# STRUCTURAL LIGHTNING PROTECTION





#### STREAMER RETARDING AIR TERMINALS

STREAMER RETARDING LIGHTNING PROTECTION SYSTEMS

The Lightning Master Streamer-retarding lightning protection system employs the basic conventional system with modified air terminals which are designed to reduce the incidence of direct strikes to the protected structure.

Lighting Master uses NFPA 780 as its design and installation standard. Lighting Master products are designed for ease of installation. A variety of factory designed and supplied installation systems make it possible to easily tailor the Lightning Master Streamer Retarding system directly to the product structure. Our Engineers will be happy to tailor a system designed specifically for your structure.

- Variable length based on site specifications
- Available in stainless steel, copper, aluminum, or tinned copper
- We custom design site-specific protection
- Turn-key installation
- Designed to meet NFPA 780

## **Streamer Retarding Technology**

Lightning Master Streamer Retarding Air Terminal technology is based on the Point Discharge Formula given below.

$$\varepsilon = \frac{Q}{4\pi \, \varepsilon r^2} \quad D = \frac{Q}{4\pi \, \varepsilon r^2}$$

sphere

where:  $\epsilon$  = electric field intensity Q = charge (in coulombs)  $\epsilon$  = permittivity of space r = radius





### Custom designs for all your needs

Streamer Retarding Air Terminals

Multipurpose spot dissipater - Lightning Master straight air terminals can be mounted wherever traditional lightning rods would be mounted. Made in stainless steel, copper, aluminum, or tinned copper for site specific customization, and can be attached to any Lightning Master base. Lengths vary based on site and application.



Enardo Valve (off-set) Streamer Retarding Air Terminal Lightning Master Inardo Valve solutions are oriented to provide clearance when valve opens during operation. This 36" SRAT dissipater installs on an Enardo Valve riser pipe. FRP pipes requires a down conductor cable, attached to the pipe at 3' intervals, and grounded at the base. Steel pipes do not require a down conductor cable.



#### Candelabra Air Terminal

For use in place of standard air terminals in a structural lightning protection system installed to NFPA 780 specifications. Standard elevation conductor: 5/8"x18", 1/2 thread (unless otherwise specified).



#### **Testimonial**

"We placed lightning protection using a formula that included Lightning Master Corp. air terminals and various equipment on 12 sites that had been struck multiple times and we also bonded and grounded most sites in the strike pattern area. On some of the sites where we had fiberglass tanks, we also installed the in-tank static drain dissipaters. Since 2009 after protecting the sites, none were struck again.

I also believe we went from 6 - 8 strikes per year to 1 or 2 strikes at most. The 1 or 2 per year are sites not yet fully protected with Lightning Master's solutions."

- Ronald "R.J." Goodman, CSP, XTO Energy

# **About Lightning Master**

Lightning Master® is a full service, full spectrum static solutions, lightning and transient protection company, serving the oil, gas and chemical industries since 1984. Our track record of success and exceptional customer service in North America, Asia, Africa, Europe and the Middle East has established LMC® as the global authority on lightning and static protection. With our unparalleled customer service we're with you, every step of the way.



