



Product description

ACO Climate Tunnel Entrance KP 1000-700 (11124)

Entrance unit for the ACO KT 500 Climate Tunnel

The ACO KP 1000-700 Tunnel Entrance with its Entrance Wings forms a continuous transition between the ACO LEP 100 Guide Wall and the ACO KT 500 Climate Tunnel. The use of polymer concrete allows a smooth transition between the contours of the tunnel and the guide wall. The Entrance Wings butt up against the entrance unit and Guide Walls to either side with millimetre accuracy and allow movement due to freezing and thawing to occur without displacement or cracking. In combination with the ACO LEP 100 Guide Wall system, which includes straight elements, inside and outside curves and riser/dropper units, a functional and harmonious entrance can be created. In contrast to a heavy, solid, individually fabricated concrete portal, the ACO system components can be combined to suit site conditions without the need for trimming and cutting. The KP 1000-700 Tunnel Entrance is tested and certified to Load Class C 250 BS EN 1433:2002.



Technical data

Dimensions

Installed length	= 1000mm
Installed width	= 1000mm
Installed height	= 720mm
Installed depth	= 570mm

Weights

The ACO KP 1000-700 Tunnel Entrance weighs approx. 284kg and can be transported and positioned using light construction equipment.

Material

Polymer concrete, characterised by

- high compressive strength and flexural strength
- high chemical resistance
- water penetration depth = 0 mm
- no reinforcement

Stability of shape

The elements are inherently stable in shape. Minimal thermal expansion coefficients permit precise installation without expansion joints.

The practical advantages

Drainage characteristics

Components of the ACO tunnel entrance, comprising the KP 1000-700 tunnel entrance and LEP 100 guide wall, are simply butted up against each other and geotextile applied behind the joints, resulting in excellent drainage characteristics. Ground water is intended to drain through the vertical joints, greatly enhancing the stability of embankments and verges.

Protection of amphibians

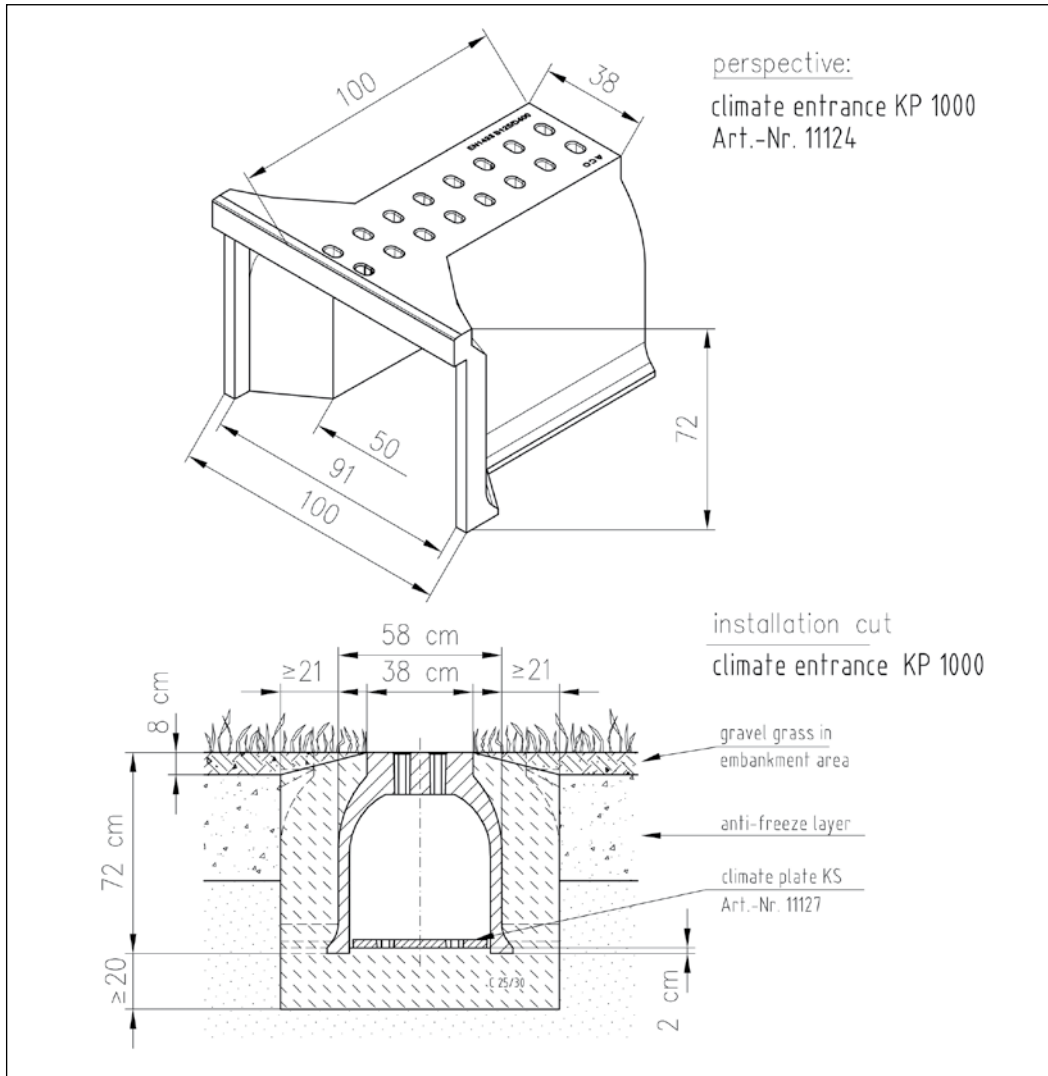
Smooth, non-absorbent surfaces with minimal thermal conductivity form an ideal contact area for amphibians. This is a definite advantage, in particular for younger amphibians which most need the resulting moist conditions. A system of several standard components allows the entrance to be optimally formed with purpose-designed guide wings. The system is optimised to suit local terrain conditions so that amphibians are guided towards the crossing.

Maintenance

The Climate Tunnel Entrance is made from polymer concrete, a homogenous material resistant to various chemicals and salts. The butt joints are tight because of their appropriately matched contours. Unsuitable materials, e.g. plain concrete, metals and silicon, are not required. The system can easily be adapted to other non-standard contours by cutting the units to suit and, where appropriate, filling with polymer concrete material. Regular checks should be made to ensure that the system continues to function efficiently. At minimum this should include a visual inspection prior to spring migration periods. A maintenance plan should be developed to keep the system free of accumulations of vegetation and leaves.

Installation

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Installation recommendation

The ACO KP 1000-700 Tunnel Entrance is bedded on a concrete footing as a continuation of the ACO Climate Tunnel.

To create the entrance ACO LEP 100 Entrance Wings are positioned on a pre-compacted gravel bed, or in critical locations on a concrete footing, with the returns fitting into the Tunnel Entrance. They are then backfilled using materials with good drainage characteristics. In critical terrain conditions the units can be given additional anchorage by using various shaped footings. Any of the 5 Guide Wall units can be used to continue the Guide Wall from the Tunnel Entrance Wing.

For detailed technical information please also refer to the installation recommendations for the ACO KT 500 Climate Tunnels, and the ACO LEP 100 Guide Wall system.

