

## HOW TO USE THE WHEATLAND WIND LOAD FENCE POST CALCULATOR EXPANDED METAL FENCE

A few tips to help you use the wind load calculator:

1. Familiarize yourself with the various wind load exposure categories, A, B, C or D listed in Table 1.
2. Identify the ice exposure region for your project:
  - Regions likely to experience heavy ice storms
  - Regions subject to moderate icing effects
  - Regions not subject to icing
3. Refer to Table 3 Typical Line Post Dimensions and select what you consider the proper diameter post for your design. Keep in mind the standard fixed post spacing for expanded metal panels is 7 ft. 9 in. (2,362 mm) or 9 ft. 9 in. (2,972 mm) **Important:** Consult the HS-83K High Strength Post Calculator for high fence and fences containing reduced openings.
4. Have available the expanded metal specification for your project.

**Table 1. Wind Exposure Category**

<b>Exposure A</b> Large city centers with at least 50% of the buildings having a height in excess of 70 feet (21.3M).
<b>Exposure B</b> Urban and suburban areas, wooded areas or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger.
<b>Exposure C</b> Open terrain with scattered obstructions having heights generally less than 30 feet (9.15M).
<b>Exposure D</b> Flat, unobstructed areas exposed to wind flowing over open water for a distance of 1 mile (1.61 km)

**Table 2. Expanded Metal Mesh Configurations**

Description	Diamond Dimension	Galvanized Weight	
.50 - 13R	0.500 x 1.20 in. 12.70 x 30.48 mm	1.73 lb/sf	8.45 kg/sq. m
.75 - 9R	0.923 x 2.00 in. 23.44 x 50.80 mm	1.95 lb/sf	9.52 kg/sq. m
.75 - 9F	0.923 x 2.10 in. 23.44 x 53.40 mm	1.86 lb/sf	9.08 kg/sq. m
1.5 - 6R	1.330 x 3.00 in. 33.78 x 76.20 mm	2.73 lb/sf	13.33 kg/sq. m
1.0 - 7R	1.000 x 2.25 in. 25.40 x 57.15 mm	3.78 lb/sf	18.46 kg/sq. m

**Table 3.**

**Typical line post diameter using ASTM F 1083-06 Regular Grade Schedule 40 Pipe**

To assist in your line post selection we offer the following guide listing typical post sizes based on a fence located in fairly open terrain, “Exposure C”, and in a region having no icing. The post sizes listed reflect the full range of wind loads from 70 to 150 MPH.

**Keep in mind post spacing for panels is 7 ft. 9 in. (2,362 mm) or 9 ft. 9 in. (2,971 mm)**

**If the calculated post spacing is greater than the standard maximum select a smaller post diameter, if the spacing is less select a larger diameter.**

**High fence, security fences with small mesh openings consult the HS-83K High Strength Post Calculator (ASTM F 1083-06 High Strength 83000 Grade)**

<b>Mesh Height</b>	<b>Typical Post Outside Diameter</b>
6 ft (1.8 m)	2.875 in. (73.0 mm)
7 ft (2.1 m)	2.875 in. (73.0 mm)
8 to 9 ft (2.4 to 2.7 m)	2.875 to 4.000 in. (73.0 to 101.6 mm)
10 ft (3.05 m)	4.000 to 6.625 in. (101.6 to 168.3 mm)
11 ft (3.4 m)	4.000 to 6.625 in. (101.6 to 168.3 mm)
12 to 14 ft (3.7 to 4.3 m)	4.000 to 6.625 in. (101.6 to 168.3 mm)
15 to 17 ft (4.6 to 5.2 m)	4.000 to 8.625 in. (101.6 to 219.1 mm)
18 to 20 ft (5.5 to 6.1 m)	4.000 to 8.625 in. (101.6 to 219.1 mm)

The Wheatland Line Post Selection Guide is derived from the Chain Link Fence Manufacturers Institute’s, “A Guide for the Selection of Line Post Spacing for Chain Link Fence” WLG 2445 and ASCE 7-95.

**DISCLAIMER:**

Wheatland Tube Company offers the guide as a general information service. However, because exposure, workmanship, soils, drainage, emplacement problems, maintenance, wind, flying debris, and other weather conditions may vary even at various locations in a single site, each application should be assessed by a qualified professional engineer. Accordingly, no representation or warranty is made, and none should be implied, respecting the suitability or adequacy of the information in the guide for any particular application, nor is this guide intended to establish industry “standards” respecting the selection of post and post spacing or for any purpose. 11/14/06