

POLE SPECIFICATION GUIDE

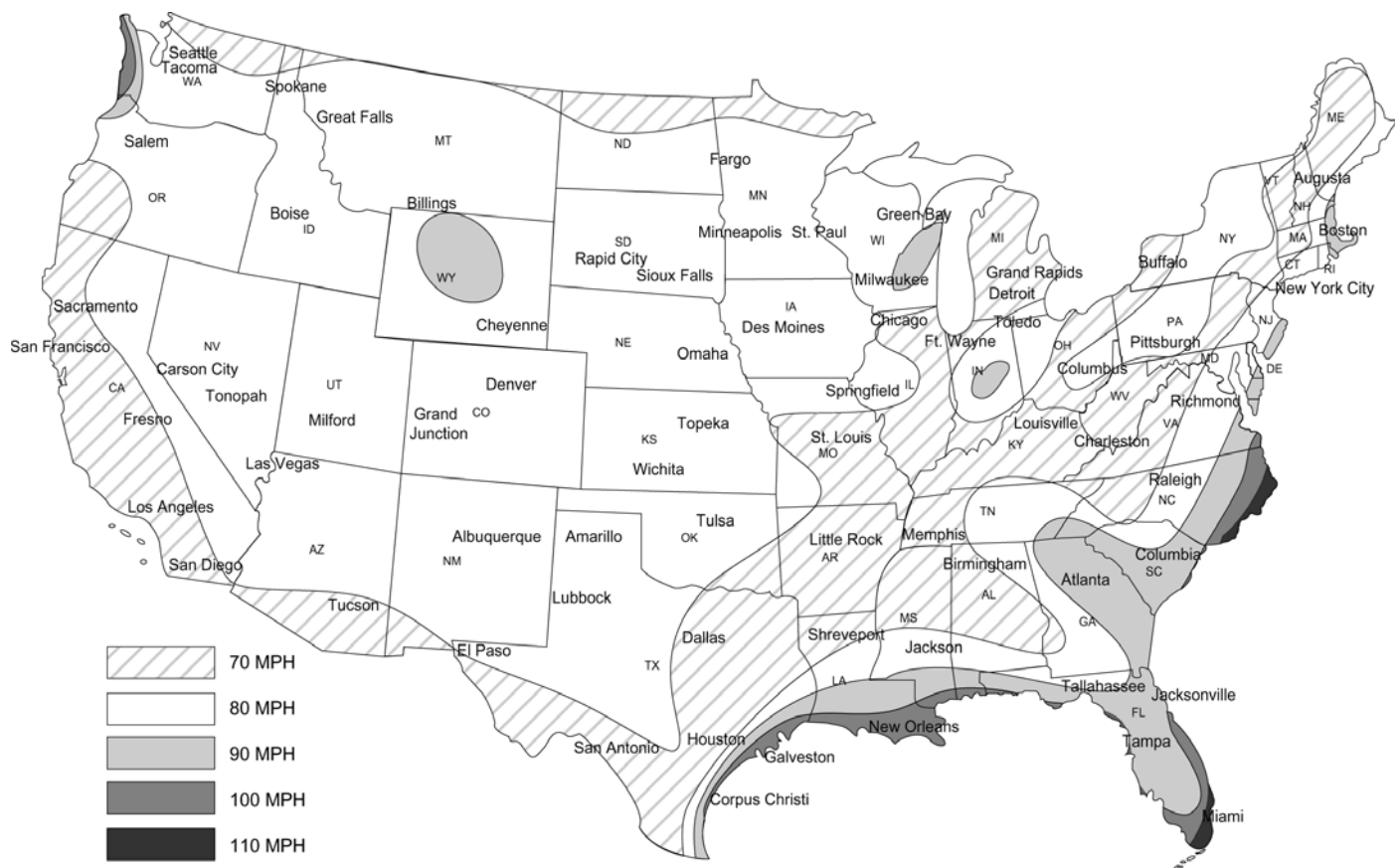
WIND LOAD DATA

ISOTACH WIND MAP

The 50-year mean recurrence Isotach wind map has been included in this catalog in order to aid in the selection of a pole with regard to its

geographic location. Where unusual wind conditions exist [mountains, natural terrains acting as funnels, hurricane regions (shown as 110

MPH regions)] it is advisable to contact Phoenix Products Company for further consultation.



PHOENIX®
Intrigue
SERIES™

ORDERING AND INSTALLATION

Phoenix Products Company offers a wide range of aluminum poles. The information cataloged, including comprehensive wind loading capacity information (see individual spec sheets) provides for easy design of almost any pole-fixture combination.

How to Order

1. Calculate the total Effective Projected Area (EPA) of the desired Phoenix Intrigue Series Pole Mount fixture(s) from the respective spec sheets.
2. Select the mounting height.
3. Determine the maximum wind velocity in your local area as shown on the Isotach Wind Map on the reverse side of this page.
4. Determine the specific pole you can use to mount the fixture(s) by utilizing the wind loading capacity information (see individual spec sheets) for the type of pole you desire. The total wind-loading rating for the desired pole must be greater than the total EPA of the fixture.

EXAMPLE

Requirement:

Twin EuroTech side arm mount (model number: 2x ETPA70MHC-SHD) mounted on a 12' round tapered aluminum pole. Location is Milwaukee, WI.

Procedure:

Look up the "EPA" (Effective Projected Area) and weight of the Phoenix Intrigue Series Pole Mount fixture(s). (Model ETPA70MHC-SHD has an EPA of .62ft² per fixture. **Total EPA = 1.24ft²**. Weight is 23lbs per fixture. **Total Weight = 46lbs**. Look at the Isotach Wind Map, locate Milwaukee, WI, and note the wind band - 80 mph. (Designs are based on the basic wind speed plus a 30% gust factor.)

Selection:

Choose a pole type (PA1, PA2, PA3 or PA4) and using the table on page 2 of the spec sheet select desired shaft style and height. For our example we've chosen base style PA1 and need a 12' tapered pole. Select the appropriate portion of the model number - (PA1T12) and read across to the 80 mph column where EPA is at Pole Top and follow across for maximum fixture weight. The EPA for PA1T12T4(1) is 4.3ft² and the maximum fixture weight is 100 lbs. This pole's capacity exceeds the design requirement therefore is satisfactory for use, in this application. Complete the model number of the selected pole by choosing the appropriate mounting information. For our example: S3A - Straight Arm 3", 2- Double @ 180° for a final model number of: **PA1T12T4S3A2**.

Anchorage:

From the Pole Spec sheet (PA1) select the 4" pole diameter. The bolt circle is 6 3/4" with a 1 3/4" bolt projection above the surface of the concrete foundation. The anchor bolt dimensions are 3/4" diameter x 17" long with a 3" hook (leg). Anchor bolt kit must be ordered separately (See spec sheet for part number).

Pole Finishes

All round tapered and non-tapered spun aluminum poles have a textured polyester powder coat finish. Black standard. Bronze, gray, white, silver, and verde green options available. For custom colors, please contact factory.

Vibration Damper

Occasionally, a phenomenon caused by local peculiarities of a site and/or prevailing winds, poles may be susceptible to wind induced harmonic vibrations in the 10 to 20 M.P.H. wind range. Vibration dampers will alleviate this condition and are available, factory installed on the inside of the pole, or are available for field installation on the outside of the shaft with stainless steel band clamps.

AASHTO Standards

The aluminum pole section of the catalog has been designed to the American Association of State Highway and Transportation Officials (AASHTO) Specifications. The AASHTO Specification is the most widely used and recognized design standard in the country, being adopted for use by all 50 states' Department of Transportation and the Federal Highway Administration.

Installation Instructions

Anchor Bolts

1. Only bolt and nut kits supplied by Phoenix Products Company should be used.
 2. Existing anchor bolts or bolt adapters supplied by other than Phoenix Products Company should not be used. If they are, Phoenix Products Company assumes no responsibility in case of bolt/adaptor failure.
 3. Anchor bolts and nuts from other sources should be used only on the advice of a structural engineer. Fasteners not suitable for this application can result in bolt and/or and/or thread failure and consequent collapse of the pole.
- CAUTION: USE OF NUTS FROM OTHER MANUFACTURERS WITH PHOENIX PRODUCTS COMPANY BOLTS MAY RESULT IN THREAD FAILURE CAUSED BY IMPROPER THREAD FIT.**
4. In addition to electrical conduit and other equipment necessary to the installation, the foundation bolts should be cast into concrete conformance with the template drawing supplied with the anchor bolts.

Cautions

- A. Check all templates for dimensional accuracy before using them to locate bolt position in the foundation.
- B. Be certain that anchor bolts are properly located to provide the desired directional orientation of the pole.
- C. Be certain that anchor bolts are plumbed vertically, and that they extend above the finished surface of the foundation to the extent called for on the bolt template.

Foundations

Since local soil and frost conditions vary widely, a civil engineer familiar with these conditions should be consulted regarding dimensions and depths of foundations.

Pole Erection and Fixture Installation

1. All aluminum poles are provided with single nut on each anchor bolt. Leveling shims can be used (sold separately) and are to be placed, as needed, on the top of the foundation and checked using a hand level to ensure that the mounting surface is level. The pole should then be installed with its base plate holes over the bolts and the nuts screwed down. After checking to ensure that the pole is plumb, the top nuts should be tightened to the torque values shown below:

BOLT DIAMETER IN INCHES	3/4
Recommended ft. lbs. of torque when nuts & bolts are not lubricated	105
Recommended ft. lbs. of torque when nuts & bolts are lubricated	78
These recommended torques: +0, -10% of torque value is permissible.	

2. When the installation is complete and checked out, the void that appears between the base plate and concrete foundation is to be filled using a non-shrinking mortar grout. Then shape and finish to a neat appearance.
3. With the exception of the instructions presented on this page, the procedures for fixture installation and pole erection are the responsibility of the installation contractor.

Grounding

Poles must be grounded in accordance with requirements in the National Electrical Code and applicable local Electrical Codes.

CAUTION: Phoenix Products Company poles have been designed to support only the luminaries originally intended. Miscellaneous items such as pennants, signs, and decorations may cause pole failure because of overloading. Addition of these items voids Phoenix Products Company's warranty. Phoenix Products Company will, however, supply information regarding total loading capacity on request. Phoenix Products Company's poles are guaranteed only when used in a pole/luminaire combination. Any other application of poles, including application without a luminaire voids the Phoenix Products Company warranty.

WARNING

DO NOT INSTALL POLES WITHOUT LIGHT FIXTURES

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