

Vector®

Galvanode® VP

Installation Instructions

The Galvanode VP embedded galvanic anode units are designed to mitigate corrosion of reinforcing steel in concrete. In concrete restoration, the anode units can be used in locations where an interface between the new repair mortar/concrete and the existing chloride contaminated or carbonated concrete creates a high potential for future corrosion. The anode units are tied to the existing reinforcing steel along this interface or around the perimeter of the repair area.

For maximum performance, the Galvanode VP-type anode units should be installed as close as practical to the edge of the repair area (within 6 in. or 150mm) while still providing sufficient clearance for the anode units to be completely surrounded by the repair mix. Anode unit spacing shall be as specified by the designer however anode spacing should not exceed 30 inches (750mm) on center. Structures containing heavy reinforcement or exposure to a particularly corrosive environment require reduced spacing (see data sheet for spacing guidelines). For additional information, refer to the Galvanode VP data sheet or contact Vector Corrosion Technologies.

Installation Procedure

1. As in standard patch repairs, all old/loose concrete should be removed from around and behind the steel reinforcement inside the repair area in accordance with good concrete repair practice. Provide sufficient clearance between the anode unit and the substrate concrete (minimum of ¾ in. [19 mm] or ¼ in. [6 mm] larger than the top size aggregate in the repair material, whichever is greater).

2. The exposed rebar in the repair area shall be thoroughly cleaned to bright metal to facilitate a good electrical connection where anodes units will be attached. Prior to installation, electrical continuity of the rebar within the repair area should be confirmed with the use of an appropriate meter.

Note: When checking electrical continuity, DC resistance of 1 ohm or a potential difference of 1mV or less is acceptable. Discontinuities can be corrected by wiring the “unconnected” bar to adjacent bars using standard steel tie wire.

3. Securely fasten anode unit in place with attached tie wires. The plastic spacers are to be centered on the rebar to prevent the anode from directly contacting the rebar.

4. Once installed, electrical continuity between the anode tie wires and the rebar should be confirmed using an appropriate meter. Maximum DC resistance of 1 ohm or potential difference of 1mV.

Level of Protection	Description	Galvanode® VP
Corrosion Prevention	Mitigates initiation of new corrosion activity	•
Corrosion Control	Reduces on-going corrosion activity	
Cathodic Protection	Reduce or eliminate on-going corrosion activity	

5. Repair material must have a resistivity below 15,000 ohm-cm. Products with significant polymer modification and/or silica fume content may not be suitable. Similarly, if bonding agents are used, they should have suitable conductivity. Insulating materials such as epoxy bonding agents should not be used.

Note: If rebar coatings are to be used, care should be taken to ensure the anode and tie wires do not become coated or the connection between the anode tie wires and the rebar is not lost.

6. Complete the repair following normal concrete repair procedures, taking care not to create any voids around the anode.

Health and Safety Information

As with all cement-based materials, contact with moisture can release alkalis which may be harmful to exposed skin. Galvashield anode units and Galvashield Embedding Mortar should be handled with suitable gloves and other personal protective equipment in accordance with standard procedures for handling cementitious materials. Additional safety information is included in the Material Safety Data Sheet.

Storage Instructions

Avoid extremes of temperature and humidity. Anode units are not particularly vulnerable to storage conditions but should be installed within 2 years.

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