

ARIS CiTYCOOL

Climate resilient green space optimization



Why ARIS CiTYCOOL?

Urban spaces are becoming increasingly overheated. This effect needs to be reduced. The ARIS CiTYCOOL climate module is a sponge city component that improves the climate effectiveness of existing green spaces by optimizing and extending the evaporation process. It also makes a significant contribution to flood prevention and promotes biodiversity so that our urban spaces remain liveable.

Fields of application

- Industry and commercial areas in urban spaces
- Urban green spaces (parks, traffic islands, roadside greenery, cemeteries, forests, etc.)
- Green spaces around public buildings (schools, hospitals, etc.)

Water

A water reservoir with a water retention height of approx. 300 mm is located underneath the plant substrate. It serves to supply the plants with sufficient water even during dry periods. It can also absorb and buffer heavy rainfall, thus helping to relieve the pressure on the channels.

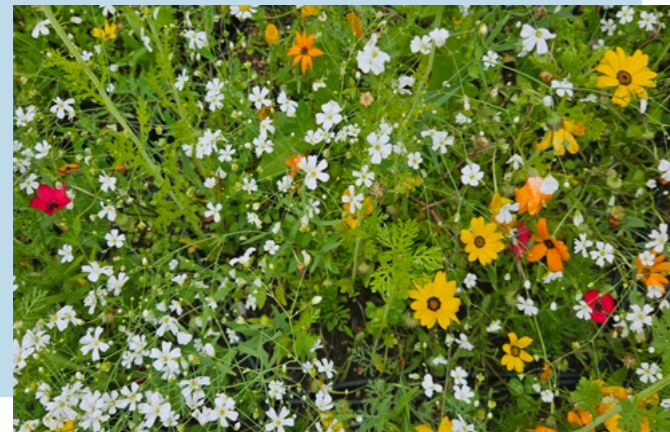
Plants

The plant selection with 17 different flowering plants offers a maximum flowering period from April to October and thus ensures long-lasting colorfulness. Thanks to the very good water supply, the plants are particularly resilient.

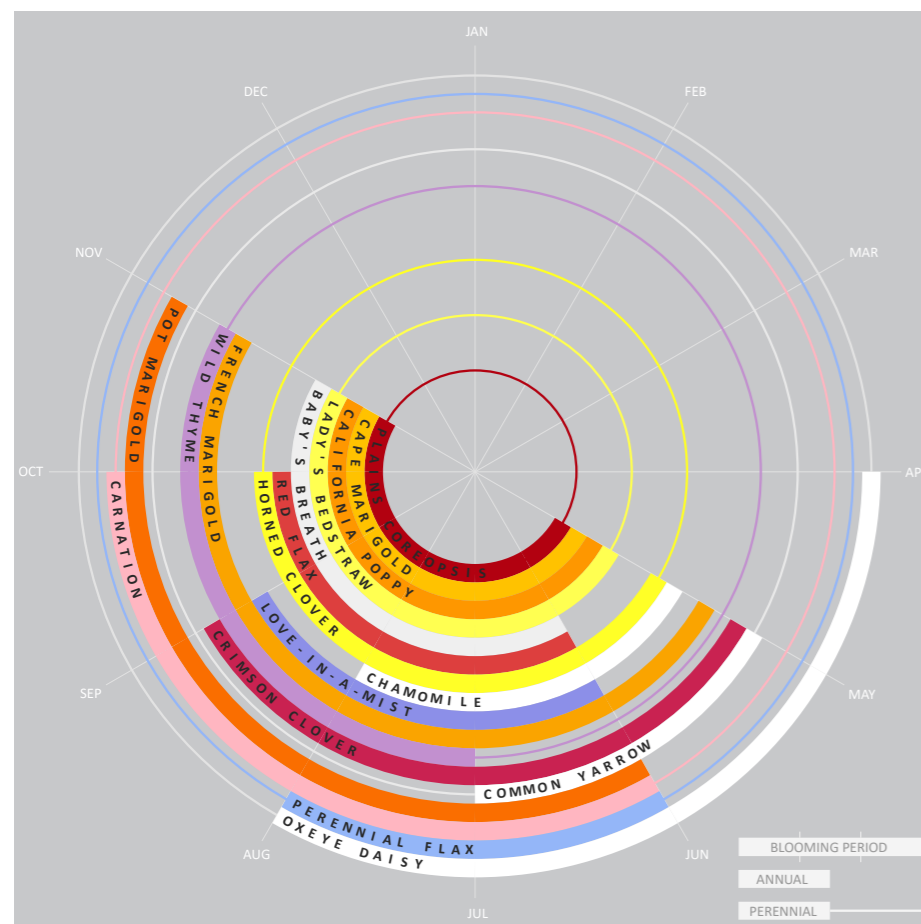
The substrate on which the plants grow also acts as a filter. It is optimized in such a way that its composition and structure ensure that the pore structure is maintained in the long term without clogging.

Climate

A key aspect is the module's optimized evaporation performance compared to conventional urban areas. The greenery acts like a natural air conditioning system with an evaporation capacity of up to 590 mm/a. The integrated water reservoirs make a significant contribution to ensuring that the evaporation performance remains above average for as long as possible. In this way, the temperature around the climate module is lowered effectively and for a long time.



Blossom sequence



Principle of operation

Plants

- Production of evaporative cooling
- Habitat for insects
- Visual enhancement of surfaces

Substrate

- Foundation for plant growth
- Water filtration

Geotextile

- Separation of water reservoir and plant substrate

Storage elements

- Storage of the water

Emergency overflow

- Drainage of excess water
- Prevention of accumulated moisture



Advantages

- Generates evaporative cooling
- Contribution to flood prevention
- Eligible for DGNB certification (bio-diversity + water cycle)
- Low maintenance
- Promotes biodiversity
- Accessible with mowing equipment

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