Galvashield® CC Installation Guide

Installation Guide

The following information provides a general step by step installation guide for Galvashield CC. It is not possible to provide a guide for all circumstances due to the diversity of sites possible, and it does not set out to provide information relating to the design and positioning of CC for specific sites due to variations in conditions such as environment, concrete and steel contents.

Marking out and positioning CC units

Perform a cover meter survey so that drilling locations for Galvashield CC units can be marked out on the concrete surface. Continuity of the steel shall be checked. Any loss of continuity will require additional electrical connections or restoration of continuity by normal means.

Marked locations should be positioned within 100 mm of the reinforcement the CC unit is to protect.

Drill holes for CC units using a rotary percussion drill to the dimensions according to the Hole Size Table on Page 3 of this document. Note: It is preferential to use a percussion drill rather than a core bit so as not to cut any steel encountered. Also accurate hole depths are awkward to obtain due to problems encountered, as the cores do not always break off cleanly at the base of the hole.

Check depth of holes periodically to ensure correct depth is drilled.

Cutting wiring grooves

Cutting of grooves needs to be carried out using a diamond saw capable of producing a 6 mm groove to a depth of 12 mm. These grooves are required to allow for connecting wire to be channelled between the reinforcement connections and each of the CC units.

Making Reinforcement connections

Two additional holes of between 30-50 mm diameter should also be drilled one at each end of the proposed chain of CC units, to allow reinforcement connections to be made. These holes need to be located directly above reinforcement bars and will be of sufficient depth to make contact with the reinforcement. Check continuity of steel between reinforcement connection points using a multi-meter. (A minimum of two reinforcement connections should be used for each CC chain, maximum CC chain grouping of 10 units). To make the reinforcement connection drill into the steel to a depth of 5 to 7 mm using a 3.5 mm (9/64”) drill bit.

Bare approximately 10 mm from one end of the connection wire.

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Insert the bared wire into the drilled reinforcement hole then push one 3.2mm (1/8 inch) stainless steel rivet onto it (ensure no exposed wire is visible when the rivet has been fully inserted).

Connecting CC units

The CC units are attached to the connection wire using connectors.

To prepare the CC units for installation cut the connection wire to approximately 20mm length. Insert the cut CC wire into the terminated junction in the connector and the continuous wire into the open side. When correctly aligned along the linking wire with the drilled CC hole, crimp the button on the connector into place using a crimping tool so that the top of the green button is level with its outer casing.

Check for electrical continuity between CC units by use of a multi- meter.

Embedding CC units and wires

Soak units in water for a minimum of 10 minutes and a maximum of 20 minutes immediately prior to embedding to fully activate them before installation.

Remove waste material from the drilled holes and the grooves then saturate with water in preparation for mortar application.

Position wetted CC units next to their relevant installation holes.

To embed the CC units, Renderoc HB40 or Fosroc Construction Grout should be used (low resistivity products which aid ongoing CC performance). The bedding mortar should be mixed with clean water to a soft paste consitency. Drain off any excess water from the grooves and holes then loosely fill the first drilled hole to a depth of approximately two thirds full.

Place a connected CC unit into the filled hole then apply pressure onto the CC unit forcing the bedding mortar to ooze up around the sides of the unit. When the CC unit is below the top of the hole by approximately 30mm stop applying force. (If the units cannot be fully inserted remove from the hole, remove the bedding mortar and repeat).

Add additional bedding mortar to the top of the hole and finish off using a trowel.

Encapsulate the connecting wires with Galvashield CC Bedding Mortar by pushing the wire to the base of the grooves then placing material on top of the wire filling the groove in the process.

Leave the mortar to cure for 24 hours before disturbing. (Additional curing such as Nitobond AR should be applied when severe drying conditions exist).

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Hole size table:

Unit type	Description	Unit size diameter x length	Minimum hole size diameter x length
Galvashield CC65	Standard unit for moderate steel density	46 x 62 mm	54 x 95 mm
Galvashield CC100	Larger unit for higher steel density	46 x 100 mm	54 x 130 mm
Galvashield CC135	Slim-fit for congested reinforcement	29 x 135 mm	38 x 165 mm

Note: Hole dia size can be adjusted depending on the standard bit size available.

This document should be read and used in conjunction with the current Galvashield CC product data sheet.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Installation Guide summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this guide carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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