

Beacon Tower

TM 500/TM 800

SeaHow[®]
by MeriTaito



Combined daymark & radar target & beacon

Beacon Tower TM800 or TM500 has triple functionality. Besides being the superstructure for the light it also provides daymark with superior conspicuity and efficient radar response. It is ideal solution to replace old beacons or small lighthouses.

The daytime conspicuity enhances the safety of Navigation especially in areas with few natural land marks, like archipelago or arctic environment in winter time when all of the landscape tend to look alike.

Beacon Tower is made from polyethylene and requires only minimum maintenance. The light weight, modular structure and easy foundation enable fast erection with moderate size of equipment. Foundation design comes along with the tower.

The construction utilizes SeaHow's proven spar-buoy technology using high quality materials and encapsulating the components inside the tower body. The tower can be equipped with any marine lantern and different kinds of power sources.

Benefits

- Excellent optical conspicuity
- Improved radar response
- Easy transport and installation
- Low maintenance need

Spars and buoys since 1976

Specifications	TM 500	TM 800
Overall length *)	2.4, 3.6, 4.8 m	4.8, 6.0, 7.5, 9.0 m
Diameter	500 mm	800 mm
Wall thickness	30 mm	30 mm
Polyethylene material	HD 100 extruded pipe	HD 100 extruded pipe
Weight	180 - 290 kg	480 - 780 kg
Retro-reflector	3M diamond	3M diamond
Radar reflector	TH500	TH800
Radar cross area RCS	20 m ²	130 m ²
Color IALA-108 *)	Yellow-red-yellow	Yellow-red-yellow
Color and UV stability	26 years (lat. 50)	26 years (lat. 50)
Optional accessories *)		
Marine lanterns	Yes (Sabik as default)	Yes (Sabik as default)
Solar Panel	Yes	Yes
Ladder	Yes	Yes
Rack for Devices	Yes	Yes

*) can be adjusted according to customer needs

Mathematical modelling was used to estimate the behaviour of the tower in the wind. CFD and FEM analyses have been performed to compute the wind load, frequency of the turbulence and loads on the body and foundation.

Results show that no resonance due to wind is expected. The vertical inclination of the tower focal plane due to deflection of the buoy in the wind is very small even with high wind speeds. See the graphics.

Behaviour in the wind

