

Aerial Drop Wire (ADW) – Sag and Tension Guide

2-Pair x 22 AWG

Span ft (m)	Initial Stringing		Heavy Loading Conditions				Medium Loading Conditions			
	Sag in (m)	Tension lbs (N)	Loaded Cable Sag		Loaded Cable Tension lbs (N)	Sag After Load Removal in (m)	Loaded Cable Sag		Loaded Cable Tension lbs (N)	Sag After Load Removal in (m)
			Vertical in (m)	Horizontal in (m)			Vertical in (m)	Horizontal in (m)		
82 (25)	5.4 (0.14)	60 (267)	21.6 (0.55)	29.0 (0.74)	179 (797)	6.1 (0.15)	15.1 (0.38)	20.2 (0.51)	123 (547)	5.6 (0.14)
98 (30)	7.7 (0.20)	60 (267)	28.1 (0.71)	37.5 (0.95)	197 (877)	8.7 (0.22)	20.0 (0.51)	26.8 (0.68)	133 (592)	8.1 (0.21)
131 (40)	12.6 (0.32)	65 (289)	43.3 (1.10)	58.1 (1.48)	228 (1015)	16.6 (0.42)	30.5 (0.77)	40.9 (1.04)	155 (690)	13.6 (0.35)
164 (50)	18.4 (0.47)	70 (312)	60.4 (1.53)	81.0 (2.06)	256 (1139)	25.7 (0.65)	41.8 (1.06)	56.1 (1.43)	177 (788)	19.6 (0.50)
197 (60)	24.8 (0.63)	75 (334)	79.2 (2.01)	106.3 (2.70)	282 (1255)	36.8 (0.93)	54.4 (1.38)	73.0 (1.85)	197 (877)	26.8 (0.68)
230 (70)	31.6 (0.80)	80 (356)	99.0 (2.52)	132.9 (3.38)	307 (1366)	48.0 (1.22)	68.7 (1.75)	92.2 (2.34)	212 (943)	36.6 (0.93)
246 (75)	35.3 (0.90)	82 (365)	109.2 (2.77)	146.5 (3.72)	319 (1420)	54.7 (1.39)	76.2 (1.94)	102.3 (2.60)	219 (975)	41.9 (1.06)
262 (80)	38.6 (0.98)	85 (378)	119.2 (3.03)	160.0 (4.07)	331 (1473)	59.8 (1.52)	83.7 (2.13)	112.3 (2.85)	226 (1006)	46.6 (1.18)
295 (90)	46.3 (1.18)	90 (401)	141.0 (3.58)	189.2 (4.81)	355 (1580)	73.3 (1.86)	99.8 (2.54)	133.9 (3.40)	240 (1068)	57.3 (1.46)
328 (100)	54.2 (1.38)	95 (423)	164.1 (4.17)	220.2 (5.59)	377 (1678)	87.3 (2.22)	116.5 (2.96)	156.4 (3.97)	255 (1135)	69.2 (1.76)
361 (110)	62.4 (1.59)	100 (445)	-	-	-	-	134.4 (3.41)	180.4 (4.58)	267 (1188)	82.4 (2.09)
394 (120)	70.4 (1.79)	105 (467)	-	-	-	-	151.8 (3.86)	203.7 (5.18)	281 (1250)	94.4 (2.40)
410 (125)	74.5 (1.89)	108 (481)	-	-	-	-	161.3 (4.10)	216.5 (5.50)	287 (1277)	100.5 (2.55)

4-Pair x 22 AWG

Span ft (m)	Initial Stringing		Heavy Loading Conditions				Medium Loading Conditions			
	Sag in (m)	Tension lbs (N)	Loaded Cable Sag		Loaded Cable Tension lbs (N)	Sag After Load Removal in (m)	Loaded Cable Sag		Loaded Cable Tension lbs (N)	Sag After Load Removal in (m)
			Vertical in (m)	Horizontal in (m)			Vertical in (m)	Horizontal in (m)		
82 (25)	10 (0.26)	60 (267)	24.4 (0.62)	28.2 (0.72)	196 (872)	11.1 (0.28)	17.8 (0.45)	20.6 (0.52)	136 (605)	10.3 (0.26)
98 (30)	14 (0.36)	60 (267)	32.2 (0.82)	37.2 (0.95)	212 (943)	16.6 (0.42)	23.4 (0.59)	27.1 (0.69)	147 (654)	14.7 (0.37)
131 (40)	24 (0.60)	65 (289)	50.0 (1.27)	57.8 (1.47)	244 (1086)	29.6 (0.75)	36.0 (0.91)	41.6 (1.06)	171 (761)	24.8 (0.63)
164 (50)	34 (0.88)	70 (312)	69.7 (1.77)	80.4 (2.04)	275 (1224)	44.4 (1.13)	50.2 (1.28)	57.9 (1.47)	193 (859)	36.6 (0.93)
197 (60)	46 (1.18)	75 (334)	91.2 (2.32)	105.3 (2.68)	303 (1348)	61.2 (1.56)	66.1 (1.68)	76.4 (1.94)	211 (939)	50.9 (1.29)
230 (70)	59 (1.51)	80 (356)	114.1 (2.90)	131.8 (3.35)	330 (1469)	79.2 (2.01)	83.6 (2.12)	96.5 (2.45)	227 (1010)	67.0 (1.70)
246 (75)	66 (1.68)	82 (365)	125.8 (3.20)	145.3 (3.69)	343 (1526)	89.0 (2.26)	92.6 (2.35)	197.0 (5.01)	235 (1046)	75.7 (1.92)
262 (80)	72 (1.84)	85 (378)	137.6 (3.50)	158.9 (4.04)	355 (1580)	98.1 (2.49)	101.7 (2.58)	117.4 (2.98)	243 (1081)	83.5 (2.12)
295 (90)	87 (2.20)	90 (401)	162.7 (4.13)	187.9 (4.77)	381 (1695)	118.2 (3.00)	121.4 (3.08)	140.2 (3.56)	258 (1148)	101.9 (2.59)
328 (100)	102 (2.58)	95 (423)	-	-	-	-	141.7 (3.60)	163.6 (4.16)	273 (1215)	121.0 (3.07)
361 (110)	102 (2.58)	115 (512)	-	-	-	-	158.6 (4.03)	183.1 (4.65)	295 (1313)	127.7 (3.25)
394 (124)	62 (1.57)	225 (1001)	-	-	-	-	159.7 (4.06)	184.5 (4.69)	349 (1553)	101.3 (2.57)