

TECHNICAL DATASHEET

ProtectorJoint© 200 G

A galvanic anode system which acts to control corrosion of reinforcing steel in concrete. Particularly suited for bridge expansion joints and bearing shelf elements



Uses

ProtectorJoint© 200 G is a remedial measure applied to reinforced concrete structures suffering from chloride-induced steel corrosion at joints between structural elements including half joints and gerber joints.

Advantages

- Targets inaccessible hidden defects
- Quick and easy to install
- Up to 20 year service life*
- Non-invasive, no breakout required
- Located within existing joints/gaps
- Measurable performance
- No permanent power supply to maintain
- Responds to local environment

* Lifetime is dependent on local conditions

Description

ProtectorJoint© 200 G is based on the use of a sacrificial metal anode located on the reinforced concrete surface in the narrow gap at a joint in a structure such as an expansion joint or bearing shelf.

The unit utilises a compressed foam which, when released, holds the anode surface firmly against the concrete surface. The anode is then connected directly to the steel using a titanium connection. The anode will immediately begin to deliver a protective current to the reinforcing steel.

Specially adapted ProtectorJoint© 200 G units contain a reference probe which allows measurement of steel potentials and corrosion rates using a corrosion management system. These parameters can be tracked over time.

The ProtectorJoint© 200 G anode system is designed to be used in galvanic mode.

Application

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

Prepare the joint to take the ProtectorJoint© 200 G by removing any material which is blocking access to the joint and loose material on the concrete surface.

Coat the ProtectorJoint© 200 G anode surface with the DuoCrete P activating adhesive, using a spatula applying at approximately 3-4mm thick.

Locate the unit within the joint at the location identified. Puncture the plastic enclosure to allow the compressed foam to expand and hold the unit in place. Ensure that the sacrificial anode surface is in contact with the concrete surface.

Install further individual ProtectorJoint© 200 G units along the joint as required. In order to connect the units in series, couple the titanium wire connection from each anode unit to a titanium feeder wire using the supplied polymeric connectors (Note: To minimise site installation time, the individual ProtectorJoint© 200 G units can be connected together as a chain prior to installation)

Expose a small section of steel reinforcement within the joint area. Connect the titanium wire from the ProtectorJoint© 200 G units to the steel rebar, then encapsulate in concrete repair mortar.

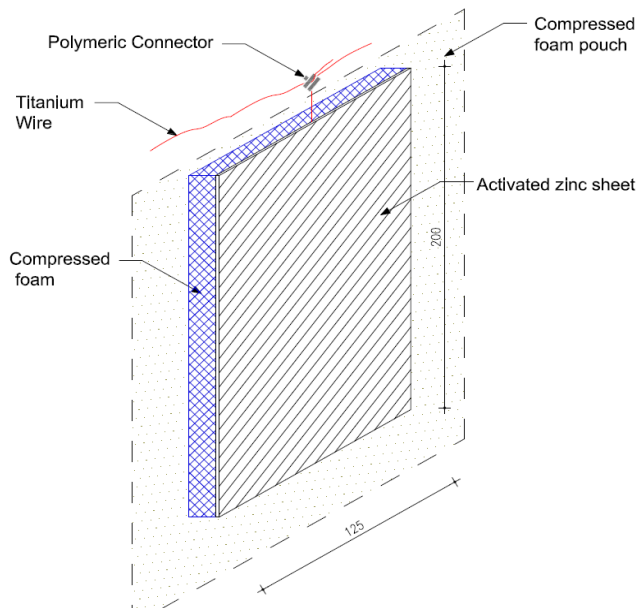
The ProtectorJoint© 200 G unit is now delivering current to the steel.

Properties

	Regular	Large
Product Dimension	125 x 200 x 8mm (5" x 8" x 5/16")	125 x 200 x 24mm (5" x 8" x 15/16")
Following Expansion	125 x 200 x 40mm (5" x 8" x 1½")	125 x 200 x 120mm (5" x 8" x 4½")
Gap Width	10 - 35mm	35 - 100mm

Other sizes can be fabricated on request

ProtectorJoint™ 200 G Detail



Compressed foam is 3x thicker on large anode variant

Other sizes can be fabricated on request

Limitations

Any discontinuous steel should be either electrically bonded to, or electrically isolated from, the system negative. Any cracks or delamination in the concrete which affect ionic current flow will affect performance of the ProtectorJoint© 200 G unit and should be pre-treated. During installation, electrical shorts between the ProtectorJoint© 200 G anode and other metal components must be avoided, if external measurements are to be taken.

It is commonly observed that depolarisation of treated steel will be slower in moist/low oxygen conditions.

Packaging

20 units per box.

Wire attached ready for installation.

Storage

Store dry.

Boxes should only be opened when the product is required.

Do not allow contact with oxidizing materials.

The lid of the box should be closed at all times when not in use. Do not remove silica gel.

CPT products have specific guidelines shown clearly on the packaging which **must** be followed to ensure a successful install.

Ancillary Materials

The following ancillary materials are also available from CPT Ltd:

- DuoCrete P activating adhesive
- MN15 Manganese dioxide reference electrodes
- Monitoring equipment

Precautions - Health and Safety

Protective clothing must be worn.

Wear gloves and eye protection at all times.

Design of the ProtectorJoint© 200 G system should be undertaken by a competent designer.

Specification Clause

The discrete anode shall be an activated zinc alloy sheet with an expandable foam backing and an integral titanium electrical connection which facilitates fixing of the unit to an insulated titanium feeder wire by use of a polymeric screw connector. The zinc sheet shall be bonded to the face of the joint, or gap, using a factory pre-mixed activating adhesive of pH<12.8 which remains pliable for a minimum of 48 hours.

Technical and Sales Support

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