

maritime pine



The increasing need to conceal radio base stations has led to the creation of antenna concealing solutions, that can easily be introduced into environments that require a low-impact visual outcome. A 'field experience' of over ten years and worldwide patents, is **calzavara's** credentials with regards quality and durability of these 'concealing antennas', even in extreme climates.

The trunk consists of a steel pole divided into several shafts, according to the overall height of the structure that can vary from 15 to 35 meters. The external surface of the trunk is coated by plastic material that is resistant to UVA rays and atmospheric agents, with an aspect that in time maintains the resemblance of natural bark.

The foliage is comprised of branches made of plastic material accurately designed, taking into consideration quantity, shape and array suitable to completely conceal the antennas and all accessory parts in a natural manner. The materials used, in addition to guaranteeing radio-electric transparency and resistance to UVA rays, over the time keep their proper mechanical and colour characteristics.



Design

Structural steel design according to the most recent European Standard. Designs to other International Standards (EIA, BS, NV65) available upon request.

- | | | |
|--|----------|---------------------------------|
| • Design wind speed (Eurocode 1 - EN 1991) | 28 m/s | ($q_{10}=1.2 \text{ kN/m}^2$) |
| • Design wind speed (EIA 222) | 160 km/h | ($q_{10}=1.2 \text{ kN/m}^2$) |
| • Constant operational wind speed on entire height | 100 km/h | |
| • Top deflection (operational wind speed) | <1° | |



Materials

The materials comply with the requirements of European Standards (EURONORM).

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|--------------------|--|------------|
| • Structural parts | Steel S355J0 (Fe 510 C) | EN 10025 |
| • Nuts and bolts | class 8.8 | EN 20898-1 |
| • Artificial bark | reinforced plastics | |
| • Branches | fibreglass reinforced plastic | |
| • Leaves | plastic materials with supporting core in glass roving and resin | |

All steel materials are protected by hot-dip galvanizing in accordance to Euronorm EN 1461 and ASTM A123 Standards.



Supply

The standard supply provides the minimum configuration required for commissioning of **maritime pine**, excluding radiant systems and mounts.

- Foundation set
- Polygonal pole, subdivided into shafts covered with artificial bark
- Foliage
- Packing list, erection and maintenance instructions
- Packing in bundles and/or wooden cases and crates

For a description of the accessories and ordering information, please refer to the [Accessories](#) catalogue.





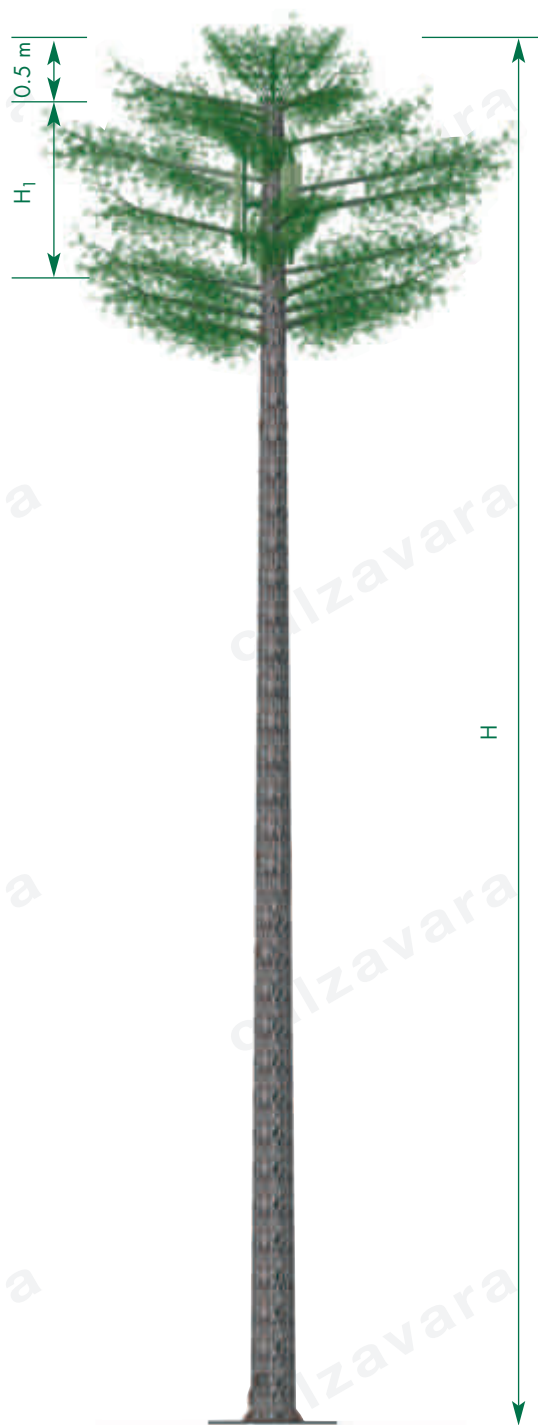
antenna mounts



bark



feeders exit



| Article | Structure height H | Antenna mount height H ₁ | Gross weight | Packing volume | Foundation concrete volume | Foundation excavation volume |
|------------------|-----------------------|--|--------------|----------------|----------------------------|------------------------------|
| | m | m | tons | m ³ | m ³ | m ³ |
| FMNL 1500 | 15 | 3.0 | 2.8 | 25 | 11 | 20 |
| FMNL 2000 | 20 | 3.0 | 4.4 | 30 | 19 | 38 |
| FMNL 2500 | 25 | 3.0 | 5.3 | 45 | 24 | 49 |
| FMNL 3000 | 30 | 3.0 | 7.1 | 60 | 30 | 62 |
| FMNL 3500 | 35 | 3.0 | 8.5 | 80 | 37 | 77 |

