



LIGHTNING PROTECTION SYSTEMS



Given the extensive experience of Mediterráneo Señales Marítimas in the field of prevention and protection against lightning, we offer a wide range of lightning arresters, surge protection and prevention products.

As lighthouses and navaid's towers are very prone to be hit by lightning, in MSM we have incorporated in our catalogue safe and effective high-quality products that meet national and international regulations in force, thus achieving greater assurance and the best solution for our customers.

We offer elements to intercept a direct lightning strike on the structure, conduct current safely and disperse the discharge through the land or the sea.

TYPES

The **collection system** is intended to intercept the lightning strike to lead to ground. Among the various standardized collection systems we offer **Early Streamer Emission (ESE) or Franklin Rod Systems**.

Early streamer emission (ESE) lightning rods base their operation on the electrical characteristics of the lightning formation. The ray begins with a downward tracer propagating in any direction. Once approaching to objects located on the ground, either one can be struck. They are mainly characterized by issuing a continuous upward tracer earlier than any other object within its protection radius. The rod should be the controlled impact point of discharge, so as to provide the lightning current a path to ground without damaging the structure.



| Model | DAT CONTROLLER PLUS |
|-------------------------|---|
| Material | Stainless steel. |
| Early Streamer Emission | Double. |
| Operation | Under any atmospheric condition. |
| Electrode isolation | Guaranteed under any operating condition. |
| Power Supply | Autonomous. |
| Maintenance | Free. |

Collection systems by Franklin rods consist of sharing and dissipating the lightning discharge current by a network of conductors. Sections and materials comply with the provisions of the rules defining such systems.



| Model | MAT 1302 FRANKLIN ROD |
|-----------------|------------------------------------|
| Material | Stainless steel. |
| Dimensions (mm) | 1 x (Ø 16 x 170) + 3 x (Ø 8 x 65). |

LIGHTNING PROTECTION SYSTEMS



Specifications subject to change without previous notice.



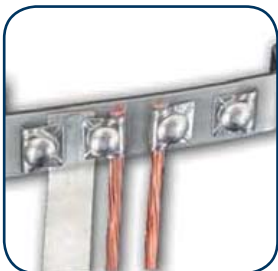
Conductor wire

| Ref. | Dimensions (mm) | Material | Weight (Kg) |
|----------|-----------------|----------|-------------|
| MAT-050D | 9x1000x9 | Copper | 0.41 |
| MAT-070D | 10,5x1000x10.5 | Copper | 0.63 |
| MAT-095D | 12,5x1000x12.5 | Copper | 0.85 |
| MAT-120D | 15x1000x15 | Copper | 1.10 |
| MAT-150D | 16x1000x16 | Copper | 1.34 |



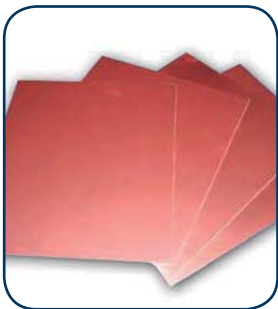
Inspection pits for grounding systems

| Ref. | Dimensions (mm) | Material |
|-------|-----------------|---------------|
| M-510 | 250x200x215 | Polypropylene |
| M-512 | 22x22x22 | Polypropylene |
| M-513 | 300x300x300 | Polypropylene |
| M-520 | 245x245x115 | Cast iron |
| M-530 | 320x320x190 | Concrete |



Bonding bars for inspection pits

| Ref. | Dimensions (mm) | No. of conductors | Material | For inspection pit |
|-------|-----------------|-------------------|-----------------|--------------------|
| M-511 | 25x5x200 | 4 | Copper | Polypropylene |
| M-521 | 25x5x150 | 4 | Copper | Cast iron |
| M-531 | 25x5x300 | 4 | Copper | Concrete |
| M-540 | 60x5x196 | 4 | Stainless steel | Polypropylene |
| M-541 | 60x5x242 | 6 | Stainless steel | Polypropylene |



Grounding plates

| Ref. | Dimensions (mm) | Material |
|-------|-----------------|----------|
| M-401 | 500x500x1.5 | Copper |
| M-411 | 500x1000x1.5 | Copper |
| M-402 | 500x500x2 | Copper |
| M-412 | 500x1000x2 | Copper |
| M-403 | 500x500x3 | Copper |
| M-413 | 500x1000x3 | Copper |



Enhancers of ground conductivity

| Ref. | Weight (kg) | Material |
|-------|-------------|-----------------------|
| M-460 | 3 | WELLCONDUCTOR |
| M-470 | 25 | Special graphite T.T. |
| M-480 | 25 | Special Clay T.T. |



Lightning event counter

| Ref. | Dimensions (mm) | Material | Range | Temperature |
|-------|-----------------|---------------|----------|-------------------|
| M-920 | 85x110x80 | Polycarbonate | 0-999999 | From -40° to 50°C |



MEDITERRÁNEO SEÑALES MARÍTIMAS, S.L.L.
 mesemar@mesemar.com • www.mesemar.com

