

Handling and maintenance instructions for BIRCO galvanized steel products and stainless steel products

1. Preliminary remarks

In order to ensure the long-term functionality and durability of high-quality steel elements, certain points must be taken into account by the customer. Specific local conditions must also be considered.

In principle, a combination of galvanized steel and stainless steel should be avoided. Otherwise, certain chemical reactions can cause corrosion.

Please observe our installation instructions in this respect.

2. Handling

When installing the up to 3-meter long components, care must be taken to ensure that they do not become damaged by distortion during transport or incorrect carrying techniques. During installation, the channels should be braced with a cover before walking on them. Take appropriate measures to protect galvanized steel and stainless steel products from being stained (jointing material/concrete, etc.) and damage (aggressive media).

Visible surfaces should not be allowed to come into contact with alkaline materials, such as plaster or cement screed, or these alkaline materials must be removed directly by thorough cleaning, since damage from corrosion of galvanized materials may occur here and visible defects may occur on stainless steel products.

When installing steel elements in screed or concrete/single-grain concrete, we recommend using stainless steel alloys due to the alkaline environment. Stainless steel must also be cleaned to remove visible defects.

Mechanical damage must be avoided in order to ensure lasting corrosion protection of the materials.

During installation, the products can always be positioned vertically by lining with filling material or by mounting and adjusting the setting feet (BIRCOtopline®).

Before handling stainless steel products, remove any foreign metal from the tools and do not use steel tools.

3. Surface changes on galvanized products

Galvanized steel products can visibly change over time. However, this does not affect the functionality of the components. The following changes can occur:

3.1 Surface loses its shine (matt surface)

This is a natural and necessary phenomenon, induced by the climate. The change to the surface results from the formation of a passivation layer (protective layer) which considerably decelerates or prevents corrosion.

3.2 Spotting (white rust)

White rust can form under certain local conditions such as restricted access of CO₂, or under conditions containing chloride or sulfate. White rust must be removed. Regular drying of the galvanized steel products enables the protective layer to form or regenerate.

4. Maintenance instructions

4.1 Maintenance instructions for galvanized steel products

In principle, galvanization prevents corrosion from forming. To maintain corrosion protection in the long term, a few points must be observed:

4.1.1. After cleaning the façade elements (such as glass fronts), the channel must be flushed with clean water so that the cleaning agents do not remain in the channel and possibly corrode it. Do not use aggressive cleaning agents. Cleaning agents should first be checked for zinc tolerance.

4.1.2. If channel elements made from galvanized steel are exposed to aggressive media (e.g. de-icing salt, alkaline or acidic liquids), industrial salt or cooking salt, this must be immediately and thoroughly rinsed afterwards in order to prevent corrosion.

4.1.3. Galvanized steel products should not be exposed to long-lasting moisture.

4.1.4. Do not use fine-grained/grainy cleaning agents.

4.1.5. Avoid heat exposure through flying sparks, welding, fire, etc. as this will destroy the protective layer.

4.1.6. Any damaged zinc layers must be post-treated by applying, for example, a zinc dust coating with a brush.

4.1.7. Joints with cementitious materials are to be avoided, as these can cause damage from corrosion on galvanized steel products, and visual defects on stainless steel products.

4.2 Maintenance instructions for stainless steel products

To maintain corrosion protection in the long term, a few points must be observed:

- 4.2.1. Cleaning: We recommend cleaning at least every six months. While doing so, also check the products for any changes.

In the event of contact with foreign metals, e.g. metal filings or surface rust, and aggressive media such as cleaning agents or de-icing salt, thoroughly clean the stainless steel elements immediately.

Use a non-ferrous cleaning agent and a sponge. Do not use a chlorinated cleaning agent, hydrochloric acid (even if diluted) or cement residue remover under any circumstances.

Immediately remove any iron particles and surface rust from stainless steel products to keep the protective layer intact and avoid contact corrosion. Any foreign metal particles such as paint and plaster splashes can be removed with a cleaning agent containing phosphoric acid or with phosphoric acid itself. Oil and grease can be removed using organic agents and paint residues with alkaline agents.

After cleaning, the channel must be flushed with clean water so that the cleaning agents do not remain in the channel and possibly corrode it.

- 4.2.2. Avoid the use of non-stainless steel materials and tools (such as spatulas, files, steel wool and granular detergents, etc.) which can corrode the surface.
- 4.2.3. Avoid heat exposure through flying sparks, fire, drilling, etc. as this will destroy the top layer. Post-process any fresh welding areas.
- 4.2.4. If using salt (e.g. de-icing salt, cooking salt), this should first be checked for stainless steel compatibility. We strongly recommend flushing the channel regularly with clean water after using de-icing salt.
- 4.2.5. Joints with cementitious materials are to be avoided, as these can cause damage from corrosion on galvanised steel products, and visual defects on stainless steel products.

5. Spare parts and technical support are available from the following address

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