



## GUTTER SYSTEMS

Gutter Installation Instructions

Using Bonding Technique

This brochure contains illustrated step by step instructions for the installation and bonding of RHEINZINK Gutter Systems utilizing the Snap-Lock Bracket System.

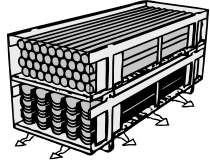
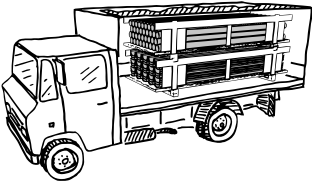
### **Instructions on the Bonding Techniques**

When using the RHEINZINK-Gutter Adhesive please comply with the following additional instructions:

- Follow the instructions for using the RHEINZINK-Gutter Adhesive
- The parts to be bonded must be free from dust and grease (cleaning with isopropyl alcohol or acetone is recommended)
- The gap to be bonded may not be more than 2 mm wide
- The gap to be bonded must be fully sealed

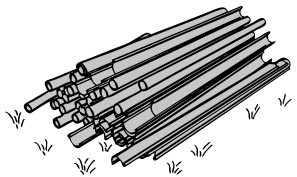
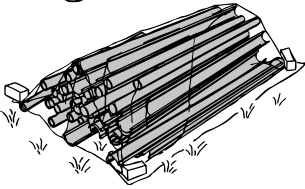
## Transportation and Storage Notes

### Correct Transportation and Storage:



- RHEINZINK products are to be transported and stored under dry and ventilated conditions at all times!
- Transport on dry pallets
- Store on dry floors on dry pallets
- Avoid changes in the dew points
- Avoid tight stacking and do not step on the products to retain the fitting accuracy
- request a dry and ventilated place for on-site storage

### Wrong Transportation and Storage:



- If zinc gets wet during transport or storage, the material oxidizes on the surface where materials are in direct contact of each other or if the material cannot dry afterwards. White zinc hydroxide occurs and cannot be entirely removed in most cases. This does not affect the durability of the product but is an optical defect.
- Tight stacking and stepping on the products can lead to deformation which will affect fitting accuracy.

## Step by Step Installation Instructions

### 1. Mounting the Gutter Brackets

With the innovative RHEINZINK Snap-Lock Bracket System, RHEINZINK now offers the right solution for most eave applications. The Snap-Lock Bracket System can be used for eaves with vertical fascia boards, with

alignment tolerances of up to 2 cm.

Installation is quick and easy! Furthermore, there are many advantages when it comes to remodeling or renovating, as the roof does not have to be altered in order to accommodate installation of the Snap-Lock Bracket System.

#### 1.1 Mounting the RHEINZINK Snap-Lock Bracket System

The installation height of the gutter should be such that the projected extension of the roof surface runs into the gutter. In heavy snowfall areas, it should be installed somewhat lower, so that the snow can slide over the gutter.



Start the installation by locating the highest point of the gutter. The extension of the roof surface (see pencil in illustration) should extend into the gutter.



Fasten the snap-lock fixing rail with a slope of 1-3 mm/m. Mount the rail with the longer leg at the bottom.



Mount adjacent rails with a gap of 3-5 mm to accommodate linear thermal expansion.



Locate the gutter brackets at a maximum spacing of 90 cm.



Lock each bracket into place by twisting it 90 degrees clockwise.

## 2. Mounting the Halfround Gutter

The upper gutter section should lap on top of the lower gutter section.

For this reason, gutter installation should always begin at the gutter outlet (the lowest point of the gutter) and continue upstream from there!

### 2.1 Preparing the Cut Out for the Gutter Plug-In Outlet



Mark the exact location of the cut out using the RHEINZINK Gutter Outlet Template. Align the centerline of the template at the lowest point of the gutter.



Cut out the opening for the gutter outlet.



Create a drip edge by bending a 5 mm edge toward the outside of the gutter.



Insert the gutter into the snap-lock brackets.



Snap the gutter bead onto the nose of the snap-lock bracket at the front.



In the photo above, the gutter has been properly snapped into place.

## 2.2 Inserting the Plug-In Outlet



Hook the plug-in outlet into the gutter bead.



Bend the rear tabs ...



... around the water check at the back of the gutter.

## 2.3 Glueing Stopends



Push stopend in position ...



... bond with gutter adhesive from the inside ...



... along the whole joint length.

## 2.4 Attaching the Gutters by Glueing



Remove dust and grease from gutter parts to be attached. Apply bead of adhesive – min. diam. 8 mm – approx. 25 mm from the end of the gutter.



Twist gutters inside each other. Ensure a gutter overlap of 50 mm.



Wipe off any adhesive emerging with a cloth. Gutter corners are bonded in the same way.



Fasten the gutter by snapping the gutter bead onto the snap-lock bracket.



## 2.5 Expansion Joints

Expansion elements must be installed at a minimum interval of 15 m along the entire length of the gutter, in order to accommodate thermal expansion. Measuring from gutter corners and downpipes, an expansion element must be installed at the half-way point 7.50 m!

The following chapters are showing two options to ensure thermal movement of the gutters.

One is to install expansion elements (see 2.5.1) and a second option is to make expansion joints at the gutter outlets (see 2.5.2)

### 2.5.1 Installing Expansion Elements



Slide on...



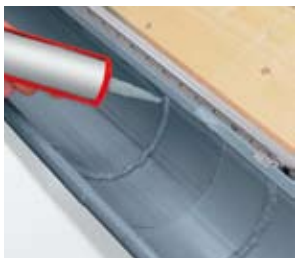
...the loose gutter bead cap.



Join the gutter pieces with an overlap of 50mm, without using adhesive! twist in the gutter bead...



...and overlap the water check.



Apply 2 beads of adhesive – min. diameter 8 mm – each approx. 25 mm away from the edge of the expansion element on the inside.



Stick 2 strips of adhesive tape approx. 20 mm long (e.g. 3M® type 4950F) on the outside corners of the expansion element, remove backing film.



Stick in expansion element so that it is rigid, press corners firmly to the adhesive tape.



Apply adhesive onto the gutter bead, on one gutter section only!



Roll the gutter bead cap over the edge of the expansion element. The cap prevents rainwater from getting in between the expansion element and the gutter.

## 2.5.2 Expansion Joints at Gutter Outlets



Mark the first half of the opening for the gutter outlet in accordance to the gutter size.



Cut out the opening.



Mark the second half of the opening for the gutter outlet, offset 50mm to the inside.



Cut out the second half including 2 strips at the side each approx. 50 x 20 mm



Connect gutter sections with 50 mm overlap.



Bend strips downwards and create a 10 mm water check along the opening.

## 2.6 Installing the Eaves Profiles

Fasten the eaves profiles with roofing nails as illustrated. Eave flashing pieces should overlap each other by a minimum of 50 mm.



Drive-in the roofing nails at staggered locations at horizontal intervals of 100 mm.

## 3. Installation of Downpipes

### 3.1 Pipe Bends



Slide the pipe bend onto the plug-in outlet. The steel tabs prevent the bend from slipping.



Determine the length of the piece of straight pipe so that the vertical section of downpipe is a minimum of 20 mm from the wall.



Insert expanded end of the downpipe over the pipe bend...



...add the second bend.

### 3.2 Installation of the Universal Downpipe Bracket

Once the Universal Downpipe Bracket has been mounted, it is hardly visible. The result is a series of downpipes with a clean and elegant appearance.

Note: The Universal Downpipe Bracket comes with a lightning conductor clip. However, use of the lightning conductor clip may not be necessary in all applications.



Hook in the Universal Downpipe Bracket.



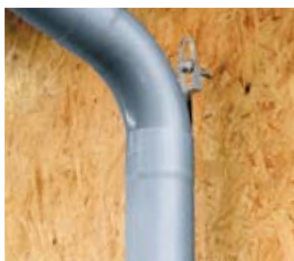
Mark the position of the screw.



Fasten the screw.



Fasten the Universal Downpipe Bracket onto the screw.



Connect the next downpipe component by sliding on the expanded pipe end.

### 3.3 Using RHEINZINK Adaptors

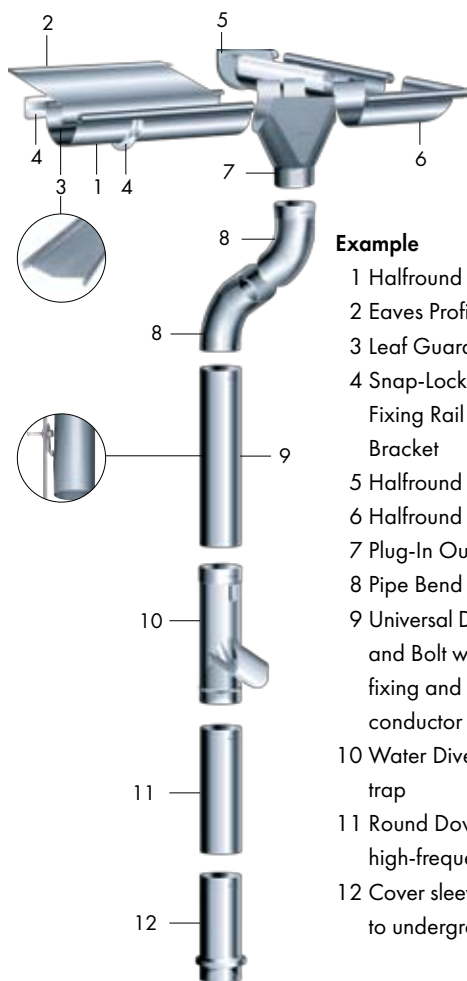
If downpipes without factory expanded ends are used, RHEINZINK Adaptors can be used to provide the connections. Alternatively, pipe ends can also be expanded by using a pipe expander fitted to an electric drill.



Insert the downpipe adaptor with the expanded end toward the top.



Insert downpipes together as per usual.



### Example

- 1 Halfround Gutter
- 2 Eaves Profile
- 3 Leaf Guard
- 4 Snap-Lock Bracket System  
Fixing Rail and Snap-Lock  
Bracket
- 5 Halfround Stopend
- 6 Halfround Corner
- 7 Plug-In Outlet
- 8 Pipe Bend
- 9 Universal Downpipe Bracket  
and Bolt with concealed  
fixing and lightning  
conductor clip
- 10 Water Diverter with leaf  
trap
- 11 Round Downpipe  
high-frequency welded
- 12 Cover sleeve for connection  
to underground drainage\*

\* Alternatively a Pipe Bend  
(Shoe) for ground level  
drainage

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