

PatchGuard™ Connect



Technical Datasheet

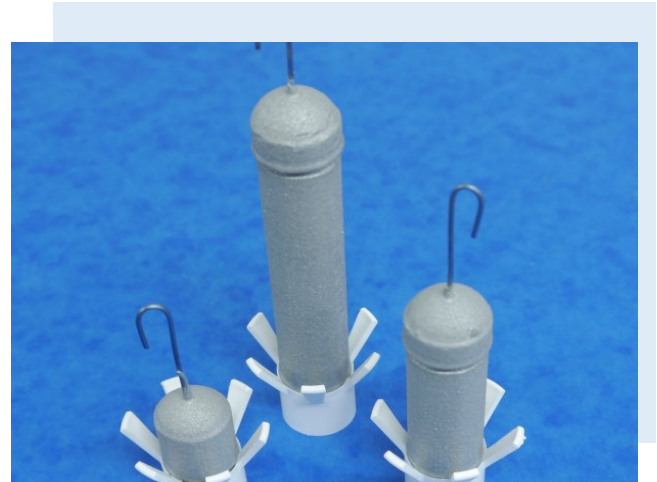
Description

PatchGuard Connect is a discrete sacrificial anode applied to reinforced concrete structures which are corroding as a result of chloride ingress or concrete carbonation.

PatchGuard Connect anodes provide a protective current to the reinforcing steel as a result of the sacrificial activity of the PatchGuard anode. Once installed, the PatchGuard Connect anode will corrode preferentially to the surrounding steel, offering protection against corrosion damage. Areas of sound concrete that are suffering from corrosion and from chloride contamination can be protected with a minimal amount of connections to the steel reinforcing—typically 2/3 per string of up to 50 anodes.

Features and Advantages

- Simple, single small volume anode unit
- Corrosion resistant connection system
- Option to deliver an electrical charge to the steel any-time during the treatment
- Conforms to the latest EN12696 (2012) standard for impressed current cathodic protection, when designed appropriately
- Large charge capacity of up to 500kc with option of sizes*
- Lifetime of up to 20 years*
- Rapid and targeted installation
- Performance can be monitored
- Pre-packaged application mortar
- No need to break-out large areas of good quality concrete



Application

Application shall be in accordance with the 'Installation Guidelines' and is summarised as follows:

PatchGuard Connect anodes are installed following guidelines in EN12696:2012 and CEN/TS 14038– 1:2004 (E). The anode units are typically applied at a density of 4-9 units/m² concrete surface, at a spacing of 350-500mm between anodes. PatchGuard Connect anodes are typically installed into pre-drilled holes of 25 mm diameter using **DuoCrete PG** embedding mortar.

The individual PatchGuard Connect units are then connected electrically to a titanium feeder wire which is connected to the steel reinforcement. This allows an option to deliver an electrical charge to the steel at any point in the future should a change in environmental conditions demand greater protection of the reinforcing. In this case our PatchGuard Connect System conforms to the latest EN12696 (2012) standard for impressed current cathodic protection.

Ancillary Material

The following ancillary materials are also available from CPT Ltd;

- PatchGuard and PatchGuard Plus
- Manganese dioxide reference electrode
- Monitoring equipment



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Product Data

PatchGuard Connect™ Dimensions:

PatchGuard Connect: (L) 42 mm x (W) 18 mm

PatchGuard Plus Connect: (L) 77 mm x (W) 18 mm

PatchGuard Ultra Connect: (L) 115 mm x (W) 18 mm

Packaging: 25 Units per box.

Storage: Store dry. Do not allow contact with Oxidizing materials

Limitations

In order that suitable current flow and lifetime can be achieved from the PatchGuard Connect anode, certain practical considerations should be taken into account.

The patch repair material cover for the PatchGuard Connect unit must be a minimum depth of 20mm. When installed in a previous patch repair, the resistivity of the repair material should be in the range of 50-200% of the parent concrete.

Any discontinuous steel should be either electrically bonded to, or electrically isolated from the system negative.

Any cracks or delaminations in the concrete which affect ionic current flow will affect performance of the PatchGuard Connect unit and should thus be pre-treated.

Specification Clause

The discrete anode shall be PatchGuard Connect, a sacrificial alloy anode with an integral titanium electrical connection which can operate in both impressed current and sacrificial anode modes. The PatchGuard Connect anode shall be embedded in DuoCrete PG mortar. The mortar shall retain its pliable properties for a minimum of 48h.

Health and Safety

Protective clothing must be worn. Wear gloves and eye protection at all times.

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