

Galvashield® CC Installation Guide

GUIDANCE NOTE

The following information provides a general step by step installation guide for Galvashield® CC.

It is not possible to provide a guide for all situations. In addition, it does not set out to provide information relating to the design and positioning of the system for specific sites due to variations in conditions such as concrete environment and steel densities. For additional information on Galvashield® CC anodes, contact Vector Corrosion Technologies. The following steps should be followed during installation of the Galvashield® CC anode system:

INSTALLATION INSTRUCTIONS

The location and spacing of the Galvashield® CC units shall be as specified by the engineer. The anodes can be installed and connected to the steel individually or up to 20 anodes connected to a common header wire with two reinforcement connections. Using a rebar locator, locate all existing steel within the area designated for protection and mark areas to drill unit installation holes. When possible, units should be installed a minimum of 100 mm (4 in.) from the reinforcing grid.

Series Connection - a single circuit shall contain no more than 20 Galvashield® CC units. Reinforcing steel connections should be made using the Vector Rebar Connection and Anode Connection Kit or the Galvashield® CC Rivet Connector Pack.

When using Vector Rebar Connectors, drill a minimum of two 12 mm (½ in.) rebar connection holes per string of anodes and install as detailed above. If installing in series, connect the units using the interconnection wire and connectors supplied in the Vector Anode Connection Kit.

If using Galvashield® CC Rivet Connectors chip 50 mm (2 in.) holes to expose rebar in two locations. If using the Galvashield® CC Rivet Connector Kits, electrical connection to the steel shall be established by drilling a 5-7 mm (0.2 to 0.28 in.) deep hole into the steel using the 3.5 mm (0.14 in.) drill bit provided. 3.2 mm (¼ in.) stainless steel pop rivets are used to connect the connecting wire to the steel. The connection shall be insulated by a neutral cure sealant or epoxy.

Saw cut a single continuous groove approximately 6 mm (¼ in.) wide by 12 mm (½ in.) deep into the concrete to interconnect rebar connection holes and anode connection holes. Connect the units directly to the rebar connection wire using the supplied wire connectors. Presoak anode units and install with Galvashield® Embedding Mortar as detailed above.

Series Installation Method:



1 Locate steel and position anode



2 Drill holes for anode



3 Confirm proper depth



4 Interconnecting saw between anode holes and rebar connection location



5 Pop rivet installation to steel



6 Connect anode to header wire



7 Continuity verification



8 Install mortar and anode



9 Cover top of anode and finish



Galvashield® CC Installation Guide

Individual Connection - drill a single 12 mm (½ in.) rebar connection hole per unit location. Sawcut a groove approximately 6 mm (¼ in.) wide by 12 mm (½ in.) deep into the concrete to interconnect the rebar connection hole and anode connection hole. Reinforcing steel connections should be made using the Vector Rebar Connection Kit. Place the weighted end of the steel connector into the drilled hole until the steel coil contacts the reinforcing steel. Feed the steel connector wire through the Vector Setting Tool and set into place by striking with a hammer. Verify continuity between unit locations and rebar connections with a multimeter. A resistance of 1 ohm or less is acceptable. Drill holes as per the dimensions listed above to accommodate the anodes.

Presoak the units for a minimum of 10 to a maximum of 20 minutes in a shallow water bath. Remove the anodes from the bath and connect the steel lead wire from the anode to the tail of the Vector Rebar Connector using the supplied sealed connectors. Galvashield Embedding Mortar should be used to install the still wet units into presoaked (saturated-surface dry) holes. Mix one 20kg (44lb.) bag of Galvashield® Embedding Mortar with 3.2 to 3.7 liters (0.8 to 1.0 gallons) of potable water. Add the powder to the water and mix with a drum or paddle mixer until a smooth consistency is achieved. Mix full bags or weigh partial bags and wafer to ensure proper mix ratio is maintained.

Place the mixed embedding mortar into the bottom ⅓ of each hole and slowly press in the unit allowing the mortar to fill the annular space ensuring there are no air voids between the unit and the parent concrete. The minimum unit cover depth shall be 20 mm (¾ in.).

Place wires into grooves and top off holes and saw cuts flush to the concrete surface with embedding mortar. Embedding mortar should be wet cured or cured with a curing compound and protected from traffic for 24 hours.

DESIGN CRITERIA

Standard Units

Unit Type	Unit Size diameter x length
Galvashield® CC2	32 x 75 mm (1.3 x 3 in.)
Galvashield® CC4	36 x 100 mm (1.4 x 4 in.)
Galvashield® Custom	Custom Sizes Available

Please note:

- Minimum hole dimension is 30 mm (1 ¼ in.) deeper than the anode length and 6 mm (¼ in.) wider than the anode diameter.

STORAGE

Store in dry conditions in the original unopened packs. If product is past, “best before date” contact Vector for advice.

Individual Connection Method:

Note: Follow the first 3 steps from Series Connection Method prior to the steps below.



1 Saw cut between anode and rebar connection holes



2 Install vector rebar connectors



3 Verify rebar continuity between rebar connectors



4 Place embedding mortar into anode hole



5 Press anode into mortar



6 Connect anode and rebar connector



7 Top up mortar on anode and finish

HEALTH AND SAFETY

As with all cement-based materials, contact with moisture can release alkalis which may be harmful to exposed skin. Galvashield® CC and Galvashield® Embedding Mortar should be handled with suitable gloves and other personal protective equipment in accordance with standard procedures for handling cementitious materials. Mix left over water from the unit bath with cementitious material and dispose by normal means after hardening. Additional safety information is included in the Safety Data Sheet.

