

The discharge has now been completed and the negative cloud charge and the positive ground charge becomes zero.

\*Drawings are not to scale.

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A lightning protection system provides a proven solution to this destructive force of nature. Some years ago, UL stated that properly installed systems will be approximately 99% effective in preventing damage from lightning.

IPC can design a system for your residence, church, manufacturing facility or other structure. No job is too large or small. We utilize lightning protection standards published by Underwriters Laboratories 96A and National Fire Protection Association 780.

### History & Facts

IPC has been a manufacturer of lightning protection equipment since 1934. We are a family owned business our fourth generation of management. IPC offers a complete manufacturing facility beginning in our foundry through machining and finishing areas along with stranding IPC cable from bare copper and aluminum wire.

#### **Installation Services**

IPC provides installations through qualified dealer contractors who install IPC products. IPC dealers are trained and experienced in the methods required for providing this type of service. Projects utilize design standards for lightning protection systems as published by National Fire Protection Association 780, Underwriters Laboratories 96A and Lightning Protection Institute 175.

If you have additional questions or need more information, please contact:



## How a Lightning Protection System Works

A brief explanation of what happens when lightning strikes.



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# How a Lightning Protection System Works



During a thunderstorm, negative charges of electrical energy build up in the lower part of clouds hovering close to Earth. Conversely, positive charges develop in the ground, directly underneath the cloud. Lightning occurs when the dry air between the cloud and the ground is moistened by rain or high humidity. Lightning strikes start downward in 150 foot intervals.



In a lightning protection system, the positive ground charge is coursed upward through the conducting cables attached to the structure. When the negative downward stroke from the cloud is about 150 feet above the top of the structure, the positive ground charge leaps upward to meet the lightning bolt (striking distance).



The two opposite charges are neutralized emptying the negative charges from the cloud and dissipating the ground charge. This all occurs in about 1/5,000 of a second.