

AS-SMART TREE



The urban heat islands (UHI) produce negative effects to the metropolitan microclimate. As built-up, impenetrable areas in cities are spreading over, the pressure brought on urban vegetation is getting increasingly severe. At present, the modern development is carried in the spirit of the blue-green infrastructure. Full-grown trees seem to represent an ideal element for microclimate improvements. Nevertheless, due to significant networking below the ground level and risks connected with spreading of both roots and treetops, a full-grown tree is often considered as a nuisance or a risk. Therefore, as an alternative solution, we offer the so-called AS-SMART TREE. They represent a unique and protected utility design.

The AS-SMART TREE consist of a robust steel construction (made of stainless steel or hot-dip galvanized steel components) serving as a supporting structure for climbing plants. The construction can be modularly erected and additionally fitted with street lamps, water-misting systems, as well as other elements positively improving the metropolitan environment. We believe that this construction will find its use mainly there, where – for various local reasons – conventional trees cannot be planted cost-effectively and/or under sustainable conditions.

It is not our intention to replace live trees, but to spread out greenery even there, where it is (for layout reasons) otherwise impossible and helping thus to enhance the municipal biodiversity.

Tree load-bearing structures

- AS-SMART TREE Singapore – a construction inspired by the Singapore tree towers
- AS-SMART TREE Malibu – a tree construction with a cupola treetop shape

Are the offered structures unsuitable for you? In such case, do not hesitate to contact us. Our Design Department can recommend **a custom-made tree concept** matching your requirements.



Advantages

- Climbing plants require far modest earth bed
- Their root system **does not interfere with buried (municipal) services**
- A simple construction makes easy its transport, handling, and maintenance
- The tree modular design facilitates its proper adjustment to local layout conditions
- An additional extension is easy due to the modular design
- Potential placements to concrete flowerpots, which facilitates easy movements of the whole construction in case of reconstructions in the neighbourhood
- Optional materials for the construction - AISI 304 stainless steel, hot-dip galvanised steel, or other suitable materials
- Wide options in climbing plants (vine types)
- Possibility of **additionally fitted lamps**, as replacements for conventional street lamps or replaceable seasonal lighting (Christmas, etc.)
- Possibility of **additionally fitted humidifiers** (for this option we are able to offer an additional tank & treatment unit)
- Potential fitting of additional water components
- Potential fitting of additional photovoltaic panels
- Custom-made designs for individual projects



AS-SMART TREE SINGAPORE

This shape is a construction inspired by the Singapore tree towers. The 250 mm dia main trunk branches off at the height of approx. 3.5 m. In its widest dimension, the treetop diameter is approx. five metres. However, the given dimensions are basic only – they can be modified according to project needs. The whole construction is structurally supported by rod-shaped rings that support, at the same time, more dense coverage of the treetop with climbing plants.

The complete steel construction of the tree can be anchored over an anchoring flange or to a concrete flowerpot. The flowerpot can be set into the ground with its upper rim flush with the ground surface. Alternatively, the concrete flowerpot can be simply laid on the ground. Openings necessary for feeding lines (water, power) are to be designed according to local layout conditions.



AS-SMART TREE MALIBU

A tree construction with a cupola treetop shape. The 250 mm dia main trunk branches off at the height of approx. 1.5 metre. The treetop diameter in its widest dimension is approx. three metres. The overall height of the basic version is 3.75 m. However, the given dimensions are basic only – they can be modified according to project needs. The whole construction is structurally supported by rod-shaped rings that support, at the same time, more dense coverage of the treetop with climbing plants.

Similarly as with the Singapore type, the structural anchoring considered in the same way. All constructions can be fitted with accessories such as lighting, water misting, etc.

