corrPRE
Special Anodes Manufacturing

Info@corrpre.com | +31.(0)182 620 470 | Zuidbaan 509
2841MD Moordrecht, Netherlands | www.corrpre.com

INSTALLATION GUIDELINES

RollAnode

Zinc sacrificial anodes for corrosion control of steel in concrete



Installation procedures

The RollAnode is a discrete zinc anode that is embedded in an ionically conductive paste during installation.

System monitoring can be performed in accordance with international standard EN ISO 12696. Monitoring equipment can be supplied by your distributor together with the anodes upon request.

Be aware that monitoring equipment designed for an impressed current CP system is not always compatible with a CP system based on galvanic anodes, particularly when current densities are monitored.

This anode can be supplied in any required length and diameter to match the designed zinc weight for the project.

Procedure

1. Check access to the structure and take the necessary precautions
2. Repair the spalled and cracked concrete if necessary
3. Localise the reinforcement
4. Check the electrical continuity of the reinforcement
5. If required, perform additional potential mapping of the reinforcement to indicate the degree and extent of expected corrosion
6. Install the RollAnode
7. Make electrical connections between the reinforcement and the anode
8. Check the electrical connections using a resistance meter
9. Patch and finish the concrete

It is recommended to keep a logbook in which all steps are recorded and checked. Any deviations from the installation procedures must be accurately recorded in the logbook and checked and signed by the supervisor before proceeding.

If certain situations are unclear regarding the proper handling of the anodes, we recommend contacting your distributor before proceeding with the installation. Each step of the installation procedure is described in detail below.

Repare the spalled and cracked concrete (if necessary)

Prior to installing the anodes, the concrete should be prepared as follows (*please check manufacturer's spec of the repair mortar*):

1. Remove all deteriorated concrete, dirt, oil, grease and other bond-inhibiting materials.

2. Preparation should be carried out using high-pressure water blasting, a scabbler or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of 2 mm for proper mortar adhesion.

Info@corrpre.com | +31.(0)182 620 470 | Zuidbaan 509
2841MD Moordrecht, Netherlands | www.corrpre.com

INSTALLATION GUIDELINES

3. Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust, at least in the areas where the anodes are to be installed. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning.

Borehole diameter

We recommend a borehole diameter of at least 4 mm larger than the RollAnode diameter. However, a diameter 5–8 mm wider can make installation easier. The contractor should verify the optimal borehole size through testing prior to application.

After drilling, clean the holes thoroughly using compressed air or water to remove all dust and debris. Ensure the holes are completely clean before applying the paste and installing the anode.



Check electrical continuity of the reinforcement

After making the correct connection, check the electrical resistance of the connection using a digital multimeter. Set the multimeter to the resistance setting (Ω) and measure the resistance. The criterion is a resistance of less than 1 Ω (DC).

Instead of making the contact directly on the connection strip, it could be checked by making contact with the current distributor bar of the anode and the reinforcement.

Additional potential mapping (if required)

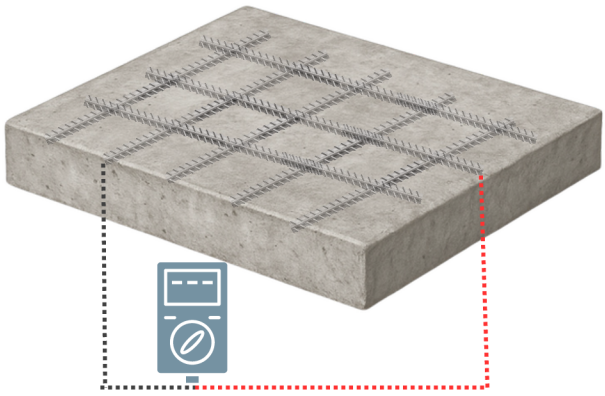
If a selective approach is desired for economic reasons, potential mapping of all concrete elements involved should be considered.

During mapping the values are logged in computertables and later on, with special software, processed as corrosion graphics. This type of software analyses potential-values and gradients and calculates for each measuring location the likelihood of active corrosion. After the interpretation the results are presented as colour maps. By using this measuring method hundreds of square metres of concrete surface per hour can be mapped and processed.

For further information about this technique and making the right interpretations, please contact us or your local distributor.

Localise the reinforcement (if necessary)

The best and easiest way to localise the reinforcement is by using a rebar locator, which accurately locates reinforcing bars and welded wire meshes. Some rebar locators also measure the concrete cover and determines the diameter of the bars. A list of suppliers can be forwarded by your distributor upon request.



Check electric continuity of the reinforcement

Info@corrpre.com | +31.(0)182 620 470 | Zuidbaan 509
2841MD Moordrecht, Netherlands | www.corrpre.com

INSTALLATION GUIDELINES

Install the RollAnode

Once the area has been repaired and cleaned, identify appropriate locations between the bars for drilling the holes at the spacing specified in the design and specification.

Drill holes in the concrete to the recommended diameter and to a depth equal to the anode length plus 15–40 mm. Before inserting the anode, fill approximately two-thirds of the hole with the supplied ZAP paste. Insert the anode and press it firmly until the paste fully surrounds it. Do not fill the remaining space with paste; leave sufficient room to cover the hole with mortar.

Connect the anode to the reinforcement

Durable connections to the reinforcement can be made in different ways:

1. By using powder-actuated or gas-driven fastening tools. Pre-drilling holes in the concrete cover will make the handling of these types of tools more accurate.

2. We can supply weldable connection plates fitted with M6 studs, which can be welded directly onto the reinforcement using welding equipment.



Interconnect all the anodes

Connect all anodes using suitable wire clamps or other durable connection methods. Apply heat-shrink tubing to protect the connections and ensure long-term durability. For more details, refer to our Guidelines for Cables in CP Systems.



Check electrical connections with a resistance meter

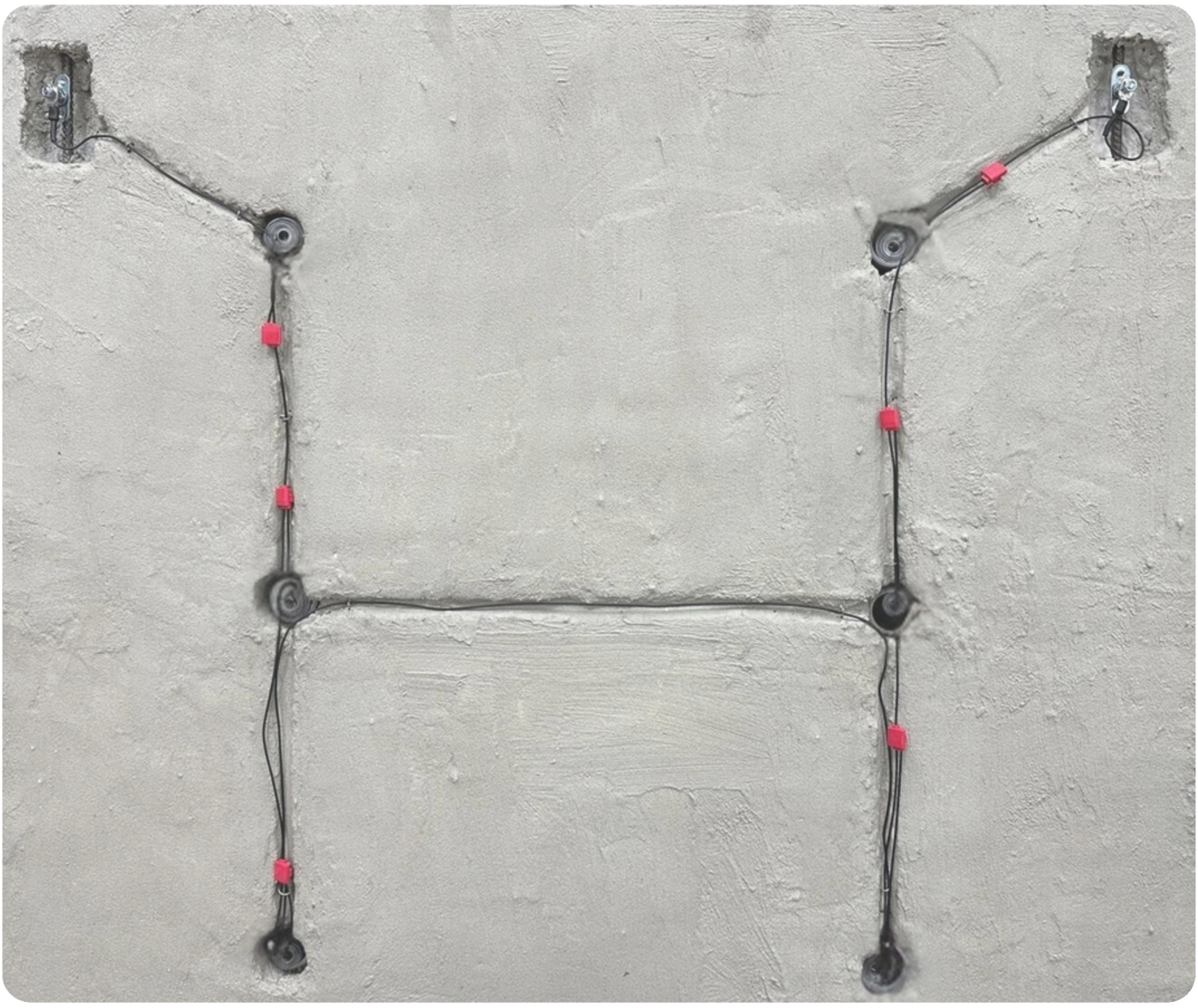
Each electrical connection between the anode and the rebar is checked in a similar way as described above.

Instead of making the contact with alligator clips directly on the connections, it could be checked by making contact directly with the current distributor bar of the anode and the reinforcement.



Info@corrpre.com | +31.(0)182 620 470 | Zuidbaan 509
2841MD Moordrecht, Netherlands | www.corrpre.com

INSTALLATION GUIDELINES



As shown above, a complete zone installation consists of 6 RollAnodes and 2 negative (rebar) connections. We always recommend using at least two rebar connections per zone. The configuration depends on whether a main stringer cable is used or if each RollAnode is connected in series. Be aware that series connections are more susceptible to failure over time, as a single faulty link can interrupt the entire circuit.

Patch the concrete

In most cases, the anode holes are finished with mortar to keep everything covered and sealed, preventing any moisture ingress. If necessary, caps can be installed on the holes to allow for future removal or replacement of the anodes. There are no specific requirements for how or with what type of mortar the RollAnodes should be covered; this applies only to the cover itself.

Info@corrpre.com | +31.(0)182 620 470 | Zuidbaan 509
2841MD Moordrecht, Netherlands | www.corrpre.com

INSTALLATION GUIDELINES

Recommendations

We always recommend performing an installation test zone with the anodes before application if this is the contractor's first installation. There are many different application methods, and each contractor may have their own approach. For applying the mortar and paste into the boreholes, a variety of machines or specialised caulking guns for these applications are available, which can be very useful.

Monitoring

If required, reference electrodes (REs) suitable for use in concrete can be installed for monitoring purposes. Reference electrodes can be supplied together with the anodes upon request. For proper data storage and interpretation, contact your supplier or refer to international standard EN ISO 12696.





Pitfalls

Failure to clean the boreholes, or insufficient cleaning, may cause poor adhesion of the mortar (electrolyte) in the boreholes. As a result, the system may work less effectively due to higher electrolytic resistance.

The same issue can occur with insufficient filling of the boreholes with mortar. In some cases, parts of the RollAnode may have no contact with the electrolyte. Ensure that the entire surface of the RollAnode comes into contact with the mortar to provide good electrolytic contact with the concrete.

All technical data stated in these Installation Guidelines are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. The information and, in particular, the recommendations relating to the application and end-use of CorrPRE's products, are given in good faith based on CorrPRE's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with CorrPRE's recommendations.

CorrPRE - **Special Anodes Manufacturing**, Zuidbaan 509, 2841MD, Moordrecht, Netherlands
Revision No.: 05
Revision date: 16-11-2026
Approved by: R. Giorgini