

austrian 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 40 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. To facilitate maintenance operations, the **austrian pine** is also available with internal climbing ladder and also in a multi-operator version (site sharing).



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) $<1^\circ$



Materials

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

- 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 the **austrian pine**, excluding radiant systems and mounts.

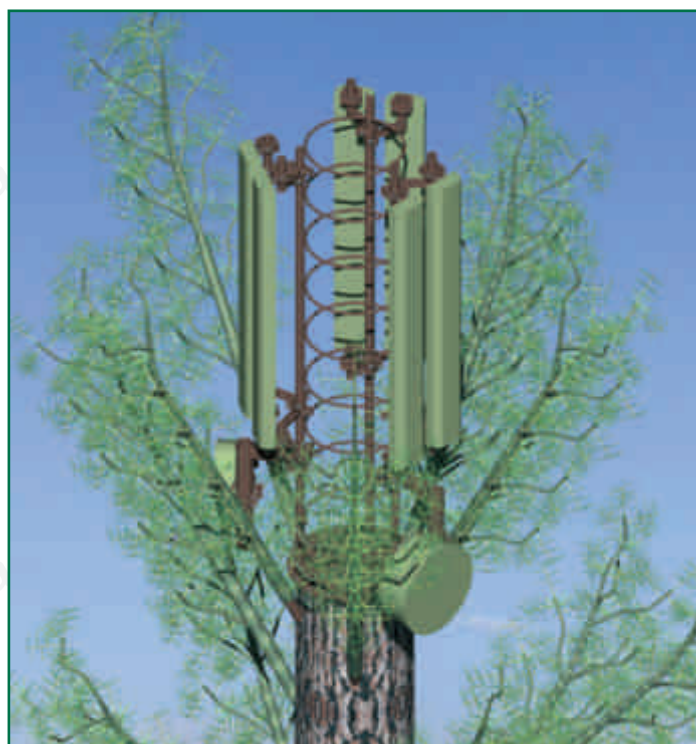
- Foundation set
- Polygonal pole, subdivided into shafts covered with artificial bark
- Top antenna pipe mounts
- Foliage
- Internal climbing ladder with anchor line (EN 353-1/2 Norm - only for version with ladder)
- Packing list, erection and maintenance instructions
- Packing in bundles and/or wooden cases and crates

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





without ladder



with ladder



bark



feeders exit



access ladder



feeders exit

How to order (for version with internal ladder)

Specify the anti-falling safety system required by adding the suffix codes to the article:

- **RL** (rigid anchor line EN 353-1)
- **FL** (flexible anchor line EN 353-2)

Example: **FAIL 3000 RL**
 austrian pine | rigid anchor line
 with internal ladder H = 30 m

For more information, refer to the Accessories catalogue.

Article	Structure height	Antenna mount height	Gross weight	Packing volume	Foundation concrete volume	Foundation excavation volume
	H	H ₁				
	m	m	tons	m ³	m ³	m ³
without ladder						
FANL 1500	15	3.5	2.5	20	12	25
FANL 2000	20	3.5	3.3	25	19	38
FANL 2500	25	3.5	5.3	40	24	49
FANL 3000	30	3.5	6.7	55	30	62
FANL 3500	35	3.5	9.2	75	37	77
FANL 4000	40	3.5	12.0	85	46	90
with ladder						
FAIL 1500 ..	15	3.5	3.0	20	12	25
FAIL 2000 ..	20	3.5	3.9	30	19	38
FAIL 2500 ..	25	3.5	6.2	45	24	49
FAIL 3000 ..	30	3.5	7.8	60	30	62
FAIL 3500 ..	35	3.5	10.8	80	37	77
FAIL 4000 ..	40	3.5	14.0	90	46	90

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austrian pine scheme



austrian pine without ladder
art. FANL 2500