

 MSM

1250

1500

3.5m

Towers and Poles

23





MEDITERRANEO SEÑALES MARITIMAS (MSM) introduces its wide range of Towers and Poles for marine and waterways Aids to Navigation.

MSM's Towers and Poles, whether made from steel or GRP, are designed and manufactured under the strictest safety Standards and taking into account the corrosive environment where they will be installed.

In their conception, we also bear in mind the difficult access to certain locations where navigational aids will be located; hence all our towers and poles are modular; not being imperative the use of cranes for their assembly.

Most of our towers, thanks to their watertight construction, serve as housing for batteries, control boards and anything to be protected from the weather. Because of their design, their structure serves as a great day mark itself.

MTI Stainless-Steel Tower, Malabo, (Equatorial Guinea).

MTS

LATTICE STEEL TOWERS

Specifications subject to change without previous notice.



Mediterraneo's MTS Lattice Steel Towers have been especially designed to integrate long-range rotating beacons c/w their solar power supply system.

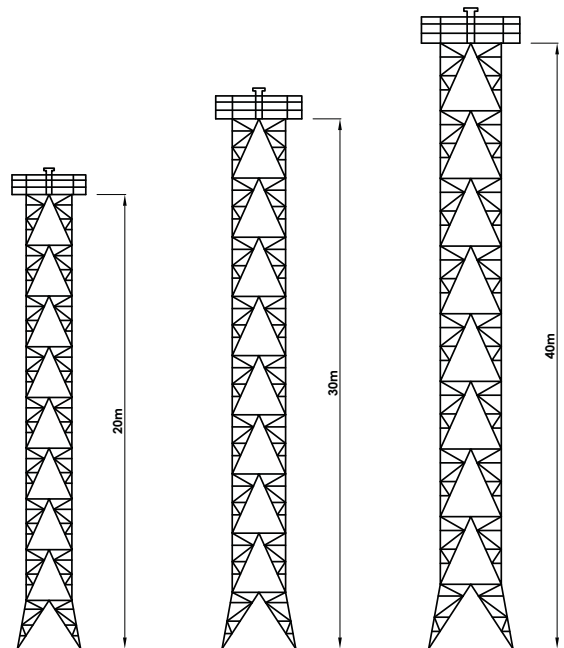
These towers are manufactured from hot-dip galvanised steel. Although standard heights are 20, 30 and 40 metres, we can also designed and supply any height under customer's request.

Features:

- Easy assembly due to its modular architecture.
- 42 ST steel profiles according to European Standards.
- Restricted access to top platform, with safety lock.
- Fast erection without crane.
- Provided with templates for the accurate anchor bolt positioning.
- Spacious top platform to hold a high number of solar modules, batteries and other accesories.
- Wind-speed resistance up to 200 Kph.
- Access ladder with protection handrail.
- Plates to fix electric conductor, if necessary.

Options

- Supports for solar modules and battery cabinet on the top platform.
- Lightning protection system.
- Day marks.
- Radar reflector.
- Housing for diesel generator at the tower base.
- Piece-lifting manual system for tower erection.
- Other heights available under request.



TYPE	MATERIAL	FOCAL HEIGHT	TOP BASE	WIND SPEED	WEIGHT
MTS 200	Hot-dip galvanised steel	21.5 m	9.00 m ²	200 km/h	8,790 kg
MTS 300	Hot-dip galvanised steel	31.5 m	12.25 m ²	200 km/h	11,050 kg
MTS 400	Hot-dip galvanised steel	41.5 m	16.00 m ²	200 km/h	14,280 kg

MTP-S

STEEL & GRP
TOWERS

Specifications subject to change without previous notice.



Mediterraneo's MTP-S towers are especially engineered to incorporate long-range rotating beacons c/w their solar power supply system, in order to operate as long-range Lighthouses.

They are manufactured from hot-dip galvanised steel profile structure and covered with GRP (Glass Reinforced Polyester) plates. Colour is impregnated in the raw material, thus the tower colour remains unaltered.

Thanks to its watertightness, batteries, control units and other items can be housed inside the tower, in order to be protected from the weather.

Features:

- Focal heights from 11 to 21 metres.
- Easy assembly due to its modular architecture.
- Fast erection without crane.
- Spacious top platform to hold solar modules and batteries.
- Tower accessories and bolting made from stainless steel.
- Wind-speed resistance higher than 200 Kph.
- Inner access ladder.
- GRP plates with rings for easy lifting.
- Access door with safety lock.
- Provided with templates for accurate anchor bolt positioning.

Options

Internal structure manufactured from stainless steel.

Solar module supports and battery box on top platform.

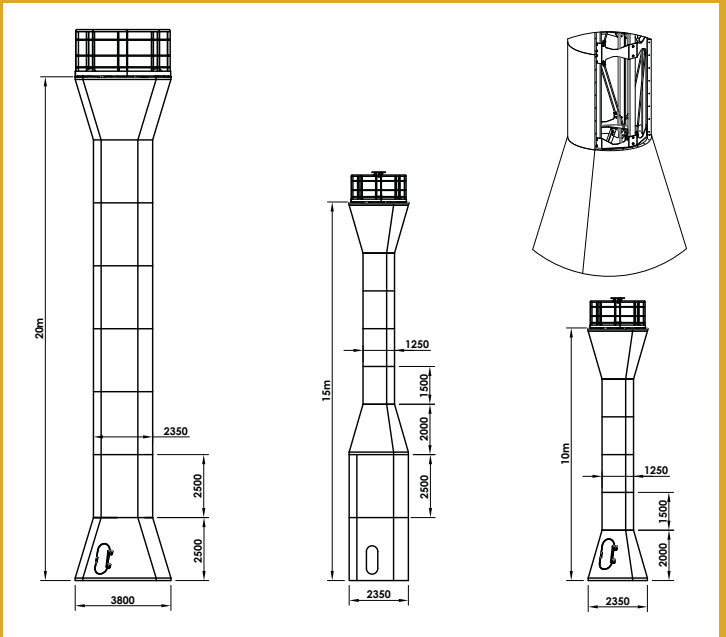
Lightning protection system.

Top mark.

Radar reflector.

Piece-lifting manual system for tower erection.

Other heights available under request.



TYPE	MATERIAL	FOCAL HEIGHT	BOTTOM BASE	TOP BASE	DIAMETER	WIND SPEED	WEIGHT
MTP-S 100	Hot-dip galvanised steel + GRP.	11.5 m	Ø 2.35 m	Ø 2.35 m	1.25 m	200 km/h	1,575 kg
MTP-S 150	Hot-dip galvanised steel + GRP.	16.5 m	Ø 2.35 m	Ø 2.35 m	1.25 m	200 km/h	3,800 kg
MTP-S 200	Hot-dip galvanised steel + GRP.	21.5 m	Ø 3.80 m	Ø 3.80 m	2.35 m	200 km/h	4,020 kg

Specifications subject to change without previous notice.



Mediterraneo's GRP towers, type MTP, are engineered to integrate flashing and rotating beacons c/w their solar power supply system, in order to operate as medium- and long-range Lighthouses.

These towers are manufactured from GRP (glass-reinforced polyester). Colour is pigmented in the raw material, thus the tower colour remains unaltered.

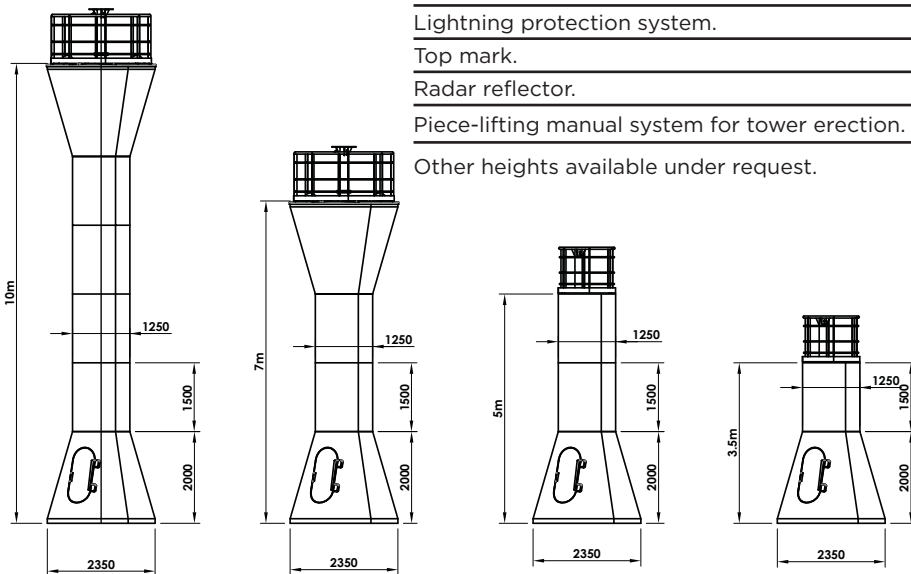
Thanks to its watertightness, batteries, control units and other items can be housed inside the tower, in order to be protected from the weather.

Features:

- Focal heights from 3.5 to 11 metres.
- Easy assembly, due to its modular architecture.
- Fast erection without crane.
- Spacious top platform to hold solar modules and batteries.
- Tower accessories and bolting made from stainless steel.
- Wind-speed resistance higher than 180 kph.
- Inner access ladder.
- GRP plates with rings for easy lifting.
- Access door with safety lock.
- Provided with templates for accurate anchor bolt positioning.

Options

- Solar module supports and battery box on top platform.
- Lightning protection system.
- Top mark.
- Radar reflector.
- Piece-lifting manual system for tower erection.
- Other heights available under request.



TYPE	MATERIAL	FOCAL HEIGHT	BOTTOM BASE	TOP BASE	DIAMETER	WIND SPEED	WEIGHT
MTP 35	Glass reinforced polyester (GRP)	5.0 m	Ø 2.35 m	Ø 1.25 m	1.25 m	180 km/h	375 kg
MTP 50	GRP	6.5 m	Ø 2.35 m	Ø 1.25 m	1.25 m	180 km/h	445 kg
MTP 70	GRP	8.5 m	Ø 2.35 m	Ø 2.35 m	1.25 m	180 km/h	880 kg
MTP 100	GRP	11.5 m	Ø 2.35 m	Ø 2.35 m	1.25 m	180 km/h	1,075 kg

Specifications subject to change without previous notice.



Mediterraneo's MTI Stainless-steel Towers are especially designed to integrate flashing and rotating beacons c/w their solar power supply system, in order to operate as medium- and long-range Lighthouses.

Thanks to its watertightness, batteries, control units and other items can be housed inside the tower, in order to be protected from the weather.

Protection handrail, inner ladder, beacon support and metallic accessories are also manufactured from stainless steel.

Features:

- Stainless-steel manufacturing (AISI 304 stainless steel).
- Focal heights from 6 to 16 metres.
- Easy assembly due to its modular architecture.
- Fast erection with use of crane.
- Spacious top platform to hold solar modules and batteries.
- Wind-speed resistance up to 200 Kph.
- Inner access ladder.
- Access door with safety lock against vandalism.
- Very useful as day mark
- Internal ventilation system.
- Special primer and two external polyurethane paint coats.
- Provided with templates for accurate anchor bolt positioning.

Options

Solar module supports and battery box on top platform.

AISI 316L stainless steel.

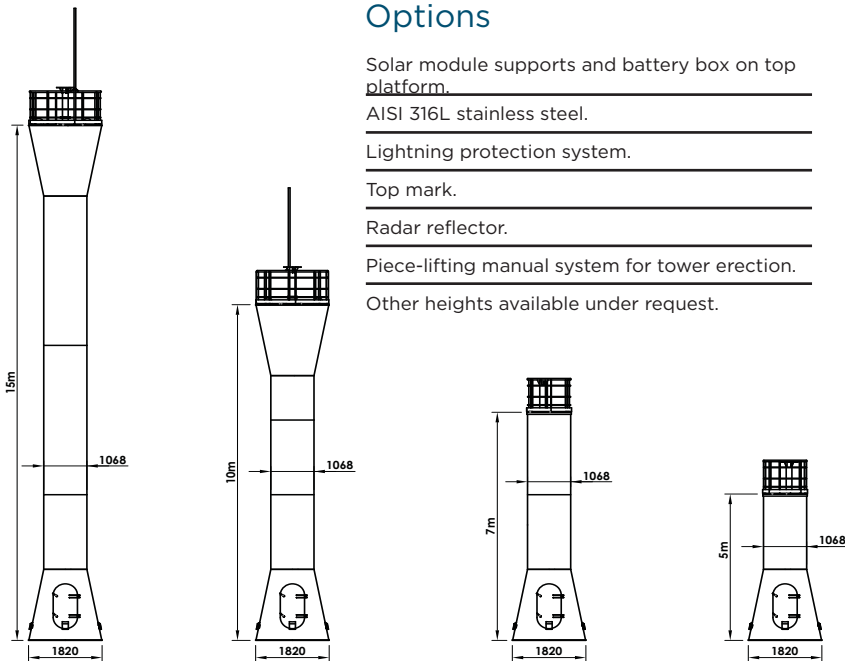
Lightning protection system.

Top mark.

Radar reflector.

Piece-lifting manual system for tower erection.

Other heights available under request.



MTI 150

MTI 100

MTI 70

MTI 50

TYPE	FOCAL HEIGHT	BOTTOM BASE	TOP BASE	DIAMETER	WIND SPEED	WEIGHT
MTI 50	6.5 m	Ø 1.8 m	Ø 1 m	1 m	200 km/h	2,350 kg
MTI 70	8.5 m	Ø 1.8 m	Ø 1 m	1 m	200 km/h	2,500 kg
MTI 100	11.5 m	Ø 1.8 m	Ø 1.8 m	1 m	200 km/h	3,700 kg
MTI 150	16.5 m	Ø 1.8 m	Ø 1.8 m	1 m	200 km/h	4,600 kg

MPM

STEEL
POLES

Specifications subject to change without previous notice.



MSM designs and manufactures all kind of poles for beacon support. They are particularly recommended for short- and medium-range beaconing applications.

They are made from either hot-dip galvanised or stainless steel. Though we have available standard dimensions, our Engineering Department can design the pole most suitable to the client's requirements.

Poles can be completed with battery boxes and solar-module supports, according to the specific needs of every installation.

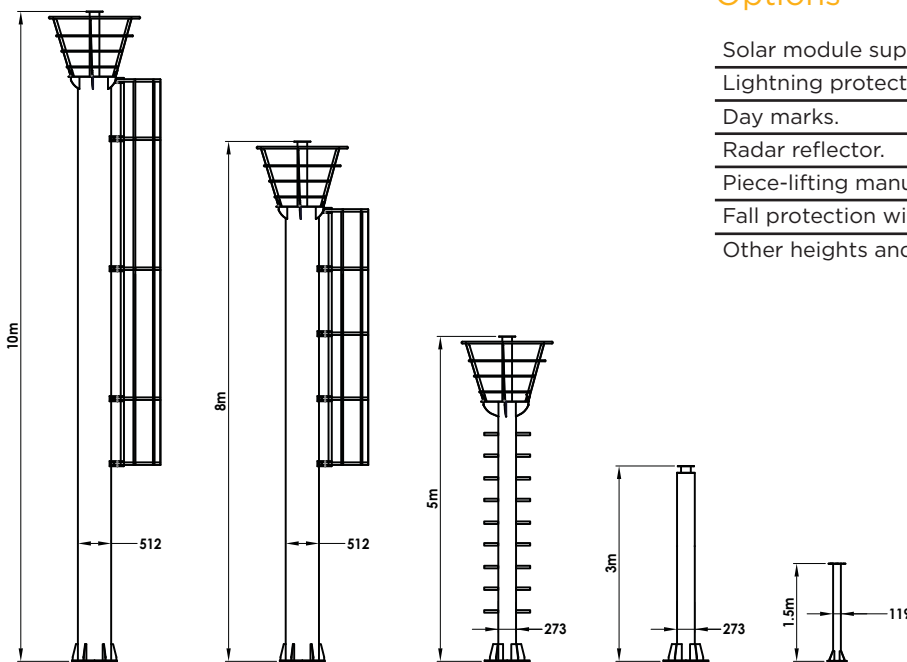
Protection rings and top platform are provided depending on the pole height.

Features:

- Focal heights from 1.8 to 10 metres.
- Wind-speed resistances can be of up to 200 Kph.
- Painted with special marine paints.
- Top platform to hold solar modules and batteries, in poles higher than 5 metres.
- Access ladder with protection ring for poles higher than 5 metres.
- Stainless-steel bolts.
- Cable glands and plates to make electric cable conduction, if necessary.
- Restricted access to top platform with safety lock, for poles higher than 5 metres.
- Provided with templates for accurate anchor bolt positioning.

Options

- Solar module supports and battery box on top platform.
- Lightning protection system.
- Day marks.
- Radar reflector.
- Piece-lifting manual system for tower erection.
- Fall protection with stainless-steel lifeline.
- Other heights and designs available.



TYPE	MATERIAL	FOCAL HEIGHT	TOP PLATFORM	WEIGHT
MPM 15	Galvanised or Stainless steel	1.8 m	Ø 30 cm	60 kg
MPM 30	Galvanised or Stainless steel	3.3 m	Ø 30 cm	105 kg
MPM 50	Galvanised or Stainless steel	5.3 m	Ø 1 m	190 kg
MPM 80	Galvanised or Stainless steel	8.1 m	Ø 1 m	520 kg
MPM 100	Galvanised or Stainless steel	10.4 m	Ø 1 m	920 kg



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