

SAG TENSION CHART ADSS CABLE -70 mtr. SPAN

Sag Tension Calculation : Single Jacket ADSS Cable (12 to 96F)
Cable OD : 11.5 mm | Cable Weight : 95-110 kg/km

Attributes & Condition	Installation*		Worse Case Installation		NESC LIGHT			NESC MEDIUM			NESC HEAVY			
	Span	Sag (meter)	Load (N)	Sag (meter)	Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)
						Vertical	Horizontal		Vertical	Horizontal		Vertical	Horizontal	
40	0.4	470	0.4	730	0.14	0.75	1340	0.43	0.60	1880	0.75	0.69	2500	
50	0.5	580	0.5	860	0.19	0.85	1590	0.60	0.83	2140	1.03	0.94	2860	
55	0.14	2560	0.14	2940	Cable Operation in 1.5% sag Max.						0.83	0.75	4300	
60	0.6	700	0.6	980	0.23	1.25	1800	0.77	1.06	2380	1.31	1.21	3210	
70	0.7	820	0.7	1110	0.29	1.50	4300	0.95	1.32	2620	1.62	1.48	3540	
80	0.8	930	0.8	1230	0.34	1.82	2200	1.14	1.58	2850	1.94	1.78	3850	
100	1	1170	1.0	1470	0.45	2.43	2580	1.54	2.14	3290	2.63	2.41	4460	
120	1.2	1400	1.2	1710	0.56	3.07	2950	1.97	2.72	3710				
150	1.5	1750	1.5	2070	0.75	4.07	3470							

NOTE : Maximum allowable tensile strength is 4300 N @ 0.6% fiber strain, Safety factor under consideration is 200 N.

Sag Tension Calculation : Single Jacket ADSS Cable (144 to 216F)
Cable OD : 14.8 mm | Cable Weight : ~ 157 kg/km

Attributes & Condition	Installation*		Worse Case Installation		NESC LIGHT			NESC MEDIUM			NESC HEAVY			
	Span	Sag (meter) (1%)	Load (N)	Sag (meter)	Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)
						Vertical	Horizontal		Vertical	Horizontal		Vertical	Horizontal	
40	0.40	740	0.4	1280	0.14	0.60	2220	0.34	0.42	2990	0.58	0.49	3790	
50	0.50	920	0.5	1500	0.19	0.81	2570	0.48	0.59	3370	0.80	0.68	4310	
60	0.60	1100	0.6	1710	0.23	1.03	2900	0.62	0.77	3740	1.03	0.88	4800	
60	0.32	2080	0.32	2800	Cable Operation in 1.5% sag Max.						0.89	0.76	5540	
70	0.70	1290	0.7	1920	0.29	1.26	3220	0.78	0.95	4090	1.28	1.09	5280	
80	0.80	1470	0.8	2130	0.34	1.50	3530	0.94	1.15	4430	1.54	1.30	5740	
100	1.00	1840	1	2530	0.45	1.99	4130	1.27	1.57	5080				
120	1.20	2210	1.2	2940	0.58	2.52	4620	1.63	2.00	5710				
150	1.50	2760	1.5	3540	0.77	3.35	5520							

NOTE : Maximum allowable tensile strength is 5600 N @ 0.6% fiber strain, Safety factor under consideration is 200 N.

Sag Tension Calculation : Single Jacket ADSS Cable (288F)
Cable OD : 17.0 mm | Cable Weight : ~ 210 kg/km

Attributes & Condition	Installation*		Worse Case Installation		NESC LIGHT			NESC MEDIUM			NESC HEAVY			
	Span	Sag (meter) (1%)	Load (N)	Sag (meter)	Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)	Sag (meter)		Load (N)
						Vertical	Horizontal		Vertical	Horizontal		Vertical	Horizontal	
40	0.40	930	0.4	1660	0.15	0.55	2670	0.32	0.37	3790	0.54	0.43	4580	
50	0.50	1170	0.5	1920	0.20	0.74	3070	0.45	0.52	4220	0.75	0.60	5170	
60	0.60	1400	0.6	2180	0.25	0.94	3460	0.58	0.68	4640	0.97	0.78	5730	
60	0.39	2150	0.39	2904	Cable Operation in 1.5% sag Max.						0.88	0.70	6360	
70	0.70	1630	0.7	2430	0.31	1.16	3830	0.73	0.85	5050	1.20	0.97	6270	
80	0.80	1860	0.8	2680	0.37	1.37	4200	0.89	1.02	5450	1.46	1.17	6790	
100	1.00	2330	1	3180	0.49	1.83	4890	1.21	1.40	6210				
120	1.20	2800	1.2	3660	0.61	2.32	5560	1.56	1.81	6950				
150	1.50	3500	2	4390	0.83	3.03	6530							

NOTE : Maximum allowable tensile strength is 6600 N @ 0.6% fiber strain, Safety factor under consideration is 200 N.

Terms & Condition

	Installation (* 1.0 % installation Sag)	Worse case Installation	NESC LIGHT	NESC MEDIUM	NESC HEAVY
Temperature	20° C	-5° C	-5° C to 70° C	-40° C to 70° C	-40° C to 70° C
Wind Speed	Zero (0)	Zero (0)	97 km/hr.	64 km/hr.	64 km/hr.
Ice Thickness	Zero (0)	Zero (0)	ICE : Zero (0)	ICE : 6.4 mm	ICE : 12.7 mm