

CatCurve

Tools for drawing catenary or hyperbolic curves.



What is the "P" value?

Here is a typical sag chart from *Alcoa's Sag10 program for calculating sag/tension values. By taking the design tension value for the conditions desired, and dividing it by the conductor weight per foot the value of "P" is obtained and then used to display the resulting catenary curve with 2DCAT or 3DCAT.

The P-Value can be entered by itself or enter 0 (zero) and you will be prompted for the horizontal tension and weight of conductor to be entered individually.

ALUMINUM COMPANY OF AMERICA SAG AND TENSION DATA

Sample OPGW

Conductor PHEASANT 1272 Kcmil 54/19 Stranding ACSS/AW
D:\SAG10W\ACSS-AW.PRF Time: 07:17 AM Date: 5/2/06
Area= 1.1259 Sq. In Dia= 1.382 In Wt= 1.568 Lb/F PTS= 32800 Lb
Data from Chart No. 1-1323
English Units

Span= 500.0 Feet NESC Medium Load Zone
Creep is NOT a Factor

Design Points

Temp	Ice	Wind	K	Weight	Final	Tension	Initial
F	In	Psf	Lb/F	Lb/F	Sag	Lb	Sag
					Ft		Ft
15.	.25	4.00	.20	2.368	7.25	10218.	7.25
0.	.00	.00	.00	1.568	5.35	9174.	5.13
15.	.00	.00	.00	1.568	5.98	8200.*	5.37
30.	.00	.00	.00	1.568	6.65	7376.	5.63
60.	.00	.00	.00	1.568	8.02	6117.	6.24
90.	.00	.00	.00	1.568	9.36	5243.	6.97
120.	.00	.00	.00	1.568	10.56	4653.	7.81
167.	.00	.00	.00	1.568	11.41	4308.	9.29
212.	.00	.00	.00	1.568	12.22	4024.	10.78

* Design Condition

* Alcoa and Sag10 are registered trademarks of Alcoa Fujikura Ltd.

$$P = \frac{H_{TEN}}{W/ft} = \frac{9136}{1.568} = 5826.53 \text{ or } 5826$$

CATCurve 2009 v.1.00 - 2D Catenary Curves

Vertical Scale: 0.1000
Horizontal Scale: 1.0000
Increment of Sag Calc: 5.0000

Curve Data

Initial Sag P Value: 0.0000
Layer: 0

Curve 2

Draw 2nd Curve
Final Sag P value: 0.0000
Layer: 0

Use Arrow at Low Points Block Name: ARROW
 Save to File File Name: C:\CAD\Drawing3.T

Conductor Desc.:
Remarks:

OK Cancel