

IMRDWS – Sag and Tension Guide

6-Pair x 22 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	85	1.0	52	1.7	38	2.3	30	3.0	24	3.7	21	4.3
50	123	2.9	91	3.9	72	5.0	59	6.0	51	7.0	44	8.1
75	159	5.0	126	6.4	104	7.7	89	9.0	78	10.3	69	11.6
100	193	7.4	160	8.9	136	10.5	119	12.0	105	13.5	94	15.1
125	227	9.8	193	11.5	168	13.3	148	15.0	133	16.7	121	18.5
150	260	12.4	225	14.2	199	16.1	178	18.0	161	19.9	147	21.8
175	292	14.9	257	17.0	230	19.0	208	21.0	190	23.0	174	25.0
200	324	17.6	289	19.7	261	21.9	238	24.0	218	26.1	202	28.3
225	356	20.3	320	22.5	291	24.8	267	27.0	247	29.2	229	31.5
250	387	23.0	351	25.3	322	27.7	297	30.0	275	32.3	257	34.7
275	418	25.8	383	28.2	352	30.6	327	33.0	304	35.4	285	37.8
300	449	28.5	413	31.0	383	33.5	356	36.0	333	38.5	313	41.0
325	480	31.3	444	33.9	413	36.4	386	39.0	362	41.6	341	44.1
350	511	34.1	475	36.8	443	39.4	416	42.0	391	44.6	370	47.2
375	542	37.0	505	39.6	473	42.3	445	45.0	420	47.7	398	50.4

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	5.4	2.3	5.9	362	3.4	2.3	4.1	216	2.4	2.4	3.4	142	0.6	3.5	3.5	118
50	13.8	5.7	14.9	568	8.7	6.0	10.6	337	6.0	6.1	8.5	227	1.6	8.4	8.5	195
75	23.7	9.9	25.7	744	15.0	10.3	18.2	440	10.2	10.4	14.5	300	2.6	14.0	14.2	262
100	-	-	-	-	22.0	15.1	26.7	534	14.8	15.1	21.1	367	3.8	20.2	20.5	323
125	-	-	-	-	29.6	20.3	35.8	621	19.7	20.2	28.2	429	5.0	26.8	27.2	381
150	-	-	-	-	37.6	25.8	45.6	703	25.0	25.6	35.7	488	6.3	33.7	34.3	435
175	-	-	-	-	46.0	31.5	55.8	781	30.4	31.2	43.6	545	7.6	41.0	41.7	488
200	-	-	-	-	54.8	37.6	66.5	856	36.1	37.0	51.7	600	9.0	48.5	49.3	538
225	-	-	-	-	-	-	-	-	42.0	43.0	60.1	653	10.5	56.2	57.2	588
250	-	-	-	-	-	-	-	-	48.0	49.2	68.7	705	11.9	64.1	65.2	636
275	-	-	-	-	-	-	-	-	54.2	55.5	77.6	756	13.4	72.3	73.5	683
300	-	-	-	-	-	-	-	-	60.6	62.0	86.7	805	15.0	80.6	82.0	729
325	-	-	-	-	-	-	-	-	67.1	68.6	95.9	854	16.6	89.0	90.6	774
350	-	-	-	-	-	-	-	-	-	-	-	-	18.2	97.6	99.3	819
375	-	-	-	-	-	-	-	-	-	-	-	-	19.8	106.4	108.2	863

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