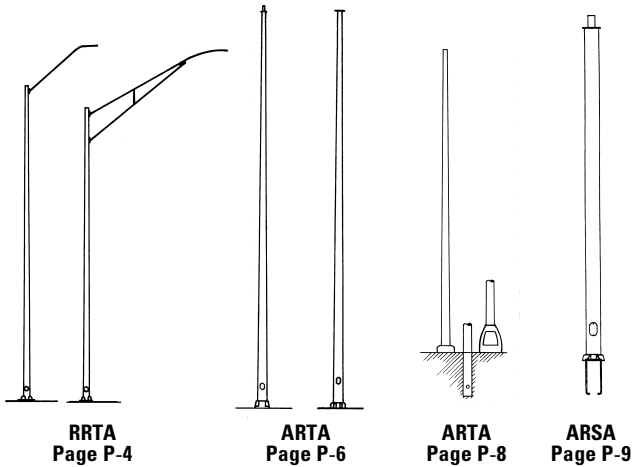


POLES AND BRACKETS INDEX



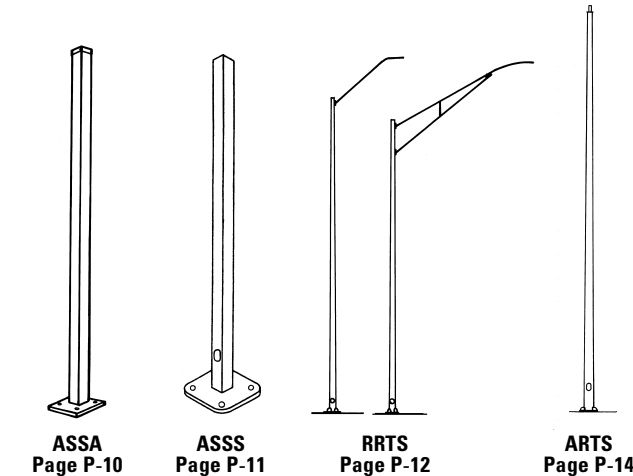
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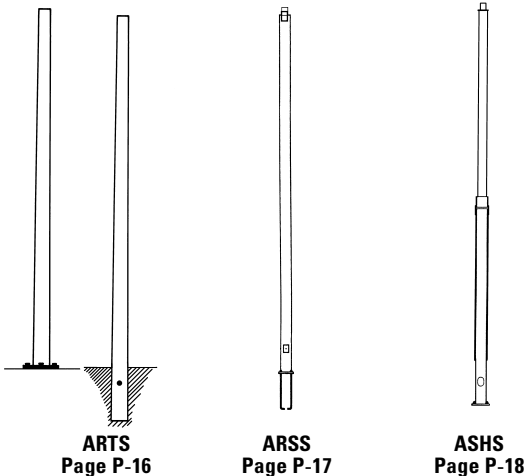


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C/F = Contact factory for all sports lighting designs.

POLE SELECTION GUIDELINES

GENERAL

A lighting pole must support the weight of the equipment you will mount on it and at the same time be able to withstand the effect of the maximum velocity winds to which it will be subjected. Therefore, the basis for selecting poles from this catalog is the weight and Effective Projected Area (EPA) data shown in Pole Selection Tables under the heading "Recommended Total Load." Before choosing a pole, determine the maximum total EPA and the total weight of all luminaires, brackets, signs, decorations, and other equipment that you plan to mount on it. EPA and weight data are given on product and accessory pages.

EFFECTIVE PROJECTED AREA (EPA)

The formula to calculate the force of wind acting on an object is: actual projected area of the object X coefficient of drag X velocity pressure of the wind. Effective projected area or EPA is the product of the first two. For example, one luminaire has an actual projected area of 2.62 square feet and a drag coefficient of 0.57. Its EPA is thus $2.62 \times 0.57 = 1.5$ square feet. When mounting a luminaire, the centroid of the effective projected area (approximate center of the luminaire projected area) should be no higher than 18 inches (457mm) above the top of the luminaire mounting tenons.

MAXIMUM EXPECTED WIND VELOCITIES

Recommended Total Load figures given in Pole Selection Tables are based on specific wind conditions—i.e., certain MPH or miles per hour isotach. The map on the next page gives maximum expected wind velocities in the contiguous United States, based on a 50-year mean recurrence interval. Refer to the map to find the maximum expected wind condition for the area where you will be installing the lighting equipment.

Velocities recorded on the map are expected isotach values, not gust values. Poles are actually designed for maximum gust velocities considerably greater than the MPH given. Design gust velocities include a gust factor of 1.3 and appropriate height factors.

There are some locations where unusual local wind conditions exist. In these areas, wind speeds could be considerably higher than those in the surrounding areas. These may necessitate the use of a greater isotach value than is shown on the map.

STEP-BY-STEP PROCEDURE FOR SELECTING POLES

1. Choose the specific luminaire you plan to use and decide how many will be mounted per pole.
2. Pick an appropriate mounting method, such as:
 - a. A single decorative post top luminaire on a 10 to 20 foot (3 to 6 meter) pole having a 3-inch (76mm) OD top;
 - b. Single or multiple decorative luminaires on arms supplied with the luminaire;

- c. One or more floodlights on 20 to 60 foot (6 to 18 meter) poles, either singly on a top tenon, or in groups on brackets;
 - d. Roadway luminaires on arms attached to the side of a pole. Pick the correct length and number of arms per pole (one per luminaire).
3. From data on the selected luminaire page, find the weight and EPA of each luminaire. Multiply these numbers by the number of luminaires per pole to determine the total weight and EPA.
4. Scan the pole pages to find a picture of the luminaire you plan to use. These are given at the top of the page under the heading "Applications." Choose an appropriate pole.
5. If brackets are needed, study the pole and accessory pages. Read the weight and EPA for the appropriate bracket.
6. Look up the weight and EPA for any other accessories.
7. Add the weight and EPA of all equipment.
8. Check the wind velocity map to find the MPH of the geographic location where the poles will be installed.
9. Study the Ordering Number Logic so you'll be familiar with the way we've devised our ordering numbers. DO NOT use the logic for ordering: Actual Ordering Numbers are given in the Selection Tables.
10. Refer to the Selection Table of the pole you've decided to use. Start at the top, because the most economical system will be the first in the tabulation that is appropriate for your application:
 - a. Find the desired nominal mounting height in the first column.
 - b. For roadway poles, pick the desired arm length and number of arms (next two columns).
 - c. In the Recommended Total Loads section, make sure the total weight of the lighting equipment does not exceed the maximum listed.
 - d. Under Effective Projected Area, find the MPH for the mounting location geographic zone. Read the EPA value in the appropriate column and check that the equipment you're using will not exceed this value.
 - e. Read the appropriate Ordering Number from the Selection Table.
11. Refer to the Ordering Number Logic to see if there are any substitutions or options required. Follow the instructions for substitutions. If you wish to include one or more options, add the indicated letter(s) to the end of the listed Ordering Number.
12. If brackets or other accessories are required, refer to appropriate pages and find the correct Ordering Numbers.

CAUTION: These design methods are guidelines only. GE takes no responsibility for system design and recommends you consult qualified professionals for verification of your pole, luminaire, accessory, base, and foundation selections.

WIND SPEED 50-YEAR MEAN RECURRENCE INTERVAL



(MPH values — — — 50 year mean recurrence)

MAXIMUM EXPECTED WIND VELOCITIES
IN THE UNITED STATES

