

C-Rural Wire – Sag and Tension Guide

2-Conductor x 14 AWG

Initial Sag and Tension¹

Span ft	0°F		20°F		40°F		60°F		80°F		100°F	
	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in
25	28	1.2	19	1.8	14	2.4	11	3.0	9	3.6	8	4.2
50	41	3.3	32	4.2	27	5.1	23	6.0	20	6.9	17	7.8
75	54	5.6	45	6.7	39	7.9	34	9.0	30	10.1	27	11.3
100	67	8.0	58	9.4	51	10.7	45	12.0	41	13.3	37	14.6
125	79	10.6	70	12.1	62	13.5	56	15.0	51	16.5	47	17.9
150	92	13.3	82	14.8	74	16.4	68	18.0	62	19.6	57	21.2
175	104	16.0	94	17.7	86	19.3	79	21.0	73	22.7	68	24.3
200	115	18.7	105	20.5	97	22.2	90	24.0	84	25.8	78	27.5
225	127	21.5	117	23.3	109	25.2	101	27.0	95	28.8	89	30.7
250	139	24.3	129	26.2	120	28.1	113	30.0	106	31.9	100	33.8
275	151	27.1	140	29.1	132	31.0	124	33.0	117	35.0	111	36.9
300	162	30.0	152	32.0	143	34.0	135	36.0	128	38.0	121	40.0
325	174	32.8	163	34.9	154	36.9	146	39.0	139	41.1	132	43.1
350	185	35.7	175	37.8	166	39.9	158	42.0	150	44.1	143	46.2
375	197	38.6	186	40.7	177	42.9	169	45.0	161	47.1	154	49.3
400	208	41.5	198	43.7	189	45.8	180	48.0	172	50.2	165	52.3
425	213	45.8	205	47.6	198	49.3	191	51.0	185	52.7	179	54.4
450	225	48.7	217	50.5	175	62.6	203	54.0	173	63.4	168	65.2
475	236	51.5	228	53.4	221	55.2	214	57.0	207	58.8	201	60.6
500	248	54.4	240	56.3	232	58.1	225	60.0	218	61.9	212	63.7
525	260	57.3	251	59.2	244	61.1	236	63.0	229	64.9	223	66.8
550	271	60.2	263	62.1	255	64.1	248	66.0	240	67.9	234	69.9
575	283	63.1	274	65.0	266	67.0	259	69.0	252	71.0	245	73.0
600	295	66.0	286	68.0	278	70.0	270	72.0	263	74.0	256	76.0

NESC Ice and Wind Loading Districts¹

Span ft	Heavy Plus ²				Heavy				Medium				Light			
	Vert. Sag in	Horiz. Sag in	Total Sag in	Tension lbs	Vert. Sag in	Horiz. Sag in	Total Sag in	Tension lbs	Vert. Sag in	Horiz. Sag in	Total Sag in	Tension lbs	Vert. Sag in	Horiz. Sag in	Total Sag in	Tension lbs
25	7.8	3.7	8.6	195	4.6	3.8	6.0	106	2.9	3.7	4.7	66	0.7	4.1	4.2	48
50	19.8	9.2	21.8	308	11.7	9.6	15.1	167	7.1	9.3	11.7	105	1.7	10.1	10.2	78
75	33.9	15.9	37.4	404	20.1	16.5	26.0	218	12.1	15.8	19.9	139	2.9	16.9	17.2	105
100	49.7	23.3	54.9	490	29.4	24.1	38.0	265	17.7	23.0	29.0	170	4.2	24.4	24.8	129
125	-	-	-	-	39.5	32.4	51.1	309	23.6	30.7	38.7	199	5.6	32.4	32.9	152
150	-	-	-	-	50.2	41.2	65.0	349	30.0	38.9	49.1	226	7.0	40.9	41.5	173
175	-	-	-	-	61.5	50.5	79.6	388	36.6	47.5	59.9	251	8.5	49.7	50.4	194
200	-	-	-	-	73.3	60.2	94.8	425	43.5	56.4	71.2	276	10.1	58.9	59.7	214
225	-	-	-	-	85.6	70.2	110.7	461	50.6	65.7	82.9	301	11.7	68.3	69.3	233
250	-	-	-	-	98.2	80.7	127.1	496	58.0	75.2	95.0	324	13.4	78.0	79.2	252
275	-	-	-	-	111.3	91.4	144.0	530	65.5	85.0	107.4	347	15.1	88.0	89.2	271
300	-	-	-	-	-	-	-	-	73.3	95.1	120.0	369	16.8	98.1	99.5	289
325	-	-	-	-	-	-	-	-	81.2	105.4	133.0	391	18.6	108.5	110.0	307
350	-	-	-	-	-	-	-	-	89.3	115.9	146.2	412	20.4	119.0	120.7	324
375	-	-	-	-	-	-	-	-	97.5	126.5	159.7	433	22.2	129.7	131.6	341
400	-	-	-	-	-	-	-	-	105.9	137.4	173.5	454	24.1	140.6	142.6	358
425	-	-	-	-	-	-	-	-	114.4	148.4	187.4	475	26.0	151.6	153.8	375
450	-	-	-	-	-	-	-	-	123.0	159.7	201.5	495	27.9	162.8	165.2	392
475	-	-	-	-	-	-	-	-	131.8	171.0	215.9	514	29.8	174.1	176.7	408
500	-	-	-	-	-	-	-	-	140.6	182.6	230.4	534	31.8	185.6	188.3	424
525	-	-	-	-	-	-	-	-	-	-	-	-	33.8	197.1	200.0	440
550	-	-	-	-	-	-	-	-	-	-	-	-	35.8	208.8	211.8	456
575	-	-	-	-	-	-	-	-	-	-	-	-	37.8	220.6	223.8	472
600	-	-	-	-	-	-	-	-	-	-	-	-	39.9	232.5	235.9	488

Loading District Specifics

	Heavy Plus ²	Heavy	Medium	Light
Horizontal Wind Pressure (lb/ft ²)	4	4	4	9
Radial Ice Thickness (in)	1	½	¼	0
Temperature (F)	0	0	15	30

¹Reflects 1% Sag at 60° F Installation

²Not an NESC District