0%	15.40	510.00	21.6%	15.98	359.00	15.2%	15.52	327.00	13.8%	15.56	288.00	12.2%	17.65
400	341.00	14.4%	15.66	330.00	14.0%	16.22	509.00	21.5%	16.80	359.00	15.2%	16.34	326.00	13.8%	16.38	289.00	12.3%	18.48
410	340.00	14.4%	16.50	329.00	13.9%	17.06	509.00	21.5%	17.65	358.00	15.2%	17.19	326.00	13.8%	17.23	291.00	12.3%	19.33
420	340.00	14.4%	17.36	329.00	13.9%	17.92	508.00	21.5%	18.51	358.00	15.2%	18.05	326.00	13.8%	18.09	292.00	12.4%	20.20
430	338.00	14.4%	18.25	328.00	13.9%	18.81	508.00	21.5%	19.40	357.00	15.1%	18.93	326.00	13.8%	18.98	293.00	12.4%	21.10
440	338.00	14.3%	19.16	328.00	13.9%	19.72	507.00	21.5%	20.31	357.00	15.1%	19.85	325.00	13.8%	19.89	294.00	12.4%	22.02
450	337.00	14.3%	20.09	328.00	13.9%	20.66	507.00	21.5%	21.24	357.00	15.1%	20.78	325.00	13.8%	20.83	295.00	12.5%	22.96
460	336.00	14.2%	21.04	327.00	13.8%	21.61	506.00	21.4%	22.19	356.00	15.1%	21.73	325.00	13.8%	21.78	296.00	12.5%	23.92
470	335.00	14.2%	22.02	327.00	13.8%	22.59	506.00	21.4%	23.17	356.00	15.1%	22.72	325.00	13.8%	22.76	297.00	12.6%	24.91
480	335.00	14.2%	23.02	327.00	13.8%	23.59	505.00	21.4%	24.17	355.00	15.0%	23.72	324.00	13.7%	23.76	298.00	12.6%	25.91
490	334.00	14.1%	24.04	326.00	13.8%	24.61	504.00	21.3%	25.20	355.00	15.0%	24.74	324.00	13.7%	24.78	299.00	12.6%	26.94
500	333.00	14.1%	25.09	326.00	13.8%	25.66	504.00	21.3%	26.25	354.00	15.0%	25.79	324.00	13.7%	25.83	299.00	12.7%	28.00
510	333.00	14.1%	26.16	326.00	13.8%	26.73	503.00	21.3%	27.32	354.00	15.0%	26.86	323.00	13.7%	26.90	300.00	12.7%	29.07
520	332.00	14.1%	27.25	325.00	13.8%	27.83	502.00	21.3%	28.41	354.00	15.0%	27.95	323.00	13.7%	28.00	300.00	12.7%	30.17
530	331.00	14.0%	28.37	325.00	13.8%	28.95	502.00	21.3%	29.53	353.00	14.9%	29.07	323.00	13.7%	29.12	301.00	12.7%	31.30
540	331.00	14.0%	29.52	324.00	13.7%	30.09	501.00	21.2%	30.67	353.00	14.9%	30.21	323.00	13.7%	30.26	301.00	12.7%	32.45
550	330.00	14.0%	30.68	324.00	13.7%	31.25	500.00	21.2%	31.83	352.00	14.9%	31.38	322.00	13.6%	31.43	301.00	12.7%	33.62
560	329.00	13.9%	31.87	324.00	13.7%	32.45	499.00	21.1%	33.02	352.00	14.9%	32.57	322.00	13.6%	32.62	302.00	12.8%	34.91
570	329.00	13.9%	33.09	323.00	13.7%	33.67	499.00	21.1%	34.24	351.00	14.9%	33.79	322.00	13.6%	33.83	302.00	12.8%	36.03
580	328.00	13.9%	34.33	323.00	13.7%	34.91	498.00	21.1%	35.46	351.00	14.9%	35.02	321.00	13.6%	35.07	302.00	12.8%	37.28
590	328.00	13.9%	35.59	322.00	13.6%	36.17	497.00	21.0%	36.74	350.00	14.8%	36.29	321.00	13.6%	36.34	303.00	12.8%	38.54
600	327.00	13.8%	36.88	322.00	13.6%	37.45	496.00	21.0%	38.02	350.00	14.8%	37.57	321.00	13.6%	37.62	303.00	12.8%	39.83

PENGUIN ACSR 4/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	808.00	22%	0.01	591.00	16%	0.01	577.00	16%	0.01	574.00	15%	0.01	501.00	13.5%	0.01	74.00	2%	0.07
20	804.00	22%	0.03	589.00	16%	0.04	584.00	16%	0.06	573.00	15%	0.04	500.00	13.5%	0.04	110.00	3%	0.19
30	798.00	21%	0.06	585.00	16%	0.08	585.00	16%	0.13	572.00	15%	0.09	501.00	13.5%	0.10	139.00	4%	0.34
40	787.00	21%	0.11	580.00	16%	0.15	606.00	16%	0.22	569.00	15%	0.16	501.00	13.5%	0.17	164.00	4%	0.52
50	777.00	21%	0.17	576.00	16%	0.23	618.00	17%	0.34	568.00	15%	0.25	501.00	13.5%	0.26	187.00	5%	0.71
60	764.00	21%	0.25	569.00	15%	0.34	628.00	17%	0.47	566.00	15%	0.37	500.00	13.5%	0.38	207.00	6%	0.92
70	749.00	20%	0.35	562.00	15%	0.46	639.00	17%	0.63	563.00	15%	0.50	500.00	13.5%	0.52	226.00	6%	1.15
80	733.00	20%	0.46	557.00	15%	0.61	648.00	17%	0.80	562.00	15%	0.65	500.00	13.5%	0.68	243.00	7%	1.40
90	717.00	19%	0.60	551.00	15%	0.78	655.00	18%	1.00	559.00	15%	0.83	500.00	13.5%	0.86	258.00	7%	1.66
100	700.00	19%	0.76	547.00	15%	0.97	662.00	18%	1.21	557.00	15%	1.03	501.00	13.5%	1.06	273.00	7%	1.95
110	685.00	18%	0.94	542.00	15%	1.18	668.00	18%	1.45	555.00	15%	1.25	501.00	13.5%	1.28	286.00	8%	2.24
120	668.00	18%	1.14	537.00	14%	1.42	673.00	18%	1.70	554.00	15%	1.49	501.00	13.5%	1.53	299.00	8%	2.56
130	653.00	18%	1.37	534.00	14%	1.68	678.00	18%	1.97	552.00	15%	1.75	501.00	13.5%	1.79	310.00	8%	2.90
140	638.00	17%	1.63	530.00	14%	1.96	681.00	18%	2.27	549.00	15%	2.04	500.00	13.5%	2.08	320.00	9%	3.25
150	626.00	17%	1.91	527.00	14%	2.27	684.00	18%	2.58	548.00	15%	2.34	500.00	13.5%	2.39	330.00	9%	3.62
160	614.00	17%	2.21	525.00	14%	2.59	687.00	18%	2.92	547.00	15%	2.67	500.00	13.5%	2.72	339.00	9%	4.01
170	604.00	16%	2.54	522.00	14%	2.94	689.00	19%	3.27	546.00	15%	3.01	500.00	13.5%	3.07	347.00	9%	4.42
180	594.00	16%	2.89	520.00	14%	3.31	691.00	19%	3.65	545.00	15%	3.38	500.00	13.5%	3.44	355.00	10%	4.85
190	585.00	16%	3.27	518.00	14%	3.70	692.00	19%	4.05	543.00	15%	3.78	500.00	13.5%	3.83	362.00	10%	5.29
200	578.00	16%	3.67	516.00	14%	4.11	693.00	19%	4.47	542.00	15%	4.19	499.00	13.4%	4.25	369.00	10%	5.76
210	571.00	15%	4.10	515.00	14%	4.54	694.00	19%	4.91	541.00	15%	4.63	499.00	13.4%	4.69	375.00	10%	6.24
220	565.00	15%	4.55	514.00	14%	5.00	694.00	19%	5.37	540.00	15%	5.09	499.00	13.4%	5.15	381.00	10%	6.74
230	560.00	15%	5.02	512.00	14%	5.48	695.00	19%	5.85	539.00	15%	5.57	499.00	13.4%	5.63	387.00	10%	7.26
240	554.00	15%	5.51	511.00	14%	5.99	695.00	19%	6.38	538.00	14%	6.07	499.00	13.4%	6.13	392.00	11%	7.80
250	550.00	15%	6.03	510.00	14%	6.51	695.00	19%	6.88	537.00	14%	6.59	499.00	13.4%	6.66	397.00	11%	8.36
260	546.00	15%	6.57	509.00	14%	7.05	695.00	19%	7.43	536.00	14%	7.14	498.00	13.4%	7.20	401.00	11%	8.95
270	542.00	15%	7.12	508.00	14%	7.62	694.00	19%	8.00	536.00	14%	7.71	498.00	13.4%	7.77	405.00	11%	9.55
280	539.00	15%	7.72	507.00	14%	8.21	694.00	19%	8.59	535.00	14%	8.30	498.00	13.3%	8.36	410.00	11%	10.17
290	536.00	14%	8.32	506.00	14%	8.82	694.00	19%	9.20	534.00	14%	8.91	498.00	13.4%	8.98	413.00	11%	10.81
300	534.00	14%	8.96	506.00	14%	9.46	694.00	19%	9.84	534.00	14%	9.54	497.00	13.4%	9.61	417.00	11%	11.47
310	531.00	14%	9.61	504.00	14%	10.12	693.00	19%	10.50	533.00	14%	10.20	497.00	13.4%	10.27	420.00	11%	12.16
320	529.00	14%	10.29	504.00	14%	10.79	693.00	19%	11.17	532.00	14%	10.88	497.00	13.4%	10.95	423.00	11%	12.86
330	526.00	14%	10.99	503.00	14%	11.50	692.00	19%	11.88	531.00	14%	11.58	496.00	13.4%	11.65	426.00	11%	13.59
340	524.00	14%	11.71	503.00	14%	12.22	691.00	19%	12.60	531.00	14%	12.31	496.00	13.4%	12.38	429.00	12%	14.33
350	523.00	14%	12.46	502.00	14%	12.97	691.00	19%	13.35	530.00	14%	13.05	496.00	13.4%	13.13	432.00	12%	15.09
360	520.00	14%	13.23	501.00	13%	13.74	690.00	19%	14.12	529.00	14%	13.83	495.00	13.3%	13.90	434.00	12%	15.88
370	518.00	14%	14.02	500.00	13%	14.54	689.00	19%	14.92	529.00	14%	14.62	495.00	13.3%	14.70	436.00	12%	16.68
380	517.00	14%	14.84	500.00	13%	15.35	688.00	19%	15.73	528.00	14%	15.44	495.00	13.3%	15.51	439.00	12%	17.51
390	516.00	14%	15.67	499.00	13%	16.19	687.00	18%	16.57	527.00	14%	16.28	494.00	13.3%	16.35	444.00	12%	18.36
400	514.00	14%	16.54	498.00	13%	17.06	686.00	18%	17.44	527.00	14%	17.15	494.00	13.3%	17.22	445.00	12%	19.24
410	513.00	14%	17.42	498.00	13%	17.94	686.00	18%	18.32	526.00	14%	18.03	494.00	13.3%	18.10	444.00	12%	20.13
420	512.00	14%	18.33	498.00	13%	18.85	685.00	18%	19.23	525.00	14%	18.94	493.00	13.3%	19.02	446.00	12%	21.04
430	510.00	14%	19.27	497.00	13%	19.78	684.00	18%	20.17	525.00	14%	19.88	493.00	13.3%	19.95	447.00	12%	21.99
440	509.00	14%	20.23	496.00	13%	20.75	683.00	18%	21.13	524.00	14%	20.83	493.00	13.3%	20.91	448.00	12%	22.95
450	508.00	14%	21.21	496.00	13%	21.73	682.00	18%	22.11	524.00	14%	21.82	492.00	13.2%	21.89	450.00	12%	23.95
460	507.00	14%	22.22	495.00	13%	22.74	681.00	18%	23.12	523.00	14%	22.83	492.00	13.2%	22.90	451.00	12%	24.96
470	506.00	14%	23.24	495.00	13%	23.77	680.00	18%	24.14	522.00	14%	23.85	491.00	13.2%	23.93	453.00	12%	25.99
480	504.00	14%	24.30	494.00	13%	24.83	679.00	18%	25.21	522.00	14%	24.91	491.00	13.2%	24.99	453.00	12%	27.06
490	503.00	14%	25.39	493.00	13%	25.91	678.00	18%	26.28	521.00	14%	25.99	490.00	13.2%	26.07	454.00	12%	28.15
500	502.00	14%	26.49	493.00	13%	27.01	677.00	18%	27.38	520.00	14%	27.09	490.00	13.2%	27.17	455.00	12%	29.25
510	501.00	13%	27.62	492.00	13%	28.14	676.00	18%	28.52	520.00	14%	28.23	489.00	13.2%	28.30	456.00	12%	30.39
520	500.00	13%	28.77	492.00	13%	29.30	675.00	18%	29.67	519.00	14%	29.38	489.00	13.2%	29.46	457.00	12%	31.55
530	500.00	13%	29.95	491.00	13%	30.47	674.00	18%	30.84	518.00	14%	30.56	488.00	13.1%	30.64	457.00	12%	32.73
540	499.00	13%	31.16	490.00	13%	31.68	673.00	18%	32.05	518.00	14%	31.77	488.00	13.1%	31.85	458.00	12%	33.94
550	498.00	13%	32.39	490.00	13%	32.92	671.00	18%	33.29	517.00	14%	33.00	487.00	13.1%	33.08	459.00	12%	35.18
560	497.00	13%	33.65	489.00	13%	34.17	670.00	18%	34.54	516.00	14%	34.26	487.00	13.1%	34.34	459.00	12%	36.43
570	496.00	13%	34.93	489.00	13%	35.45	669.00	18%	35.82	515.00	14%	35.54	486.00	13.1%	35.62	460.00	12%	37.72
580	495.00	13%	36.25	488.00	13%	36.77	668.00	18%	37.14	515.00	14%	36.85	486.00	13.1%	36.93	460.00	12%	39.04
590	494.00	13%	37.58	487.00	13%	38.47	667.00	18%	38.47	514.00	14%	38.18	485.00	13.1%	38.26	460.00	12%	40.38
600	493.00	13%	38.94	487.00	13%	39.46	666.00	18%	39.83	513.00	14%	39.55	485.00	13.1%	39.63	460.00	12%	41.74

WAXWING ACSR 266.8 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3060.38
 Peso (daN/m): 0.4224

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 33%
 Operación diaria (EDS): 17%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	997.00	32.6%	0.01	638.00	21%	0.01	621.00	20.2%	0.01	618.00	20.2%	0.01	535.00	17.5%	0.01	70.00	2.3%	0.08
20	994.00	32.4%	0.02	635.00	21%	0.03	630.00	20.6%	0.06	618.00	20.2%	0.04	535.00	17.5%	0.04	95.00	3.1%	0.22
30	987.00	32.3%	0.05	632.00	21%	0.08	640.00	20.9%	0.12	616.00	20.1%	0.09	535.00	17.5%	0.09	116.00	3.8%	0.41
40	979.00	32.0%	0.09	628.00	21%	0.13	652.00	21.3%	0.21	615.00	20.1%	0.15	535.00	17.5%	0.16	136.00	4.4%	0.62
50	967.00	31.6%	0.14	622.00	20%	0.20	665.00	21.7%	0.33	613.00	20.0%	0.24	535.00	17.5%	0.25	153.00	5.0%	0.86
60	953.00	31.1%	0.20	616.00	20%	0.31	677.00	22.1%	0.46	612.00	20.0%	0.34	535.00	17.5%	0.36	169.00	5.5%	1.12
70	939.00	30.7%	0.28	611.00	20%	0.42	689.00	22.5%	0.61	610.00	19.9%	0.47	535.00	17.5%	0.48	184.00	6.0%	1.41
80	921.00	30.1%	0.37	604.00	20%	0.56	699.00	22.8%	0.78	607.00	19.8%	0.61	535.00	17.5%	0.63	199.00	6.5%	1.71
90	903.00	29.5%	0.47	599.00	20%	0.71	710.00	23.2%	0.96	605.00	19.8%	0.77	535.00	17.5%	0.80	215.00	7.1%	1.98
100	882.00	28.8%	0.60	593.00	19%	0.89	718.00	23.5%	1.17	603.00	19.7%	0.96	535.00	17.5%	0.99	234.00	7.6%	2.26
110	860.00	28.1%	0.74	587.00	19%	1.09	725.00	23.7%	1.39	601.00	19.6%	1.16	535.00	17.5%	1.19	250.00	8.2%	2.55
120	838.00	27.4%	0.91	582.00	19%	1.31	732.00	23.9%	1.63	599.00	19.6%	1.38	535.00	17.5%	1.42	269.00	8.7%	2.86
130	817.00	26.7%	1.09	578.00	19%	1.55	738.00	24.1%	1.89	597.00	19.5%	1.63	535.00	17.5%	1.67	281.00	9.2%	3.18
140	795.00	26.0%	1.30	573.00	19%	1.81	743.00	24.3%	2.17	595.00	19.4%	1.89	534.00	17.4%	1.94	295.00	9.6%	3.51
150	775.00	25.3%	1.53	569.00	19%	2.09	747.00	24.4%	2.47	593.00	19.4%	2.18	534.00	17.4%	2.22	309.00	10.1%	3.86
160	755.00	24.7%	1.79	567.00	19%	2.39	751.00	24.5%	2.78	592.00	19.3%	2.48	534.00	17.4%	2.53	320.00	10.5%	4.23
170	736.00	24.0%	2.07	564.00	18%	2.71	754.00	24.6%	3.12	591.00	19.3%	2.81	534.00	17.4%	2.86	331.00	10.8%	4.61
180	719.00	23.5%	2.36	561.00	18%	3.05	757.00	24.7%	3.47	589.00	19.2%	3.15	534.00	17.4%	3.20	342.00	11.2%	5.01
190	704.00	23.0%	2.71	559.00	18%	3.41	760.00	24.8%	3.84	588.00	19.2%	3.51	534.00	17.4%	3.57	352.00	11.5%	5.42
200	689.00	22.5%	3.07	555.00	18%	3.80	761.00	24.9%	4.24	586.00	19.1%	3.90	534.00	17.4%	3.96	361.00	11.8%	5.86
210	676.00	22.1%	3.45	555.00	18%	4.20	763.00	24.9%	4.65	585.00	19.1%	4.31	534.00	17.4%	4.37	370.00	12.1%	6.31
220	664.00	21.7%	3.85	553.00	18%	4.63	764.00	25.0%	5.08	584.00	19.1%	4.73	533.00	17.4%	4.79	378.00	12.4%	6.77
230	654.00	21.4%	4.27	551.00	18%	5.07	765.00	25.0%	5.53	584.00	19.1%	5.17	533.00	17.4%	5.24	386.00	12.6%	7.25
240	644.00	21.0%	4.73	550.00	18%	5.54	766.00	25.0%	6.00	582.00	19.0%	5.64	533.00	17.4%	5.71	393.00	12.8%	7.76
250	635.00	20.7%	5.20	548.00	18%	6.02	767.00	25.1%	6.49	581.00	19.0%	6.13	533.00	17.4%	6.20	399.00	13.0%	8.28
260	628.00	20.5%	5.69	547.00	18%	6.53	767.00	25.1%	7.00	581.00	19.0%	6.64	533.00	17.4%	6.71	406.00	13.3%	8.81
270	620.00	20.3%	6.21	546.00	18%	7.06	767.00	25.1%	7.53	579.00	18.9%	7.17	532.00	17.4%	7.24	411.00	13.4%	9.37
280	614.00	20.1%	6.75	545.00	18%	7.61	767.00	25.1%	8.08	579.00	18.9%	7.71	532.00	17.4%	7.79	417.00	13.6%	9.95
290	608.00	19.9%	7.31	544.00	18%	8.18	768.00	25.1%	8.66	578.00	18.9%	8.28	532.00	17.4%	8.36	422.00	13.8%	10.54
300	602.00	19.7%	7.90	543.00	18%	8.77	767.00	25.1%	9.25	577.00	18.9%	8.88	532.00	17.4%	8.95	427.00	14.0%	11.16
310	597.00	19.5%	8.50	542.00	18%	9.38	767.00	25.1%	9.86	576.00	18.8%	9.49	531.00	17.4%	9.56	431.00	14.1%	11.79
320	593.00	19.4%	9.13	541.00	18%	10.01	767.00	25.1%	10.49	575.00	18.8%	10.12	531.00	17.4%	10.19	435.00	14.2%	12.44
330	589.00	19.2%	9.78	540.00	18%	10.66	766.00	25.0%	11.15	575.00	18.8%	10.77	531.00	17.4%	10.85	439.00	14.3%	13.12
340	585.00	19.1%	10.45	539.00	18%	11.34	766.00	25.0%	11.82	574.00	18.8%	11.44	531.00	17.4%	11.52	443.00	14.5%	13.81
350	582.00	19.0%	11.14	538.00	18%	12.03	765.00	25.0%	12.52	573.00	18.7%	12.14	530.00	17.3%	12.22	446.00	14.6%	14.52
360	579.00	18.9%	11.84	538.00	18%	12.75	765.00	25.0%	13.23	573.00	18.7%	12.85	530.00	17.3%	12.93	450.00	14.7%	15.25
370	576.00	18.8%	12.58	537.00	18%	13.48	764.00	25.0%	13.97	572.00	18.7%	13.59	530.00	17.3%	13.67	453.00	14.8%	16.00
380	573.00	18.7%	13.34	536.00	18%	14.24	764.00	25.0%	14.73	571.00	18.7%	14.35	529.00	17.3%	14.43	456.00	14.9%	16.78
390	570.00	18.6%	14.11	535.00	18%	15.02	763.00	24.9%	15.51	571.00	18.7%	15.13	529.00	17.3%	15.21	458.00	15.0%	17.57
400	568.00	18.6%	14.92	535.00	17%	15.85	762.00	24.9%	16.31	570.00	18.6%	15.93	529.00	17.3%	16.02	461.00	15.1%	18.39
410	565.00	18.5%	15.74	534.00	17%	16.65	761.00	24.9%	17.14	569.00	18.6%	16.76	528.00	17.3%	16.84	463.00	15.1%	19.23
420	563.00	18.4%	16.58	534.00	17%	17.49	761.00	24.9%	17.98	568.00	18.6%	17.60	528.00	17.3%	17.68	465.00	15.2%	20.08
430	561.00	18.3%	17.45	533.00	17%	18.35	760.00	24.8%	18.85	568.00	18.6%	18.47	528.00	17.3%	18.55	467.00	15.3%	20.96
440	559.00	18.3%	18.33	533.00	17%	19.25	759.00	24.8%	19.73	567.00	18.5%	19.36	527.00	17.2%	19.44	469.00	15.3%	21.86
450	557.00	18.2%	19.24	532.00	17%	20.16	758.00	24.8%	20.65	567.00	18.5%	20.27	527.00	17.2%	20.35	471.00	15.4%	22.78
460	555.00	18.1%	20.17	531.00	17%	21.09	757.00	24.7%	21.57	566.00	18.5%	21.20	527.00	17.2%	21.28	473.00	15.5%	23.71
470	554.00	18.1%	21.12	531.00	17%	22.04	756.00	24.7%	22.53	565.00	18.5%	22.15	526.00	17.2%	22.24	474.00	15.5%	24.68
480	552.00	18.0%	22.11	530.00	17%	23.02	755.00	24.7%	23.51	564.00	18.4%	23.13	526.00	17.2%	23.22	476.00	15.6%	25.67
490	550.00	18.0%	23.10	530.00	17%	24.02	754.00	24.6%	24.51	564.00	18.4%	24.13	525.00	17.2%	24.22	477.00	15.6%	26.67
500	549.00	17.9%	24.13	529.00	17%	25.05	753.00	24.6%	25.53	563.00	18.4%	25.16	525.00	17.2%	25.24	478.00	15.6%	27.71
510	547.00	17.9%	25.17	528.00	17%	26.09	752.00	24.6%	26.57	563.00	18.4%	26.20	524.00	17.1%	26.29	480.00	15.7%	28.76
520	546.00	17.8%	26.24	528.00	17%	27.16	751.00	24.5%	27.64	562.00	18.4%	27.27	524.00	17.1%	27.36	481.00	15.7%	29.83
530	545.00	17.8%	27.33	527.00	17%	28.26	750.00	24.5%	28.73	561.00	18.3%	28.35	524.00	17.1%	28.44	482.00	15.7%	30.93
540	543.00	17.7%	28.44	527.00	17%	29.36	749.00	24.5%	29.84	561.00	18.3%	29.47	523.00	17.1%	29.56	483.00	15.8%	32.05
550	542.00	17.7%	29.58	526.00	17%	30.51	748.00	24.4%	30.98	560.00	18.3%	30.61	523.00	17.1%	30.70	484.00	15.8%	33.20
560	541.00	17.7%	30.74	526.00	17%	31.66	747.00	24.4%	32.14	559.00	18.3%	31.77	522.00	17.1%	31.86	485.00	15.8%	34.35
570	540.00	17.6%	31.92	525.00	17%	32.84	746.00	24.4%	33.33	558.00	18.2%	32.95	522.00	17.1%	33.04	485.00	15.8%	35.55
580	538.00	17.6%	33.13	524.00	17%	34.06	745.00	24.3%	34.53	558.00	18.2%	34.16	521.00	17.0%	34.25	486.00	15.9%	36.75
590	537.00	17.5%	34.37	523.00	17%	35.29	744.00	24.3%	35.76	557.00	18.2%	35.39	521.00	17.0%	35.49	486.00	15.9%	38.00
600	536.00	17.5%	35.63	523.00	17%	36.55	743.00	24.3%	37.02	556.00	18.2%	36.65	520.00	17.0%	36.74	487.00	15.9%	39.26

LINNET ACSR 336.4 KCMIL																		
Clima: Frío																		
Altitud: 2500 msnm - 3500 msnm																		
Temperatura máxima (°C): 27																		
Temperatura media (°C): 9																		
Temperatura mínima (°C): 4																		
Temperatura coincidente (°C): 5																		
Velocidad del viento máxima (km/h): 100																		
Velocidad del viento promedio (km/h): 60																		
Propiedades físicas del conductor:																		
Tensión de rotura (daN): 6271.99																		
Peso (daN/m): 0.6741																		
Condición de tensionado: (% límite de tensión de rotura)																		
Temperatura mínima: 19%																		
Operación diaria (EDS): 12%																		
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	1191.00	19.0%	0.01	852.00	14%	0.01	829.00	13.2%	0.01	826.00	13.2%	0.01	715.00	11.4%	0.01	117.00	1.9%	0.07
20	1191.00	19.0%	0.03	854.00	14%	0.04	843.00	13.4%	0.06	829.00	13.2%	0.04	720.00	11.5%	0.05	174.00	2.8%	0.19
30	1191.00	19.0%	0.06	856.00	14%	0.09	850.00	13.7%	0.12	832.00	13.3%	0.10	728.00	11.6%	0.10	227.00	3.5%	0.34
40	1191.00	19.0%	0.11	857.00	14%	0.16	882.00	14.1%	0.21	841.00	13.4%	0.17	739.00	11.8%	0.18	264.00	4.2%	0.51
50	1191.00	19.0%	0.18	861.00	14%	0.24	905.00	14.4%	0.32	847.00	13.5%	0.26	752.00	12.0%	0.28	302.00	4.8%	0.70
60	1165.00	18.6%	0.26	862.00	14%	0.36	915.00	14.6%	0.46	845.00	13.5%	0.38	752.00	12.0%	0.40	334.00	5.3%	0.91
70	1144.00	18.2%	0.36	842.00	13%	0.49	923.00	14.7%	0.61	838.00	13.4%	0.52	752.00	12.0%	0.55	362.00	5.8%	1.14
80	1115.00	17.8%	0.48	833.00	13%	0.65	932.00	14.9%	0.79	834.00	13.3%	0.68	752.00	12.0%	0.72	389.00	6.2%	1.39
90	1087.00	17.3%	0.63	825.00	13%	0.83	939.00	15.0%	0.99	829.00	13.2%	0.87	752.00	12.0%	0.91	411.00	6.6%	1.66
100	1059.00	16.9%	0.80	817.00	13%	1.03	944.00	15.1%	1.21	825.00	13.2%	1.08	752.00	12.0%	1.12	433.00	6.9%	1.95
110	1030.00	16.4%	0.99	810.00	13%	1.26	948.00	15.2%	1.45	820.00	13.1%	1.31	752.00	12.0%	1.36	453.00	7.2%	2.25
120	1004.00	16.0%	1.21	803.00	13%	1.51	953.00	15.2%	1.71	818.00	13.0%	1.56	752.00	12.0%	1.62	471.00	7.5%	2.58
130	977.00	15.6%	1.46	796.00	13%	1.79	954.00	15.2%	2.00	813.00	13.0%	1.84	751.00	12.0%	1.90	488.00	7.8%	2.92
140	955.00	15.2%	1.73	791.00	13%	2.09	956.00	15.2%	2.31	810.00	12.9%	2.14	751.00	12.0%	2.20	503.00	8.0%	3.29
150	934.00	14.9%	2.03	788.00	13%	2.41	959.00	15.3%	2.53	807.00	12.9%	2.46	751.00	12.0%	2.53	517.00	8.2%	3.67
160	916.00	14.6%	2.35	784.00	13%	2.75	960.00	15.3%	2.99	805.00	12.8%	2.81	751.00	12.0%	2.88	531.00	8.5%	4.07
170	900.00	14.3%	2.71	781.00	12%	3.12	961.00	15.3%	3.36	802.00	12.8%	3.18	750.00	12.0%	3.25	543.00	8.7%	4.49
180	886.00	14.1%	3.06	776.00	12%	3.51	961.00	15.3%	3.76	801.00	12.8%	3.57	750.00	12.0%	3.64	554.00	8.8%	4.93
190	874.00	13.9%	3.48	775.00	12%	3.93	962.00	15.3%	4.17	799.00	12.7%	3.99	750.00	12.0%	4.06	565.00	9.0%	5.39
200	862.00	13.7%	3.91	772.00	12%	4.37	961.00	15.3%	4.61	797.00	12.7%	4.43	749.00	11.9%	4.50	575.00	9.2%	5.87
210	852.00	13.6%	4.36	770.00	12%	4.83	962.00	15.3%	5.08	796.00	12.7%	4.89	749.00	11.9%	4.96	584.00	9.3%	6.37
220	842.00	13.4%	4.85	768.00	12%	5.32	961.00	15.3%	5.57	794.00	12.7%	5.38	749.00	11.9%	5.45	592.00	9.4%	6.89
230	835.00	13.3%	5.35	766.00	12%	5.82	960.00	15.3%	6.07	792.00	12.6%	5.89	749.00	11.9%	5.96	600.00	9.6%	7.44
240	827.00	13.2%	5.87	765.00	12%	6.35	959.00	15.3%	6.61	791.00	12.6%	6.42	748.00	11.9%	6.49	607.00	9.7%	8.00
250	821.00	13.1%	6.42	763.00	12%	6.91	959.00	15.3%	7.16	790.00	12.6%	6.97	748.00	11.9%	7.05	614.00	9.8%	8.59
260	815.00	13.0%	7.00	762.00	12%	7.49	958.00	15.3%	7.74	788.00	12.6%	7.55	747.00	11.9%	7.63	621.00	9.9%	9.19
270	810.00	12.9%	7.60	760.00	12%	8.09	957.00	15.3%	8.35	787.00	12.5%	8.15	747.00	11.9%	8.24	625.00	10.0%	9.83
280	805.00	12.8%	8.22	759.00	12%	8.72	956.00	15.2%	8.97	786.00	12.5%	8.78	747.00	11.9%	8.86	632.00	10.1%	10.48
290	800.00	12.8%	8.87	758.00	12%	9.37	955.00	15.2%	9.62	785.00	12.5%	9.43	746.00	11.9%	9.51	637.00	10.2%	11.15
300	796.00	12.7%	9.54	756.00	12%	10.04	954.00	15.2%	10.30	784.00	12.5%	10.10	746.00	11.9%	10.19	642.00	10.2%	11.85
310	793.00	12.6%	10.23	755.00	12%	10.74	953.00	15.2%	11.00	783.00	12.5%	10.80	745.00	11.9%	10.89	646.00	10.3%	12.56
320	789.00	12.6%	10.95	754.00	12%	11.46	951.00	15.2%	11.72	782.00	12.5%	11.52	745.00	11.9%	11.61	650.00	10.4%	13.31
330	786.00	12.5%	11.70	753.00	12%	12.21	950.00	15.1%	12.46	781.00	12.5%	12.27	744.00	11.9%	12.35	654.00	10.4%	14.07
340	783.00	12.5%	12.46	752.00	12%	12.98	949.00	15.1%	13.23	780.00	12.4%	13.04	744.00	11.9%	13.13	657.00	10.5%	14.86
350	780.00	12.4%	13.26	751.00	12%	13.77	948.00	15.1%	14.03	779.00	12.4%	13.83	743.00	11.8%	13.92	661.00	10.5%	15.67
360	778.00	12.4%	14.08	750.00	12%	14.59	946.00	15.1%	14.85	778.00	12.4%	14.66	743.00	11.8%	14.74	664.00	10.6%	16.50
370	776.00	12.4%	14.92	749.00	12%	15.43	945.00	15.1%	15.69	777.00	12.4%	15.50	742.00	11.8%	15.58	667.00	10.6%	17.36
380	773.00	12.3%	15.79	748.00	12%	16.30	944.00	15.1%	16.56	776.00	12.4%	16.37	741.00	11.8%	16.45	669.00	10.7%	18.24
390	770.00	12.3%	16.68	747.00	12%	17.20	942.00	15.0%	17.45	775.00	12.4%	17.26	741.00	11.8%	17.39	672.00	10.7%	19.15
400	768.00	12.2%	17.60	746.00	12%	18.12	941.00	15.0%	18.37	774.00	12.3%	18.18	740.00	11.8%	18.27	674.00	10.7%	20.08
410	766.00	12.2%	18.54	746.00	12%	19.06	940.00	15.0%	19.31	773.00	12.3%	19.12	740.00	11.8%	19.21	676.00	10.8%	21.03
420	764.00	12.2%	19.50	745.00	12%	20.03	938.00	15.0%	20.28	772.00	12.3%	20.09	739.00	11.8%	20.18	678.00	10.8%	22.01
430	762.00	12.1%	20.50	744.00	12%	21.02	937.00	14.9%	21.27	771.00	12.3%	21.08	738.00	11.8%	21.17	680.00	10.8%	23.01
440	761.00	12.1%	21.52	743.00	12%	22.04	935.00	14.9%	22.29	770.00	12.3%	22.10	738.00	11.8%	22.20	681.00	10.9%	24.05
450	759.00	12.1%	22.57	742.00	12%	23.09	934.00	14.9%	23.34	769.00	12.3%	23.15	737.00	11.8%	23.24	683.00	10.9%	25.10
460	757.00	12.1%	23.64	741.00	12%	24.16	933.00	14.9%	24.41	768.00	12.2%	24.22	736.00	11.7%	24.31	684.00	10.9%	26.18
470	755.00	12.0%	24.74	740.00	12%	25.26	931.00	14.8%	25.51	767.00	12.2%	25.32	735.00	11.7%	25.41	685.00	10.9%	27.29
480	754.00	12.0%	25.86	739.00	12%	26.38	930.00	14.8%	26.63	766.00	12.2%	26.44	735.00	11.7%	26.53	686.00	10.9%	28.42
490	752.00	12.0%	27.01	738.00	12%	27.54	928.00	14.8%	27.79	765.00	12.2%	27.60	734.00	11.7%	27.69	687.00	11.0%	29.58
500	751.00	12.0%	28.19	737.00	12%	28.71	927.00	14.8%	28.96	764.00	12.2%	28.77	733.00	11.7%	28.86	688.00	11.0%	30.76
510	749.00	11.9%	29.40	736.00	12%	29.92	925.00	14.7%	30.16	763.00	12.2%	29.98						

AMES AAAC 77.47 KCML

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	284.00	22.8%	0.00	203.00	16.3%	0.01	199.00	16.0%	0.02	197.00	15.8%	0.01	174.00	14.0%	0.01	7.00	0.6%	0.18
20	284.00	22.8%	0.02	202.00	16.2%	0.03	205.00	16.5%	0.08	198.00	15.5%	0.04	174.00	14.0%	0.03	15.00	1.2%	0.36
30	283.00	22.7%	0.04	202.00	16.2%	0.06	214.00	17.4%	0.17	199.00	16.0%	0.08	174.00	14.0%	0.07	21.00	1.7%	0.56
40	282.00	22.6%	0.08	201.00	16.1%	0.11	223.00	17.9%	0.28	200.00	16.1%	0.15	174.00	14.0%	0.12	28.00	2.2%	0.76
50	280.00	22.5%	0.12	200.00	16.1%	0.17	232.00	18.6%	0.41	201.00	16.1%	0.23	174.00	14.0%	0.19	34.00	2.7%	0.97
60	278.00	22.3%	0.17	199.00	16.0%	0.24	241.00	19.3%	0.56	203.00	16.3%	0.33	174.00	14.0%	0.27	40.00	3.2%	1.18
70	276.00	22.2%	0.24	198.00	15.9%	0.33	250.00	20.1%	0.73	204.00	16.4%	0.44	174.00	14.0%	0.37	46.00	3.7%	1.41
80	273.00	21.9%	0.31	197.00	15.8%	0.43	258.00	20.7%	0.91	205.00	16.5%	0.57	174.00	14.0%	0.49	52.00	4.2%	1.64
90	270.00	21.7%	0.40	196.00	15.7%	0.55	266.00	21.4%	1.11	207.00	16.6%	0.71	174.00	14.0%	0.62	57.00	4.6%	1.89
100	267.00	21.4%	0.50	195.00	15.7%	0.68	274.00	22.0%	1.32	208.00	16.7%	0.87	174.00	14.0%	0.76	62.00	5.0%	2.14
110	264.00	21.2%	0.61	194.00	15.6%	0.83	281.00	22.6%	1.55	209.00	16.8%	1.04	174.00	14.0%	0.92	67.00	5.4%	2.41
120	260.00	20.9%	0.73	193.00	15.5%	0.99	288.00	23.1%	1.79	210.00	16.8%	1.22	174.00	14.0%	1.10	71.00	5.7%	2.68
130	257.00	20.6%	0.87	192.00	15.4%	1.17	294.00	23.6%	2.04	211.00	16.9%	1.42	174.00	14.0%	1.29	76.00	6.1%	2.97
140	253.00	20.3%	1.03	190.00	15.3%	1.37	300.00	24.1%	2.31	212.00	17.0%	1.64	174.00	14.0%	1.49	80.00	6.4%	3.26
150	250.00	20.1%	1.19	189.00	15.2%	1.58	306.00	24.6%	2.58	213.00	17.1%	1.87	174.00	14.0%	1.71	84.00	6.7%	3.57
160	246.00	19.8%	1.38	188.00	15.1%	1.80	311.00	25.0%	2.87	214.00	17.2%	2.11	174.00	14.0%	1.95	87.00	7.0%	3.88
170	242.00	19.4%	1.58	187.00	15.0%	2.04	316.00	25.4%	3.18	214.00	17.2%	2.37	174.00	14.0%	2.20	91.00	7.3%	4.21
180	238.00	19.2%	1.80	187.00	15.0%	2.30	321.00	25.8%	3.50	215.00	17.3%	2.64	174.00	14.0%	2.47	94.00	7.6%	4.55
190	235.00	18.9%	2.04	186.00	14.9%	2.58	325.00	26.1%	3.83	215.00	17.3%	2.94	174.00	14.0%	2.75	98.00	7.9%	4.91
200	232.00	18.6%	2.29	185.00	14.9%	2.87	329.00	26.4%	4.17	216.00	17.3%	3.24	174.00	14.0%	3.05	101.00	8.1%	5.27
210	228.00	18.3%	2.56	184.00	14.8%	3.18	333.00	26.7%	4.53	216.00	17.3%	3.55	174.00	14.0%	3.36	104.00	8.4%	5.65
220	225.00	18.1%	2.85	184.00	14.8%	3.50	336.00	27.0%	4.89	217.00	17.4%	3.89	174.00	14.0%	3.69	106.00	8.5%	6.03
230	222.00	17.8%	3.16	183.00	14.7%	3.83	340.00	27.3%	5.28	217.00	17.4%	4.23	174.00	14.0%	4.04	109.00	8.8%	6.43
240	219.00	17.6%	3.48	182.00	14.6%	4.19	343.00	27.5%	5.67	217.00	17.4%	4.60	174.00	14.0%	4.39	112.00	9.0%	6.85
250	217.00	17.4%	3.83	182.00	14.6%	4.56	345.00	27.7%	6.09	217.00	17.4%	4.98	174.00	14.0%	4.77	114.00	9.2%	7.28
260	214.00	17.2%	4.19	181.00	14.5%	4.95	348.00	27.9%	6.51	218.00	17.5%	5.37	174.00	14.0%	5.16	116.00	9.3%	7.71
270	212.00	17.0%	4.56	181.00	14.5%	5.35	351.00	28.2%	6.95	218.00	17.5%	5.78	174.00	14.0%	5.57	119.00	9.6%	8.17
280	210.00	16.9%	4.95	180.00	14.5%	5.76	353.00	28.3%	7.39	218.00	17.5%	6.20	174.00	14.0%	5.99	121.00	9.7%	8.63
290	208.00	16.7%	5.37	180.00	14.5%	6.20	355.00	28.5%	7.86	218.00	17.5%	6.64	174.00	14.0%	6.43	123.00	9.9%	9.11
300	206.00	16.5%	5.81	180.00	14.5%	6.65	357.00	28.7%	8.34	218.00	17.5%	7.10	174.00	14.0%	6.88	124.00	10.0%	9.61

AZUSA AAAC 123.3 KCML																								
Clima: Frío																								
Altitud: 2500 msnm - 3500 msnm																								
Temperatura máxima (°C): 27																								
Temperatura media (°C): 9																								
Temperatura mínima (°C): 4																								
Temperatura coincidente (°C): 5																								
Velocidad del viento máxima (km/h): 100																								
Velocidad del viento promedio (km/h): 60																								
Propiedades físicas del conductor:																								
Tensión de rotura (daN): 1983.91																								
Peso (daN/m): 0.1688																								
Condición de tensionado: (% límite de tensión de rotura)																								
Temperatura mínima: 22.5%																								
Operación diaria (EDS): 13%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final								
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha			Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	425.00	21.4%	0.00	303.00	15.3%	0.01	297.00	15.0%	0.02	294.00	14.8%	0.01	258.00	13.0%	0.01	12.00	0.6%	0.18						
20	424.00	21.4%	0.02	302.00	15.2%	0.03	303.00	15.3%	0.07	294.00	14.8%	0.04	258.00	13.0%	0.03	23.00	1.2%	0.37						
30	422.00	21.3%	0.05	301.00	15.2%	0.06	312.00	15.7%	0.15	295.00	14.9%	0.08	258.00	13.0%	0.07	33.00	1.7%	0.57						
40	420.00	21.2%	0.08	300.00	15.1%	0.11	323.00	16.3%	0.25	296.00	14.9%	0.14	258.00	13.0%	0.13	43.00	2.2%	0.78						
50	418.00	21.0%	0.13	299.00	15.1%	0.18	334.00	16.8%	0.37	297.00	15.0%	0.22	258.00	13.0%	0.20	53.00	2.7%	0.99						
60	413.00	20.8%	0.18	297.00	15.0%	0.26	345.00	17.4%	0.51	298.00	15.0%	0.32	258.00	13.0%	0.29	63.00	3.2%	1.21						
70	409.00	20.6%	0.25	295.00	14.9%	0.35	355.00	17.9%	0.67	299.00	15.1%	0.43	258.00	13.0%	0.40	72.00	3.6%	1.45						
80	404.00	20.4%	0.33	292.00	14.7%	0.46	366.00	18.4%	0.95	300.00	15.1%	0.56	258.00	13.0%	0.52	80.00	4.0%	1.69						
90	399.00	20.1%	0.43	291.00	14.7%	0.59	375.00	18.9%	1.03	301.00	15.2%	0.70	258.00	13.0%	0.66	88.00	4.4%	1.94						
100	393.00	19.8%	0.54	289.00	14.6%	0.73	384.00	19.4%	1.24	302.00	15.2%	0.86	258.00	13.0%	0.82	96.00	4.8%	2.20						
110	387.00	19.5%	0.66	287.00	14.5%	0.89	392.00	19.9%	1.46	303.00	15.3%	1.04	258.00	13.0%	0.99	103.00	5.2%	2.47						
120	382.00	19.2%	0.80	285.00	14.4%	1.07	400.00	20.2%	1.69	303.00	15.3%	1.23	258.00	13.0%	1.18	110.00	5.5%	2.76						
130	375.00	18.9%	0.95	282.00	14.2%	1.26	407.00	20.5%	1.94	303.00	15.3%	1.44	258.00	13.0%	1.39	117.00	5.9%	3.05						
140	369.00	18.6%	1.12	281.00	14.2%	1.47	413.00	20.8%	2.20	304.00	15.3%	1.66	257.00	13.0%	1.61	123.00	6.2%	3.36						
150	363.00	18.3%	1.31	279.00	14.1%	1.70	419.00	21.1%	2.47	304.00	15.3%	1.90	257.00	13.0%	1.84	129.00	6.5%	3.68						
160	357.00	18.0%	1.51	277.00	14.0%	1.95	425.00	21.4%	2.76	304.00	15.3%	2.16	257.00	13.0%	2.10	135.00	6.8%	4.01						
170	351.00	17.7%	1.74	276.00	13.9%	2.21	430.00	21.7%	3.07	304.00	15.3%	2.43	257.00	13.0%	2.37	140.00	7.1%	4.35						
180	345.00	17.4%	1.96	275.00	13.9%	2.49	435.00	21.9%	3.38	305.00	15.4%	2.72	257.00	13.0%	2.66	145.00	7.4%	4.71						
190	340.00	17.1%	2.24	274.00	13.8%	2.78	439.00	22.1%	3.72	305.00	15.4%	3.03	257.00	13.0%	2.96	150.00	7.6%	5.07						
200	334.00	16.8%	2.53	272.00	13.7%	3.10	443.00	22.3%	4.07	305.00	15.4%	3.35	257.00	13.0%	3.28	155.00	7.8%	5.46						
210	329.00	16.6%	2.83	271.00	13.7%	3.43	447.00	22.5%	4.43	305.00	15.4%	3.69	257.00	13.0%	3.62	159.00	8.0%	5.85						
220	325.00	16.4%	3.15	270.00	13.6%	3.78	450.00	22.7%	4.81	305.00	15.4%	4.04	257.00	13.0%	3.97	163.00	8.2%	6.26						
230	320.00	16.1%	3.49	269.00	13.6%	4.15	454.00	22.9%	5.20	305.00	15.4%	4.41	257.00	13.0%	4.35	167.00	8.4%	6.68						
240	316.00	15.9%	3.84	269.00	13.6%	4.53	457.00	23.0%	5.60	305.00	15.4%	4.80	257.00	13.0%	4.73	171.00	8.6%	7.12						
250	313.00	15.8%	4.22	268.00	13.5%	4.93	459.00	23.1%	6.03	305.00	15.4%	5.20	257.00	13.0%	5.14	175.00	8.8%	7.57						
260	309.00	15.6%	4.62	267.00	13.5%	5.35	461.00	23.2%	6.47	304.00	15.3%	5.62	257.00	13.0%	5.56	178.00	9.0%	8.04						
270	306.00	15.4%	5.04	266.00	13.4%	5.79	464.00	23.4%	6.92	304.00	15.3%	6.06	257.00	13.0%	5.99	181.00	9.1%	8.51						
280	303.00	15.3%	5.47	266.00	13.4%	6.24	466.00	23.5%	7.39	304.00	15.3%	6.51	257.00	13.0%	6.45	184.00	9.3%	9.01						
290	300.00	15.1%	5.93	265.00	13.4%	6.70	467.00	23.5%	7.88	304.00	15.3%	6.99	257.00	13.0%	6.92	187.00	9.4%	9.52						
300	297.00	15.0%	6.40	264.00	13.3%	7.19	469.00	23.6%	8.38	304.00	15.3%	7.47	257.00	13.0%	7.41	189.00	9.5%	10.04						
310	295.00	14.9%	6.88	264.00	13.3%	7.69	471.00	23.7%	8.89	303.00	15.3%	7.98	257.00	13.0%	7.91	192.00	9.7%	10.58						
320	292.00	14.7%	7.40	263.00	13.3%	8.21	472.00	23.8%	9.43	303.00	15.3%	8.50	256.00	12.9%	8.44	194.00	9.8%	11.13						
330	290.00	14.6%	7.92	263.00	13.3%	8.75	473.00	23.8%	9.98	303.00	15.3%	9.04	256.00	12.9%	8.97	197.00	9.9%	11.70						
340	288.00	14.5%	8.46	263.00	13.3%	9.30	474.00	23.9%	10.54	303.00	15.3%	9.59	256.00	12.9%	9.53	199.00	10.0%	12.29						
350	287.00	14.5%	9.03	262.00	13.2%	9.87	475.00	23.9%	11.13	302.00	15.2%	10.16	256.00	12.9%	10.10	201.00	10.1%	12.89						
360	285.00	14.4%	9.61	262.00	13.2%	10.47	476.00	24.0%	11.73	302.00	15.2%	10.76	256.00	12.9%	10.70	203.00	10.2%	13.51						
370	283.00	14.3%	10.21	261.00	13.2%	11.07	477.00	24.0%	12.34	302.00	15.2%	11.36	256.00	12.9%	11.30	205.00	10.3%	14.13						
380	282.00	14.2%	10.82	261.00	13.2%	11.69	478.00	24.1%	12.97	302.00	15.2%	11.99	256.00	12.9%	11.93	207.00	10.4%	14.78						
390	280.00	14.1%	11.46	261.00	13.2%	12.33	479.00	24.1%	13.62	301.00	15.2%	12.63	256.00	12.9%	12.57	208.00	10.5%	15.45						
400	278.00	14.1%	12.11	260.00	13.1%	12.99	479.00	24.1%	14.28	301.00	15.2%	13.28</												

ANAREIM AAAC 155.4 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2397.59
 Peso (daN/m): 0.2129

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	517.00	21.6%	0.01	369.00	15.4%	0.01	369.00	15.0%	0.02	357.00	14.9%	0.01	312.00	13.0%	0.01	14.00	0.6%	0.19
20	516.00	21.4%	0.02	367.00	15.2%	0.03	367.00	15.2%	0.06	357.00	14.9%	0.04	312.00	13.0%	0.03	28.00	1.2%	0.38
30	513.00	21.4%	0.05	366.00	15.3%	0.07	377.00	15.7%	0.14	359.00	15.0%	0.08	312.00	13.0%	0.08	41.00	1.7%	0.58
40	509.00	21.2%	0.08	364.00	15.2%	0.12	388.00	16.2%	0.24	359.00	15.0%	0.14	312.00	13.0%	0.14	54.00	2.3%	0.79
50	505.00	21.1%	0.13	362.00	15.1%	0.18	400.00	16.4%	0.36	360.00	15.0%	0.22	312.00	13.0%	0.21	66.00	2.8%	1.01
60	501.00	20.9%	0.19	360.00	15.0%	0.27	412.00	17.2%	0.49	360.00	15.0%	0.32	312.00	13.0%	0.31	78.00	3.3%	1.23
70	495.00	20.6%	0.26	358.00	14.9%	0.36	423.00	17.6%	0.65	361.00	15.1%	0.43	312.00	13.0%	0.42	89.00	3.7%	1.47
80	488.00	20.4%	0.35	355.00	14.8%	0.48	434.00	18.1%	0.92	361.00	15.1%	0.57	311.00	13.0%	0.55	100.00	4.2%	1.71
90	481.00	20.1%	0.45	352.00	14.7%	0.61	444.00	18.5%	1.01	362.00	15.1%	0.71	311.00	13.0%	0.69	110.00	4.6%	1.97
100	474.00	19.8%	0.56	349.00	14.6%	0.76	453.00	18.9%	1.21	362.00	15.1%	0.88	311.00	13.0%	0.85	119.00	5.0%	2.24
110	466.00	19.4%	0.69	346.00	14.4%	0.93	462.00	19.2%	1.43	362.00	15.1%	1.06	311.00	13.0%	1.03	128.00	5.3%	2.51
120	458.00	19.1%	0.84	344.00	14.3%	1.12	470.00	19.6%	1.66	363.00	15.1%	1.25	311.00	13.0%	1.23	137.00	5.7%	2.80
130	450.00	18.8%	1.00	341.00	14.2%	1.32	477.00	19.9%	1.90	362.00	15.1%	1.47	311.00	13.0%	1.45	145.00	6.0%	3.11
140	442.00	18.4%	1.18	339.00	14.1%	1.54	483.00	20.1%	2.17	362.00	15.1%	1.70	311.00	13.0%	1.68	153.00	6.4%	3.42
150	433.00	18.1%	1.38	336.00	14.0%	1.78	489.00	20.4%	2.44	362.00	15.1%	1.95	311.00	13.0%	1.93	160.00	6.7%	3.74
160	426.00	17.8%	1.60	335.00	14.0%	2.04	495.00	20.6%	2.74	362.00	15.1%	2.21	311.00	13.0%	2.19	167.00	7.0%	4.08
170	419.00	17.5%	1.84	333.00	13.9%	2.31	500.00	20.9%	3.04	362.00	15.1%	2.50	311.00	13.0%	2.47	174.00	7.3%	4.43
180	411.00	17.1%	2.10	331.00	13.8%	2.60	504.00	21.0%	3.37	362.00	15.1%	2.80	311.00	13.0%	2.77	180.00	7.6%	4.80
190	405.00	16.9%	2.37	330.00	13.8%	2.92	509.00	21.2%	3.70	362.00	15.1%	3.11	311.00	13.0%	3.09	186.00	7.8%	5.18
200	398.00	16.6%	2.68	328.00	13.7%	3.24	513.00	21.4%	4.06	361.00	15.1%	3.45	311.00	13.0%	3.43	191.00	8.0%	5.57
210	392.00	16.3%	3.00	327.00	13.6%	3.59	516.00	21.5%	4.43	361.00	15.1%	3.80	311.00	13.0%	3.78	197.00	8.2%	5.98
220	386.00	16.1%	3.34	325.00	13.6%	3.96	519.00	21.6%	4.82	360.00	15.0%	4.17	311.00	13.0%	4.15	201.00	8.4%	6.40
230	381.00	15.9%	3.69	325.00	13.6%	4.34	522.00	21.8%	5.22	360.00	15.0%	4.55	311.00	13.0%	4.53	206.00	8.6%	6.84
240	377.00	15.7%	4.07	324.00	13.5%	4.74	525.00	21.9%	5.64	360.00	15.0%	4.95	311.00	13.0%	4.94	211.00	8.8%	7.28
250	372.00	15.5%	4.47	323.00	13.5%	5.16	527.00	22.0%	6.07	360.00	15.0%	5.38	310.00	12.9%	5.36	215.00	9.0%	7.75
260	368.00	15.3%	4.89	322.00	13.4%	5.60	529.00	22.1%	6.52	359.00	15.0%	5.82	310.00	12.9%	5.80	219.00	9.1%	8.23
270	364.00	15.2%	5.32	321.00	13.4%	6.05	531.00	22.1%	6.99	359.00	15.0%	6.27	310.00	12.9%	6.26	223.00	9.2%	8.73
280	361.00	15.1%	5.79	320.00	13.3%	6.52	532.00	22.2%	7.48	358.00	14.9%	6.75	310.00	12.9%	6.73	225.00	9.4%	9.24
290	358.00	14.9%	6.26	320.00	13.3%	7.01	534.00	22.3%	7.98	358.00	14.9%	7.23	310.00	12.9%	7.22	230.00	9.6%	9.76
300	354.00	14.8%	6.76	319.00	13.2%	7.52	535.00	22.3%	8.50	358.00	14.9%	7.74	310.00	12.9%	7.73	233.00	9.7%	10.31
310	350.00	14.7%	7.28	318.00	13.2%	8.04	536.00	22.4%	9.03	358.00	14.9%	8.27	310.00	12.9%	8.26	235.00	9.8%	10.87
320	349.00	14.6%	7.81	318.00	13.3%	8.59	537.00	22.4%	9.58	357.00	14.9%	8.81	310.00	12.9%	8.81	239.00	10.0%	11.44
330	347.00	14.5%	8.36	317.00	13.2%	9.15	538.00	22.4%	10.16	357.00	14.9%	9.38	310.00	12.9%	9.37	241.00	10.1%	12.03
340	345.00	14.4%	8.93	317.00	13.2%	9.73	539.00	22.5%	10.74	356.00	14.8%	9.96	310.00	12.9%	9.95	244.00	10.2%	12.64
350	343.00	14.3%	9.52	316.00	13.2%	10.32	540.00	22.5%	11.34	356.00	14.8%	10.56	309.00	12.9%	10.55	246.00	10.3%	13.26
360	341.00	14.2%	10.13	316.00	13.2%	10.94	540.00	22.5%	11.96	356.00	14.8%	11.17	309.00	12.9%	11.17	249.00	10.4%	13.90
370	339.00	14.1%	10.76	315.00	13.1%	11.57	541.00	22.6%	12.60	355.00	14.8%	11.81	309.00	12.9%	11.80	251.00	10.5%	14.56
380	337.00	14.1%	11.41	315.00	13.1%	12.23	541.00	22.6%	13.26	355.00	14.8%	12.46	309.00	12.9%	12.46	253.00	10.6%	15.24
390	336.00	14.0%	12.07	314.00	13.1%	12.89	542.00	22.6%	13.93	355.00	14.8%	13.13	309.00	12.9%	13.13	255.00	10.6%	15.93
400	334.00	13.9%	12.75	314.00	13.2%	13.58	542.00	22.6%	14.63	354.00	14.8%	13.82	308.00	12.9%	13.81	257.00	10.7%	16.64
410	333.00	13.9%	13.46	314.00	13.1%	14.29	542.00	22.6%	15.34	354.00	14.8%	14.52	309.00	12.9%	14.52	258.00	10.8%	17.36
420	332.00	13.8%	14.18	313.00	13.1%	15.02	542.00	22.6%	16.07	354.00	14.8%	15.25	308.00	12.8%	15.25	260.00	10.8%	18.11
430	330.00	13.8%	14.92	313.00	13.1%	15.76	542.00	22.6%	16.81	353.00	14.7%	15.99	308.00	12.8%	15.99	261.00	10.8%	18.87
440	329.00	13.7%	15.68	312.00	13.0%	16.52	542.00	22.6%	17.57	353.00	14.7%	16.75	308.00	12.8%	16.76	263.00	11.0%	19.64
450	328.00	13.7%	16.45	312.00	13.0%	17.30	542.00	22.6%	18.36	353.00	14.7%	17.53	308.00	12.8%	17.54	264.00	11.0%	20.44
460	327.00	13.6%	17.25	312.00	13.0%	18.10	542.00	22.6%	19.16	352.00	14.7%	18.34	308.00	12.8%	18.34	266.00	11.1%	21.25
470	326.00	13.6%	18.07	311.00	13.0%	18.92	542.00	22.6%	19.98	352.00	14.7%	19.15	308.00	12.8%	19.16	267.00	11.1%	22.08
480	325.00	13.6%	18.90	311.00	13.0%	19.76	542.00	22.6%	20.82	351.00	14.6%	19.99	307.00	12.8%	19.99	268.00	11.2%	22.94
490	324.00	13.5%	19.76	311.00	13.0%	20.61	542.00	22.6%	21.68	351.00	14.6%	20.84	307.00	12.8%	20.85	269.00	11.2%	23.81
500	323.00	13.5%	20.62	310.00	12.9%	21.49	541.00	22.6%	22.55	351.00	14.6%	21.72	307.00	12.8%	21.72	270.00	11.3%	24.69
510	322.00	13.4%	21.52	310.00	12.9%	22.38	541.00	22.6%	23.44	350.00	14.6%	22.61	307.00	12.8%	22.62	271.00	11.3%	25.60
520	322.00	13.4%	22.43	310.00	12.9%	23.29	541.00	22.6%	24.36	350.00	14.6%	23.52	307.00	12.8%	23.53	272.00	11.3%	26.52
530	321.00	13.4%	23.38	310.00	12.9%	24.22	540.00	22.5%	25.29	350.00	14.6%	24.45	306.00	12.8%	24.47	273.00	11.4%	27.46
540	320.00	13.3%	24.31	309.00	12.9%	25.18	540.00	22.5%	26.24	349.00	14.6%	25.40	306.00	12.8%	25.42	274.00	11.4%	28.42
550	319.00	13.3%	25.28	309.00	12.9%	26.15	540.00	22.5%	27.22	349.00	14.6%	26.38	306.00	12.8%	26.39	275.00	11.5%	29.41
560	319.00	13.3%	26.26	309.00	12.9%	27.13	539.00	22.5%	28.20	349.00	14.6%	27.37	306.00	12.8%	27.38	276.00	11.5%	30.40
570	318.00	13.3%	27.28	308.00	12.8%	28.15	539.00	22.5%	29.21	348.00	14.5%	28.37	306.00	12.8%	28.39	276.00	11.5%	31.43
580	317.00	13.2%	28.30	308.00	12.8%	29.17	539.00	22.5%	30.24	348.00	14.5%	29.40	305.00	12.7%	29.42	277.00	11.6%	32.46
590	317.00	13.2%	29.35	308.00	12.8%	30.25	538.00	22.4%	31.29	347.00	14.5%	30.46	305.00	12.7%	30.47	278.00	11.6%	33.52
600	316.00	13.2%	30.42	307.00	12.8%	31.29												

ALLIANCE AAAC 246.9 KCMIIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 100
 Velocidad del viento promedio (km/h): 60

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	793.00	20.8%	0.01	566.00	15%	0.01	551.00	14%	0.01	548.00	14%	0.01	476.00	12.5%	0.01	22.00	1%	0.19
20	791.00	20.8%	0.02	565.00	15%	0.03	558.00	15%	0.06	549.00	14%	0.04	476.00	12.5%	0.04	44.00	1%	0.38
30	787.00	20.7%	0.05	563.00	15%	0.07	569.00	15%	0.12	548.00	14%	0.08	476.00	12.5%	0.08	65.00	2%	0.59
40	780.00	20.5%	0.09	559.00	15%	0.12	582.00	15%	0.21	548.00	14%	0.14	476.00	12.5%	0.14	85.00	2%	0.80
50	773.00	20.3%	0.14	555.00	15%	0.19	594.00	16%	0.32	547.00	14%	0.22	476.00	12.5%	0.22	104.00	3%	1.02
60	766.00	20.1%	0.20	552.00	14%	0.28	606.00	16%	0.45	547.00	14%	0.32	476.00	12.5%	0.32	122.00	3%	1.25
70	755.00	19.8%	0.27	547.00	14%	0.38	618.00	16%	0.60	546.00	14%	0.43	476.00	12.5%	0.44	140.00	4%	1.49
80	745.00	19.6%	0.36	543.00	14%	0.50	630.00	17%	0.76	546.00	14%	0.56	476.00	12.5%	0.57	158.00	4%	1.73
90	732.00	19.2%	0.47	538.00	14%	0.64	641.00	17%	0.94	544.00	14%	0.71	476.00	12.5%	0.72	172.00	5%	1.99
100	720.00	18.9%	0.59	533.00	14%	0.79	650.00	17%	1.13	543.00	14%	0.87	476.00	12.5%	0.89	187.00	5%	2.27
110	707.00	18.6%	0.72	528.00	14%	0.97	659.00	17%	1.34	542.00	14%	1.06	476.00	12.5%	1.08	201.00	5%	2.55
120	694.00	18.2%	0.88	524.00	14%	1.16	668.00	18%	1.57	541.00	14%	1.26	476.00	12.5%	1.28	214.00	6%	2.85
130	681.00	17.9%	1.05	520.00	14%	1.37	675.00	18%	1.81	540.00	14%	1.48	476.00	12.5%	1.50	227.00	6%	3.15
140	667.00	17.5%	1.24	516.00	14%	1.61	681.00	18%	2.07	539.00	14%	1.72	476.00	12.5%	1.75	239.00	6%	3.47
150	654.00	17.2%	1.45	513.00	13%	1.86	687.00	18%	2.35	537.00	14%	1.98	476.00	12.5%	2.00	250.00	7%	3.80
160	642.00	16.9%	1.69	510.00	13%	2.13	692.00	18%	2.64	536.00	14%	2.25	476.00	12.5%	2.28	261.00	7%	4.15
170	630.00	16.5%	1.94	507.00	13%	2.41	697.00	18%	2.95	535.00	14%	2.54	476.00	12.5%	2.57	271.00	7%	4.51
180	619.00	16.3%	2.21	504.00	13%	2.72	701.00	18%	3.28	534.00	14%	2.85	476.00	12.5%	2.89	281.00	7%	4.89
190	609.00	16.0%	2.51	502.00	13%	3.04	706.00	19%	3.62	533.00	14%	3.18	476.00	12.5%	3.22	290.00	8%	5.28
200	599.00	15.7%	2.82	500.00	13%	3.38	709.00	19%	3.98	532.00	14%	3.52	476.00	12.5%	3.56	298.00	8%	5.68
210	590.00	15.5%	3.16	498.00	13%	3.75	711.00	19%	4.35	531.00	14%	3.89	474.00	12.4%	3.93	306.00	8%	6.10
220	582.00	15.3%	3.52	496.00	13%	4.13	714.00	19%	4.75	530.00	14%	4.28	474.00	12.4%	4.32	314.00	8%	6.53
230	574.00	15.1%	3.90	495.00	13%	4.53	717.00	19%	5.15	530.00	14%	4.67	474.00	12.4%	4.72	321.00	8%	6.98
240	567.00	14.9%	4.30	493.00	13%	4.94	718.00	19%	5.58	529.00	14%	5.09	474.00	12.4%	5.14	328.00	8%	7.44
250	561.00	14.7%	4.71	492.00	13%	5.38	720.00	19%	6.03	528.00	14%	5.53	474.00	12.4%	5.58	334.00	9%	7.93
260	555.00	14.6%	5.16	490.00	13%	5.84	721.00	19%	6.49	527.00	14%	5.98	474.00	12.4%	6.04	340.00	9%	8.42
270	550.00	14.4%	5.61	489.00	13%	6.31	723.00	19%	6.97	527.00	14%	6.46	474.00	12.4%	6.51	346.00	9%	8.93
280	544.00	14.3%	6.05	488.00	13%	6.80	724.00	19%	7.47	526.00	14%	6.95	473.00	12.4%	7.01	351.00	9%	9.46
290	540.00	14.2%	6.59	487.00	13%	7.31	725.00	19%	7.98	525.00	14%	7.46	473.00	12.4%	7.52	356.00	9%	10.01
300	535.00	14.1%	7.11	486.00	13%	7.84	725.00	19%	8.52	524.00	14%	7.99	473.00	12.4%	8.05	361.00	9%	10.57
310	530.00	14.0%	7.65	485.00	13%	8.39	726.00	19%	9.07	524.00	14%	8.54	473.00	12.4%	8.60	365.00	10%	11.15
320	528.00	13.9%	8.21	484.00	13%	8.95	726.00	19%	9.64	523.00	14%	9.11	473.00	12.4%	9.17	369.00	10%	11.74
330	524.00	13.8%	8.79	483.00	13%	9.54	726.00	19%	10.24	522.00	14%	9.70	473.00	12.4%	9.76	373.00	10%	12.36
340	521.00	13.7%	9.39	483.00	13%	10.14	727.00	19%	10.84	522.00	14%	10.30	472.00	12.4%	10.36	377.00	10%	12.98
350	519.00	13.6%	10.00	482.00	13%	10.77	727.00	19%	11.46	521.00	14%	10.92	472.00	12.4%	10.98	381.00	10%	13.63
360	516.00	13.6%	10.64	481.00	13%	11.41	727.00	19%	12.11	521.00	14%	11.58	472.00	12.4%	11.63	384.00	10%	14.30
370	513.00	13.5%	11.29	480.00	13%	12.07	727.00	19%	12.77	520.00	14%	12.23	472.00	12.4%	12.29	387.00	10%	14.98
380	511.00	13.4%	11.97	480.00	13%	12.75	727.00	19%	13.45	520.00	14%	12.90	472.00	12.4%	12.97	390.00	10%	15.68
390	509.00	13.4%	12.66	479.00	13%	13.44	727.00	19%	14.15	519.00	14%	13.60	471.00	12.4%	13.67	393.00	10%	16.40
400	507.00	13.3%	13.38	478.00	13%	14.16	726.00	19%	14.87	518.00	14%	14.32	471.00	12.4%	14.39	396.00	10%	17.13
410	505.00	13.3%	14.11	478.00	13%	14.90	726.00	19%	15.61	518.00	14%	15.06	471.00	12.4%	15.13	398.00	10%	17.89
420	503.00	13.2%	14.86	477.00	13%	15.66	726.00	19%	16.37	517.00	14%	15.81	471.00	12.4%	15.89	401.00	11%	18.66
430	501.00	13.2%	15.64	477.00	13%	16.43	725.00	19%	17.14	517.00	14%	16.59	470.00	12.3%	16.66	403.00	11%	19.45
440	499.00	13.1%	16.43	476.00	13%	17.23	725.00	19%	17.94	516.00	14%	17.38	470.00	12.3%	17.45	405.00	11%	20.26
450	498.00	13.1%	17.24	476.00	13%	18.04	724.00	19%	18.75	515.00	14%	18.20	470.00	12.3%	18.27	407.00	11%	21.09
460	496.00	13.0%	18.07	475.00	12%	18.88	724.00	19%	19.59	515.00	14%	19.03	469.00	12.3%	19.10	409.00	11%	21.94
470	495.00	13.0%	18.92	475.00	12%	19.73	723.00	19%	20.44	514.00	13%	19.88	469.00	12.3%	19.96	411.00	11%	22.80
480	493.00	12.9%	19.79	474.00	12%	20.60	723.00	19%	21.32	514.00	13%	20.76	469.00	12.3%	20.83	413.00	11%	23.69
490	492.00	12.9%	20.68	474.00	12%	21.49	722.00	19%	22.21	513.00	13%	21.65	469.00	12.3%	21.72	414.00	11%	24.59
500	491.00	12.9%	21.59	473.00	12%	22.41	722.00	19%	23.12	513.00	13%	22.56	468.00	12.3%	22.64	416.00	11%	25.51
510	490.00	12.9%	22.53	473.00	12%	23.34	721.00	19%	24.05	512.00	13%	23.49	468.00	12.3%	23.57	417.00	11%	26.46
520	488.00	12.8%	23.48	472.00	12%	24.29	720.00	19%	25.01	512.00	13%	24.45	468.00	12.3%	24.52	419.00	11%	27.42
530	487.00	12.8%	24.45	472.00	12%	25.27	719.00	19%	25.98	511.00	13%	25.42	467.00	12.3%	25.50	420.00	11%	28.40
540	486.00	12.8%	25.44	471.00	12%	26.26	719.00	19%	26.97	511.00	13%	26.41	467.00	12.3%	26.49	421.00	11%	29.41
550	485.00	12.7%	26.45	471.00	12%	27.27	718.00	19%	27.98	510.00	13%	27.42	466.00	12.3%	27.50	422.00	11%	30.43
560	484.00	12.7%	27.49	470.00	12%	28.31	717.00	19%	29.02	509.00	13%	28.46	466.00	12.2%	28.54	423.00	11%	31.47
570	483.00	12.7%	28.54	470.00	12%	29.36	716.00	19%	30.07	509.00	13%	29.51	466.00	12.2%	29.59	424.00	11%	32.53
580	482.00	12.7%	29.62	469.00	12%	30.43	715.00	19%	31.14	508.00	13%	30.59	466.00	12.2%	30.67	425.00	11%	33.62
590	481.00	12.6%	30.71	469.00	12%	31.53	715.00	19%	32.24	508.00	13%	31.69	466.00	12.2%	31.76	426.00	11%	34.72
600	480.00	12.6%	31.82	468.00	12%	32.65	714.00	19%	33.36	507.00	13%	32.80	466.00	12.2%	32.88	427.00	11%	35.84

BUTTE AAAC 312.8 KCML																											
Clima: Frío																											
Altitud: 2500 msnm - 3500 msnm																											
Temperatura máxima (°C): 27																											
Temperatura media (°C): 9																											
Temperatura mínima (°C): 4																											
Temperatura coincidente (°C): 5																											
Velocidad del viento máxima (km/h): 100																											
Velocidad del viento promedio (km/h): 60																											
Propiedades físicas del conductor:																											
Tensión de rotura (daN): 4993.04																											
Peso (daN/m): 0.4284																											
Condición de tensionado: (% límite de tensión de rotura)																											
Temperatura mínima: 19%																											
Operación diaria (EDS): 11%																											
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final						
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha				
	daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m				
10	912.00	18.0%	0.01		673.00	14%	0.01		654.00	13%	0.01		651.00	13%	0.01		563.00	11.5%	0.01		28.00	1%	0.19				
20	909.00	18.0%	0.02		671.00	14%	0.03		663.00	14%	0.06		651.00	13%	0.04		563.00	11.5%	0.04		55.00	1%	0.39				
30	903.00	18.5%	0.05		667.00	14%	0.07		673.00	14%	0.12		651.00	13%	0.08		563.00	11.5%	0.09		81.00	2%	0.59				
40	895.00	18.3%	0.10		662.00	14%	0.13		685.00	14%	0.21		648.00	13%	0.15		563.00	11.5%	0.15		106.00	2%	0.81				
50	887.00	18.1%	0.15		658.00	13%	0.20		700.00	14%	0.32		648.00	13%	0.23		563.00	11.5%	0.24		130.00	3%	1.03				
60	875.00	17.9%	0.22		652.00	13%	0.30		713.00	15%	0.45		646.00	13%	0.33		562.00	11.5%	0.34		153.00	3%	1.26				
70	862.00	17.6%	0.30		646.00	13%	0.41		725.00	15%	0.60		644.00	13%	0.45		562.00	11.5%	0.47		174.00	4%	1.51				
80	848.00	17.3%	0.40		640.00	13%	0.54		736.00	15%	0.77		642.00	13%	0.59		562.00	11.5%	0.61		195.00	4%	1.76				
90	831.00	17.0%	0.52		633.00	13%	0.69		747.00	15%	0.95		639.00	13%	0.75		562.00	11.5%	0.77		214.00	4%	2.03				
100	816.00	16.7%	0.66		626.00	13%	0.86		756.00	15%	1.15		637.00	13%	0.93		562.00	11.5%	0.95		232.00	5%	2.31				
110	800.00	16.3%	0.81		622.00	13%	1.04		765.00	16%	1.37		635.00	13%	1.12		562.00	11.5%	1.15		249.00	5%	2.60				
120	784.00	16.0%	0.98		616.00	13%	1.25		773.00	16%	1.61		633.00	13%	1.34		562.00	11.5%	1.37		265.00	5%	2.91				
130	768.00	15.7%	1.18		611.00	12%	1.48		779.00	16%	1.86		631.00	13%	1.57		562.00	11.5%	1.61		281.00	6%	3.23				
140	753.00	15.4%	1.39		607.00	12%	1.73		785.00	16%	2.13		630.00	13%	1.83		562.00	11.5%	1.87		295.00	6%	3.56				
150	738.00	15.1%	1.63		603.00	12%	2.00		791.00	16%	2.42		628.00	13%	2.10		562.00	11.5%	2.15		309.00	6%	3.91				
160	725.00	14.8%	1.89		600.00	12%	2.29		795.00	16%	2.73		626.00	13%	2.39		562.00	11.5%	2.44		322.00	7%	4.27				
170	712.00	14.6%	2.17		596.00	12%	2.60		799.00	16%	3.05		624.00	13%	2.71		561.00	11.5%	2.76		334.00	7%	4.65				
180	700.00	14.3%	2.46		593.00	12%	2.93		802.00	16%	3.40		623.00	13%	3.04		561.00	11.5%	3.09		345.00	7%	5.04				
190	689.00	14.1%	2.81		590.00	12%	3.28		806.00	16%	3.76		622.00	13%	3.39		561.00	11.5%	3.45		355.00	7%	5.45				
200	680.00	13.9%	3.15		588.00	12%	3.65		809.00	17%	4.14		620.00	13%	3.76		561.00	11.5%	3.82		365.00	7%	5.87				
210	670.00	13.7%	3.53		586.00	12%	4.04		811.00	17%	4.54		619.00	13%	4.15		561.00	11.5%	4.21		374.00	8%	6.31				
220	662.00	13.5%	3.92		583.00	12%	4.45		812.00	17%	4.95		618.00	13%	4.57		561.00	11.5%	4.63		383.00	8%	6.77				
230	654.00	13.4%	4.33		582.00	12%	4.87		814.00	17%	5.39		617.00	13%	4.99		560.00	11.4%	5.06		392.00	8%	7.24				
240	647.00	13.2%	4.77		580.00	12%	5.32		815.00	17%	5.85		616.00	13%	5.44		560.00	11.4%	5.51		399.00	8%	7.73				
250	641.00	13.1%	5.23		579.00	12%	5.79		816.00	17%	6.32		615.00	13%	5.91		560.00	11.4%	5.98		407.00	8%	8.24				
260	635.00	13.0%	5.70		577.00	12%	6.28		817.00	17%	6.81		614.00	13%	6.40		560.00	11.4%	6.47		414.00	8%	8.77				
270	630.00	12.9%	6.20		576.00	12%	6.79		818.00	17%	7.32		613.00	13%	6.91		560.00	11.4%	6.98		420.00	9%	9.31				
280	625.00	12.8%	6.73		574.00	12%	7.32		818.00	17%	7.86		612.00	13%	7.44		559.00	11.4%	7.51		426.00	9%	9.87				
290	621.00	12.7%	7.26		573.00	12%	7.86		819.00	17%	8.41		611.00	12%	7.99		559.00	11.4%	8.06		432.00	9%	10.45				
300	616.00	12.6%	7.83		572.00	12%	8.43		819.00	17%	9.98		610.00	12%	8.56		558.00	11.4%	8.63		437.00	9%	11.05				
310	613.00	12.5%	8.41		571.00	12%	9.02		819.00	17%	9.57		610.00	12%	9.14		558.00	11.4%	9.22		442.00	9%	11.66				
320	609.00	12.4%	9.01		570.00	12%	9.63		819.00	17%	10.18		609.00	12%	9.76		558.00	11.4%	9.83		447.00	9%	12.30				
330	606.00	12.4%	9.64		569.00	12%	10.26		818.00	17%	10.82		608.00	12%	10.39		558.00	11.4%	10.47		451.00	9%	12.95				
340	603.00	12.3%	10.28		569.00	12%	10.90		819.00	17%	11.46		607.00	12%	11.03		558.00	11.4%	11.11		456.00	9%	13.62				
350	600.00	12.3%	10.95		567.00	12%	11.58		818.00	17%	12.14		606.00	12%	11.70		558.00	11.4%	11.78		460.00	9%	14.31				
360	598.00	12.2%	11.63		567.00	12%	12.27		818.00	17%	12.83		606.00	12%	12.39		557.00	11.4%	12.47		463.00	9%	15.02				
370	596.00	12.2%	12.34		566.00	12%	12.96		817.00	17%	13.54		605.00	12%	13.10		557.00	11.4%	13.19		467.00	10%	15.75				
380	593.00	12.1%	13.07		565.00	12%	13.70		817.00	17%	14.27		604.00	12%	13.83		557.00	11.4%	13.92		470.00	10%	16.49				
390	591.00	12.1%	13.81		564.00	12%	14.46		81																		

CANTON AAAC 336.4 KCML																								
Clima: Frío																								
Altitud: 2500 msnm - 3500 msnm																								
Temperatura máxima (°C): 27																								
Temperatura media (°C): 9																								
Temperatura mínima (°C): 4																								
Temperatura coincidente (°C): 5																								
Velocidad del viento máxima (km/h): 100																								
Velocidad del viento promedio (km/h): 60																								
Propiedades físicas del conductor:																								
Tensión de rotura (daN): 5916.13																								
Peso (daN/m): 0.5404																								
Condición de tensionado: (% límite de tensión de rotura)																								
Temperatura mínima: 19%																								
Operación diaria (EDS): 11%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha	
	daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m	
10	1065.00	18.0%	0.01	790.00	13%	0.01	766.00	13%	0.01	762.00	13%	0.01	651.00	11.0%	0.01	35.00	1%	0.20						
20	1059.00	17.8%	0.03	786.00	13%	0.03	773.00	13%	0.06	750.00	13%	0.04	651.00	11.0%	0.04	68.00	1%	0.40						
30	1052.00	17.6%	0.06	780.00	13%	0.08	764.00	13%	0.12	758.00	13%	0.09	651.00	11.0%	0.09	100.00	2%	0.61						
40	1040.00	17.2%	0.10	773.00	13%	0.14	758.00	13%	0.21	756.00	13%	0.16	651.00	11.0%	0.17	131.00	2%	0.83						
50	1023.00	17.3%	0.16	767.00	13%	0.22	813.00	14%	0.33	752.00	13%	0.24	651.00	11.0%	0.26	160.00	3%	1.06						
60	1010.00	17.1%	0.24	757.00	13%	0.32	825.00	14%	0.46	748.00	13%	0.35	651.00	11.0%	0.37	188.00	3%	1.30						
70	989.00	16.7%	0.33	747.00	13%	0.44	836.00	14%	0.61	744.00	13%	0.48	650.00	11.0%	0.51	214.00	4%	1.55						
80	970.00	16.4%	0.45	739.00	12%	0.58	847.00	14%	0.78	740.00	13%	0.63	649.00	11.0%	0.67	239.00	4%	1.81						
90	948.00	16.0%	0.58	730.00	12%	0.75	857.00	14%	0.97	736.00	12%	0.80	649.00	11.0%	0.84	262.00	4%	2.09						
100	926.00	15.7%	0.73	722.00	12%	0.94	864.00	15%	1.19	732.00	12%	1.00	649.00	11.0%	1.04	284.00	5%	2.38						
110	905.00	15.3%	0.90	715.00	12%	1.14	872.00	15%	1.42	729.00	12%	1.21	649.00	11.0%	1.26	305.00	5%	2.68						
120	886.00	15.0%	1.10	709.00	12%	1.37	879.00	15%	1.66	727.00	12%	1.44	650.00	11.0%	1.50	324.00	5%	3.00						
130	865.00	14.6%	1.32	703.00	12%	1.62	884.00	15%	1.93	723.00	12%	1.70	649.00	11.0%	1.76	342.00	6%	3.34						
140	847.00	14.3%	1.56	698.00	12%	1.90	888.00	15%	2.22	721.00	12%	1.98	650.00	11.0%	2.04	359.00	6%	3.69						
150	829.00	14.0%	1.83	692.00	12%	2.20	892.00	15%	2.53	718.00	12%	2.28	649.00	11.0%	2.34	375.00	6%	4.05						
160	813.00	13.7%	2.13	689.00	12%	2.51	895.00	15%	2.86	716.00	12%	2.60	649.00	11.0%	2.67	390.00	7%	4.44						
170	799.00	13.5%	2.45	685.00	12%	2.85	898.00	15%	3.21	714.00	12%	2.94	649.00	11.0%	3.01	404.00	7%	4.84						
180	785.00	13.3%	2.79	682.00	12%	3.21	900.00	15%	3.58	712.00	12%	3.30	649.00	11.0%	3.38	417.00	7%	5.25						
190	774.00	13.1%	3.15	679.00	11%	3.59	902.00	15%	3.97	710.00	12%	3.69	649.00	11.0%	3.76	429.00	7%	5.69						
200	763.00	12.9%	3.54	676.00	11%	4.00	903.00	15%	4.38	708.00	12%	4.09	649.00	11.0%	4.17	440.00	7%	6.14						
210	753.00	12.7%	3.96	673.00	11%	4.43	903.00	15%	4.81	706.00	12%	4.52	648.00	11.0%	4.60	451.00	8%	6.62						
220	745.00	12.6%	4.39	671.00	11%	4.87	904.00	15%	5.26	705.00	12%	4.97	648.00	11.0%	5.05	461.00	8%	7.10						
230	737.00	12.5%	4.85	669.00	11%	5.34	905.00	15%	5.74	703.00	12%	5.44	648.00	11.0%	5.52	470.00	8%	7.61						
240	730.00	12.3%	5.33	668.00	11%	5.83	905.00	15%	6.23	702.00	12%	5.93	648.00	11.0%	6.01	479.00	8%	8.14						
250	723.00	12.2%	5.84	666.00	11%	6.35	905.00	15%	6.75	700.00	12%	6.44	647.00	10.9%	6.53	487.00	9%	8.68						
260	718.00	12.1%	6.37	664.00	11%	6.88	905.00	15%	7.28	699.00	12%	6.98	647.00	10.9%	7.07	494.00	9%	9.25						
270	713.00	12.1%	6.92	663.00	11%	7.44	905.00	15%	7.84	698.00	12%	7.53	647.00	10.9%	7.62	502.00	9%	9.84						
280	708.00	12.0%	7.49	661.00	11%	8.02	904.00	15%	8.42	697.00	12%	8.11	646.00	10.9%	8.21	508.00	9%	10.44						
290	703.00	11.9%	8.08	660.00	11%	8.62	904.00	15%	9.02	696.00	12%	8.71	646.00	10.9%	8.81	514.00	9%	11.07						
300	699.00	11.8%	8.70	659.00	11%	9.24	903.00	15%	9.65	695.00	12%	9.34	646.00	10.9%	9.43	520.00	9%	11.71						
310	696.00	11.8%	9.34	658.00	11%	9.88	902.00	15%	10.29	694.00	12%	9.98	645.00	10.9%	10.08	525.00	9%	12.38						
320	692.00	11.7%	10.01	657.00	11%	10.55	902.00	15%	10.96	693.00	12%	10.64	645.00	10.9%	10.74	531.00	9%	13.07						
330	689.00	11.6%	10.69	656.00	11%	11.24	901.00	15%	11.65	692.00	12%	11.34	645.00	10.9%	11.43	535.00	9%	13.78						
340	686.00	11.6%	11.40	655.00	11%	11.95	900.00	15%	12.36	691.00	12%	12.05	644.00	10.9%	12.14	540.00	9%	14.50						
350	683.00	11.5%	12.13	654.00	11%	12.68	899.00	15%	13.09	690.00	12%	12.78	644.00	10.9%	12.88	544.00	9%	15.26						
360	681.00	11.5%	12.89	653.00	11%	13.44	898.00	15%	13.85	689.00	12%	13.54	643.00	10.9%	13.64	548.00	9%	16.03						
370	678.00	11.5%	13.66	652.00	11%	14.22	897.00	15%	14.63	688.00	12%	14.32	643.00	10.9%	14.41	551.00	9%	16.82						
380	676.00	11.4%	14.46	651.00	11%	15.02	896.00	15%	15.43	687.00	12%	15.12	642.00	10.9%	15.21	555.00	9%	17.64						
390	674.00	11.4%	15.29	650.00	11%	15.84	895.00	15%	16.26	686.00	12%	15.94	642.00	10.9%	16.04	558.00	9%	18.48						
400	674.00	11.4%	16.12	649.00	11%	16.69	894.00	15%	17.10	686.00	12%	16.78	642.00	10.9%	16.88	561.00	9%	19.33						
410	670.00	11.3%	16.99	648.00	11%	17.56	893.00	15%	17.96	685.00	12%	17.66	641.00	10.8%	17.75	564.00	10%	20.21						
420	668.00	11.3%	17.89	648.00	11%	18.45	892.00	15%	18.86	684.00	12%	18.54	641.00	10.8%	18.65	566.00	10%	21.11						
430	666.00	11.3%	18.80	647.00	11%	19.36	891.00	15%	19.77	683.00	12%	19.46	640.00	10.8%	19.56	569.00	10%	22.04						
440	664.00	11.2%	19.74	646.00	11%	20.30	889.00	15%	20.71	682.00	12%	20.40	640.00	10.8%	20.50	571.00	10%	22.99						
450	663.00	11.2%	20.70	645.00	11%	21.27	888.00	15%	21.67	681.00	12%	21.36	639.00	10.8%	21.47	573.00	10%	23.96						
460	661.00	11.2%	21.69	644.00	11%	22.25	887.00	15%	22.66	680.00	11%	22.25	639.00	10.8%	22.45	575.00	10%	24.96						
470	659.00	11.1%	22.70	643.00	11%	23.27	885.00	15%	23.67	680.00	11%	23.36	638.00	10.8%	23.46	577.00	10%	25.98						
480	658.00	11.1%	23.73	643.00	11%	24.30	884.00	15%	24.70	679.00	11%	24.39	638.00	10.8%	24.50	578.00	10%	27.02						
490	657.00	11.1%	24.79	642.00	11%	25.36	883.00	15%	25.76	678.00	11%	25.45	637.00	10.8%	25.56	580.00	10%	28.08						
500	655.00	11.1%	25.87	641.00	11%	26.44	882.00	15%	26.84	677.00	11%	26.53	636.00	10.8%	26.64	582.00	10%	29.17						
510	654.00	11.1%	26.98	640.00	11%	27.54	880.00	15%	27.95	676.00	11%	27.64	636.00	10.8%	27.74	583.00	10%	30.29						
520	652.00	11.0%	28.11	640.00	11%	28.68	879.00	15%	29.08	675.00	11%	28.77	635.00	10.7%	28.88	584.00	10%	31.42						
530	651.00	11.0%	29.26	639.00	11%	29.83	878.00	15%	29.83	674.00	11%	29.83	634.00	10.7%	29.83	585.00	10%	32.57						
540	650.00	11.0%	30.44	638.00	11%	31.01	876.00	15%	31.41	673.00	11%	31.11	634.00	10.7%	31.21	586.00	10%	33.77						
550	649.00	11.0%	31.65	637.00	11%	32.22	875.00	15%	32.61	673.00	11%	32.31	633.00	10.7%	32.42	587.00	10%	34.98						
560	647.00	11.0%	32.88	636.00	11%	33.07	874.00	15%	33.46	672.00	11%	33.36	632.00	10.7%	33.46	588.00	10%	36.27						
570	646.00	10.9%	34.13	636.00	11%	34.70	872.00	15%	35.10	671.00	11%	34.80	632.00											



ANEXO B3.4: Zona 4 (Velocidad de viento máxima 120 km/h)

SPARROW ACSR 2 AWG

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 120
Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
Tensión de rotura (daN): 1267.74
Peso (daN/m): 0.1330
Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 23%
Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	291.00	23.0%	0.01	202.00	15.9%	0.01	202.00	15.9%	0.03	196.00	15.5%	0.01	172.00	13.6%	0.01	25.00	2.0%	0.07
20	291.00	23.0%	0.02	201.00	15.9%	0.03	216.00	17.0%	0.10	198.00	15.6%	0.06	173.00	13.6%	0.04	37.00	2.9%	0.18
30	291.00	23.0%	0.05	202.00	15.9%	0.07	233.00	18.4%	0.21	202.00	15.9%	0.11	174.00	13.7%	0.09	46.00	3.6%	0.32
40	291.00	23.0%	0.09	202.00	15.9%	0.13	251.00	19.8%	0.35	206.00	16.2%	0.19	176.00	13.9%	0.15	55.00	4.3%	0.49
50	290.00	22.9%	0.14	202.00	15.9%	0.21	267.00	21.1%	0.51	210.00	16.6%	0.28	177.00	14.0%	0.23	62.00	4.9%	0.67
60	287.00	22.6%	0.21	201.00	15.9%	0.30	282.00	22.2%	0.68	213.00	16.8%	0.41	177.00	14.0%	0.34	69.00	5.4%	0.87
70	282.00	22.2%	0.29	199.00	15.7%	0.41	295.00	23.3%	0.88	215.00	17.0%	0.54	177.00	14.0%	0.46	75.00	5.9%	1.09
80	277.00	21.8%	0.38	197.00	15.5%	0.54	307.00	24.2%	1.09	217.00	17.1%	0.70	177.00	14.0%	0.60	80.00	6.3%	1.32
90	273.00	21.5%	0.49	196.00	15.5%	0.69	319.00	25.2%	1.32	219.00	17.3%	0.87	177.00	14.0%	0.76	86.00	6.8%	1.57
100	267.00	21.1%	0.62	194.00	15.3%	0.86	329.00	26.0%	1.56	221.00	17.4%	1.06	177.00	14.0%	0.94	90.00	7.1%	1.84
110	261.00	20.6%	0.77	193.00	15.2%	1.04	339.00	26.7%	1.82	223.00	17.6%	1.27	177.00	14.0%	1.14	95.00	7.5%	2.12
120	255.00	20.1%	0.84	192.00	15.1%	1.25	348.00	27.5%	2.10	224.00	17.7%	1.50	177.00	14.0%	1.35	99.00	7.8%	2.42
130	250.00	19.7%	1.13	190.00	15.0%	1.48	356.00	28.1%	2.39	225.00	17.7%	1.74	177.00	14.0%	1.59	103.00	8.1%	2.74
140	244.00	19.2%	1.33	189.00	14.9%	1.72	364.00	28.7%	2.70	226.00	17.8%	2.00	177.00	14.0%	1.84	106.00	8.4%	3.07
150	238.00	18.8%	1.56	188.00	14.8%	1.99	371.00	29.3%	3.02	227.00	17.8%	2.28	177.00	14.0%	2.11	110.00	8.7%	3.41
160	234.00	18.5%	1.82	187.00	14.8%	2.28	377.00	29.7%	3.36	228.00	18.0%	2.58	177.00	14.0%	2.41	113.00	8.9%	3.77
170	230.00	18.1%	2.09	186.00	14.7%	2.58	383.00	30.2%	3.71	229.00	18.1%	2.89	177.00	14.0%	2.72	116.00	9.2%	4.15
180	225.00	17.7%	2.39	185.00	14.6%	2.91	388.00	30.6%	4.08	229.00	18.1%	3.23	177.00	14.0%	3.05	119.00	9.4%	4.54
190	221.00	17.4%	2.71	185.00	14.6%	3.25	393.00	31.0%	4.47	230.00	18.1%	3.58	177.00	14.0%	3.39	121.00	9.5%	4.95
200	218.00	17.2%	3.06	184.00	14.5%	3.62	398.00	31.4%	4.87	230.00	18.1%	3.95	177.00	14.0%	3.76	124.00	9.8%	5.38
210	214.00	16.9%	3.42	183.00	14.4%	4.00	402.00	31.7%	5.29	230.00	18.1%	4.34	177.00	14.0%	4.15	126.00	9.9%	5.82
220	212.00	16.7%	3.81	183.00	14.4%	4.40	406.00	32.0%	5.73	231.00	18.2%	4.75	177.00	14.0%	4.56	128.00	10.1%	6.28
230	209.00	16.5%	4.22	183.00	14.4%	4.82	409.00	32.3%	6.19	231.00	18.2%	5.18	177.00	14.0%	4.98	130.00	10.3%	6.75
240	206.00	16.2%	4.65	182.00	14.4%	5.27	412.00	32.5%	6.66	231.00	18.2%	5.63	177.00	14.0%	5.43	132.00	10.4%	7.25
250	204.00	16.1%	5.10	182.00	14.4%	5.73	415.00	32.7%	7.15	231.00	18.2%	6.09	177.00	14.0%	5.89	134.00	10.6%	7.76
260	202.00	15.9%	5.57	181.00	14.3%	6.21	418.00	33.0%	7.65	231.00	18.2%	6.57	177.00	14.0%	6.37	136.00	10.7%	8.28
270	200.00	15.8%	6.06	181.00	14.3%	6.71	421.00	33.2%	8.18	231.00	18.2%	7.08	177.00	14.0%	6.88	138.00	10.9%	8.82
280	199.00	15.7%	6.57	181.00	14.3%	7.23	423.00	33.4%	8.72	231.00	18.2%	7.60	176.00	13.9%	7.40	139.00	11.0%	9.39
290	197.00	15.5%	7.10	180.00	14.2%	7.77	425.00	33.5%	9.28	231.00	18.2%	8.14	176.00	13.9%	7.94	141.00	11.1%	9.96
300	196.00	15.5%	7.66	180.00	14.2%	8.33	427.00	33.7%	9.86	231.00	18.2%	8.70	176.00	13.9%	8.50	142.00	11.2%	10.55
310	194.00	15.3%	8.23	180.00	14.2%	8.91	429.00	33.8%	10.46	231.00	18.2%	9.28	176.00	13.9%	9.08	144.00	11.4%	11.15
320	193.00	15.2%	8.83	179.00	14.1%	9.51	430.00	33.9%	11.07	231.00	18.2%	9.88	176.00	13.9%	9.68	145.00	11.4%	11.77
330	192.00	15.1%	9.44	179.00	14.1%	10.13	432.00	34.1%	11.71	231.00	18.2%	10.50	176.00	13.9%	10.30	146.00	11.5%	12.41
340	191.00	15.1%	10.08	179.00	14.1%	10.77	433.00	34.2%	12.36	230.00	18.1%	11.14	176.00	13.9%	10.94	147.00	11.6%	13.07
350	190.00	15.0%	10.73	179.00	14.1%	11.43	434.00	34.2%	13.03	230.00	18.1%	11.80	176.00	13.9%	11.60	149.00	11.8%	13.74
360	189.00	14.9%	11.40	178.00	14.0%	12.10	435.00	34.3%	13.72	230.00	18.1%	12.48	176.00	13.9%	12.28	150.00	11.8%	14.43
370	188.00	14.8%	12.10	178.00	14.0%	12.81	436.00	34.4%	14.43	230.00	18.1%	13.18	176.00	13.9%	12.98	151.00	11.9%	15.15
380	188.00	14.8%	12.82	178.00	14.0%	13.53	437.00	34.5%	15.16	230.00	18.1%	13.90	176.00	13.9%	13.70	152.00	12.0%	15.88
390	187.00	14.8%	13.56	178.00	14.0%	14.26	437.00	34.5%	15.91	230.00	18.1%	14.64	176.00	13.9%	14.44	152.00	12.0%	16.64
400	186.00	14.7%	14.32	178.00	14.0%	15.02	438.00	34.5%	16.68	229.00	18.1%	15.40	176.00	13.8%	15.20	153.00	12.1%	17.41
410	186.00	14.7%	15.09	177.00	14.0%	15.81	439.00	34.6%	17.46	229.00	18.1%	16.18	176.00	13.8%	15.98	154.00	12.1%	18.20
420	185.00	14.6%	15.89	177.00	14.0%	16.60	439.00	34.6%	18.27	229.00	18.1%	16.98	176.00	13.8%	16.78	155.00	12.2%	19.01
430	184.00	14.5%	16.71	177.00	14.0%	17.43	439.00	34.6%	19.10	229.00	18.1%	17.80	176.00	13.8%	17.60	156.00	12.2%	19.84
440	184.00	14.5%	17.55	177.00	14.0%	18.27	440.00	34.7%	19.95	228.00	18.0%	18.64	176.00	13.8%	18.45	156.00	12.3%	20.69
450	183.00	14.4%	18.41	177.00	14.0%	19.13	440.00	34.7%	20.81	228.00	18.0%	19.50	176.00	13.8%	19.31	157.00	12.4%	21.57
460	183.00	14.4%	19.30	176.00	13.9%	20.01	440.00	34.7%	21.70	228.00	18.0%	20.39	176.00	13.8%	20.19	157.00	12.4%	22.46
470	182.00	14.4%	20.19	176.00	13.9%	20.92	440.00	34.7%	22.61	228.00	18.0%	21.29	176.00	13.8%	21.10	158.00	12.5%	23.37
480	182.00	14.4%	21.12	176.00	13.9%	21.84	441.00	34.8%	23.54	227.00	17.9%	22.21	176.00	13.8%	22.02	158.00	12.5%	24.30
490	182.00	14.4%	22.07	176.00	13.9%	22.79	441.00	34.8%	24.49	227.00	17.9%	23.16	174.00	13.7%	22.97	159.00	12.5%	25.26
500	181.00	14.3%	23.04	176.00	13.9%	23.76	441.00	34.8%	25.46	227.00	17.9%	24.13	174.00	13.7%	23.94	159.00	12.5%	26.24
510	181.00	14.3%	24.03	175.00	13.8%	24.75	441.00	34.8%	26.45	227.00	17.9%	25.12	174.00	13.7%	24.93	160.00	12.6%	27.23
520	180.00	14.2%	25.03	175.00	13.8%	25.75	440.00	34.7%	27.46	226.00	17.8%	26.12	174.00	13.7%	25.94	160.00	12.6%	28.24
530	180.00	14.2%	26.06	175.00	13.8%	26.78	440.00	34.7%	28.50	226.00	17.8%	27.16	174.00	13.7%	26.97	160.00	12.6%	29.28
540	179.00	14.1%	27.12	175.00	13.8%	27.84	440.00	34.7%	29.56	226.00	17.8%	28.21	174.00	13.7%	28.02	161.00	12.7%	30.34
550	179.00	14.1%	28.20	175.00	13.8%	28.92	440.00	34.7%	30.63	225.00	17.7%	29.29	174.00	13.7%	29.10	161.00	12.7%	31.43
560	179.00	14.1%	29.29	175.00	13.8%	30.01	440.00	34.7%	31.73	225.00	17.7%	30.38	173.00	13.6%	30.20	161.00	12.7%	32.53
570	178.00	14.0%	30.41	174.00	13.7%	31.13	440.00	34.7%	32.85	225.00	17.7%	31.50	173.00	13.6%	31.31	161.00	12.7%	33.65
580	178.00	14.0%	31.55	174.00	13.7%	32.28	439.00	34.6%	34.00	225.00	17.7%	32.64	173.00	13.6%	32.46	162.00	12.8%	34.80
590	178.00	14.0%	32.72	174.00	13.7%	33.44	439.00	34.6%	35.16	224.00	17.7%	33.80	173.00	13.6%	33.62	162.00	12.8%	35.97
600	177.00	14.0%	33.90	174.00	13.7%	34.62	439.00	34.6%	36.34	224.00	17.7%	34.98	173.00	13.6%	34.81	162.00	12.8%	37.16

RAVEN ACSR 110 AWG																								
Clima: Frío																								
Altitud: 2500 msnm - 3500 msnm																								
Temperatura máxima (°C): 27																								
Temperatura media (°C): 9																								
Temperatura mínima (°C): 4																								
Temperatura coincidente (°C): 5																								
Velocidad del viento máxima (km/h): 120																								
Velocidad del viento promedio (km/h): 70																								
Propiedades físicas del conductor:																								
Tensión de rotura (daN): 1948.32																								
Peso (daN/m): 0.2118																								
Condición de tensionado: (% límite de tensión de rotura)																								
Temperatura mínima: 22.5%																								
Operación diaria (EDS): 14%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial						Mínima temperatura (temperatura mínima y sin viento). Condición Final						Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	434.00	22.3%	0.01	318.00	16.3%	0.01	315.00	16.2%	0.02	310.00	15.9%	0.01	272.00	14.0%	0.01	44.00	2.3%	0.06						
20	432.00	22.2%	0.02	317.00	16.2%	0.03	323.00	16.9%	0.09	311.00	16.0%	0.06	272.00	14.0%	0.04	61.00	3.1%	0.17						
30	430.00	22.1%	0.06	316.00	16.2%	0.08	348.00	17.9%	0.19	313.00	16.1%	0.10	272.00	14.0%	0.09	75.00	3.8%	0.32						
40	426.00	21.9%	0.10	314.00	16.1%	0.14	367.00	18.8%	0.31	315.00	16.2%	0.18	272.00	14.0%	0.16	88.00	4.5%	0.48						
50	421.00	21.6%	0.16	311.00	16.0%	0.21	385.00	19.8%	0.45	317.00	16.3%	0.27	272.00	14.0%	0.24	99.00	5.1%	0.67						
60	416.00	21.4%	0.23	309.00	15.9%	0.31	402.00	20.6%	0.62	319.00	16.4%	0.39	272.00	14.0%	0.35	109.00	5.6%	0.87						
70	409.00	21.0%	0.32	306.00	15.7%	0.42	418.00	21.5%	0.80	321.00	16.5%	0.52	272.00	14.0%	0.48	119.00	6.1%	1.10						
80	402.00	20.6%	0.42	303.00	15.6%	0.56	433.00	22.2%	1.00	322.00	16.5%	0.67	272.00	14.0%	0.62	127.00	6.5%	1.33						
90	395.00	20.3%	0.54	301.00	15.4%	0.71	446.00	22.9%	1.22	324.00	16.6%	0.85	272.00	14.0%	0.79	135.00	6.9%	1.59						
100	387.00	19.9%	0.68	298.00	15.3%	0.89	459.00	23.6%	1.46	325.00	16.7%	1.04	273.00	14.0%	0.97	143.00	7.3%	1.86						
110	380.00	19.5%	0.84	296.00	15.2%	1.08	470.00	24.1%	1.71	327.00	16.8%	1.25	272.00	14.0%	1.18	150.00	7.7%	2.14						
120	372.00	19.1%	1.02	294.00	15.1%	1.30	480.00	24.6%	1.97	328.00	16.8%	1.47	272.00	14.0%	1.40	156.00	8.0%	2.46						
130	364.00	18.7%	1.23	292.00	15.0%	1.53	489.00	25.1%	2.26	328.00	16.8%	1.72	272.00	14.0%	1.64	162.00	8.3%	2.77						
140	357.00	18.3%	1.45	290.00	14.9%	1.79	498.00	25.6%	2.56	329.00	16.9%	1.99	272.00	14.0%	1.91	167.00	8.6%	3.10						
150	350.00	18.0%	1.70	288.00	14.8%	2.07	505.00	25.9%	2.88	329.00	16.9%	2.27	272.00	14.0%	2.19	172.00	8.8%	3.46						
160	344.00	17.7%	1.97	287.00	14.7%	2.36	513.00	26.3%	3.21	330.00	16.9%	2.57	272.00	14.0%	2.49	177.00	9.1%	3.83						
170	338.00	17.3%	2.26	286.00	14.7%	2.68	519.00	26.6%	3.56	330.00	16.9%	2.90	272.00	14.0%	2.81	182.00	9.3%	4.21						
180	333.00	17.1%	2.58	284.00	14.6%	3.02	524.00	26.9%	3.94	330.00	16.9%	3.24	272.00	14.0%	3.16	186.00	9.5%	4.62						
190	328.00	16.8%	2.92	283.00	14.5%	3.38	530.00	27.2%	4.32	330.00	16.9%	3.60	272.00	14.0%	3.52	190.00	9.8%	5.04						
200	323.00	16.6%	3.28	282.00	14.5%	3.75	534.00	27.4%	4.73	330.00	16.9%	3.99	272.00	14.0%	3.90	194.00	10.0%	5.47						
210	318.00	16.4%	3.66	281.00	14.4%	4.15	539.00	27.7%	5.15	330.00	16.9%	4.39	272.00	14.0%	4.30	197.00	10.1%	5.92						
220	315.00	16.2%	4.07	281.00	14.4%	4.57	542.00	27.8%	5.59	330.00	16.9%	4.81	272.00	14.0%	4.72	201.00	10.3%	6.39						
230	312.00	16.0%	4.49	280.00	14.4%	5.01	546.00	28.0%	6.05	330.00	16.9%	5.25	272.00	14.0%	5.16	204.00	10.5%	6.88						
240	308.00	15.9%	4.94	279.00	14.3%	5.47	549.00	28.2%	6.53	330.00	16.9%	5.71	271.00	13.9%	5.63	207.00	10.6%	7.39						
250	306.00	15.7%	5.41	278.00	14.3%	5.95	552.00	28.3%	7.02	330.00	16.9%	6.19	271.00	13.9%	6.11	209.00	10.7%	7.91						
260	303.00	15.6%	5.90	278.00	14.3%	6.45	554.00	28.4%	7.54	329.00	16.9%	6.69	271.00	13.9%	6.61	212.00	10.9%	8.45						
270	301.00	15.4%	6.42	277.00	14.2%	6.97	556.00	28.5%	8.07	329.00	16.9%	7.21	271.00	13.9%	7.13	214.00	11.0%	9.02						
280	299.00	15.3%	6.95	277.00	14.2%	7.51	558.00	28.6%	8.63	329.00	16.9%	7.75	271.00	13.9%	7.67	217.00	11.1%	9.59						
290	297.00	15.2%	7.50	276.00	14.2%	8.07	560.00	28.7%	9.20	329.00	16.9%	8.31	271.00	13.9%	8.23	219.00	11.2%	10.19						
300	296.00	15.2%	8.07	276.00	14.2%	8.65	562.00	28.8%	9.79	328.00	16.8%	8.89	271.00	13.9%	8.81	221.00	11.3%	10.80						
310	294.00	15.1%	8.67	276.00	14.2%	9.25	563.00	28.9%	10.40	328.00	16.8%	9.50	271.00	13.9%	9.41	223.00	11.4%	11.44						
320	292.00	15.0%	9.29	275.00	14.1%	9.87	564.00	28.9%	11.03	328.00	16.8%	10.12	271.00	13.9%	10.04	225.00	11.5%	12.08						
330	291.00	14.9%	9.93	275.00	14.1%	10.51	565.00	29.0%	11.68	328.00	16.8%	10.76	270.00	13.9%	10.68	227.00	11.7%	12.74						
340	290.00	14.9%	10.59	274.00	14.1%	11.17	566.00	29.1%	12.35	327.00	16.8%	11.42	270.00	13.9%	11.34	229.00	11.8%	13.42						
350	288.00	14.8%	11.27	274.00	14.1%	11.86	567.00	29.1%	13.04	327.00	16.8%	12.11	270.00	13.9%	12.03	230.00	11.8%	14.12						
360	287.00	14.7%	11.97	274.00	14.1%	12.56	568.00	29.2%	13.75	327.00	16.8%	12.81	270.00	13.9%	12.73	232.00	11.9%	14.84						
370	286.00	14.7%	12.70	273.00	14.0%	13.29	568.00	29.2%	14.49	326.00	16.7%	13.54	270.00	13.9%	13.46	233.00	12.0%	15.58						
380	285.00	14.6%	13.44	273.00	14.0%	14.04	568.00	29.2%	15.24	326.00	16.7%	14.29	270.00	13.9%	14.21	235.00	12.1%	16.34						
390	284.00	14.6%	14.20	273.00	14.0%	14.80	569.00	29.2%	16.00	326.00	16.7%	15.05	270.00	13.9%	14.97	236.00	12.1%	17.12						
400	283.00	14.5%	14.99	272.00	14.0%	15.59	569.00	29.2%	16.80	326.00	16.7%	15.84	269.00	13.8%	15.76	237.00	12.2%	17.92						
410	282.00	14.5%	15.80	272.00	14.0%	16.41	569.00	29.2%	17.62	325.00	16.7%	16.66	269.00	13.8%	16.58	238.00	12.2%	18.74						
420	282.00	14.5%	16.63	272.00	14.0%	17.23	569.00	29.2%	18.45	324.00	16.6%	17.48	269.00	13.8%	17.40	239.00	12.3%	19.58						
430	281.00	14.4%	17.48	271.00	13.9%	18.08	569.00	29.2%	19.30	324.00	16.6%	18.33	269.00	13.8%	18.26	240.00	12.3%	20.44						
440	280.00	14.4%	18.35	271.00	13.9%	18.96	569.00	29.2%	20.18	324.00	16.6%	19.21	269.00	13.8%	19.13	241.00	12.4%	21.33						
450	279.00	14.3%	19.25	271.00	13.9%	19.86	569.00	29.2%	21.08	323.00	16.5%	20.11	268.00	13.8%	20.03	242.00	12.4%	22.23						
460	279.00	14.3%	20.16	271.00	13.9%	20.77	569.00	29.2%	21.99	323.00	16.5%	21.02	268.00	13.8%	20.95	243.00	12.5%	23.15						
470	278.00	14.3%	21.10	270.00	13.9%	21.71	569.00	29.2%	22.94	323.00	16.5%	21.96	268.00	13.8%	21.89	244.00	12.5%	24.10						
480	277.00	14.2%	22.06	270.00	13.9%	22.67	569.00	29.2%	23.90	322.00	16.5%	22.92	268.00	13.8%	22.85	244.00	12.5%	25.07						
490	277.00	14.2%	23.04	270.00	13.9%	23.66	568.00	29.2%	24.88	322.00	16.5%	23.90	268.00	13.8%	23.83	245.00	12.6%	26.06						
500	276.00	14.2%	24.05	269.00	13.8%	24.66	568.00	29.2%	25.89	321.00	16.5%	24.91	267.00	13.7%	24.84	246.00	12.6%	27.07						
510	276.00	14.2%	25.08	269.00	13.8%	25.69	568.00	29.2%	26.92	321.00	16.5%	25.93	267.00	13.7%	25.86	246.00	12.6%	28.10						
520	275.00	14.1%	26.13	269.00	13.8%	26.74	567.00	29.1%	27.97	320.00	16.4%	26.99	267.00	13.7%	26.92	247.00	12.7%	29.16						
530	274.00	14.1%	27.19	268.00	13.8%	27.81	567.00	29.1%	29.04	320.00	16.4%	28.06	267.00	13.7%	28.02	248.00	12.7%	30.24						
540	274.00	14.1%	28.29	268.00	13.8%	28.91	566.00	29.1%	30.13	320.00	16.4%	29.15	267.00	13.7%	29.08	248.00	12.7%	31.34						
550	273.00	14.0%	29.41	268.00	13.8%	30.03	566.00	29.1%	31.26	319.00	16.4%	30.27	266.00	13.7%	30.20	248.00	12.7%	32.47						
560	272.00	14.0%	30.56	267.00	13.7%	31.18	566.00	29.0%	32.36	319.00	16.4%	31.36	266.00	13.7%	31.29	249.00	12.8%	33.62						
570	272.00	14.0%	31.72	267.00	13.7%	32.34	564.00	28.9%	33.56	318.00	16.3%	32.58	266.00	13.7%	32.51	249.00	12.8%	34.78						
580	272.00	14.0%	32.90	266.00	13.7%	33.52	564.00	28.9%	34.74	318.00	16.3%	33.76	265.00	13.7%	33.70	249.00	12.8%	35.97						
590	271.00	13.9%	34.10	265.00	13.7%	34.71	563.00	28.8%	35.96	317.00	16.2%	34.99	265.00	13.6%	34.91	250.00	12.9%	37.19						
600	271.00	13.9%	35.25	265.00	13.7%	35.97	563.00	28.9%	37.19	317.00	16.3%	36.21	265.00	13.6%	36.15	250.00	12.9%	38.43						

QUAL ACSR 2/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2362.01
 Peso (daN/m): 0.2667

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS				
	m	m		m	m		m	m		m	m		m	m		m	m		m	m				
10	529.00	22.4%	0.01	388.00	16.4%	0.01	383.00	16.2%	0.02	377.00	16.0%	0.01	330.00	14.0%	0.01	51.00	2.2%	0.07						
20	527.00	22.2%	0.03	386.00	16.2%	0.03	386.00	16.9%	0.08	379.00	16.0%	0.04	330.00	14.0%	0.04	73.00	3.1%	0.18						
30	523.00	22.1%	0.06	384.00	16.3%	0.08	417.00	17.7%	0.18	379.00	16.0%	0.10	330.00	14.0%	0.09	91.00	3.9%	0.33						
40	518.00	21.9%	0.10	382.00	16.2%	0.14	438.00	18.5%	0.30	381.00	16.1%	0.18	330.00	14.0%	0.16	107.00	4.5%	0.50						
50	512.00	21.7%	0.16	379.00	16.0%	0.22	469.00	19.4%	0.44	383.00	16.2%	0.27	330.00	14.0%	0.25	121.00	5.1%	0.69						
60	504.00	21.3%	0.24	375.00	15.9%	0.32	477.00	20.2%	0.60	384.00	16.3%	0.39	330.00	14.0%	0.36	134.00	5.7%	0.89						
70	496.00	21.0%	0.33	372.00	15.7%	0.44	495.00	21.0%	0.78	386.00	16.3%	0.52	330.00	14.0%	0.49	146.00	6.2%	1.12						
80	486.00	20.6%	0.44	366.00	15.6%	0.58	510.00	21.6%	0.97	387.00	16.4%	0.68	330.00	14.0%	0.65	157.00	6.6%	1.36						
90	477.00	20.2%	0.57	364.00	15.4%	0.74	525.00	22.2%	1.19	388.00	16.4%	0.85	330.00	14.0%	0.82	167.00	7.1%	1.62						
100	467.00	19.8%	0.71	361.00	15.3%	0.92	538.00	22.8%	1.42	389.00	16.5%	1.05	330.00	14.0%	1.01	176.00	7.5%	1.90						
110	457.00	19.3%	0.86	359.00	15.2%	1.12	550.00	23.3%	1.67	390.00	16.5%	1.26	330.00	14.0%	1.22	184.00	7.8%	2.19						
120	447.00	18.9%	1.07	356.00	15.1%	1.35	560.00	23.7%	1.94	391.00	16.6%	1.49	330.00	14.0%	1.45	192.00	8.1%	2.50						
130	436.00	18.5%	1.29	353.00	14.9%	1.60	569.00	24.1%	2.23	390.00	16.5%	1.75	330.00	14.0%	1.71	199.00	8.4%	2.83						
140	428.00	18.1%	1.53	351.00	14.9%	1.86	578.00	24.5%	2.53	390.00	16.5%	2.03	330.00	14.0%	1.98	206.00	8.7%	3.17						
150	420.00	17.8%	1.79	349.00	14.8%	2.15	586.00	24.8%	2.85	391.00	16.6%	2.32	330.00	14.0%	2.27	213.00	9.0%	3.53						
160	411.00	17.4%	2.07	347.00	14.7%	2.46	593.00	25.1%	3.19	391.00	16.6%	2.63	330.00	14.0%	2.59	219.00	9.3%	3.91						
170	405.00	17.1%	2.38	345.00	14.6%	2.79	599.00	25.4%	3.55	391.00	16.6%	2.97	330.00	14.0%	2.92	224.00	9.5%	4.30						
180	399.00	16.9%	2.71	344.00	14.6%	3.14	604.00	25.6%	3.92	391.00	16.6%	3.32	330.00	14.0%	3.28	229.00	9.7%	4.71						
190	392.00	16.6%	3.07	343.00	14.5%	3.51	609.00	25.8%	4.32	390.00	16.5%	3.70	330.00	14.0%	3.65	234.00	9.9%	5.15						
200	387.00	16.4%	3.45	341.00	14.4%	3.91	613.00	26.0%	4.73	390.00	16.5%	4.09	329.00	13.9%	4.05	239.00	10.1%	5.59						
210	382.00	16.2%	3.85	341.00	14.4%	4.32	617.00	26.1%	5.16	390.00	16.5%	4.51	329.00	13.9%	4.46	243.00	10.3%	6.06						
220	378.00	16.0%	4.27	340.00	14.4%	4.75	621.00	26.3%	5.61	389.00	16.5%	4.95	329.00	13.9%	4.90	247.00	10.5%	6.54						
230	374.00	15.8%	4.72	339.00	14.4%	5.21	624.00	26.4%	6.08	389.00	16.5%	5.40	329.00	13.9%	5.36	251.00	10.6%	7.05						
240	370.00	15.7%	5.19	338.00	14.3%	5.69	626.00	26.5%	6.57	389.00	16.5%	5.88	329.00	13.9%	5.84	254.00	10.8%	7.57						
250	368.00	15.6%	5.67	337.00	14.3%	6.19	629.00	26.6%	7.08	388.00	16.4%	6.38	329.00	13.9%	6.34	257.00	10.9%	8.10						
260	364.00	15.4%	6.19	336.00	14.2%	6.70	631.00	26.7%	7.61	388.00	16.4%	6.90	329.00	13.9%	6.86	261.00	11.0%	8.66						
270	362.00	15.3%	6.72	336.00	14.2%	7.25	633.00	26.8%	8.16	388.00	16.4%	7.44	329.00	13.9%	7.40	263.00	11.1%	9.24						
280	359.00	15.2%	7.28	335.00	14.2%	7.81	634.00	26.8%	8.73	387.00	16.4%	8.00	328.00	13.9%	7.97	266.00	11.3%	9.84						
290	357.00	15.1%	7.85	335.00	14.2%	8.39	636.00	26.9%	9.32	387.00	16.4%	8.58	328.00	13.9%	8.55	269.00	11.4%	10.45						
300	355.00	15.0%	8.46	334.00	14.1%	8.99	637.00	27.0%	9.93	386.00	16.3%	9.19	328.00	13.9%	9.15	271.00	11.5%	11.09						
310	353.00	14.9%	9.08	333.00	14.1%	9.62	638.00	27.0%	10.56	386.00	16.3%	9.82	328.00	13.9%	9.78	273.00	11.6%	11.74						
320	352.00	14.9%	9.72	333.00	14.1%	10.27	638.00	27.0%	11.22	385.00	16.3%	10.46	328.00	13.9%	10.43	275.00	11.6%	12.42						
330	350.00	14.8%	10.38	333.00	14.1%	10.93	639.00	27.1%	11.89	385.00	16.3%	11.13	328.00	13.9%	11.09	278.00	11.8%	13.10						
340	349.00	14.8%	11.07	332.00	14.1%	11.63	639.00	27.1%	12.59	385.00	16.3%	11.82	327.00	13.8%	11.79	280.00	11.9%	13.81						
350	347.00	14.7%	11.78	332.00	14.1%	12.33	640.00	27.1%	13.30	384.00	16.3%	12.53	327.00	13.8%	12.50	282.00	11.9%	14.53						
360	346.00	14.6%	12.51	331.00	14.0%	13.07	640.00	27.1%	14.04	384.00	16.3%	13.26	327.00	13.8%	13.23	283.00	12.0%	15.28						
370	345.00	14.6%	13.26	331.00	14.0%	13.86	640.00	27.1%	14.79	383.00	16.2%	14.02	327.00	13.8%	14.02	285.00	12.1%	16.05						
380	344.00	14.6%	14.04	330.00	14.0%	14.60	640.00	27.1%	15.57	383.00	16.2%	14.80	327.00	13.8%	14.77	287.00	12.2%	16.84						
390	342.00	14.5%	14.84	330.00	14.0%	15.40	640.00	27.1%	16.37	382.00	16.2%	15.59	327.00	13.8%	15.56	288.00	12.2%	17.65						
400	341.00	14.4%	15.66	330.00	14.0%	16.22	640.00	27.1%	17.19	382.00	16.2%	16.42	326.00	13.8%	16.38	289.00	12.2%	18.48						
410	340.00	14.4%	16.50	329.00	13.9%	17.06	640.00	27.1%	18.04	381.00	16.1%	17.26	326.00	13.8%	17.23	291.00	12.3%	19.33						
420	340.00	14.4%	17.36	329.00	13.9%	17.92	640.00	27.1%	18.91	381.00	16.1%	18.12	326.00	13.8%	18.09	292.00	12.4%	20.20						
430	339.00	14.3%	18.25	328.00	13.9%	18.81	639.00	27.1%	19.79	381.00	16.1%	19.01	326.00	13.8%	19.01	293.00	12.4%	21.10						
440	338.00	14.3%	19.16	328.00	13.9%	19.72	639.00	27.1%	20.71	380.00	16.1%	19.92	325.00	13.8%	19.89	294.00	12.4%	22.02						
450	337.00	14.3%	20.09	328.00	13.9%	20.66	639.00	27.1%	21.64	380.00	16.1%	20.85	325.00	13.8%	20.83	295.00	12.5%	22.96						
460	336.00	14.2%	21.04	327.00	13.8%	21.61	638.00	27.0%	22.59	379.00	16.0%	21.80	325.00	13.8%	21.78	296.00	12.5%	23.92						
470	335.00	14.2%	22.02	327.00	13.8%	22.59	638.00	27.0%	23.57	379.00	16.0%	22.79	325.00	13.8%	22.76	297.00	12.6%	24.91						
480	335.00	14.2%	23.02	327.00	13.8%	23.59	637.00	27.0%	24.57	378.00	16.0%	23.78	324.00	13.7%	23.76	298.00	12.6%	25.91						
490	334.00	14.1%	24.04	326.00	13.8%	24.61	636.00	26.9%	25.60	378.00	16.0%	24.81	324.00	13.7%	24.78	299.00	12.6%	26.94						
500	333.00	14.1%	25.09	326.00	13.8%	25.66	636.00	26.9%	26.65	377.00	16.0%	25.86	324.00	13.7%	25.83	300.00	12.7%	28.00						
510	333.00	14.1%	26.16	326.00	13.8%	26.73	635.00	26.9%	27.72	377.00	16.0%	26.93	323.00	13.7%	26.90	300.00	12.7%	29.07						
520	332.00	14.1%	27.25	325.00	13.8%	27.83	634.00	26.8%	28.81	376.00	15.9%	28.02	323.00	13.7%	28.00	301.00	12.7%	30.17						
530	331.00	14.0%	28.37	325.00	13.8%	28.95	634.00	26.8%	29.93	376.00	15.9%	29.14	323.00	13.7%	29.12	301.00	12.7%	31.30						
540</																								

PENGUIN ACSR 4/0 AWG

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3714.26
 Peso (daN/m): 0.4243
 Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	808.00	22%	0.01	591.00	16%	0.01	580.00	16%	0.02	574.00	15%	0.01	501.00	13.5%	0.01	74.00	2%	0.07
20	804.00	22%	0.03	588.00	16%	0.04	597.00	16%	0.07	575.00	15%	0.04	500.00	13.5%	0.04	110.00	3%	0.19
30	798.00	21%	0.06	585.00	16%	0.08	619.00	17%	0.16	575.00	15%	0.10	501.00	13.5%	0.10	139.00	4%	0.34
40	787.00	21%	0.11	580.00	16%	0.15	642.00	17%	0.27	575.00	15%	0.17	501.00	13.5%	0.17	164.00	4%	0.52
50	777.00	21%	0.17	576.00	16%	0.23	664.00	18%	0.40	575.00	15%	0.27	501.00	13.5%	0.26	187.00	5%	0.71
60	764.00	21%	0.25	569.00	15%	0.34	685.00	18%	0.55	575.00	15%	0.38	500.00	13.5%	0.38	207.00	6%	0.92
70	749.00	20%	0.35	562.00	15%	0.46	705.00	19%	0.72	575.00	15%	0.52	500.00	13.5%	0.52	226.00	6%	1.15
80	733.00	20%	0.46	557.00	15%	0.61	723.00	19%	0.91	575.00	15%	0.68	500.00	13.5%	0.68	243.00	7%	1.40
90	717.00	19%	0.60	551.00	15%	0.78	739.00	20%	1.12	574.00	15%	0.86	500.00	13.5%	0.86	258.00	7%	1.66
100	700.00	19%	0.76	547.00	15%	0.97	752.00	20%	1.35	573.00	15%	1.06	501.00	13.5%	1.06	273.00	7%	1.95
110	685.00	18%	0.94	542.00	15%	1.18	765.00	21%	1.60	573.00	15%	1.28	501.00	13.5%	1.28	286.00	8%	2.24
120	668.00	18%	1.14	537.00	14%	1.42	776.00	21%	1.88	572.00	15%	1.52	501.00	13.5%	1.52	298.00	8%	2.56
130	653.00	18%	1.37	534.00	14%	1.68	786.00	21%	2.15	571.00	15%	1.79	501.00	13.5%	1.79	310.00	8%	2.90
140	638.00	17%	1.63	530.00	14%	1.96	794.00	21%	2.45	570.00	15%	2.07	500.00	13.5%	2.08	320.00	9%	3.25
150	626.00	17%	1.91	527.00	14%	2.27	801.00	22%	2.78	569.00	15%	2.38	500.00	13.5%	2.39	330.00	9%	3.62
160	614.00	17%	2.21	525.00	14%	2.59	808.00	22%	3.12	569.00	15%	2.71	500.00	13.5%	2.72	339.00	9%	4.01
170	604.00	16%	2.54	522.00	14%	2.94	813.00	22%	3.48	568.00	15%	3.06	500.00	13.5%	3.07	347.00	9%	4.42
180	594.00	16%	2.89	520.00	14%	3.31	818.00	22%	3.87	567.00	15%	3.43	500.00	13.5%	3.44	355.00	10%	4.85
190	585.00	16%	3.27	518.00	14%	3.70	822.00	22%	4.27	566.00	15%	3.82	500.00	13.5%	3.83	362.00	10%	5.29
200	578.00	16%	3.67	516.00	14%	4.11	825.00	22%	4.70	565.00	15%	4.24	499.00	13.4%	4.25	369.00	10%	5.76
210	571.00	15%	4.10	515.00	14%	4.54	829.00	22%	5.14	564.00	15%	4.67	499.00	13.4%	4.69	375.00	10%	6.24
220	565.00	15%	4.55	514.00	14%	5.00	831.00	22%	5.60	563.00	15%	5.13	499.00	13.4%	5.15	381.00	10%	6.74
230	560.00	15%	5.02	512.00	14%	5.48	833.00	22%	6.09	562.00	15%	5.61	499.00	13.4%	5.63	387.00	10%	7.26
240	554.00	15%	5.51	511.00	14%	5.99	835.00	22%	6.60	562.00	15%	6.11	499.00	13.4%	6.13	392.00	11%	7.80
250	550.00	15%	6.03	510.00	14%	6.51	836.00	23%	7.13	561.00	15%	6.63	499.00	13.4%	6.66	397.00	11%	8.36
260	546.00	15%	6.57	509.00	14%	7.05	838.00	23%	7.68	560.00	15%	7.18	498.00	13.4%	7.20	401.00	11%	8.95
270	542.00	15%	7.12	508.00	14%	7.62	839.00	23%	8.25	559.00	15%	7.75	498.00	13.4%	7.77	405.00	11%	9.55
280	539.00	15%	7.72	507.00	14%	8.21	839.00	23%	8.85	558.00	15%	8.34	498.00	13.3%	8.36	410.00	11%	10.17
290	536.00	14%	8.32	506.00	14%	8.82	840.00	23%	9.46	558.00	15%	8.95	498.00	13.4%	8.98	413.00	11%	10.81
300	534.00	14%	8.96	506.00	14%	9.46	840.00	23%	10.10	557.00	15%	9.59	497.00	13.4%	9.61	417.00	11%	11.47
310	531.00	14%	9.61	504.00	14%	10.12	840.00	23%	10.76	556.00	15%	10.25	497.00	13.4%	10.27	420.00	11%	12.16
320	529.00	14%	10.29	504.00	14%	10.79	840.00	23%	11.44	556.00	15%	10.92	497.00	13.4%	10.95	423.00	11%	12.86
330	526.00	14%	10.99	503.00	14%	11.50	840.00	23%	12.14	556.00	15%	11.62	496.00	13.4%	11.65	426.00	11%	13.59
340	524.00	14%	11.71	503.00	14%	12.22	840.00	23%	12.87	554.00	15%	12.35	496.00	13.4%	12.38	429.00	12%	14.33
350	523.00	14%	12.46	502.00	14%	12.97	839.00	23%	13.62	554.00	15%	13.10	496.00	13.4%	13.13	432.00	12%	15.09
360	520.00	14%	13.23	501.00	13%	13.74	839.00	23%	14.39	553.00	15%	13.87	495.00	13.3%	13.90	434.00	12%	15.88
370	518.00	14%	14.02	500.00	13%	14.54	838.00	23%	15.19	552.00	15%	14.67	495.00	13.3%	14.70	436.00	12%	16.68
380	517.00	14%	14.84	500.00	13%	15.35	838.00	23%	16.00	552.00	15%	15.48	495.00	13.3%	15.51	439.00	12%	17.51
390	516.00	14%	15.67	499.00	13%	16.19	837.00	23%	16.84	551.00	15%	16.32	494.00	13.3%	16.35	444.00	12%	18.36
400	514.00	14%	16.54	498.00	13%	17.06	836.00	23%	17.71	550.00	15%	17.19	494.00	13.3%	17.22	445.00	12%	19.24
410	513.00	14%	17.42	498.00	13%	17.94	835.00	22%	18.60	549.00	15%	18.07	494.00	13.3%	18.10	444.00	12%	20.13
420	512.00	14%	18.33	498.00	13%	18.85	834.00	22%	19.51	549.00	15%	18.98	493.00	13.3%	19.02	446.00	12%	21.04
430	510.00	14%	19.27	497.00	13%	19.78	834.00	22%	20.44	548.00	15%	19.92	493.00	13.3%	19.95	447.00	12%	21.99
440	509.00	14%	20.23	496.00	13%	20.75	833.00	22%	21.40	547.00	15%	20.88	493.00	13.3%	20.91	448.00	12%	22.95
450	508.00	14%	21.21	496.00	13%	21.73	831.00	22%	22.38	547.00	15%	21.86	492.00	13.2%	21.89	450.00	12%	23.95
460	507.00	14%	22.22	495.00	13%	22.74	830.00	22%	23.39	546.00	15%	22.87	492.00	13.2%	22.90	451.00	12%	24.96
470	506.00	14%	23.24	495.00	13%	23.77	829.00	22%	24.42	545.00	15%	23.90	491.00	13.2%	23.93	453.00	12%	25.99
480	504.00	14%	24.30	494.00	13%	24.83	828.00	22%	25.48	544.00	15%	24.95	491.00	13.2%	24.99	453.00	12%	27.06
490	503.00	14%	25.39	493.00	13%	25.91	827.00	22%	26.56	544.00	15%	26.03	490.00	13.2%	26.07	454.00	12%	28.15
500	502.00	14%	26.49	493.00	13%	27.01	826.00	22%	27.66	543.00	15%	27.14	490.00	13.2%	27.17	455.00	12%	29.25
510	501.00	13%	27.62	492.00	13%	28.14	825.00	22%	28.79	542.00	15%	28.27	489.00	13.2%	28.30	456.00	12%	30.39
520	500.00	13%	28.77	492.00	13%	29.30	823.00	22%	29.94	541.00	15%	29.43	489.00	13.2%	29.46	457.00	12%	31.55
530	500.00	13%	29.95	491.00	13%	30.47	822.00	22%	31.12	541.00	15%	30.60	488.00	13.1%	30.64	457.00	12%	32.73
540	499.00	13%	31.16	490.00	13%	31.68	821.00	22%	32.33	540.00	15%	31.81	488.00	13.1%	31.85	458.00	12%	33.94
550	498.00	13%	32.39	490.00	13%	32.92	820.00	22%	33.56	539.00	15%	33.04	487.00	13.1%	33.08	459.00	12%	35.18
560	497.00	13%	33.65	489.00	13%	34.17	818.00	22%	34.82	538.00	14%	34.29	487.00	13.1%	34.34	459.00	12%	36.43
570	496.00	13%	34.93	489.00	13%	35.45	817.00	22%	36.09	538.00	14%	35.57	486.00	13.1%	35.62	460.00	12%	37.72
580	495.00	13%	36.25	488.00	13%	36.77	815.00	22%	37.41	537.00	14%	36.89	486.00	13.1%	36.93	460.00	12%	39.04
590	494.00	13%	37.58	487.00	13%	38.10	814.00	22%	38.74	536.00	14%	38.22	485.00	13.1%	38.26	460.00	12%	40.38
600	493.00	13%	38.94	487.00	13%	39.46	813.00	22%	40.10	535.00	14%	39.59	485.00	13.1%	39.63	460.00	12%	41.74

WAXWING ACSR 266.8 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3060.38
 Peso (daN/m): 0.4224

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 33%
 Operación diaria (EDS): 17%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	997.00	32.6%	0.01	638.00	21%	0.01	625.00	20.4%	0.02	618.00	20.2%	0.01	535.00	17.5%	0.01	70.00	2.3%	0.08
20	994.00	32.4%	0.02	635.00	21%	0.03	642.00	21.0%	0.07	619.00	20.2%	0.04	535.00	17.5%	0.04	95.00	3.1%	0.22
30	987.00	32.3%	0.05	632.00	21%	0.08	665.00	21.7%	0.16	619.00	20.2%	0.09	535.00	17.5%	0.09	116.00	3.8%	0.41
40	979.00	32.0%	0.09	628.00	21%	0.13	690.00	22.5%	0.26	621.00	20.3%	0.16	535.00	17.5%	0.16	136.00	4.4%	0.62
50	967.00	31.6%	0.14	622.00	20%	0.21	714.00	23.3%	0.39	621.00	20.3%	0.25	535.00	17.5%	0.25	153.00	5.0%	0.86
60	953.00	31.1%	0.20	616.00	20%	0.31	738.00	24.1%	0.64	621.00	20.3%	0.36	535.00	17.5%	0.36	169.00	5.5%	1.12
70	939.00	30.7%	0.28	611.00	20%	0.42	760.00	24.8%	0.71	622.00	20.3%	0.49	535.00	17.5%	0.48	184.00	6.0%	1.41
80	921.00	30.1%	0.37	604.00	20%	0.56	780.00	25.5%	0.90	621.00	20.3%	0.64	535.00	17.5%	0.63	199.00	6.5%	1.71
90	903.00	29.5%	0.47	599.00	20%	0.71	799.00	26.1%	1.10	622.00	20.3%	0.81	535.00	17.5%	0.80	215.00	7.1%	1.98
100	882.00	28.8%	0.60	593.00	19%	0.89	815.00	26.6%	1.32	621.00	20.3%	0.99	535.00	17.5%	0.99	234.00	7.6%	2.26
110	860.00	28.1%	0.74	587.00	19%	1.09	830.00	27.1%	1.56	620.00	20.3%	1.20	535.00	17.5%	1.19	250.00	8.2%	2.55
120	838.00	27.4%	0.91	582.00	19%	1.31	843.00	27.5%	1.81	620.00	20.3%	1.43	535.00	17.5%	1.42	269.00	8.7%	2.86
130	817.00	26.7%	1.09	578.00	19%	1.55	855.00	27.9%	2.09	619.00	20.2%	1.67	535.00	17.5%	1.67	281.00	9.2%	3.18
140	795.00	26.0%	1.30	573.00	19%	1.81	866.00	28.3%	2.38	618.00	20.2%	1.94	534.00	17.4%	1.94	295.00	9.6%	3.51
150	775.00	25.3%	1.53	569.00	19%	2.09	875.00	28.6%	2.69	618.00	20.2%	2.23	534.00	17.4%	2.22	309.00	10.1%	3.86
160	755.00	24.7%	1.79	567.00	19%	2.39	884.00	28.9%	3.01	617.00	20.2%	2.53	534.00	17.4%	2.53	320.00	10.5%	4.23
170	736.00	24.0%	2.07	564.00	18%	2.71	892.00	29.1%	3.36	616.00	20.1%	2.86	534.00	17.4%	2.86	331.00	10.8%	4.61
180	719.00	23.5%	2.36	561.00	18%	3.05	899.00	29.4%	3.72	615.00	20.1%	3.20	534.00	17.4%	3.20	342.00	11.2%	5.01
190	704.00	23.0%	2.71	559.00	18%	3.41	905.00	29.6%	4.10	615.00	20.1%	3.57	534.00	17.4%	3.57	352.00	11.5%	5.42
200	689.00	22.5%	3.07	555.00	18%	3.80	910.00	29.7%	4.50	614.00	20.1%	3.96	534.00	17.4%	3.96	361.00	11.8%	5.86
210	676.00	22.1%	3.45	555.00	18%	4.20	914.00	29.8%	4.92	613.00	20.0%	4.36	534.00	17.4%	4.37	370.00	12.1%	6.31
220	664.00	21.7%	3.85	553.00	18%	4.63	918.00	30.0%	5.36	612.00	20.0%	4.79	533.00	17.4%	4.79	378.00	12.4%	6.77
230	654.00	21.4%	4.27	551.00	18%	5.07	922.00	30.1%	5.82	612.00	20.0%	5.23	533.00	17.4%	5.24	386.00	12.6%	7.25
240	644.00	21.0%	4.73	550.00	18%	5.54	925.00	30.2%	6.29	611.00	20.0%	5.70	533.00	17.4%	5.71	393.00	12.8%	7.76
250	635.00	20.7%	5.20	548.00	18%	6.02	927.00	30.3%	6.79	610.00	19.9%	6.19	533.00	17.4%	6.20	399.00	13.0%	8.28
260	628.00	20.5%	5.69	547.00	18%	6.53	930.00	30.4%	7.30	609.00	19.9%	6.70	533.00	17.4%	6.71	406.00	13.3%	8.81
270	620.00	20.3%	6.21	546.00	18%	7.06	931.00	30.4%	7.84	608.00	19.9%	7.23	532.00	17.4%	7.24	411.00	13.4%	9.37
280	614.00	20.1%	6.75	545.00	18%	7.61	933.00	30.5%	8.40	607.00	19.9%	7.77	532.00	17.4%	7.79	417.00	13.6%	9.95
290	608.00	19.9%	7.31	544.00	18%	8.18	935.00	30.6%	8.97	607.00	19.8%	8.34	532.00	17.4%	8.36	422.00	13.8%	10.54
300	602.00	19.7%	7.90	543.00	18%	8.77	936.00	30.6%	9.56	606.00	19.8%	8.93	532.00	17.4%	8.95	427.00	14.0%	11.16
310	597.00	19.5%	8.50	542.00	18%	9.38	936.00	30.6%	10.18	605.00	19.8%	9.55	531.00	17.4%	9.56	431.00	14.1%	11.79
320	593.00	19.4%	9.13	541.00	18%	10.01	937.00	30.6%	10.82	604.00	19.7%	10.17	531.00	17.4%	10.19	435.00	14.2%	12.44
330	589.00	19.2%	9.78	540.00	18%	10.66	938.00	30.6%	11.47	604.00	19.7%	10.83	531.00	17.4%	10.85	439.00	14.3%	13.12
340	585.00	19.1%	10.45	539.00	18%	11.34	938.00	30.6%	12.15	603.00	19.7%	11.50	531.00	17.4%	11.52	443.00	14.5%	13.81
350	582.00	19.0%	11.14	538.00	18%	12.03	938.00	30.6%	12.85	602.00	19.7%	12.20	530.00	17.3%	12.22	446.00	14.6%	14.52
360	579.00	18.9%	11.84	538.00	18%	12.75	938.00	30.6%	13.56	602.00	19.7%	12.91	530.00	17.3%	12.93	450.00	14.7%	15.25
370	576.00	18.8%	12.58	537.00	18%	13.48	938.00	30.6%	14.30	601.00	19.6%	13.65	530.00	17.3%	13.67	453.00	14.8%	16.00
380	573.00	18.7%	13.34	536.00	18%	14.24	938.00	30.6%	15.06	600.00	19.6%	14.41	529.00	17.3%	14.43	456.00	14.9%	16.78
390	570.00	18.6%	14.11	536.00	18%	15.02	938.00	30.6%	15.84	599.00	19.6%	15.19	529.00	17.3%	15.21	459.00	15.0%	17.57
400	568.00	18.6%	14.92	535.00	17%	15.85	937.00	30.6%	16.65	599.00	19.6%	15.99	529.00	17.3%	16.02	463.00	15.1%	18.39
410	565.00	18.5%	15.74	534.00	17%	16.65	937.00	30.6%	17.47	598.00	19.5%	16.81	528.00	17.3%	16.84	465.00	15.1%	19.23
420	563.00	18.4%	16.58	534.00	17%	17.49	936.00	30.6%	18.32	597.00	19.5%	17.68	528.00	17.3%	17.68	465.00	15.2%	20.08
430	561.00	18.3%	17.45	533.00	17%	18.35	936.00	30.6%	19.18	596.00	19.5%	18.52	528.00	17.3%	18.55	467.00	15.3%	20.96
440	559.00	18.3%	18.33	533.00	17%	19.25	935.00	30.6%	20.07	596.00	19.5%	19.41	527.00	17.2%	19.44	469.00	15.3%	21.86
450	557.00	18.2%	19.24	532.00	17%	20.16	934.00	30.5%	20.99	595.00	19.4%	20.33	527.00	17.2%	20.35	471.00	15.4%	22.78
460	555.00	18.1%	20.17	531.00	17%	21.09	933.00	30.5%	21.92	594.00	19.4%	21.25	527.00	17.2%	21.28	473.00	15.5%	23.71
470	554.00	18.1%	21.12	531.00	17%	22.04	932.00	30.5%	22.87	594.00	19.4%	22.21	526.00	17.2%	22.24	474.00	15.5%	24.68
480	552.00	18.0%	22.11	530.00	17%	23.02	931.00	30.4%	23.85	593.00	19.4%	23.19	526.00	17.2%	23.22	476.00	15.6%	25.67
490	550.00	18.0%	23.10	530.00	17%	24.02	930.00	30.4%	24.85	592.00	19.3%	24.19	525.00	17.2%	24.22	477.00	15.6%	26.67
500	549.00	17.9%	24.13	529.00	17%	25.05	929.00	30.4%	25.87	591.00	19.3%	25.21	525.00	17.2%	25.24	478.00	15.6%	27.71
510	547.00	17.9%	25.17	528.00	17%	26.09	928.00	30.3%	26.92	590.00	19.3%	26.25	524.00	17.1%	26.29	480.00	15.7%	28.76
520	546.00	17.8%	26.24	528.00	17%	27.16	927.00	30.3%	27.99	590.00	19.3%	27.32	524.00	17.1%	27.36	481.00	15.7%	29.83
530	545.00	17.8%	27.33	527.00	17%	28.26	926.00	30.3%	29.07	589.00	19.2%	28.41	524.00	17.1%	28.44	482.00	15.7%	30.93
540	543.00	17.7%	28.44	527.00	17%	29.36	925.00	30.2%	30.19	588.00	19.2%	29.53	523.00	17.1%	29.56	483.00	15.8%	32.05
550	542.00	17.7%	29.58	526.00	17%	30.51	924.00	30.1%	31.33	587.00	19.2%	30.66	523.00	17.1%	30.70	484.00	15.8%	33.20
560	541.00	17.6%	30.74	525.00	17%	31.66	923.00	30.2%	32.48	587.00	19.2%	31.83	522.00	17.1%	31.96	485.00	15.8%	34.35
570	540.00	17.6%	31.92	525.00	17%	32.84	921.00	30.1%	33.67	586.00	19.1%	33.01	522.00	17.1%	33.04	485.00	15.8%	35.55
580	538.00	17.6%	33.13	524.00	17%	34.06	920.00	30.1%	34.67	585.00	19.1%	34.22	521.00	17.0%	34.25	486.00	15.9%	36.75
590	537.00	17.5%	34.37	523.00	17%	35.29	919.00	30.0%	36.11	584.00	19.1%	35.45	521.00	17.0%	35.49	486.00	15.9%	38.00
600	536.00	17.5%	35.63	523.00	17%	36.55	918.00	30.0%	37.36	584.00	19.1%	36.71	520.00	17.0%	36.74	487.00	15.9%	39.26

LINNET ACSR 336.4 KCMIL

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
Temperatura máxima (°C): 27
Temperatura media (°C): 9
Temperatura mínima (°C): 4
Temperatura coincidente (°C): 5
Velocidad del viento máxima (km/h): 120
Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
Tensión de rotura (daN): 6271.99
Peso (daN/m): 0.6741

Condición de tensionado: (% límite de tensión de rotura)
Temperatura mínima: 19%
Operación diaria (EDS): 12%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	1191.00	19.0%	0.01	852.00	14%	0.01	833.00	13.3%	0.02	826.00	13.2%	0.01	715.00	11.4%	0.01	117.00	1.9%	0.07
20	1191.00	19.0%	0.03	854.00	14%	0.04	859.00	13.7%	0.07	851.00	13.2%	0.05	720.00	11.5%	0.05	174.00	2.8%	0.19
30	1191.00	19.0%	0.06	856.00	14%	0.09	890.00	14.4%	0.15	837.00	13.3%	0.10	728.00	11.6%	0.10	227.00	3.5%	0.34
40	1191.00	19.0%	0.11	857.00	14%	0.16	924.00	14.7%	0.25	845.00	13.5%	0.18	739.00	11.8%	0.18	264.00	4.2%	0.51
50	1191.00	19.0%	0.18	861.00	14%	0.24	960.00	15.3%	0.38	866.00	13.6%	0.27	752.00	12.0%	0.28	302.00	4.8%	0.70
60	1165.00	18.6%	0.26	852.00	14%	0.36	986.00	15.7%	0.52	854.00	13.6%	0.39	752.00	12.0%	0.40	334.00	5.3%	0.91
70	1144.00	18.2%	0.36	842.00	13%	0.49	1006.00	16.0%	0.69	851.00	13.6%	0.53	752.00	12.0%	0.55	362.00	5.8%	1.14
80	1115.00	17.8%	0.48	833.00	13%	0.65	1025.00	16.3%	0.98	849.00	13.5%	0.70	752.00	12.0%	0.72	389.00	6.2%	1.39
90	1087.00	17.3%	0.63	825.00	13%	0.83	1041.00	16.6%	1.09	846.00	13.5%	0.89	752.00	12.0%	0.91	411.00	6.6%	1.66
100	1059.00	16.9%	0.80	817.00	13%	1.03	1055.00	16.8%	1.32	842.00	13.4%	1.10	752.00	12.0%	1.12	433.00	6.9%	1.95
110	1030.00	16.4%	0.99	810.00	13%	1.26	1066.00	17.0%	1.57	840.00	13.4%	1.33	752.00	12.0%	1.36	453.00	7.2%	2.25
120	1004.00	16.0%	1.21	803.00	13%	1.51	1077.00	17.2%	1.84	837.00	13.3%	1.58	752.00	12.0%	1.62	471.00	7.5%	2.58
130	977.00	15.6%	1.46	796.00	13%	1.79	1085.00	17.3%	2.14	833.00	13.3%	1.87	751.00	12.0%	1.90	488.00	7.8%	2.92
140	955.00	15.2%	1.73	791.00	13%	2.09	1093.00	17.4%	2.45	831.00	13.2%	2.17	751.00	12.0%	2.20	503.00	8.0%	3.29
150	934.00	14.9%	2.03	788.00	13%	2.41	1099.00	17.5%	2.78	829.00	13.2%	2.49	751.00	12.0%	2.53	517.00	8.2%	3.67
160	916.00	14.6%	2.35	784.00	13%	2.75	1104.00	17.6%	3.14	827.00	13.2%	2.84	751.00	12.0%	2.88	531.00	8.5%	4.07
170	900.00	14.3%	2.71	781.00	12%	3.12	1108.00	17.7%	3.52	826.00	13.2%	3.21	750.00	12.0%	3.25	543.00	8.7%	4.49
180	886.00	14.1%	3.06	776.00	12%	3.51	1112.00	17.7%	3.92	824.00	13.1%	3.60	750.00	12.0%	3.64	554.00	8.8%	4.93
190	874.00	13.9%	3.48	775.00	12%	3.93	1115.00	17.8%	4.34	823.00	13.1%	4.01	750.00	12.0%	4.06	565.00	9.0%	5.39
200	862.00	13.7%	3.91	772.00	12%	4.37	1118.00	17.8%	4.78	820.00	13.1%	4.46	749.00	11.9%	4.50	575.00	9.2%	5.87
210	852.00	13.6%	4.36	770.00	12%	4.83	1120.00	17.9%	5.25	819.00	13.1%	4.92	749.00	11.9%	4.96	584.00	9.3%	6.37
220	842.00	13.4%	4.85	768.00	12%	5.32	1120.00	17.9%	5.74	818.00	13.0%	5.41	749.00	11.9%	5.45	592.00	9.4%	6.89
230	835.00	13.3%	5.35	766.00	12%	5.82	1121.00	17.9%	6.25	816.00	13.0%	5.91	749.00	11.9%	5.96	600.00	9.6%	7.44
240	827.00	13.2%	5.87	765.00	12%	6.35	1122.00	17.9%	6.79	815.00	13.0%	6.44	748.00	11.9%	6.49	607.00	9.7%	8.00
250	821.00	13.1%	6.42	763.00	12%	6.91	1122.00	17.9%	7.35	814.00	13.0%	7.00	748.00	11.9%	7.05	614.00	9.8%	8.59
260	815.00	13.0%	7.00	762.00	12%	7.49	1123.00	17.9%	7.93	813.00	13.0%	7.58	747.00	11.9%	7.63	621.00	9.9%	9.19
270	810.00	12.9%	7.60	760.00	12%	8.09	1122.00	17.9%	8.53	811.00	12.9%	8.18	747.00	11.9%	8.24	625.00	10.0%	9.83
280	805.00	12.8%	8.22	759.00	12%	8.72	1122.00	17.9%	9.16	810.00	12.9%	8.81	747.00	11.9%	8.86	632.00	10.1%	10.48
290	800.00	12.8%	8.87	758.00	12%	9.37	1121.00	17.9%	9.81	809.00	12.9%	9.46	746.00	11.9%	9.51	637.00	10.2%	11.15
300	796.00	12.7%	9.54	756.00	12%	10.04	1121.00	17.9%	10.48	808.00	12.9%	10.13	746.00	11.9%	10.19	642.00	10.2%	11.85
310	793.00	12.6%	10.23	755.00	12%	10.74	1120.00	17.9%	11.18	807.00	12.9%	10.83	745.00	11.9%	10.89	646.00	10.3%	12.56
320	789.00	12.6%	10.95	754.00	12%	11.46	1119.00	17.9%	11.90	806.00	12.9%	11.55	745.00	11.9%	11.61	650.00	10.4%	13.31
330	786.00	12.5%	11.70	753.00	12%	12.21	1118.00	17.9%	12.65	805.00	12.9%	12.30	744.00	11.9%	12.35	654.00	10.4%	14.07
340	783.00	12.5%	12.46	752.00	12%	12.98	1117.00	17.9%	13.42	804.00	12.9%	13.07	744.00	11.9%	13.13	657.00	10.5%	14.86
350	780.00	12.4%	13.26	751.00	12%	13.77	1116.00	17.8%	14.22	803.00	12.8%	13.86	743.00	11.8%	13.92	661.00	10.5%	15.67
360	778.00	12.4%	14.08	750.00	12%	14.59	1114.00	17.8%	15.04	801.00	12.8%	14.68	743.00	11.8%	14.74	664.00	10.6%	16.50
370	776.00	12.4%	14.92	749.00	12%	15.43	1113.00	17.8%	15.88	801.00	12.8%	15.12	742.00	11.8%	15.58	667.00	10.6%	17.36
380	773.00	12.3%	15.79	748.00	12%	16.30	1111.00	17.7%	16.75	799.00	12.7%	16.39	741.00	11.8%	16.45	669.00	10.7%	18.24
390	770.00	12.3%	16.68	747.00	12%	17.20	1110.00	17.7%	17.64	798.00	12.7%	17.29	741.00	11.8%	17.39	672.00	10.7%	19.15
400	768.00	12.2%	17.60	746.00	12%	18.12	1108.00	17.7%	18.56	797.00	12.7%	18.21	740.00	11.8%	18.27	674.00	10.7%	20.08
410	766.00	12.2%	18.54	746.00	12%	19.06	1107.00	17.6%	19.50	796.00	12.7%	19.15	740.00	11.8%	19.21	676.00	10.8%	21.03
420	764.00	12.2%	19.50	745.00	12%	20.03	1106.00	17.6%	20.47	795.00	12.7%	20.11	739.00	11.8%	20.18	678.00	10.8%	22.01
430	762.00	12.1%	20.50	744.00	12%	21.02	1104.00	17.6%	21.46	794.00	12.7%	21.11	738.00	11.8%	21.17	680.00	10.8%	23.01
440	761.00	12.1%	21.52	743.00	12%	22.04	1102.00	17.6%	22.48	793.00	12.6%	22.13	738.00	11.8%	22.20	681.00	10.9%	24.05
450	759.00	12.1%	22.57	742.00	12%	23.09	1100.00	17.5%	23.53	792.00	12.6%	23.18	737.00	11.8%	23.24	683.00	10.9%	25.10
460	757.00	12.1%	23.64	741.00	12%	24.16	1099.00	17.5%	24.60	791.00	12.6%	24.25	736.00	11.7%	24.31	684.00	10.9%	26.18
470	755.00	12.0%	24.74	740.00	12%	25.26	1097.00	17.5%	25.69	790.00	12.6%	25.34	735.00	11.7%	25.41	685.00	10.9%	27.29
480	754.00	12.0%	25.86	739.00	12%	26.38	1095.00	17.5%	26.82	789.00	12.6%	26.47	735.00	11.7%	26.53	686.00	10.9%	28.42
490	752.00	12.0%	27.01	738.00	12%	27.54	1093.00	17.4%	27.97	787.00	12.5%	27.63	734.00	11.7%	27.69	687.00	11.0%	29.58
500	751.00	12.0%	28.19	737.00	12%	28.71	1091.00	17.4%	29.14	786.00	12.5%	28.80	733.00	11.7%	28.86	688.00	11.0%	30.76
510	749.00	11.9%	29.40	736.00	12%	29.92	1090.00	17.4%	30.35	785.00	12.5%	30.01	732.00	11.7%	30.07	689.00	11.0%	31.97
520	747.00	11.9%	30.63	735.00	12%	31.15	1088.00	17.3%	31.50	784.00	12.5%	31.24	731.00	11.7%	31.30	690.00	11.0%	33.21
530	746.00	11.9%	31.89	734.00	12%	32.41	1086.00	17.3%	32.84	783.00	12.5%	32.50	731.00	11.7%	32.56	690.00	11.0%	34.48
540	744.00	11.9%	33.18	733.00	12%	33.70	1084.00	17.3%	34.13	782.00	12.5%	33.79	730.00	11.6%	33.85	691.00	11.0%	35.77
550	743.00	11.8%	34.49	732.00	12%	35.01	1082.00	17.2%	35.44	781.00	12.5%	35.10	729.00	11.6%	35.17	691.00	11.0%	37.09
560	742.00	11.8%	35.83	731.00	12%	36.35	1080.00	17.2%	36.78	780.00	12.4%	36.44	728.00	11.6%	36.51	692.00	11.0%	38.43
570	740.00	11.8%	37.20	730.00	12%	37.72	1078.00	17.2%	38.15	778.00	12.4%	37.81	727.00	11.6%	37.88	692.00	11.0%	39.81
580	739.00	11.8%	38.61	729.00	12%	39.13	1076.00	17.2%	39.56	777.00	12.4%	39.22	726.00	11.6%	39.28	692.00	11.0%	41.21
590	737.00	11.8%	40.03	728.00	12%	40.56	1074.00	17.1%	40.98	776.00	12.4%	40.65	725.00	11.6%	40.71	693.00	11.0%	42.65
600	736.00	11.7%	41.50	727.00	12%	42.02	1071.00	17.1%	42.44	775.00	12.4%	42.10	724.00	11.5%	42.17	693.00	11.0%	44.11

AMES AAAC 77.47 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1245.5
 Peso (daN/m): 0.1060

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 23.5%
 Operación diaria (EDS): 14%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m	daN	UTS	m
10	284.00	22.8%	0.00	203.00	16.3%	0.01	202.00	16.2%	0.03	197.00	15.8%	0.01	174.00	14.0%	0.01	7.00	0.6%	0.18
20	284.00	22.8%	0.02	202.00	16.2%	0.03	213.00	17.1%	0.10	199.00	16.0%	0.05	174.00	14.0%	0.03	15.00	1.2%	0.36
30	283.00	22.7%	0.04	202.00	16.2%	0.06	228.00	18.3%	0.22	201.00	16.1%	0.10	174.00	14.0%	0.07	21.00	1.7%	0.56
40	282.00	22.6%	0.08	201.00	16.1%	0.11	243.00	19.5%	0.36	203.00	16.3%	0.17	174.00	14.0%	0.12	28.00	2.2%	0.76
50	280.00	22.5%	0.12	200.00	16.1%	0.17	257.00	20.6%	0.52	206.00	16.5%	0.27	174.00	14.0%	0.19	34.00	2.7%	0.97
60	278.00	22.3%	0.17	199.00	16.0%	0.24	272.00	21.8%	0.70	209.00	16.8%	0.38	174.00	14.0%	0.27	40.00	3.2%	1.18
70	276.00	22.2%	0.24	198.00	15.9%	0.33	285.00	22.9%	0.89	212.00	17.0%	0.50	174.00	14.0%	0.37	46.00	3.7%	1.41
80	273.00	21.9%	0.31	197.00	15.8%	0.43	298.00	23.9%	1.10	215.00	17.3%	0.64	174.00	14.0%	0.49	52.00	4.2%	1.64
90	270.00	21.7%	0.40	196.00	15.7%	0.55	310.00	24.9%	1.33	217.00	17.4%	0.79	174.00	14.0%	0.62	57.00	4.6%	1.89
100	267.00	21.4%	0.50	195.00	15.7%	0.68	321.00	25.8%	1.57	220.00	17.7%	0.97	174.00	14.0%	0.76	62.00	5.0%	2.14
110	264.00	21.2%	0.61	194.00	15.6%	0.83	332.00	26.7%	1.83	222.00	17.8%	1.15	174.00	14.0%	0.92	67.00	5.4%	2.41
120	260.00	20.9%	0.73	193.00	15.5%	0.98	341.00	27.4%	2.09	225.00	18.1%	1.35	174.00	14.0%	1.10	71.00	5.7%	2.68
130	257.00	20.6%	0.87	192.00	15.4%	1.17	351.00	28.2%	2.37	227.00	18.2%	1.56	174.00	14.0%	1.29	76.00	6.1%	2.97
140	253.00	20.3%	1.03	190.00	15.3%	1.37	360.00	28.9%	2.67	229.00	18.4%	1.78	174.00	14.0%	1.49	80.00	6.4%	3.26
150	250.00	20.1%	1.19	189.00	15.2%	1.58	369.00	29.6%	2.97	231.00	18.5%	2.02	174.00	14.0%	1.71	84.00	6.7%	3.57
160	246.00	19.8%	1.38	188.00	15.1%	1.80	376.00	30.2%	3.29	232.00	18.6%	2.27	174.00	14.0%	1.95	87.00	7.0%	3.88
170	242.00	19.4%	1.58	187.00	15.0%	2.04	384.00	30.8%	3.62	234.00	18.8%	2.55	174.00	14.0%	2.20	91.00	7.3%	4.21
180	238.00	19.2%	1.80	187.00	15.0%	2.30	391.00	31.4%	3.96	235.00	18.9%	2.82	174.00	14.0%	2.47	94.00	7.6%	4.55
190	235.00	18.9%	2.04	186.00	14.9%	2.58	398.00	32.0%	4.32	236.00	18.9%	3.13	174.00	14.0%	2.75	98.00	7.9%	4.91
200	232.00	18.6%	2.29	185.00	14.9%	2.87	404.00	32.4%	4.69	237.00	19.0%	3.43	174.00	14.0%	3.05	101.00	8.1%	5.27
210	228.00	18.3%	2.56	184.00	14.8%	3.18	410.00	32.9%	5.07	238.00	19.1%	3.75	174.00	14.0%	3.36	104.00	8.4%	5.65
220	225.00	18.1%	2.85	184.00	14.8%	3.50	416.00	33.4%	5.47	240.00	19.3%	4.10	174.00	14.0%	3.69	106.00	8.5%	6.03
230	222.00	17.8%	3.16	183.00	14.7%	3.83	421.00	33.8%	5.87	240.00	19.3%	4.45	174.00	14.0%	4.04	109.00	8.8%	6.43
240	219.00	17.6%	3.48	182.00	14.6%	4.19	426.00	34.2%	6.29	241.00	19.3%	4.82	174.00	14.0%	4.39	112.00	9.0%	6.85
250	217.00	17.4%	3.83	182.00	14.6%	4.56	431.00	34.6%	6.73	242.00	19.4%	5.21	174.00	14.0%	4.77	114.00	9.2%	7.28
260	214.00	17.2%	4.19	181.00	14.5%	4.95	436.00	35.0%	7.17	242.00	19.4%	5.60	174.00	14.0%	5.16	116.00	9.3%	7.71
270	212.00	17.0%	4.56	181.00	14.5%	5.35	440.00	35.3%	7.63	243.00	19.5%	6.01	174.00	14.0%	5.57	119.00	9.6%	8.17
280	210.00	16.9%	4.95	180.00	14.5%	5.76	444.00	35.6%	8.10	243.00	19.5%	6.44	174.00	14.0%	5.99	121.00	9.7%	8.63
290	208.00	16.7%	5.37	180.00	14.5%	6.20	448.00	36.0%	8.59	244.00	19.6%	6.88	174.00	14.0%	6.43	123.00	9.9%	9.11
300	206.00	16.5%	5.81	180.00	14.5%	6.65	452.00	36.3%	9.09	244.00	19.6%	7.35	174.00	14.0%	6.88	124.00	10.0%	9.61

AZUSA AAAC 123.3 KCML

Clima: Frío
Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 1983.91
 Peso (daN/m): 0.1688
Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	425.00	21.4%	0.00	303.00	15.3%	0.01	299.00	15.1%	0.02	294.00	14.8%	0.01	258.00	13.0%	0.01	12.00	0.6%	0.18
20	424.00	21.4%	0.02	302.00	15.2%	0.03	313.00	15.8%	0.09	296.00	14.9%	0.04	258.00	13.0%	0.03	23.00	1.2%	0.37
30	422.00	21.3%	0.05	301.00	15.2%	0.06	330.00	16.6%	0.19	298.00	15.0%	0.09	258.00	13.0%	0.07	33.00	1.7%	0.57
40	420.00	21.2%	0.08	300.00	15.1%	0.11	348.00	17.5%	0.32	300.00	15.1%	0.16	258.00	13.0%	0.13	43.00	2.2%	0.78
50	418.00	21.0%	0.13	299.00	15.1%	0.18	366.00	18.4%	0.46	303.00	15.3%	0.25	258.00	13.0%	0.20	53.00	2.7%	0.99
60	413.00	20.8%	0.18	297.00	15.0%	0.26	384.00	19.4%	0.63	306.00	15.4%	0.36	258.00	13.0%	0.29	63.00	3.2%	1.21
70	409.00	20.6%	0.25	295.00	14.9%	0.35	401.00	20.2%	0.81	309.00	15.6%	0.48	258.00	13.0%	0.40	72.00	3.6%	1.45
80	404.00	20.4%	0.33	292.00	14.7%	0.46	417.00	21.0%	1.01	311.00	15.7%	0.62	258.00	13.0%	0.52	80.00	4.0%	1.69
90	399.00	20.1%	0.43	291.00	14.7%	0.59	431.00	21.7%	1.23	313.00	15.8%	0.77	258.00	13.0%	0.66	88.00	4.4%	1.94
100	393.00	19.8%	0.54	289.00	14.6%	0.73	445.00	22.4%	1.46	316.00	15.9%	0.94	258.00	13.0%	0.82	96.00	4.8%	2.20
110	387.00	19.5%	0.66	287.00	14.5%	0.89	458.00	23.1%	1.70	318.00	16.0%	1.12	258.00	13.0%	0.99	103.00	5.2%	2.47
120	382.00	19.2%	0.80	285.00	14.4%	1.07	470.00	23.7%	1.96	320.00	16.1%	1.32	258.00	13.0%	1.18	110.00	5.6%	2.76
130	375.00	18.9%	0.95	282.00	14.2%	1.26	481.00	24.2%	2.23	322.00	16.2%	1.54	258.00	13.0%	1.39	117.00	5.9%	3.05
140	369.00	18.6%	1.12	281.00	14.2%	1.47	492.00	24.8%	2.51	324.00	16.3%	1.77	257.00	13.0%	1.61	123.00	6.2%	3.36
150	363.00	18.3%	1.31	279.00	14.1%	1.70	502.00	25.3%	2.81	325.00	16.4%	2.02	257.00	13.0%	1.84	129.00	6.5%	3.68
160	357.00	18.0%	1.51	277.00	14.0%	1.95	511.00	25.8%	3.12	326.00	16.4%	2.28	257.00	13.0%	2.10	135.00	6.8%	4.01
170	351.00	17.7%	1.74	276.00	13.9%	2.21	519.00	26.2%	3.45	327.00	16.5%	2.56	257.00	13.0%	2.37	140.00	7.1%	4.35
180	345.00	17.4%	1.98	275.00	13.9%	2.49	527.00	26.6%	3.79	328.00	16.5%	2.85	257.00	13.0%	2.66	145.00	7.4%	4.71
190	340.00	17.1%	2.24	274.00	13.8%	2.78	535.00	27.0%	4.14	329.00	16.6%	3.16	257.00	13.0%	2.96	150.00	7.6%	5.07
200	334.00	16.8%	2.53	272.00	13.7%	3.10	542.00	27.3%	4.51	330.00	16.6%	3.49	257.00	13.0%	3.28	155.00	7.8%	5.46
210	329.00	16.6%	2.83	271.00	13.7%	3.43	548.00	27.6%	4.89	330.00	16.6%	3.83	257.00	13.0%	3.62	159.00	8.0%	5.85
220	325.00	16.4%	3.15	270.00	13.6%	3.78	554.00	27.9%	5.29	331.00	16.7%	4.19	257.00	13.0%	3.97	163.00	8.2%	6.26
230	320.00	16.1%	3.49	269.00	13.6%	4.15	560.00	28.2%	5.70	331.00	16.7%	4.56	257.00	13.0%	4.35	167.00	8.4%	6.68
240	316.00	15.9%	3.84	269.00	13.6%	4.53	566.00	28.5%	6.12	332.00	16.7%	4.95	257.00	13.0%	4.73	171.00	8.6%	7.12
250	313.00	15.8%	4.22	268.00	13.5%	4.93	570.00	28.7%	6.56	332.00	16.7%	5.36	257.00	13.0%	5.14	175.00	8.8%	7.57
260	309.00	15.6%	4.62	267.00	13.5%	5.35	575.00	29.0%	7.02	332.00	16.7%	5.78	257.00	13.0%	5.56	178.00	9.0%	8.04
270	306.00	15.4%	5.04	266.00	13.4%	5.79	579.00	29.2%	7.48	332.00	16.7%	6.22	257.00	13.0%	5.99	181.00	9.1%	8.51
280	303.00	15.2%	5.47	266.00	13.4%	6.24	583.00	29.4%	7.97	332.00	16.7%	6.68	257.00	13.0%	6.45	184.00	9.3%	9.01
290	300.00	15.1%	5.93	265.00	13.4%	6.70	587.00	29.6%	8.47	332.00	16.7%	7.15	257.00	13.0%	6.92	187.00	9.4%	9.52
300	297.00	15.0%	6.40	264.00	13.3%	7.19	590.00	29.7%	8.99	332.00	16.7%	7.64	257.00	13.0%	7.41	189.00	9.5%	10.04
310	295.00	14.9%	6.88	264.00	13.3%	7.69	594.00	29.9%	9.51	333.00	16.8%	8.14	257.00	13.0%	7.91	192.00	9.7%	10.58
320	292.00	14.7%	7.40	263.00	13.3%	8.21	597.00	30.1%	10.06	333.00	16.8%	8.67	256.00	12.9%	8.44	194.00	9.8%	11.13
330	290.00	14.6%	7.92	263.00	13.3%	8.75	599.00	30.2%	10.62	333.00	16.8%	9.21	256.00	12.9%	8.97	197.00	9.9%	11.70
340	288.00	14.5%	8.46	263.00	13.3%	9.30	602.00	30.3%	11.20	332.00	16.7%	9.76	256.00	12.9%	9.53	199.00	10.0%	12.29
350	287.00	14.5%	9.03	262.00	13.2%	9.87	604.00	30.4%	11.79	332.00	16.7%	10.34	256.00	12.9%	10.10	201.00	10.1%	12.89
360	285.00	14.4%	9.61	262.00	13.2%	10.47	606.00	30.5%	12.40	332.00	16.7%	10.93	256.00	12.9%	10.70	203.00	10.2%	13.51
370	283.00	14.3%	10.21	261.00	13.2%	11.07	609.00	30.7%	13.03	332.00	16.7%	11.53	256.00	12.9%	11.30	205.00	10.3%	14.13
380	282.00	14.2%	10.82	261.00	13.2%	11.69	611.00	30.8%	13.67	332.00	16.7%	12.16	256.00	12.9%	11.93	207.00	10.4%	14.78
390	280.00	14.1%	11.46	261.00	13.2%	12.33	612.00	30.8%	14.33	332.00	16.7%	12.80	256.00	12.9%	12.57	208.00	10.5%	15.45
400	278.00	14.1%	12.11	260.00	13.1%	12.99	614.00	30.9%	15.00	332.00	16.7%	13.46	256.00	12.9%	13.23	210.00	10.6%	16.13
410	278.00	14.0%	12.78	260.00	13.1%	13.66	615.00	31.0%	15.69	331.00	16.7%	14.14	256.00	12.9%	13.90	211.00	10.6%	16.82
420	277.00	14.0%	13.47	260.00	13.1%	14.36	617.00	31.1%	16.40	331.00	16.7%	14.83	256.00	12.9%	14.60	213.00	10.7%	17.54
430	276.00	13.9%	14.17	259.00	13.1%	15.07	618.00	31.2%	17.12	331.00	16.7%	15.54	256.00	12.9%	15.31	214.00	10.8%	18.27
440	275.00	13.9%	14.90	259.00	13.1%	15.80	619.00	31.2%	17.86	331.00	16.7%	16.27	256.00	12.9%	16.04	215.00	10.8%	19.02
450	274.00	13.8%	15.64	259.00	13.1%	16.54	620.00	31.3%	18.62	331.00	16.7%	17.02	256.00	12.9%	16.79	217.00	10.9%	19.78
460	273.00	13.8%	16.41	258.00	13.0%	17.31	621.00	31.3%	19.39	330.00	16.6%	17.78	256.00	12.9%	17.56	218.00	11.0%	20.57
470	272.00	13.7%	17.18	258.00	13.0%	18.09	622.00	31.4%	20.18	330.00	16.6%	18.56	256.00	12.9%	18.34	219.00	11.0%	21.36
480	271.00	13.7%	17.98	258.00	13.0%	18.89	622.00	31.4%	20.99	330.00	16.6%	19.36	256.00	12.9%	19.14	220.00	11.1%	22.18
490	270.00	13.6%	18.79	258.00	13.0%	19.71	623.00	31.4%	21.82	329.00	16.6%	20.18	254.00	12.8%	19.96	221.00	11.1%	23.01
500	269.00	13.6%	19.63	257.00	13.0%	20.54	624.00	31.5%	22.66	329.00	16.6%	21.02	254.00	12.8%	20.79	222.00	11.2%	23.86
510	269.00	13.6%	20.48	257.00	13.0%	21.40	624.00	31.5%	23.52	329.00	16.6%	21.87	254.00	12.8%	21.65	223.00	11.2%	24.72
520	268.00	13.5%	21.35	257.00	13.0%	22.27	625.00	31.5%	24.40	329.00	16.6%	22.74	254.00	12.8%	22.52	224.00	11.3%	25.61
530	267.00	13.5%	22.23	257.00	13.0%	23.16	625.00	31.5%	25.30	328.00	16.5%	23.63	254.00	12.8%	23.41	224.00	11.3%	26.51
540	267.00	13.5%	23.14	256.00	12.9%	24.07	625.00	31.5%	26.21	328.00	16.5%	24.54	254.00	12.8%	24.32	225.00	11.3%	27.43
550	266.00	13.4%	24.06	256.00	12.9%	24.99	625.00	31.5%	27.14	328.00	16.5%	25.46	254.00	12.8%	25.24	226.00	11.4%	28.36
560	265.00	13.4%	25.01	256.00	12.9%	25.94	626.00	31.6%	28.09	327.00	16.5%	26.41	253.00	12.8%	26.19	227.00	11.4%	29.32
570	265.00	13.4%	25.97	256.00	12.9%	26.90	626.00	31.6%	29.06	327.00	16.5%	27.37	253.00	12.8%	27.15	227.00	11.4%	30.30
580	264.00	13.3%	26.96	255.00	12.9%	27.89	626.00	31.6%	30.05	327.00	16.5%	28.36	253.00	12.8%	28.14	228.00	11.5%	31.29
590	264.00	13.3%	27.95	255.00	12.9%	28.89	626.00	31.6%	31.06	326.00	16.4%	29.36	253.00	12.8%	29.14	228.00	11.5%	32.30
600	263.00	13.3%	28.97	255.00	12.9%	29.90	626.00	31.6%	32.08	326.00	16.4%	30.37	253.00	12.8%	30.16	229.00	11.5%	33.32

ANAREIM AAAC 155.4 KCMIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 2397.59
 Peso (daN/m): 0.2129

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22.5%
 Operación diaria (EDS): 13%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha	Tensión mecánica	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha		
	daN	UTS			daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS			
10	517.00	21.0%	0.01	369.00	15.4%	0.01	363.00	15.1%	0.02	357.00	14.9%	0.01	312.00	13.0%	0.01	14.00	0.6%	0.19						
20	515.00	21.4%	0.02	367.00	15.2%	0.03	377.00	15.7%	0.09	359.00	15.0%	0.04	312.00	13.0%	0.03	28.00	1.2%	0.38						
30	513.00	21.4%	0.05	366.00	15.3%	0.07	396.00	16.5%	0.18	361.00	15.1%	0.09	312.00	13.0%	0.08	41.00	1.7%	0.58						
40	509.00	21.2%	0.08	364.00	15.2%	0.12	416.00	17.4%	0.30	363.00	15.1%	0.16	312.00	13.0%	0.14	54.00	2.3%	0.79						
50	505.00	21.1%	0.13	362.00	15.1%	0.18	436.00	18.2%	0.44	366.00	15.3%	0.25	312.00	13.0%	0.21	66.00	2.8%	1.01						
60	501.00	20.9%	0.19	360.00	15.0%	0.27	457.00	19.1%	0.60	368.00	15.3%	0.35	312.00	13.0%	0.31	78.00	3.3%	1.23						
70	495.00	20.6%	0.26	358.00	14.9%	0.36	475.00	19.8%	0.78	371.00	15.5%	0.47	312.00	13.0%	0.42	89.00	3.7%	1.47						
80	488.00	20.4%	0.35	355.00	14.8%	0.48	492.00	20.5%	0.98	373.00	15.6%	0.61	311.00	13.0%	0.55	100.00	4.2%	1.71						
90	481.00	20.1%	0.45	352.00	14.7%	0.61	508.00	21.2%	1.19	375.00	15.6%	0.77	311.00	13.0%	0.69	110.00	4.6%	1.97						
100	474.00	19.8%	0.56	349.00	14.6%	0.76	523.00	21.8%	1.41	377.00	15.7%	0.94	311.00	13.0%	0.85	119.00	5.0%	2.24						
110	466.00	19.4%	0.69	346.00	14.4%	0.93	537.00	22.4%	1.65	379.00	15.8%	1.13	311.00	13.0%	1.03	128.00	5.3%	2.51						
120	458.00	19.1%	0.84	344.00	14.3%	1.12	550.00	22.9%	1.90	381.00	15.8%	1.33	311.00	13.0%	1.23	137.00	5.7%	2.80						
130	450.00	18.8%	1.00	341.00	14.2%	1.32	562.00	23.4%	2.17	382.00	15.9%	1.55	311.00	13.0%	1.45	145.00	6.0%	3.11						
140	442.00	18.4%	1.18	339.00	14.1%	1.54	573.00	23.9%	2.46	383.00	16.0%	1.79	311.00	13.0%	1.68	153.00	6.4%	3.42						
150	433.00	18.1%	1.38	336.00	14.0%	1.78	583.00	24.3%	2.75	384.00	16.0%	2.05	311.00	13.0%	1.93	160.00	6.7%	3.74						
160	426.00	17.8%	1.60	335.00	14.0%	2.04	593.00	24.7%	3.05	385.00	16.1%	2.31	311.00	13.0%	2.19	167.00	7.0%	4.08						
170	419.00	17.5%	1.84	333.00	13.9%	2.31	602.00	25.1%	3.39	386.00	16.1%	2.60	311.00	13.0%	2.47	174.00	7.3%	4.43						
180	411.00	17.1%	2.10	331.00	13.8%	2.60	610.00	25.4%	3.73	387.00	16.1%	2.90	311.00	13.0%	2.77	180.00	7.6%	4.80						
190	405.00	16.9%	2.37	330.00	13.8%	2.92	618.00	25.8%	4.09	387.00	16.1%	3.22	311.00	13.0%	3.09	186.00	7.8%	5.18						
200	398.00	16.6%	2.68	328.00	13.7%	3.24	625.00	26.1%	4.46	387.00	16.1%	3.56	311.00	13.0%	3.43	191.00	8.0%	5.57						
210	392.00	16.3%	3.00	327.00	13.6%	3.59	631.00	26.5%	4.85	387.00	16.1%	3.92	311.00	13.0%	3.78	197.00	8.2%	5.98						
220	386.00	16.1%	3.34	325.00	13.6%	3.96	637.00	26.6%	5.25	388.00	16.2%	4.29	311.00	13.0%	4.15	201.00	8.4%	6.40						
230	381.00	15.9%	3.69	325.00	13.6%	4.34	642.00	26.8%	5.67	388.00	16.2%	4.67	311.00	13.0%	4.53	206.00	8.6%	6.84						
240	377.00	15.7%	4.07	324.00	13.5%	4.74	648.00	27.0%	6.10	388.00	16.2%	5.08	311.00	13.0%	4.94	211.00	8.8%	7.28						
250	372.00	15.5%	4.47	323.00	13.5%	5.16	652.00	27.2%	6.55	388.00	16.2%	5.50	310.00	12.9%	5.36	215.00	9.0%	7.75						
260	368.00	15.3%	4.89	322.00	13.4%	5.60	657.00	27.4%	7.01	388.00	16.2%	5.94	310.00	12.9%	5.80	219.00	9.1%	8.23						
270	364.00	15.2%	5.32	321.00	13.4%	6.05	661.00	27.6%	7.49	388.00	16.2%	6.40	310.00	12.9%	6.26	223.00	9.2%	8.73						
280	361.00	15.1%	5.79	320.00	13.3%	6.52	664.00	27.7%	7.99	388.00	16.2%	6.87	310.00	12.9%	6.73	225.00	9.4%	9.24						
290	358.00	14.9%	6.26	320.00	13.3%	7.01	668.00	27.9%	8.50	388.00	16.2%	7.36	310.00	12.9%	7.22	230.00	9.6%	9.76						
300	354.00	14.8%	6.76	319.00	13.3%	7.52	671.00	28.0%	9.03	388.00	16.2%	7.88	310.00	12.9%	7.73	233.00	9.7%	10.31						
310	350.00	14.7%	7.28	318.00	13.3%	8.04	674.00	28.1%	9.57	388.00	16.2%	8.40	310.00	12.9%	8.26	235.00	9.8%	10.87						
320	349.00	14.6%	7.81	318.00	13.3%	8.59	676.00	28.2%	10.13	387.00	16.1%	8.95	310.00	12.9%	8.81	239.00	10.0%	11.44						
330	347.00	14.5%	8.36	317.00	13.2%	9.15	678.00	28.3%	10.72	387.00	16.1%	9.51	310.00	12.9%	9.37	241.00	10.1%	12.03						
340	345.00	14.4%	8.93	317.00	13.2%	9.73	681.00	28.4%	11.31	387.00	16.1%	10.09	310.00	12.9%	9.95	244.00	10.2%	12.64						
350	343.00	14.3%	9.52	316.00	13.2%	10.32	683.00	28.5%	11.92	387.00	16.1%	10.69	309.00	12.9%	10.55	246.00	10.3%	13.26						
360	341.00	14.2%	10.13	316.00	13.2%	10.94	685.00	28.6%	12.55	387.00	16.1%	11.30	309.00	12.9%	11.17	249.00	10.4%	13.90						
370	339.00	14.1%	10.76	315.00	13.1%	11.57	686.00	28.6%	13.20	386.00	16.1%	11.94	309.00	12.9%	11.80	251.00	10.5%	14.56						
380	337.00	14.1%	11.41	315.00	13.1%	12.23	688.00	28.7%	13.86	386.00	16.1%	12.59	309.00	12.9%	12.46	253.00	10.6%	15.24						
390	336.00	14.0%	12.07	314.00	13.1%	12.89	689.00	28.7%	14.54	386.00	16.1%	13.26	309.00	12.9%	13.13	255.00	10.6%	15.93						
400	334.00	13.9%	12.75	314.00	13.1%	13.58	690.00	28.8%	15.24	385.00	16.1%	13.95	308.00	12.9%	13.81	257.00	10.7%	16.64						
410	333.00	13.9%	13.46	314.00	13.1%	14.29	691.00	28.8%	15.96	385.00	16.1%	14.66	309.00	12.9%	14.52	258.00	10.8%	17.36						
420	332.00	13.8%	14.18	313.00	13.1%	15.02	692.00	28.9%	16.69	385.00	16.1%	15.38	308.00	12.8%	15.25	260.00	10.8%	18.11						
430	330.00	13.8%	14.92	313.00	13.1%	15.76	693.00	28.9%	17.44	384.00	16.0%	16.13	308.00	12.8%	15.99	261.00	10.8%	18.87						
440	329.00	13.7%	15.68	312.00	13.0%	16.52	694.00	28.9%	18.21	384.00	16.0%	16.89	308.00	12.8%	16.76	263.00	11.0%	19.64						
450	328.00	13.7%	16.45	312.00	13.0%	17.30	695.00	29.0%	19.00	384.00	16.0%	17.67	308.00	12.8%	17.54	264.00	11.0%	20.44						
460	327.00	13.6%	17.25	312.00	13.0%	18.10	695.00	29.0%	19.80	383.00	16.0%	18.47	308.00	12.8%	18.34	266.00	11.1%	21.25						
470	326.00	13.6%	18.07	311.00	13.0%	18.92	696.00	29.0%	20.62	383.00	16.0%	19.29	308.00	12.8%	19.16	267.00	11.1%	22.08						
480	325.00	13.6%	18.90	311.00	13.0%	19.76	696.00	29.0%	21.47	382.00	15.9%	20.13	307.00	12.8%	19.99	268.00	11.2%	22.94						
490	324.00	13.5%	19.76	311.00	13.0%	20.61	696.00	29.0%	22.33	382.00	15.9%	20.98	307.00	12.8%	20.85	269.00	11.2%	23.81						
500	323.00	13.5%	20.62	310.00	12.9%	21.49	696.00	29.0%	23.21	382.00	15.9%	21.85	307.00	12.8%	21.72	270.00	11.3%	24.69						
510	322.00	13.4%	21.52	310.00	12.9%	22.38	697.00	29.1%	24.10	381.00	15.9%	22.75	307.00	12.8%	22.62	271.00	11.3%	25.60						
520	322.00	13.4%	22.43	310.00	12.9%	23.29	697.00	29.1%	25.02	381.00	15.9%	23.66	307.00	12.8%	23.53	272.00	11.3%	26.52						
530	321.00	13.4%	23.38	310.00	12.9%	24.22	697.00	29.1%	25.96	381.00	15.9%	24.59	306.00	12.8%	24.47	273.00	11.4%	27.46						
540	320.00	13.3%	24.31	309.00	12.9%	25.18	697.00	29.1%	26.91	380.00	15.8%	25.54	306.00	12.8%	25.42	274.00	11.4%	28.42						
550	319.00	13.3%	25.28	309.00	12.9%	26.15	697.00	29.1%	27.88	380.00	15.8%	26.51	306.00	12.8%	26.39	275.00	11.5%	29.41						
560	319.00	13.3%	26.26	308.00	12.9%	27.13	696.00	29.0%	28.88	379.00	15.8%	27.50	306.00	12.8%	27.38	276.00	11.5%	30.40						
570	318.00	13.3%	27.28	308.00	12.8%	28.15	696.00	29.0%	29.89	379.00	15.8%	28.51	306.00	12.8%	28.39	276.00	11.5%	31.43						
580	317.00	13.2%	28.30	308.00	12.8%	29.17	696.00	29.0%	30.92	378.00	15.8%	29.54	305.00	12.7%	29.42	277.00	11.6%	32.46						
590	317.00	13.2%	29.35	308.00	12.8%	30.23	696.00	29.0%	31.97	378.00	15.8%	30.59	305.00	12.7%	30.47	278.00	11.6%	33.52						
600	316.00	13.2%	30.42	307.00	12.8%	31.29	695.00	29.0%	33.04	378.00	15.8%	31.66	305.00	12.7%	31.53	278.00	11.6%	34.60						

ALLIANCE AAAC 246.9 KCMIIL

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 3907.68
 Peso (daN/m): 0.3382

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 22%
 Operación diaria (EDS): 12.5%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha	
	daN	UTS			daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m		daN	UTS	m	
10	793.00	20.8%	0.01	566.00	15%	0.01	554.00	15%	0.02	548.00	14%	0.01	476.00	12.5%	0.01	22.00	1%	0.19						
20	791.00	20.8%	0.02	565.00	15%	0.03	570.00	15%	0.07	551.00	14%	0.04	476.00	12.5%	0.04	44.00	1%	0.38						
30	787.00	20.7%	0.05	563.00	15%	0.07	591.00	16%	0.16	551.00	14%	0.09	476.00	12.5%	0.08	65.00	2%	0.59						
40	780.00	20.5%	0.09	559.00	15%	0.12	615.00	16%	0.27	552.00	14%	0.15	476.00	12.5%	0.14	85.00	2%	0.80						
50	773.00	20.3%	0.14	555.00	15%	0.19	638.00	17%	0.40	554.00	15%	0.24	476.00	12.5%	0.22	104.00	3%	1.02						
60	766.00	20.1%	0.20	552.00	14%	0.28	661.00	17%	0.54	556.00	15%	0.34	476.00	12.5%	0.32	122.00	3%	1.25						
70	755.00	19.8%	0.27	547.00	14%	0.38	683.00	18%	0.71	557.00	15%	0.46	476.00	12.5%	0.44	140.00	4%	1.49						
80	745.00	19.6%	0.36	543.00	14%	0.50	703.00	19%	0.99	558.00	15%	0.60	476.00	12.5%	0.57	156.00	4%	1.73						
90	732.00	19.2%	0.47	538.00	14%	0.64	722.00	19%	1.09	559.00	15%	0.75	476.00	12.5%	0.72	172.00	5%	1.99						
100	720.00	18.9%	0.59	533.00	14%	0.79	739.00	19%	1.30	560.00	15%	0.92	476.00	12.5%	0.89	187.00	5%	2.27						
110	707.00	18.6%	0.72	528.00	14%	0.97	755.00	20%	1.53	560.00	15%	1.11	476.00	12.5%	1.08	201.00	5%	2.55						
120	694.00	18.2%	0.88	524.00	14%	1.16	770.00	20%	1.78	561.00	15%	1.32	475.00	12.5%	1.28	214.00	6%	2.85						
130	681.00	17.9%	1.05	520.00	14%	1.37	783.00	21%	2.04	562.00	15%	1.54	475.00	12.5%	1.50	227.00	6%	3.15						
140	667.00	17.5%	1.24	516.00	14%	1.61	795.00	21%	2.32	562.00	15%	1.78	475.00	12.5%	1.75	239.00	6%	3.47						
150	654.00	17.2%	1.45	513.00	13%	1.86	807.00	21%	2.61	562.00	15%	2.04	476.00	12.5%	2.00	250.00	7%	3.80						
160	642.00	16.9%	1.69	510.00	13%	2.13	817.00	21%	2.91	562.00	15%	2.32	476.00	12.5%	2.28	261.00	7%	4.15						
170	630.00	16.5%	1.94	507.00	13%	2.41	826.00	22%	3.24	562.00	15%	2.61	475.00	12.5%	2.57	271.00	7%	4.51						
180	619.00	16.3%	2.21	504.00	13%	2.72	835.00	22%	3.58	562.00	15%	2.92	476.00	12.5%	2.89	281.00	7%	4.89						
190	609.00	16.0%	2.51	502.00	13%	3.04	843.00	22%	3.93	561.00	15%	3.25	475.00	12.5%	3.22	290.00	8%	5.28						
200	599.00	15.7%	2.82	500.00	13%	3.38	850.00	22%	4.30	561.00	15%	3.60	475.00	12.5%	3.56	298.00	8%	5.68						
210	590.00	15.5%	3.16	498.00	13%	3.75	856.00	22%	4.69	560.00	15%	3.97	474.00	12.4%	3.93	306.00	8%	6.10						
220	582.00	15.3%	3.52	496.00	13%	4.13	862.00	23%	5.10	560.00	15%	4.36	474.00	12.4%	4.32	314.00	8%	6.53						
230	574.00	15.1%	3.90	495.00	13%	4.53	868.00	23%	5.51	560.00	15%	4.75	474.00	12.4%	4.72	321.00	8%	6.98						
240	567.00	14.9%	4.30	493.00	13%	4.94	872.00	23%	5.95	560.00	15%	5.14	474.00	12.4%	5.14	328.00	9%	7.44						
250	561.00	14.7%	4.71	492.00	13%	5.38	877.00	23%	6.41	559.00	15%	5.61	474.00	12.4%	5.58	334.00	9%	7.93						
260	555.00	14.6%	5.16	490.00	13%	5.84	881.00	23%	6.88	558.00	15%	6.07	474.00	12.4%	6.04	340.00	9%	8.42						
270	550.00	14.4%	5.61	489.00	13%	6.31	884.00	23%	7.37	558.00	15%	6.54	474.00	12.4%	6.51	346.00	9%	8.93						
280	544.00	14.3%	6.09	488.00	13%	6.80	887.00	23%	7.87	557.00	15%	7.01	473.00	12.4%	7.01	351.00	9%	9.46						
290	540.00	14.2%	6.59	487.00	13%	7.31	890.00	23%	8.39	557.00	15%	7.55	473.00	12.4%	7.52	356.00	9%	10.01						
300	535.00	14.1%	7.11	486.00	13%	7.84	892.00	23%	8.94	556.00	15%	8.08	473.00	12.4%	8.05	361.00	9%	10.57						
310	530.00	14.0%	7.65	485.00	13%	8.39	895.00	24%	9.49	556.00	15%	8.62	473.00	12.4%	8.60	365.00	10%	11.15						
320	528.00	13.9%	8.21	484.00	13%	8.95	897.00	24%	10.07	555.00	15%	9.19	473.00	12.4%	9.17	369.00	10%	11.74						
330	524.00	13.8%	8.79	483.00	13%	9.54	898.00	24%	10.67	554.00	15%	9.78	473.00	12.4%	9.76	373.00	10%	12.36						
340	521.00	13.7%	9.39	483.00	13%	10.14	900.00	24%	11.27	554.00	15%	10.39	472.00	12.4%	10.36	377.00	10%	12.98						
350	519.00	13.6%	10.00	482.00	13%	10.77	901.00	24%	11.91	553.00	15%	11.01	472.00	12.4%	10.98	381.00	10%	13.63						
360	516.00	13.6%	10.64	481.00	13%	11.41	902.00	24%	12.56	553.00	15%	11.65	472.00	12.4%	11.63	384.00	10%	14.30						
370	513.00	13.5%	11.29	480.00	13%	12.07	903.00	24%	13.22	552.00	14%	12.31	472.00	12.4%	12.29	387.00	10%	14.98						
380	511.00	13.4%	11.97	480.00	13%	12.75	904.00	24%	13.91	552.00	14%	12.99	472.00	12.4%	12.97	390.00	10%	15.68						
390	509.00	13.4%	12.66	479.00	13%	13.44	905.00	24%	14.61	551.00	14%	13.69	471.00	12.4%	13.67	393.00	10%	16.40						
400	507.00	13.3%	13.38	478.00	13%	14.16	905.00	24%	15.33	551.00	14%	14.41	471.00	12.4%	14.41	396.00	10%	17.13						
410	505.00	13.3%	14.11	478.00	13%	14.90	906.00	24%	16.07	550.00	14%	15.14	471.00	12.4%	15.13	398.00	10%	17.89						
420	503.00	13.2%	14.86	477.00	13%	15.66	906.00	24%	16.83	549.00	14%	15.90	471.00	12.4%	15.89	401.00	11%	18.66						
430	501.00	13.2%	15.64	477.00	13%	16.43	906.00	24%	17.61	549.00	14%	16.67	470.00	12.3%	16.66	403.00	11%	19.45						
440	499.00	13.1%	16.43	476.00	13%	17.23	906.00	24%	18.41	548.00	14%	17.47	470.00	12.3%	17.45	405.00	11%	20.26						
450	498.00	13.1%	17.24	476.00	13%	18.04	906.00	24%	19.23	548.00	14%	18.29	470.00	12.3%	18.27	407.00	11%	21.09						
460	496.00	13.0%	18.07	475.00	12%	18.88	906.00	24%	20.06	547.00	14%	19.12	469.00	12.3%	19.10	409.00	11%	21.94						
470	495.00	13.0%	18.92	475.00	12%	19.73	906.00	24%	20.92	546.00	14%	19.97	469.00	12.3%	19.96	411.00	11%	22.80						
480	493.00	12.9%	19.79	474.00	12%	20.60	906.00	24%	21.79	546.00	14%	20.84	469.00	12.3%	20.83	413.00	11%	23.69						
490	492.00	12.9%	20.68	474.00	12%	21.49	905.00	24%	22.69	545.00	14%	21.74	469.00	12.3%	21.72	414.00	11%	24.59						
500	491.00	12.9%	21.59	473.00	12%	22.41	905.00	24%	23.60	545.00	14%	22.65	468.00	12.3%	22.65	416.00	11%	25.51						
510	490.00	12.9%	22.53	473.00	12%	23.34	905.00	24%	24.53	544.00	14%	23.58	468.00	12.3%	23.57	417.00	11%	26.46						
520	488.00	12.8%	23.48	472.00	12%	24.29	904.00	24%	25.49	543.00	14%	24.53	468.00	12.3%	24.52	419.00	11%	27.42						
530	487.00	12.8%	24.45	472.00	12%	25.27	904.00	24%	26.46	543.00	14%	25.51	467.00	12.3%	25.51	420.00	11%	28.40						
540	486.00	12.8%	25.44	471.00	12%	26.26	903.00	24%	27.45	542.00	14%	26.50	467.00	12.3%	26.49	421.00	11%	29.41						
550	485.00	12.7%	26.45	471.00	12%	27.27	902.00	24%	28.47	542.00	14%	27.51	467.00	12.3%	27.50	422.00	11%	30.43						
560	484.00	12.7%	27.49	470.00	12%	28.31	902.00	24%	29.50	541.00	14%	28.55	466.00	12.2%	28.55	423.00	11%	31.47						
570	483.00	12.7%	28.54	470.00	12%	29.36	901.00	24%	30.56	540.00	14%	29.60	466.00	12.2%	29.59	424.00	11%	32.53						
580	482.00	12.7%	29.62	469.00	12%	30.43	900.00	24%	31.63	540.00	14%	30.67	466.00	12.2%	30.67	425.00	11%	33.62						

BUTTE AAAC 312.8 KCML

Clima: Frío
 Altitud: 2500 msnm - 3500 msnm
 Temperatura máxima (°C): 27
 Temperatura media (°C): 9
 Temperatura mínima (°C): 4
 Temperatura coincidente (°C): 5
 Velocidad del viento máxima (km/h): 120
 Velocidad del viento promedio (km/h): 70

Propiedades físicas del conductor:
 Tensión de rotura (daN): 4993.04
 Peso (daN/m): 0.4284

Condición de tensionado: (% límite de tensión de rotura)
 Temperatura mínima: 19%
 Operación diaria (EDS): 11%

Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial			Mínima temperatura (temperatura mínima y sin viento). Condición Final			Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final			Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final			Operación Diaria (Tensión diaria promedio, EDS). Condición Final			Máxima flecha (Temperatura máxima, sin viento). Condición Final		
	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha	Tensión mecánica		Flecha
	daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS		daN	UTS	
10	912.00	18.0%	0.01	673.00	14%	0.01	657.00	13%	0.02	651.00	13%	0.01	553.00	11.5%	0.01	28.00	1%	0.19
20	909.00	18.0%	0.02	671.00	14%	0.03	676.00	14%	0.07	652.00	13%	0.04	563.00	11.5%	0.04	55.00	1%	0.39
30	903.00	18.5%	0.05	667.00	14%	0.07	699.00	14%	0.16	654.00	13%	0.09	563.00	11.5%	0.09	81.00	2%	0.59
40	895.00	18.3%	0.10	662.00	14%	0.13	724.00	15%	0.26	654.00	13%	0.16	563.00	11.5%	0.15	106.00	2%	0.81
50	887.00	18.1%	0.15	658.00	13%	0.20	749.00	15%	0.39	655.00	13%	0.25	563.00	11.5%	0.24	130.00	3%	1.03
60	875.00	17.9%	0.22	652.00	13%	0.30	775.00	16%	0.54	655.00	13%	0.35	562.00	11.5%	0.34	153.00	3%	1.26
70	862.00	17.6%	0.30	646.00	13%	0.41	797.00	16%	0.71	657.00	13%	0.48	562.00	11.5%	0.47	174.00	4%	1.51
80	848.00	17.3%	0.40	640.00	13%	0.54	819.00	17%	0.99	656.00	13%	0.62	562.00	11.5%	0.61	195.00	4%	1.76
90	831.00	17.0%	0.52	633.00	13%	0.69	838.00	17%	1.09	656.00	13%	0.78	562.00	11.5%	0.77	214.00	4%	2.03
100	816.00	16.7%	0.66	626.00	13%	0.86	857.00	18%	1.31	655.00	13%	0.97	562.00	11.5%	0.95	232.00	5%	2.31
110	800.00	16.3%	0.81	622.00	13%	1.04	874.00	18%	1.55	655.00	13%	1.17	562.00	11.5%	1.15	249.00	5%	2.60
120	784.00	16.0%	0.98	616.00	13%	1.25	888.00	18%	1.80	655.00	13%	1.38	562.00	11.5%	1.37	265.00	5%	2.91
130	768.00	15.7%	1.18	611.00	12%	1.48	902.00	18%	2.07	655.00	13%	1.62	562.00	11.5%	1.61	281.00	6%	3.23
140	753.00	15.4%	1.39	607.00	12%	1.73	914.00	19%	2.35	654.00	13%	1.88	562.00	11.5%	1.87	295.00	6%	3.56
150	739.00	15.1%	1.63	603.00	12%	2.00	925.00	19%	2.66	653.00	13%	2.16	562.00	11.5%	2.15	309.00	6%	3.91
160	725.00	14.8%	1.89	600.00	12%	2.29	935.00	19%	2.97	653.00	13%	2.45	562.00	11.5%	2.44	322.00	7%	4.27
170	712.00	14.6%	2.17	596.00	12%	2.60	944.00	19%	3.31	652.00	13%	2.76	561.00	11.5%	2.76	334.00	7%	4.65
180	700.00	14.3%	2.46	593.00	12%	2.93	951.00	19%	3.67	651.00	13%	3.10	561.00	11.5%	3.09	345.00	7%	5.04
190	689.00	14.1%	2.81	590.00	12%	3.28	959.00	20%	4.04	651.00	13%	3.45	561.00	11.5%	3.45	355.00	7%	5.45
200	680.00	13.9%	3.15	588.00	12%	3.65	966.00	20%	4.43	650.00	13%	3.82	561.00	11.5%	3.82	365.00	7%	5.87
210	670.00	13.7%	3.53	586.00	12%	4.04	971.00	20%	4.84	649.00	13%	4.22	561.00	11.5%	4.21	374.00	8%	6.31
220	662.00	13.5%	3.92	583.00	12%	4.45	976.00	20%	5.26	648.00	13%	4.63	561.00	11.5%	4.63	383.00	8%	6.77
230	654.00	13.4%	4.33	582.00	12%	4.87	981.00	20%	5.70	647.00	13%	5.06	560.00	11.4%	5.06	392.00	8%	7.24
240	647.00	13.2%	4.77	580.00	12%	5.32	984.00	20%	6.17	647.00	13%	5.51	560.00	11.4%	5.51	399.00	8%	7.73
250	641.00	13.1%	5.23	579.00	12%	5.79	988.00	20%	6.65	646.00	13%	5.98	560.00	11.4%	5.98	407.00	8%	8.24
260	635.00	13.0%	5.70	577.00	12%	6.28	991.00	20%	7.15	645.00	13%	6.47	560.00	11.4%	6.47	414.00	8%	8.77
270	630.00	12.9%	6.20	576.00	12%	6.79	994.00	20%	7.67	645.00	13%	6.98	560.00	11.4%	6.98	420.00	9%	9.31
280	625.00	12.8%	6.73	574.00	12%	7.32	996.00	20%	8.20	644.00	13%	7.51	559.00	11.4%	7.51	426.00	9%	9.87
290	621.00	12.7%	7.26	573.00	12%	7.86	998.00	20%	8.76	643.00	13%	8.06	559.00	11.4%	8.06	432.00	9%	10.45
300	616.00	12.6%	7.83	572.00	12%	8.43	999.00	20%	9.34	642.00	13%	8.63	559.00	11.4%	8.63	437.00	9%	11.05
310	613.00	12.5%	8.41	571.00	12%	9.02	1001.00	20%	9.93	642.00	13%	9.21	559.00	11.4%	9.22	442.00	9%	11.66
320	609.00	12.4%	9.01	570.00	12%	9.63	1003.00	20%	10.54	641.00	13%	9.82	558.00	11.4%	9.83	447.00	9%	12.30
330	606.00	12.4%	9.64	569.00	12%	10.26	1003.00	20%	11.18	640.00	13%	10.45	558.00	11.4%	10.47	451.00	9%	12.95
340	603.00	12.3%	10.28	569.00	12%	10.90	1004.00	21%	11.83	639.00	13%	11.10	558.00	11.4%	11.11	456.00	9%	13.62
350	600.00	12.3%	10.95	567.00	12%	11.58	1005.00	21%	12.51	638.00	13%	11.77	558.00	11.4%	11.78	460.00	9%	14.31
360	598.00	12.2%	11.63	567.00	12%	12.27	1005.00	21%	13.20	638.00	13%	12.46	557.00	11.4%	12.47	463.00	9%	15.02
370	596.00	12.2%	12.34	566.00	12%	12.98	1006.00	21%	13.91	637.00	13%	13.17	557.00	11.4%	13.19	467.00	10%	15.75
380	593.00	12.1%	13.07	565.00	12%	13.70	1006.00	21%	14.65	636.00	13%	13.90	557.00	11.4%	13.92	470.00	10%	16.49
390	591.00	12.1%	13.81	564.00	12%	14.46	1006.00	21%	15.40	635.00	13%	14.65	556.00	11.4%	14.67	473.00	10%	17.27
400	588.00	12.0%	14.58	564.00	12%	15.23	1006.00	21%	16.17	635.00	13%	15.42	556.00	11.4%	15.44	476.00	10%	18.05
410	587.00	12.0%	15.38	563.00	12%	16.02	1005.00	21%	16.97	634.00	13%	16.22	556.00	11.4%	16.24	479.00	10%	18.86
420	585.00	12.0%	16.19	562.00	11%	16.84	1005.00	21%	17.78	633.00	13%	17.03	555.00	11.3%	17.05	481.00	10%	19.69
430	583.00	11.9%	17.02	562.00	11%	17.67	1005.00	21%	18.62	632.00	13%	17.87	555.00	11.3%	17.88	484.00	10%	20.54
440	581.00	11.9%	17.87	561.00	11%	18.53	1004.00	21%	19.48	632.00	13%	18.72	555.00	11.3%	18.74	486.00	10%	21.40
450	580.00	11.9%	18.75	560.00	11%	19.40	1004.00	21%	20.36	631.00	13%	19.60	554.00	11.3%	19.62	488.00	10%	22.29
460	578.00	11.8%	19.64	560.00	11%	20.30	1003.00	20%	21.25	630.00	13%	20.49	554.00	11.3%	20.52	490.00	10%	23.20
470	577.00	11.8%	20.56	559.00	11%	21.22	1002.00	20%	22.17	629.00	13%	21.42	553.00	11.3%	21.44	492.00	10%	24.13
480	575.00	11.8%	21.50	558.00	11%	22.16	1002.00	20%	23.11	629.00	13%	22.35	553.00	11.3%	22.38	494.00	10%	25.08
490	574.00	11.7%	22.46	558.00	11%	23.12	1001.00	20%	24.08	628.00	13%	23.11	553.00	11.3%	23.34	496.00	10%	26.05
500	573.00	11.7%	23.44	557.00	11%	24.10	1000.00	20%	25.06	627.00	13%	24.30	552.00	11.3%	24.32	497.00	10%	27.04
510	572.00	11.7%	24.45	557.00	11%	25.11	999.00	20%	26.06	626.00	13%	25.30	552.00	11.3%	25.33	499.00	10%	28.06
520	570.00	11.6%	25.47	556.00	11%	26.14	998.00	20%	27.09	626.00	13%	26.33	551.00	11.3%	26.35	500.00	10%	29.09
530	569.00	11.6%	26.53	555.00	11%	27.19	997.00	20%	28.14	625.00	13%	27.38	551.00	11.3%	27.41	501.00	10%	30.15
540	568.00	11.6%	27.59	555.00	11%	28.26	996.00	20%	29.21	624.00	13%	28.45	550.00	11.2%	28.48	502.00	10%	31.23
550	567.00	11.6%	28.69	554.00	11%	29.35	995.00	20%	30.30	623.00	13%	29.54	550.00	11.2%	29.57	503.00	10%	32.33
560	566.00	11.6%	29.80	553.00	11%	30.47	994.00	20%	31.42	623.00	13%	30.66	550.00	11.2%	30.69	504.00	10%	33.45
570	565.00	11.5%	30.94	553.00	11%	31.61	993.00	20%	32.56	622.00	13%	31.80	549.00	11.2%	31.83	505.00	10%	34.60
580	564.00	11.5%	32.10	552.00	11%	32.77	991.00	20%	33.72	621.00	13%	32.96	548.00	11.2%	32.98	506.00	10%	35.76
590	562.00	11.5%	33.29	551.00	11%	33.96	990.00	20%	34.90	620.00	13%	34.14	548.00	11.2%	34.17	507.00	10%	36.95
600	561.00	11.5%	34.49	551.00	11%	35.16	989.00	20%	36.11	619.00	13%	35.35	548.00	11.2%	35.38	508.00	10%	38.16

CANTON AAAC 336.4 KCMIL																								
Clima: Frío																								
Altitud: 2500 msnm - 3500 msnm																								
Temperatura máxima (°C): 27																								
Temperatura media (°C): 9																								
Temperatura mínima (°C): 4																								
Temperatura coincidente (°C): 5																								
Velocidad del viento máxima (km/h): 120																								
Velocidad del viento promedio (km/h): 70																								
Propiedades físicas del conductor:																								
Tensión de rotura (daN): 5916.13																								
Peso (daN/m): 0.5404																								
Condición de tensionado: (% límite de tensión de rotura)																								
Temperatura mínima: 19%																								
Operación diaria (EDS): 11%																								
Vano Regulador (m)	Mínima temperatura (temperatura mínima y sin viento). Condición Inicial				Mínima temperatura (temperatura mínima y sin viento). Condición Final				Máxima velocidad del viento (temperatura coincidente y viento máximo). Condición Final				Velocidad promedio del viento (temperatura coincidente y viento promedio) Condición Final				Operación Diaria (Tensión diaria promedio, EDS). Condición Final				Máxima flecha (Temperatura máxima, sin viento). Condición Final			
	Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha		Tensión mecánica		Flecha	
	daN	UTS			daN	UTS			daN	UTS			daN	UTS			daN	UTS			daN	UTS		
10	1065.00	18.0%	0.01	790.00	13%	0.01	769.00	13%	0.02	762.00	13%	0.01	651.00	11.0%	0.01	35.00	1%	0.20						
20	1059.00	17.8%	0.03	786.00	13%	0.03	788.00	13%	0.07	762.00	13%	0.04	651.00	11.0%	0.04	68.00	1%	0.40						
30	1052.00	17.8%	0.06	780.00	13%	0.08	815.00	14%	0.15	762.00	13%	0.09	651.00	11.0%	0.09	100.00	2%	0.61						
40	1040.00	17.6%	0.10	773.00	13%	0.14	842.00	14%	0.26	762.00	13%	0.17	651.00	11.0%	0.17	131.00	2%	0.83						
50	1023.00	17.3%	0.16	767.00	13%	0.22	870.00	15%	0.39	762.00	13%	0.26	651.00	11.0%	0.26	160.00	3%	1.06						
60	1010.00	17.1%	0.24	757.00	13%	0.32	896.00	15%	0.54	760.00	13%	0.37	651.00	11.0%	0.37	188.00	3%	1.30						
70	989.00	16.7%	0.33	747.00	13%	0.44	919.00	16%	0.71	757.00	13%	0.50	650.00	11.0%	0.51	214.00	4%	1.55						
80	970.00	16.4%	0.45	739.00	12%	0.58	942.00	16%	0.90	757.00	13%	0.66	649.00	11.0%	0.67	239.00	4%	1.81						
90	948.00	16.0%	0.58	730.00	12%	0.75	961.00	16%	1.10	755.00	13%	0.83	649.00	11.0%	0.84	262.00	4%	2.09						
100	926.00	15.7%	0.73	722.00	12%	0.94	979.00	17%	1.33	753.00	13%	1.03	649.00	11.0%	1.04	284.00	5%	2.38						
110	905.00	15.3%	0.90	715.00	12%	1.14	995.00	17%	1.57	751.00	13%	1.24	649.00	11.0%	1.26	305.00	5%	2.68						
120	886.00	15.0%	1.10	709.00	12%	1.37	1009.00	17%	1.83	750.00	13%	1.48	650.00	11.0%	1.50	324.00	5%	3.00						
130	865.00	14.6%	1.32	703.00	12%	1.62	1021.00	17%	2.11	748.00	13%	1.74	649.00	11.0%	1.76	342.00	6%	3.34						
140	847.00	14.3%	1.56	698.00	12%	1.90	1032.00	17%	2.41	747.00	13%	2.02	650.00	11.0%	2.04	359.00	6%	3.69						
150	829.00	14.0%	1.83	692.00	12%	2.20	1041.00	18%	2.73	745.00	13%	2.32	649.00	11.0%	2.34	375.00	6%	4.05						
160	813.00	13.7%	2.13	689.00	12%	2.51	1050.00	18%	3.07	743.00	13%	2.64	649.00	11.0%	2.67	390.00	7%	4.44						
170	799.00	13.5%	2.45	685.00	12%	2.85	1057.00	18%	3.43	742.00	13%	2.98	649.00	11.0%	3.01	404.00	7%	4.84						
180	786.00	13.3%	2.79	682.00	12%	3.21	1063.00	18%	3.80	740.00	13%	3.34	649.00	11.0%	3.38	417.00	7%	5.25						
190	774.00	13.1%	3.15	679.00	11%	3.59	1069.00	18%	4.20	739.00	12%	3.73	649.00	11.0%	3.76	429.00	7%	5.69						
200	763.00	12.9%	3.54	676.00	11%	4.00	1073.00	18%	4.62	737.00	12%	4.14	649.00	11.0%	4.17	440.00	7%	6.14						
210	753.00	12.7%	3.96	673.00	11%	4.43	1077.00	18%	5.06	736.00	12%	4.57	649.00	11.0%	4.60	451.00	8%	6.62						
220	745.00	12.6%	4.39	671.00	11%	4.87	1081.00	18%	5.51	735.00	12%	5.01	648.00	11.0%	5.05	461.00	8%	7.10						
230	737.00	12.5%	4.85	668.00	11%	5.34	1084.00	18%	5.99	734.00	12%	5.48	648.00	11.0%	5.52	470.00	8%	7.61						
240	730.00	12.3%	5.33	666.00	11%	5.83	1086.00	18%	6.49	732.00	12%	5.98	648.00	11.0%	6.01	479.00	8%	8.14						
250	723.00	12.2%	5.84	664.00	11%	6.35	1088.00	18%	7.01	731.00	12%	6.49	647.00	10.9%	6.53	487.00	9%	8.68						
260	718.00	12.1%	6.37	663.00	11%	6.88	1089.00	18%	7.55	730.00	12%	7.03	647.00	10.9%	7.07	494.00	9%	9.25						
270	713.00	12.1%	6.92	662.00	11%	7.44	1091.00	18%	8.11	729.00	12%	7.58	647.00	10.9%	7.62	502.00	9%	9.84						
280	708.00	12.0%	7.49	661.00	11%	8.02	1092.00	18%	8.69	728.00	12%	8.16	646.00	10.9%	8.21	508.00	9%	10.44						
290	703.00	11.9%	8.08	660.00	11%	8.62	1093.00	18%	9.29	727.00	12%	8.76	646.00	10.9%	8.81	514.00	9%	11.07						
300	699.00	11.8%	8.70	659.00	11%	9.24	1093.00	18%	9.82	726.00	12%	9.38	646.00	10.9%	9.43	520.00	9%	11.71						
310	696.00	11.8%	9.34	658.00	11%	9.88	1093.00	18%	10.57	725.00	12%	10.03	645.00	10.9%	10.08	525.00	9%	12.38						
320	692.00	11.7%	10.01	657.00	11%	10.55	1093.00	18%	11.24	724.00	12%	10.69	645.00	10.9%	10.74	531.00	9%	13.07						
330	689.00	11.6%	10.69	656.00	11%	11.24	1093.00	18%	11.93	723.00	12%	11.38	645.00	10.9%	11.43	535.00	9%	13.78						
340	686.00	11.6%	11.40	655.00	11%	11.95	1093.00	18%	12.64	722.00	12%	12.09	644.00	10.9%	12.14	540.00	9%	14.50						
350	683.00	11.5%	12.13	654.00	11%	12.68	1092.00	18%	13.38	721.00	12%	12.83	644.00	10.9%	12.88	544.00	9%	15.26						
360	681.00	11.5%	12.89	653.00	11%	13.44	1092.00	18%	14.13	720.00	12%	13.58	643.00	10.9%	13.64	548.00	9%	16.03						
370	678.00	11.5%	13.66	652.00	11%	14.22	1091.00	18%	14.91	719.00	12%	14.36	643.00	10.9%	14.41	551.00	9%	16.82						
380	676.00	11.4%	14.46	651.00	11%	15.02	1090.00	18%	15.72	718.00	12%	15.16	642.00	10.9%	15.21	555.00	9%	17.64						
390	674.00	11.4%	15.29	650.00	11%	15.84	1089.00	18%	16.54	717.00	12%	15.99	642.00	10.9%	16.04	558.00	9%	18.48						
400	672.00	11.4%	16.12	649.00	11%	16.69	1089.00	18%	17.38	716.00	12%	16.83	642.00	10.9%	16.88	561.00	9%	19.33						
410	670.00	11.3%	16.99	648.00	11%	17.56	1088.00	18%	18.25	715.00	12%	17.70	641.00	10.8%	17.75	564.00	10%	20.21						
420	668.00	11.3%	17.89	648.00	11%	18.45	1087.00	18%	19.15	714.00	12%	18.59	641.00	10.8%	18.65	566.00	10%	21.11						
430	666.00	11.3%	18.80	647.00	11%	19.36	1086.00	18%	20.06	713.00	12%	19.51	640.00	10.8%	19.56	569.00	10%	22.04						
440	664.00	11.2%	19.74	646.00	11%	20.30	1084.00	18%	21.00	712.00	12%	20.44	640.00	10.8%	20.50	571.00	10%	22.99						
450	663.00	11.2%	20.70	645.00	11%	21.27	1083.00	18%	21.96	711.00	12%	21.41	639.00	10.8%	21.47	573.00	10%	23.96						
460	661.00	11.2%	21.69	644.00	11%	22.25	1082.00	18%	22.95	710.00	12%	22.39	639.00	10.8%	22.45	575.00	10%	24.96						
470	659.00	11.1%	22.70	643.00	11%	23.27	1080.00	18%	23.96	709.00	12%	23.41	638.00	10.8%	23.46	577.00	10%	25.98						
480	658.00	11.1%	23.73	643.00	11%	24.30	1079.00	18%	24.99	709.00	12%	24.44	638.00	10.8%	24.50	578.00	10%	27.02						
490	657.00	11.1%	24.79	642.00	11%	25.36	1077.00	18%	26.05	708.00	12%	25.50	637.00	10.8%	25.56	580.00	10%	28.08						
500	655.00	11.1%	25.87	641.00	11%	26.44	1076.00	18%	27.13	707.00	12%	26.58	636.00	10.8%	26.64	582.00	10%	29.17						
510	654.00	11.1%	26.98	640.00	11%	27.54	1075.00	18%	28.24	706.00	12%	27.68	636.00	10.8%	27.74	583.00	10%	30.29						
520	652.00	11.0%	28.11	640.00	11%	28.68	1073.00	18%	29.37	705.00	12%	28.82	635.00	10.7%	28.88	584.00	10%	31.42						
530	651.00	11.0%	29.26	639.00	11%	29.82	1071.00	18%	30.82	704.00	12%	29.77	634.00	10.7%	29.83	585.00	10%	32.57						
540	650.00	11.0%	30.44	638.00	11%	31.01	1070.00	18%	31.70	703.00	12%	31.15	634.00	10.7%	31.21	586.00	10%	33.77						
550	649.00	11.0%	31.65	637.00	11%	32.22	1068.00	18%	32.90	702.00	12%	32.86	633.00	10.7%	32.92	587.00	10%	34.98						
560	647.00	11.0%	32.86	636.00	11%	32.45	1066.00	18%	34.13	701.00	12%	34.08	632.00	10.7%	34.14	588.00	10%	36.22						
570	646.00	10.9%	34.13	636.00	11%	34.70	1065.00	18%	35.38															