

## **CALCULATION OF TENSION AND SAG**

Cable Type	12F Drop Cable	
Cable Diameter (mm)	5.05 ± 0.3 mm	
Cable Weight (Kg/Km)	30 ± 5 kg/km	
Cable Modulus (kN/mm <sup>2</sup> )	14.95	
CTE (1/C, 10 <sup>-6</sup> )	2.42	
EDT (N)	400	Every Day tension
MRCL (N)	1500	Maximum Rated Cable Load

### **NESC Light Condition**

Span (meters)	Initial Sag (%)	EDT (N)	Final Sag (%)	MRCL (N)
20	1	80	2.1	350
40	1	160	2.5	580
60	1	240	2.8	780
80	1	320	3.0	970
100	1	400	3.2	1140

Span (meters)	Initial Sag (%)	EDT (N)	Final Sag (%)	MRCL (N)
20	1.5	50	2.3	310
40	1.5	110	2.7	530
60	1.5	160	3.0	720
80	1.5	220	3.3	890
100	1.5	270	3.5	1050
120	1.5	320	3.6	1200
140	1.5	380	3.8	1340

### **NESC Medium Condition**

Span (meters)	Initial Sag (%)	EDT (N)	Final Sag (%)	MRCL (N)
20	1	80	2.8	630
40	1	160	3.4	1030
60	1	240	3.9	1360
65	1	260	4.0	1440

Span (meters)	Initial Sag (%)	EDT (N)	Final Sag (%)	MRCL (N)
20	1.5	50	3.0	590
40	1.5	110	3.6	970
60	1.5	160	4.1	1300
70	1.5	190	4.3	1450

**NESC Heavy Condition**

<b>Span (meters)</b>	<b>Initial Sag (%)</b>	<b>EDT (N)</b>	<b>Final Sag (%)</b>	<b>MRCL (N)</b>
20	1	80	3.4	960
38	1	155	4.2	1490

<b>Span (meters)</b>	<b>Initial Sag (%)</b>	<b>EDT (N)</b>	<b>Final Sag (%)</b>	<b>MRCL (N)</b>
20	1.5	50	3.6	920
40	1.5	110	4.4	1490