

Technical Data Sheet

CorrAnode ICCP

Discrete anode for Impressed current cathodic protection of steel in concrete

Description

CorrAnode is a discrete ICCP anode specifically designed for giving electro-chemical protection, known as impressed current cathodic protection (ICCP), for the prevention of corrosion of the concrete steel reinforcement according to the international standard ISO/EN 12696. The current required for cathodic protection is provided by a DC power source supplied through an anode feeder cable.

Several typical examples of applications:

- Bridge deck or beam supports and columns
- Large parking garages
- Cooling towers with large surface area's
- Zones of newly casted concrete adhered onto an existing structure

The anode is manufactured as a discrete MMO-titanium anode. The heart of the anode is based on a MMO-coated titanium electrode. The anodes are specifically designed for application in pre-drilled holes which can be used in combination with our silicate based grout or just traditional mineral based grouts preferably recommended by certified CP designers or engineers.

The anodic electrochemical reactions taking place on the electrode material produce hydrogen-ions (H+) and oxygen gas (O₂). The acidification by the anode reaction will not harm the grout and the oxygen gas will be easily dissipated by the natural porosity of the silicate based grout. In case of using traditional mineral based grouts we recommend a maximum current density of 110 mA/m² anode surface area to comply with the manufacturer's recommended anode service life.



Typical Features

The certified MMO coating will guarantee an operational life of at least 50 years, depending on the specific application and environment.

In combination with our **SiliGrout** these anodes can operate at high current densities without causing any problems to the anode bed due to anodic acid production.

Due to their durability and long service life, MMO-coated titanium anodes require minimal maintenance once installed.



Technical Information

ICCP Anode	MMO - coated Ti mesh
Total expanded anode surface area	45 cm ²
Expected design life	30 years at 5 mA per 10cm anode length
Diameter	12/14mm
Length	Max length of 1000mm

Substrate

This product is applied as drilled-in anode in pre-drilled holes with a minimum diameter of 15mm.

The space between the anode and the concrete should be filled with our **SiliGrout** or mineral based grouts which are normally used for drilled-in anodes for reinforced concrete structures.

ICCP design

In line with other CP systems, a CP system based on **CorrAnode** discrete anodes should be designed by qualified and certified engineers and installed by qualified and experienced contractors. Refer to the international standard ISO12696 "Cathodic protection of steel in concrete" and EN15257.

For further recommendations refer to the General Description and Installation Guidelines.

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Revision Nr.
03

Revision date
01 Oktober 2023

Approved
R.Giorgini

All technical data stated in this Technical Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. The information, and, in particular, the recommendations relating to the application and end-use of CorrPRE's products, are given in good faith based on CorrPRE's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with CorrPRE's recommendations.