

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G51.125.3**  
**Issue 1, July, 1955**  
**AT&T Co Standard**

# **SUSPENSION STRAND**

## **STRAND TENSIONS AND SAGS**

### **10M STRAND—COPPER CONDUCTOR CABLES**

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#### **1. GENERAL**

1.01 This section covers the approximate sags and strand tensions with the cable in place for **copper conductor cables on 10,000 pound suspension strand**.

1.02 The values of cable-in-place sags and tensions are for strand which was placed at the proper stringing tension (see G51.125.1) and with no wind or ice loads present at the time of measurement. However, wind loads alone, under average conditions, have little effect on sags and tensions.

1.03 These values apply for all copper conductor cables on 10,000 pound suspension strand regardless of conductor gauge, cable makeup, sheath material or storm loading area.

1.04 The maximum span lengths for various weights of cable in each of the storm loading areas are listed in the sections on the selection of suspension strand.

#### **2. TENSIONS AND SAGS WITH CABLE IN PLACE**

2.01 When 10,000 pound suspension strand is placed at the proper stringing tension, the approximate sags and tensions with a copper conductor cable in place will be as listed in the following tables.

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
0.2	0	3	2725	4	2725	6	2725	8	2725	10	2750	13	2750	16	2750
	20	3	2525	4	2525	6	2525	9	2550	11	2550	14	2550	17	2575
	40	3	2325	5	2325	7	2350	9	2350	12	2375	15	2375	18	2400
	60	3	2125	5	2125	7	2150	10	2150	13	2175	16	2200	20	2225
	80	4	1925	6	1950	8	1950	11	1975	14	2000	18	2025	22	2050
	100	4	1725	6	1750	9	1775	12	1800	15	1825	19	1825	23	1875
0.4	0	4	2725	6	2750	8	2775	11	2800	14	2825	18	2850	22	2875
	20	4	2550	6	2550	9	2575	12	2600	15	2625	19	2650	23	2700
	40	4	2350	7	2375	9	2400	13	2425	16	2450	20	2475	25	2525
	60	5	2150	7	2175	10	2225	14	2250	18	2275	22	2325	27	2375
	80	5	1950	8	2000	11	2025	15	2075	19	2125	24	2175	28	2200
	100	6	1775	9	1825	12	1850	16	1900	20	1950	25	2000	30	2050
0.6	0	5	2750	7	2800	10	2825	14	2850	18	2900	22	2950	27	3000
	20	5	2575	8	2600	11	2650	15	2700	19	2725	24	2775	29	2825
	40	5	2375	8	2425	12	2450	16	2500	20	2575	25	2625	31	2675
	60	6	2200	9	2250	13	2300	17	2350	22	2400	27	2450	32	2525
	80	6	2000	10	2075	14	2125	18	2175	23	2250	29	2325	34	2375
	100	7	1825	11	1900	15	1975	20	2025	25	2100	30	2175	36	2250
0.8	0	6	2800	9	2850	13	2875	17	2950	21	3000	27	3050	32	3125
	20	6	2600	9	2650	13	2700	18	2775	23	2850	28	2900	34	2975
	40	7	2425	10	2475	14	2550	19	2600	24	2675	30	2750	36	2825
	60	7	2250	11	2300	15	2375	20	2450	25	2525	31	2600	37	2675
	80	8	2075	12	2150	16	2225	21	2300	27	2375	33	2475	39	2550
	100	8	1900	13	2000	17	2075	23	2150	29	2250	35	2350	41	2425

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	275		300		325		350		375		400		425	
		Sag (In.)	Tens. (Lbs.)												
0.2	0	19	2775	23	2775	27	2800	31	2800	35	2800	40	2825	45	2825
	20	21	2575	24	2600	28	2625	33	2625	38	2650	42	2650	48	2675
	40	22	2400	26	2425	30	2450	35	2450	40	2475	45	2500	51	2525
	60	24	2225	28	2250	33	2275	38	2300	43	2325	48	2350	54	2375
	80	26	2075	30	2100	35	2125	40	2150	46	2175	51	2200	57	2225
	100	28	1925	33	1950	38	1975	43	2000	49	2025	55	2075	61	2100
0.4	0	26	2900	31	2925	36	2950	41	2975	47	3000	53	3050	59	3075
	20	28	2725	33	2750	38	2800	44	2825	49	2850	56	2900	62	2925
	40	30	2550	35	2600	40	2650	46	2675	52	2725	58	2750	65	2800
	60	32	2400	37	2425	43	2500	49	2525	55	2575	61	2625	68	2650
	80	34	2250	39	2300	45	2350	51	2400	58	2450	65	2500	72	2525
	100	36	2125	42	2175	48	2225	54	2275	61	2325	68	2375	75	2425
0.6	0	33	3025	38	3075	44	3125	50	3175	57	3225	64	3275	71	3325
	20	34	2875	40	2925	46	2975	53	3050	59	3075	66	3150	74	3200
	40	36	2725	42	2775	49	2850	55	2900	62	2950	69	3000	77	3075
	60	38	2575	44	2650	51	2700	58	2775	65	2825	72	2875	80	2950
	80	40	2450	47	2500	54	2575	61	2650	68	2700	75	2775	83	2825
	100	43	2325	49	2375	56	2450	63	2525	71	2600	79	2650	87	2725
0.8	0	38	3175	44	3250	51	3325	58	3375	65	3450	73	3500	81	3575
	20	40	3050	46	3100	53	3175	61	3250	68	3325	76	3375	84	3450
	40	42	2900	49	2975	56	3050	63	3125	71	3200	79	3250	87	3325
	60	44	2775	51	2850	58	2925	66	3000	73	3075	82	3150	90	3225
	80	46	2625	53	2725	61	2800	68	2875	76	2950	85	3025	93	3100
	100	48	2525	56	2600	63	2675	71	2775	79	2850	88	2925	96	3000

SUSPENSION STRAND  
STRAND TENSIONS AND SAGS  
10M STRAND—COPPER CONDUCTOR CABLES

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	450		475		500		525		550		575		600	
		Sag (In.)	Tens. (Lbs.)												
0.2	0	50	2850	56	2850	61	2875	67	2875	74	2900	80	2925	87	2925
	20	53	2700	59	2700	65	2725	71	2750	77	2750	84	2775	91	2775
	40	56	2550	62	2550	68	2575	75	2600	82	2625	88	2625	96	2650
	60	60	2400	66	2425	72	2450	79	2450	86	2475	93	2500	100	2525
	80	63	2250	70	2275	76	2300	83	2325	90	2350	98	2375	105	2400
	100	67	2125	74	2150	81	2175	88	2225	95	2250	103	2275	111	2300
0.4	0	65	3100	72	3150	79	3175	86	3200	94	3225	102	3275	110	3300
	20	69	2950	76	3000	83	3025	90	3075	98	3100	106	3150	114	3175
	40	72	2825	79	2875	86	2900	94	2950	102	2975	110	3025	118	3050
	60	75	2700	83	2750	90	2775	98	2825	106	2850	114	2900	123	2950
	80	79	2575	86	2625	94	2675	102	2700	110	2750	119	2800	128	2825
	100	83	2450	90	2500	98	2550	106	2600	115	2650	124	2700	132	2725
0.6	0	78	3375	86	3425	94	3475	102	3525	111	3575	—	—		
	20	81	3250	89	3300	98	3350	106	3400	115	3450	—	—		
	40	85	3125	93	3175	101	3225	110	3275	118	3325	—	—		
	60	88	3000	96	3050	105	3125	114	3175	122	3225	—	—		
	80	91	2875	100	2950	109	3000	117	3050	127	3125	—	—		
	100	95	2775	104	2850	112	2900	121	2950	131	3025	—	—		
0.8	0	89	3650	98	3700	107	3775	—	—						
	20	92	3525	101	3575	110	3650	—	—						
	40	96	3400	104	3475	113	3525	—	—						
	60	99	3300	108	3350	117	3425	—	—						
	80	102	3175	111	3250	121	3325	—	—						
	100	105	3075	115	3150	124	3225	—	—						

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
1.0	0	7	2825	10	2900	14	2950	19	3025	25	3100	30	3175		
	20	7	2650	11	2725	15	2800	20	2875	26	2950	32	3025		
	40	8	2475	12	2550	16	2625	22	2700	27	2800	33	2900		
	60	8	2300	13	2375	17	2475	23	2575	29	2650	35	2750		
	80	9	2125	13	2225	18	2325	24	2425	30	2525	37	2625		
	100	10	1950	14	2075	20	2175	26	2275	32	2400	39	2500		
1.2	0	8	2875	12	2950	16	3025	22	3125	27	3225	34	3300		
	20	8	2700	12	2775	17	2875	23	2975	29	3075	35	3175		
	40	9	2525	13	2625	18	2725	24	2825	30	2925	37	3025		
	60	9	2350	14	2450	19	2575	25	2675	32	2800	38	2900		
	80	10	2175	15	2300	21	2425	27	2550	33	2650	40	2775		
	100	11	2025	16	2150	22	2275	28	2400	35	2550	42	2650		
1.4	0	9	2900	13	3000	18	3100	24	3225	30	3325	37	3450		
	20	9	2750	14	2850	19	2950	25	3075	31	3175	38	3300		
	40	10	2575	15	2675	20	2800	26	2925	33	3050	40	3175		
	60	10	2400	15	2525	21	2650	27	2800	34	2925	42	3050		
	80	11	2250	16	2375	22	2525	29	2650	36	2800	43	2925		
	100	12	2100	17	2250	24	2400	30	2550	37	2675	45	2825		
1.6	0	9	2950	14	3075	20	3200	26	3325	33	3450	40	3575		
	20	10	2800	15	2900	21	3050	27	3175	34	3300	41	3425		
	40	11	2625	16	2750	22	2900	28	3025	35	3175	43	3300		
	60	11	2475	17	2600	23	2750	30	2900	37	3050	45	3200		
	80	12	2325	18	2475	24	2625	31	2775	38	2925	46	3075		
	100	13	2175	19	2350	25	2500	32	2650	40	2825	48	2975		

SUSPENSION STRAND  
 STRAND TENSIONS AND SAGS  
 10M STRAND—COPPER CONDUCTOR CABLES

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	250		275		300		325		350		375		400	
		Sag (In.)	Tens. (Lbs.)												
1.0	0	36	3275	43	3350	50	3435	57	3500	65	3575	73	3675		
	20	38	3125	45	3200	52	3300	60	3375	67	3450	76	3550		
	40	40	2975	47	3075	54	3150	62	3250	70	3350	78	3425		
	60	42	2850	49	2950	56	3050	64	3125	72	3225	81	3300		
	80	44	2725	51	2825	59	2925	67	3025	75	3100	84	3200		
	100	46	2600	53	2700	61	2800	69	2900	78	3000	86	3100		
1.2	0	40	3400	48	3500	55	3600	63	3700	71	3800	80	3875		
	20	42	3275	49	3375	57	3475	65	3575	74	3675	82	3775		
	40	44	3150	51	3250	59	3350	68	3450	76	3550	85	3650		
	60	46	3025	53	3125	61	3225	70	3325	79	3450	88	3550		
	80	48	2900	55	3000	64	3125	72	3225	81	3325	90	3450		
	100	50	2775	58	2900	66	3000	75	3125	84	3225	93	3350		
1.4	0	44	3550	52	3650	60	3775	68	3875	77	4000	86	4100		
	20	46	3425	54	3525	62	3650	70	3750	79	3875	88	3975		
	40	48	3300	55	3425	64	3525	73	3650	82	3750	91	3875		
	60	49	3175	57	3300	66	3425	75	3525	84	3650	93	3775		
	80	51	3050	59	3175	68	3300	77	3425	86	3550	96	3675		
	100	53	2950	62	3075	70	3200	79	3325	89	3450	99	3575		
1.6	0	47	3700	56	3825	64	3950	73	4075	82	4175	92	4300		
	20	49	3575	57	3700	66	3825	75	3950	84	4075	94	4200		
	40	51	3450	59	3575	68	3700	77	3850	87	3975	96	4100		
	60	53	3325	61	3475	70	3600	79	3725	89	3850	99	3975		
	80	54	3225	63	3350	72	3500	82	3625	91	3750	101	3900		
	100	56	3125	65	3250	74	3400	84	3525	94	3675	104	3800		

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	400		425		450		475		500		525		550	
		Sag (In.)	Tens. (Lbs.)												
1.0	0	81	3750	90	3825	99	3900	108	3975	—	—				
	20	84	3625	93	3700	102	3775	111	3875	—	—				
	40	87	3500	96	3600	105	3675	114	3750	—	—				
	60	90	3400	99	3475	109	3575	118	3650	—	—				
	80	93	3300	102	3375	111	3475	121	3550	—	—				
	100	96	3200	105	3275	114	3375	124	3450	—	—				
1.2	0	89	3975	98	4075	107	4150	—	—						
	20	91	3850	101	3950	110	4050	—	—						
	40	94	3750	104	3850	113	3950	—	—						
	60	97	3650	106	3750	116	3825	—	—						
	80	100	3550	109	3650	119	3750	—	—						
	100	102	3450	112	3550	122	3650	—	—						
1.4	0	95	4200	105	4300	—	—								
	20	98	4100	108	4200	—	—								
	40	101	3975	111	4100	—	—								
	60	103	3875	113	4000	—	—								
	80	106	3775	116	3900	—	—								
	100	109	3675	119	3800	—	—								
1.6	0	102	4425	112	4525	—	—								
	20	104	4300	114	4425	—	—								
	40	107	4200	117	4325	—	—								
	60	109	4100	120	4225	—	—								
	80	112	4000	123	4125	—	—								
	100	114	3925	125	4050	—	—								

## COPPER CONDUCTOR CABLE, 10M STRAND

### Span Length (Feet)

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
1.8	0	10	3000	15	3150	21	3275	28	3425	35	3550	43	3700	51	3850
	20	11	2850	16	2975	22	3125	29	3275	36	3425	44	3575	52	3725
	40	12	2675	17	2825	23	3000	30	3150	38	3300	46	3450	54	3600
	60	12	2525	18	2700	24	2850	32	3025	39	3175	47	3325	56	3475
	80	13	2375	19	2550	26	2725	33	2900	41	3050	49	3225	57	3375
	100	14	2250	20	2425	27	2600	34	2775	42	2950	50	3125	59	3275
2.0	0	11	3050	17	3200	23	3350	30	3525	37	3675	45	3825	53	3975
	20	12	2900	17	3050	24	3225	31	3375	38	3550	47	3700	55	3850
	40	12	2750	18	2900	25	3075	32	3250	40	3425	48	3575	57	3750
	60	13	2600	19	2775	26	2950	33	3125	41	3300	50	3475	59	3625
	80	14	2450	20	2650	27	2825	35	3000	43	3200	51	3350	60	3525
	100	15	2325	21	2525	28	2700	36	2900	44	3075	53	3250	62	3425
2.2	0	12	3100	18	3275	24	3450	31	3625	39	3775	47	3950	56	4125
	20	13	2950	18	3125	25	3300	33	3475	40	3650	49	3825	58	4000
	40	13	2800	19	3000	26	3175	34	3350	42	3550	50	3725	59	3900
	60	14	2650	20	2850	27	3050	35	3250	43	3425	52	3600	61	3775
	80	15	2525	21	2725	28	2925	36	3125	45	3325	54	3500	63	3675
	100	16	2400	22	2600	30	2825	38	3025	46	3200	55	3400	65	3575
2.4	0	13	3175	19	3350	26	3525	33	3725	41	3900	50	4075	59	4250
	20	13	3000	20	3200	27	3400	34	3600	42	3775	51	3975	60	4150
	40	14	2875	20	3075	28	3275	35	3475	44	3650	53	3850	62	4025
	60	15	2725	21	2925	29	3150	37	3350	45	3550	54	3750	64	3925
	80	15	2575	22	2800	30	3025	38	3225	47	3450	56	3650	65	3825
	100	16	2450	23	2700	31	2925	39	3125	48	3350	57	3550	67	3725

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	275		300		325		350		375		400		425	
		Sag (In.)	Tens. (Lbs.)												
1.8	0	59	3975	68	4100	77	4250	87	4375	97	4500	107	4625	—	—
	20	61	3850	70	4000	79	4125	89	4275	99	4400	110	4525	—	—
	40	63	3750	72	3875	81	4025	91	4175	102	4300	112	4425	—	—
	60	65	3625	74	3775	84	3925	94	4050	104	4200	115	4325	—	—
	80	67	3525	76	3675	86	3825	96	3975	106	4100	117	4250	—	—
	100	68	3425	78	3575	88	3725	98	3875	109	4000	120	4150	—	—
2.0	0	62	4125	72	4275	81	4425	91	4575	102	4700	112	4850	—	—
	20	64	4025	74	4175	83	4325	93	4450	104	4600	115	4750	—	—
	40	66	3900	75	4050	85	4200	96	4350	106	4500	117	4650	—	—
	60	68	3800	77	3950	88	4100	98	4250	109	4400	120	4550	—	—
	80	70	3700	79	3850	90	4000	100	4175	111	4300	122	4450	—	—
	100	72	3600	82	3775	92	3925	102	4075	113	4225	125	4375	—	—
2.2	0	65	4275	75	4450	85	4600	95	4750	106	4900	117	5050	—	—
	20	67	4175	77	4325	87	4500	98	4650	108	4800	120	4950	—	—
	40	69	4050	79	4225	89	4400	100	4550	111	4700	122	4850	—	—
	60	71	3950	81	4125	91	4300	102	4450	113	4600	124	4750	—	—
	80	73	3850	83	4025	93	4200	104	4350	115	4525	127	4675	—	—
	100	74	3750	85	3925	95	4100	106	4275	118	4425	129	4575	—	—
2.4	0	68	4425	78	4600	89	4775	99	4925	111	5100	—	—	—	—
	20	70	4325	80	4500	91	4675	102	4825	113	5000	—	—	—	—
	40	72	4225	82	4400	93	4575	104	4725	115	4900	—	—	—	—
	60	74	4125	84	4300	95	4475	106	4650	117	4800	—	—	—	—
	80	75	4025	86	4200	97	4375	108	4550	119	4725	—	—	—	—
	100	77	3925	88	4100	99	4275	110	4450	122	4625	—	—	—	—

SUSPENSION STRAND  
 STRAND TENSIONS AND SAGS  
 10M STRAND—COPPER CONDUCTOR CABLES

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
2.6	0	13	3225	20	3425	27	3625	35	3825	43	4000	52	4200	61	4400
	20	14	3075	21	3275	28	3475	36	3700	44	3900	53	4100	63	4275
	40	15	2925	21	3150	29	3350	37	3575	46	3775	55	3975	64	4175
	60	15	2775	22	3025	30	3250	38	3450	47	3675	56	3875	66	4075
	80	16	2650	23	2900	31	3125	39	3350	48	3575	58	3775	68	3975
	100	17	2525	24	2775	32	3025	41	3250	50	3450	59	3675	69	3875
2.8	0	14	3275	21	3500	28	3700	36	3925	45	4125	54	4325	64	4525
	20	15	3125	21	3350	29	3575	37	3800	46	4000	55	4225	65	4425
	40	15	3000	22	3225	30	3450	38	3675	47	3900	57	4100	67	4325
	60	16	2850	23	3100	31	3325	40	3575	49	3800	58	4000	68	4225
	80	17	2725	24	2975	32	3225	41	3450	50	3675	60	3900	70	4125
	100	18	2600	25	2875	33	3125	42	3350	51	3575	61	3800	72	4025
3.0	0	15	3325	22	3550	29	3800	37	4025	46	4225	56	4450	66	4675
	20	15	3175	22	3425	30	3650	39	3900	48	4125	57	4350	67	4550
	40	16	3050	23	3300	31	3550	40	3775	49	4000	59	4225	69	4450
	60	17	2925	24	3175	32	3425	41	3675	50	3900	60	4125	70	4350
	80	18	2800	25	3050	33	3325	42	3575	52	3800	62	4025	72	4250
	100	18	2675	26	2950	34	3200	43	3450	53	3700	63	3950	74	4175
3.5	0	16	3475	24	3725	32	4000	41	4250	50	4500	60	4750	71	4975
	20	17	3325	25	3625	33	3875	42	4150	52	4400	62	4650	72	4875
	40	18	3200	26	3475	34	3750	43	4025	53	4300	63	4525	74	4775
	60	19	3075	27	3350	35	3650	44	3925	54	4175	65	4425	75	4675
	80	19	2950	27	3250	36	3550	46	3825	56	4075	66	4325	77	4600
	100	20	2825	28	3150	37	3450	47	3725	57	4000	67	4250	78	4500

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	275		300		325		350		375		400		425	
		Sag (In.)	Tens. (Lbs.)												
2.6	0	71	4575	81	4750	92	4950	103	5125	115	5275	—	—		
	20	73	4475	83	4650	94	4850	105	5025	117	5200	—	—		
	40	75	4375	85	4550	96	4750	107	4925	119	5100	—	—		
	60	76	4275	87	4450	98	4650	109	4825	121	5000	—	—		
	80	78	4175	89	4375	100	4550	111	4725	123	4900	—	—		
	100	80	4075	91	4275	102	4450	114	4650	126	4825	—	—		
2.8	0	74	4725	84	4925	95	5100	107	5300	118	5475	—	—		
	20	75	4625	86	4825	97	5000	109	5200	120	5375	—	—		
	40	77	4525	88	4725	99	4900	111	5100	123	5275	—	—		
	60	79	4425	90	4625	101	4825	113	5000	125	5200	—	—		
	80	81	4325	92	4525	103	4725	115	4925	127	5100	—	—		
	100	82	4225	93	4425	105	4625	117	4825	129	5025	—	—		
3.0	0	76	4875	87	5075	98	5275	110	5475	—	—				
	20	78	4775	89	4975	100	5175	112	5375	—	—				
	40	79	4675	91	4875	102	5075	114	5275	—	—				
	60	81	4575	92	4775	104	4975	116	5175	—	—				
	80	83	4475	94	4675	106	4900	118	5100	—	—				
	100	85	4375	96	4600	108	4800	120	5000	—	—				
3.5	0	82	5225	94	5450	106	5675	118	5875	—	—				
	20	84	5125	95	5350	107	5575	120	5775	—	—				
	40	85	5025	97	5250	109	5475	122	5700	—	—				
	60	87	4925	99	5150	111	5375	124	5600	—	—				
	80	88	4825	100	5075	113	5300	126	5525	—	—				
	100	90	4750	102	4975	115	5200	128	5425	—	—				

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
4.0	0	18	3625	26	3925	34	4200	44	4500	54	4775				
	20	18	3475	26	3800	35	4100	45	4375	55	4675				
	40	19	3350	27	3675	36	3975	46	4275	56	4575				
	60	20	3225	28	3575	37	3875	47	4175	57	4475				
	80	21	3125	29	3450	38	3775	48	4075	59	4375				
	100	21	3000	30	3350	39	3675	49	3975	60	4275				
4.5	0	19	3750	28	4075	37	4400	47	4725	57	5025				
	20	20	3625	28	3975	38	4300	48	4625	58	4925				
	40	21	3500	29	3850	39	4175	49	4525	60	4825				
	60	21	3375	30	3750	40	4075	50	4425	61	4725				
	80	22	3275	31	3625	41	3975	51	4325	62	4625				
	100	23	3175	32	3525	42	3900	52	4225	63	4550				
5.0	0	20	3900	29	4275	39	4625	49	4950	60	5275				
	20	21	3775	30	4150	39	4500	50	4850	61	5200				
	40	22	3650	31	4050	40	4400	51	4750	62	5075				
	60	22	3550	31	3925	41	4300	52	4650	63	5000				
	80	23	3425	32	3825	42	4200	53	4550	65	4900				
	100	24	3325	33	3725	43	4100	54	4475	66	4800				
5.5	0	22	4025	31	4425	41	4800	52	5175	63	5525				
	20	22	3925	32	4325	42	4700	53	5075	64	5425				
	40	23	3800	32	4200	43	4600	54	4975	65	5350				
	60	24	3700	33	4100	44	4500	55	4875	66	5250				
	80	24	3575	34	4000	45	4400	56	4775	68	5150				
	100	25	3475	35	3900	45	4300	57	4700	69	5075				

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	225		250		275		300		325		350		375	
		Sag (In.)	Tens. (Lbs.)												
4.0	0	64	5050	75	5300	87	5550	99	5800	112	6050	—	—		
	20	66	4950	77	5200	89	5475	101	5725	113	5950	—	—		
	40	67	4850	78	5100	90	5375	102	5625	115	5875	—	—		
	60	68	4750	80	5025	92	5275	104	5525	117	5775	—	—		
	80	70	4650	81	4925	93	5200	106	5450	119	5700	—	—		
	100	71	4550	83	4825	95	5100	108	5350	121	5600	—	—		
4.5	0	68	5325	80	5600	92	5875	105	6150	118	6425	—	—		
	20	70	5225	81	5500	93	5775	106	6075	119	6325	—	—		
	40	71	5125	83	5400	95	5700	108	5975	121	6250	—	—		
	60	72	5025	84	5325	96	5600	109	5875	123	6150	—	—		
	80	74	4925	86	5225	98	5525	111	5800	124	6075	—	—		
	100	75	4850	87	5150	100	5425	113	5725	126	6000	—	—		
5.0	0	71	5600	84	5900	96	6200	109	6500	—	—				
	20	73	5500	85	5825	98	6125	111	6400	—	—				
	40	74	5400	86	5725	99	6025	113	6325	—	—				
	60	75	5325	88	5625	101	5950	114	6225	—	—				
	80	77	5225	89	5550	102	5850	116	6150	—	—				
	100	78	5150	90	5450	104	5775	117	6075	—	—				
5.5	0	75	5875	88	6200	101	6500	—	—						
	20	76	5775	89	6100	102	6425	—	—						
	40	77	5675	90	6000	103	6325	—	—						
	60	79	5600	92	5925	105	6250	—	—						
	80	80	5500	93	5825	106	6150	—	—						
	100	81	5425	94	5750	108	6075	—	—						

SUSPENSION STRAND  
 STRAND TENSIONS AND SAGS  
 10M STRAND—COPPER CONDUCTOR CABLES

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
6.0	0	23	4175	32	4600	42	5000	53	5400	65	5775	78	6125	91	6475
	20	23	4050	33	4500	43	4900	54	5300	66	5675	79	6050	92	6400
	40	24	3950	33	4375	44	4800	55	5200	67	5575	80	5950	93	6300
	60	24	3850	34	4275	45	4700	56	5100	69	5500	81	5850	95	6225
	80	25	3750	35	4200	46	4625	57	5025	70	5400	82	5775	96	6125
	100	26	3650	36	4100	47	4525	58	4925	71	5325	84	5700	97	6050
6.5	0	24	4325	34	4750	44	5175	56	5600	68	6000	81	6400	—	—
	20	24	4200	34	4650	45	5075	57	5500	69	5900	82	6300	—	—
	40	25	4100	35	4550	46	4975	58	5400	70	5825	83	6200	—	—
	60	26	3975	36	4450	47	4900	59	5325	71	5725	84	6125	—	—
	80	26	3875	37	4350	48	4800	60	5225	72	5650	86	6025	—	—
	100	27	3775	37	4250	49	4700	61	5150	74	5550	87	5950	—	—
7.0	0	24	4450	35	4925	46	5375	57	5825	70	6250	83	6650	—	—
	20	25	4350	35	4825	46	5275	58	5725	71	6150	84	6550	—	—
	40	26	4225	36	4725	47	5200	59	5625	72	6050	85	6475	—	—
	60	26	4125	37	4625	48	5100	60	5550	73	5975	87	6375	—	—
	80	27	4025	38	4525	49	5000	61	5450	74	5875	88	6300	—	—
	100	28	3925	38	4450	50	4925	62	5375	75	5800	89	6200	—	—
7.5	0	26	4575	36	5075	47	5550	60	6025	73	6450	—	—	—	—
	20	26	4475	37	4975	48	5450	61	5925	74	6375	—	—	—	—
	40	27	4375	37	4875	49	5375	61	5825	75	6275	—	—	—	—
	60	27	4275	38	4775	50	5275	62	5750	76	6200	—	—	—	—
	80	28	4175	39	4700	51	5175	63	5650	77	6100	—	—	—	—
	100	29	4075	40	4600	52	5100	64	5575	78	6025	—	—	—	—

**COPPER CONDUCTOR CABLE, 10M STRAND**  
**Span Length (Feet)**

Cable Weight Lbs./Ft.	Temp. (°F)	100		125		150		175		200		225		250	
		Sag (In.)	Tens. (Lbs.)												
8.0	0	26	4725	37	5250	49	5750	61	6225	74	6700	—	—		
	20	27	4600	38	5150	49	5650	62	6125	75	6600	—	—		
	40	28	4500	38	5050	50	5550	63	6050	76	6500	—	—		
	60	28	4400	39	4950	51	5475	64	5950	77	6425	—	—		
	80	29	4300	40	4850	52	5375	65	5875	78	6350	—	—		
	100	29	4225	41	4775	53	5300	66	5775	79	6250	—	—		
8.5	0	27	4825	38	5375	50	5900	62	6400	—	—				
	20	28	4725	39	5275	50	5800	63	6300	—	—				
	40	28	4625	39	5175	51	5700	64	6200	—	—				
	60	29	4525	40	5075	52	5600	65	6125	—	—				
	80	29	4425	41	5000	53	5525	66	6050	—	—				
	100	30	4325	41	4900	54	5450	67	6000	—	—				
	0														
	20														
	40														
	60														
	80														
	100														
	0														
	20														
	40														
	60														
	80														
	100														