

RAINWATER SYSTEMS

Installation instructions

Designed to make your life easier.

Congratulations, you have just purchased a Ruukki rainwater system, the best choice for the worry-free builder. Our rainwater systems are as easy to install and carefree to maintain as they are aesthetically pleasing. They perfectly compliment the roof.

Ruukki's high quality roof rainwater systems are based on the latest know-how in materials and processing technologies. This combined with elegant form and functionality makes it a top-of-the-class choice for roof renovation.

Designed for demanding climates.

Our products are designed for demanding climates and withstand years of fluctuating conditions, from summer heat and autumn rains to ice-cold winter. A key advantage is our unique surface treatment, i.e. the color coating.

The coating gives the surface unparalleled durability, effectively protecting it from corrosion due to humidity, and also ensures that the color will not fade due to the sun's UV radiation.

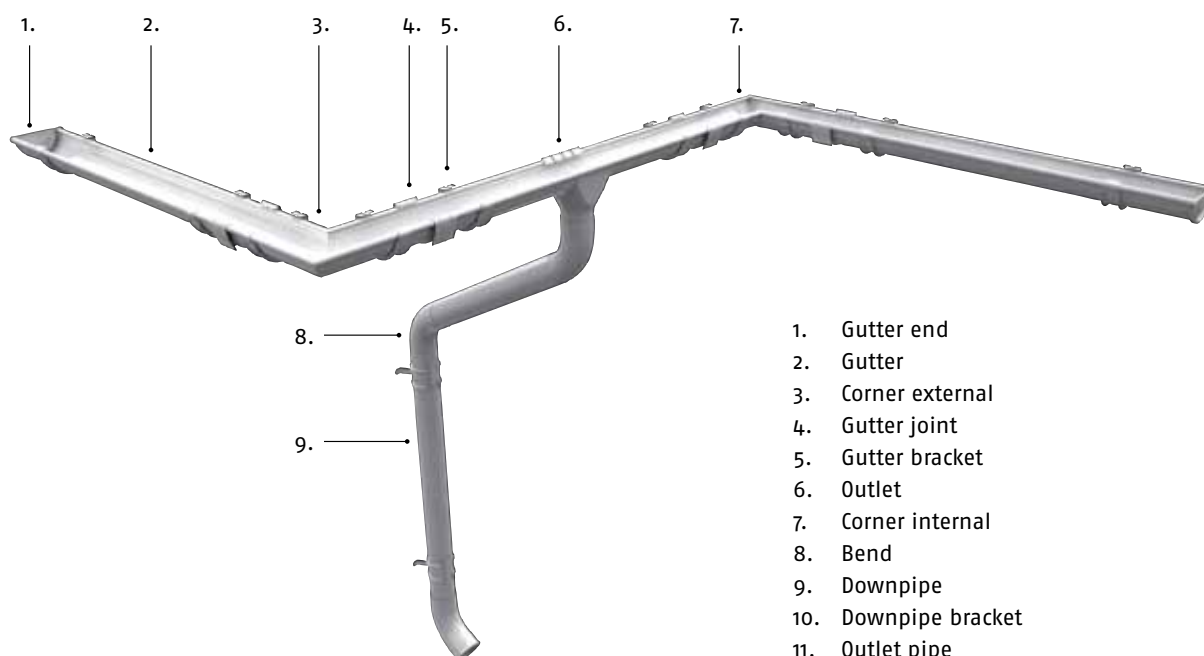
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The installation methods presented in the installation instructions are for guideline purposes. The required method of installation may vary slightly depending on the roof type or country of installation. For special instructions, updates and more installation tips visit our web site at www.ruukkihome.com

For general installation instructions and guidance, follow the structural designer's instructions or contact our technical support department.

Rainwater system and components 125 / 87 mm



1. Gutter end
2. Gutter
3. Corner external
4. Gutter joint
5. Gutter bracket
6. Outlet
7. Corner internal
8. Bend
9. Downpipe
10. Downpipe bracket
11. Outlet pipe



- | | |
|------------------------------|----------------|
| 1. Gutter end universal | R50G125EU |
| 2. Gutter 2m | R50G1252000 |
| Gutter 4m | R50G1254000 |
| Gutter 6m | R50G1256000 |
| 3. Bracket adjustable | R20G125BA |
| 4. Bracket long | R20G125BL |
| 5. Bracket short | R20G125BS |
| 6. Gutter joint | R50G125J |
| 7. Corner external 90° | R10G125CE90 |
| Corner external 1:1,5 45° | R10G125CE11545 |
| Corner external 1:2 45° | R10G125CE1245 |
| Corner external 1:3 45° | R10G125CE1345 |
| Corner internal 90° | R10G125CI90 |
| Corner internal 1:1,5 45° | R10G125CI11545 |
| Corner internal 1:2 45° | R10G125CI1245 |
| Corner internal 1:3 45° | R10G125CI1345 |
| 8. Gutter outlet | R40G125870 |
| 9. Downpipe 1m | R40D871000 |
| Downpipe 2.5m | R40D872500 |
| Downpipe 4m | R40D874000 |
| 10. Bend 60° | R10D87N |
| 11. Outlet pipe | R40D870 |
| 12. Downpipe bracket (wood) | R20D87BW |
| 13. Downpipe bracket (brick) | R20D87BR |
| 14. Y-joint | R40D87Y |
| 15. Well joint part | R40D87J |

Ordering rainwater system

When you order a rainwater system, please have the following details to hand:

- dimensions and shape of roof (approved construction drawings are not needed, you can simply make a sketch yourself)
- wall height (from the ground to the bottom of the cornice)

Delivery reception

Accepting a system

Make sure that the delivery meets your order and that all items listed in the dispatch are included. Mistakes or errors in delivery and any damage caused during transportation must be noted in the bill of lading and Ruukki or the dealer must be notified immediately. Complaints must be made within eight days of delivery. The company is not liable for costs arising from the replacement of incorrectly installed products.

Unloading and handling the delivery

To avoid scratching the painted surface of the products, do not pull the gutters out of their packaging. Instead, lift them out one at a time. Take care when handling parts of the rainwater system to avoid dents and other damage during installation. When storing parts of the rainwater system do not place anything on top of the gutters or downpipes.

Dimensioning

You will need a hacksaw or plate shears and an electric screwdriver with a correct-size chuck or a battery-driven drill, measure and hammer.

Do not use an angle grinder with a cut-off disc!

Any scratches in the coating should be painted with suitable touch-up paint.

Maintenance

Annual service

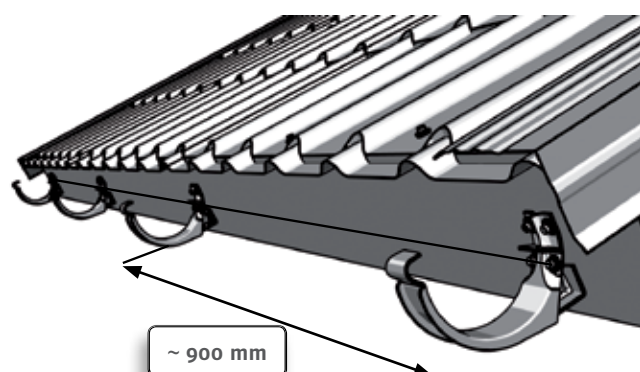
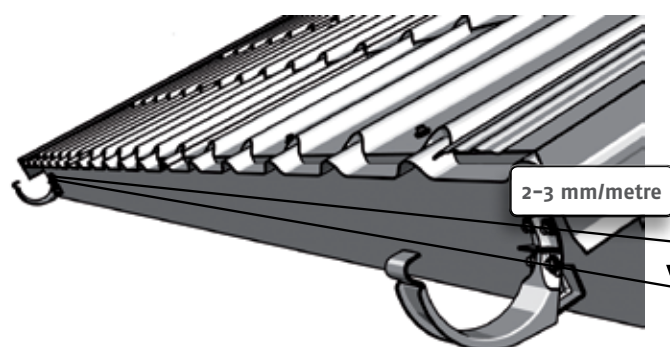
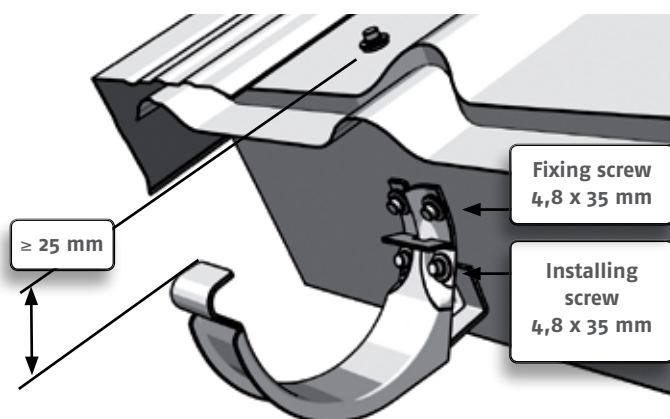
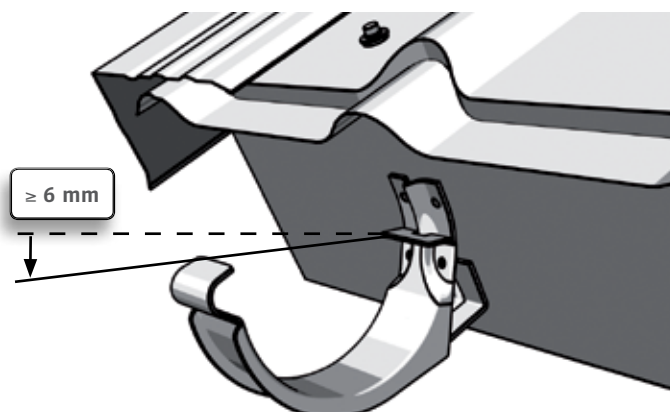
To ensure that the rainwater system will function properly and have a long useful life, the system must be inspected regularly.

Removal of leaves, needles, etc.

Because rainwater does not flush all leaves, needles and other debris from the gutters and downpipes, they must be inspected every year. Take care not to damage the coating of the gutters when cleaning them.

Washing

Dirty or stained parts can be washed with a soft brush and water. Pressure washers (up to 50 bar) may also be used. If needed, a commercial detergent intended for paint coatings may be used. Apply the detergent and rinse off after a few minutes with plenty of water.



Installing brackets

Adjusting the angle of brackets

Place the adjustable bracket against the fascia. Adjust the angle of the bracket so that it is roughly level, with the front of the bracket slightly lower than the back.

Fix the bracket to its fastening piece with short installation screws (2 screws/bracket). If there are no fastening holes matching the required angle, use the nearest pair of holes available.

Fix each bracket to its fastening piece at the pair of holes defined above (2 screws/bracket).

Installing brackets

Start the installation of brackets at the end of the eaves from which you want the slope toward the downpipe to start.

The first and the last bracket must be installed at about 150 mm from the eaves' ends.

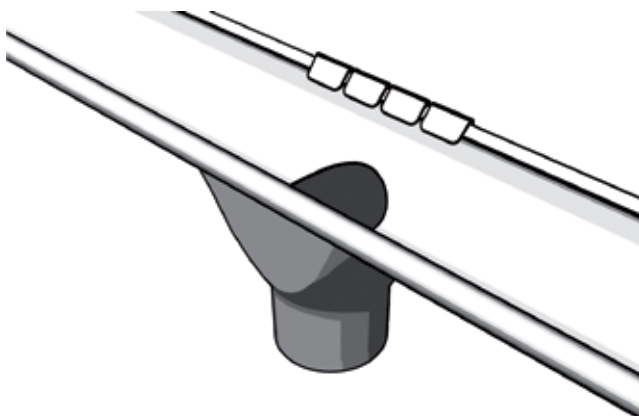
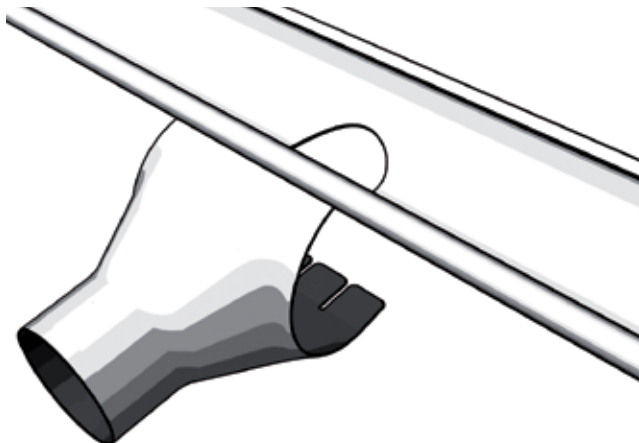
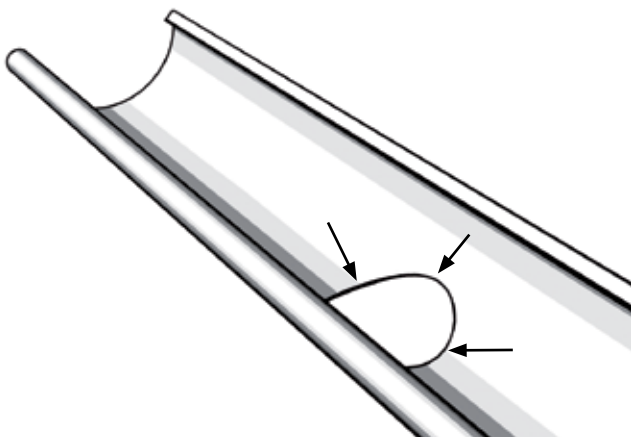
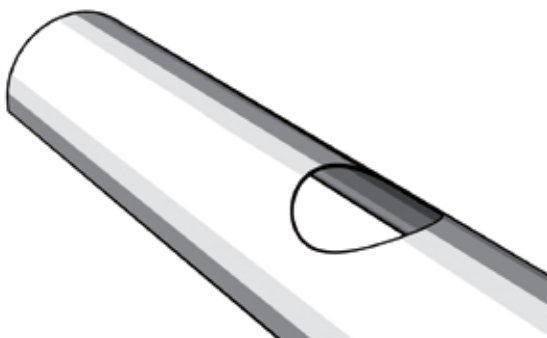
Fasten the first adjustable bracket to the fascia board so that the height difference between the assumed level of the roof and the gutter's outer edge is ≥ 25 mm. The brackets must be fixed to their fastening piece's topmost pair of holes with long installation screws (2 screws/bracket).

Slope

Calculate the slope required for the eaves and install another bracket at the other end of the fascia board. The recommended slope towards the downpipe is about 2-3 mm/metre.

Bracket spacing

Use an alignment wire to install the brackets at right level and at 900 mm intervals with long installation screws (2 screws/bracket).



Installing gutter outlets

Making a hole for the gutter outlet

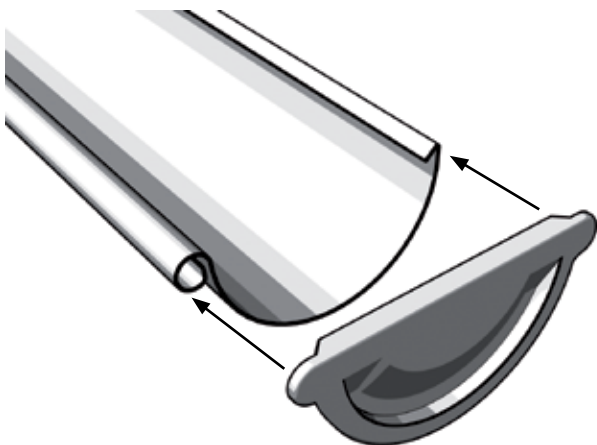
Mark the location of the downpipe on the gutter and cut an opening for the outlet. Using a hacksaw, cut an opening in the bottom of the gutter at an incline from both directions of the gutter.

Use a hammer to shape the hole if needed. Remove any burr.

Attaching the gutter outlet

Place the gutter outlet at the hole in the gutter. Place the front of the outlet inside the front of the gutter. Turn the outlet into place against the bottom of the gutter.

Bend the rear flanges of the outlet around the back of the gutter.



Installing gutter ends

Place the gutter end against the end of the gutter and press it in place.



Check that the gutter end is locked to the step in the gutter by tapping it with a rubber mallet or similar tool at both edges and the middle.

The flange on the side of the gutter facing the wall can be bent by hand to align with the gutter.

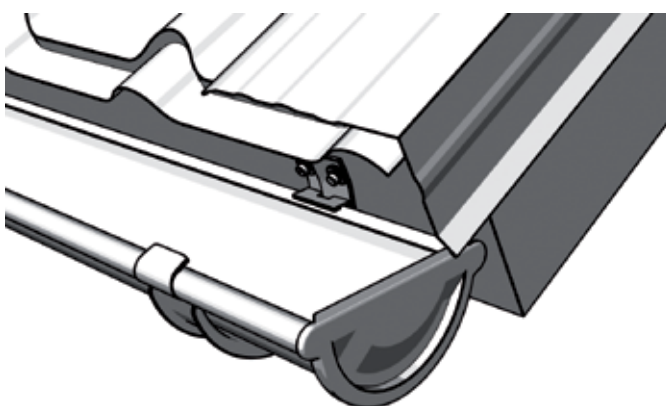


Installing the gutter

NB! It is recommended that all parts of the gutter are assembled before the gutter is put in place, if possible (including gutter end, gutter outlet and corners).

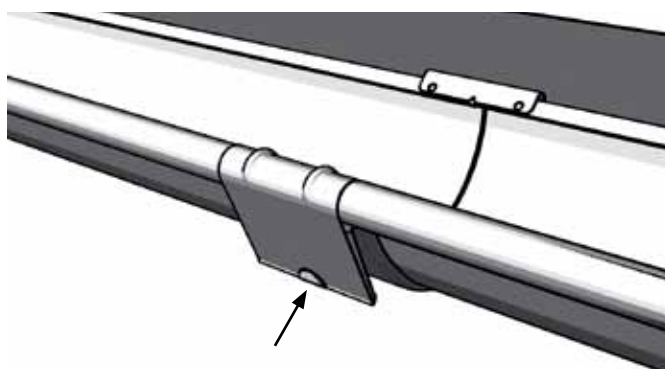
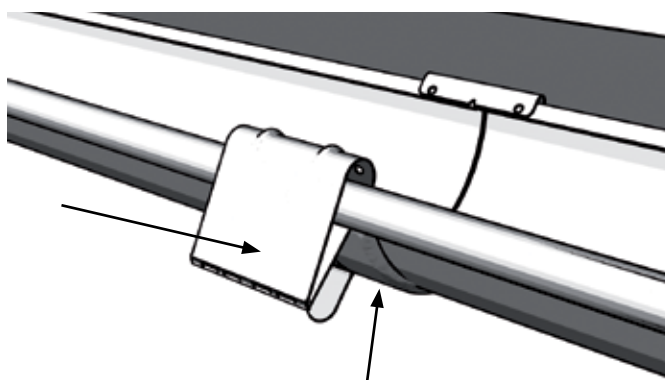
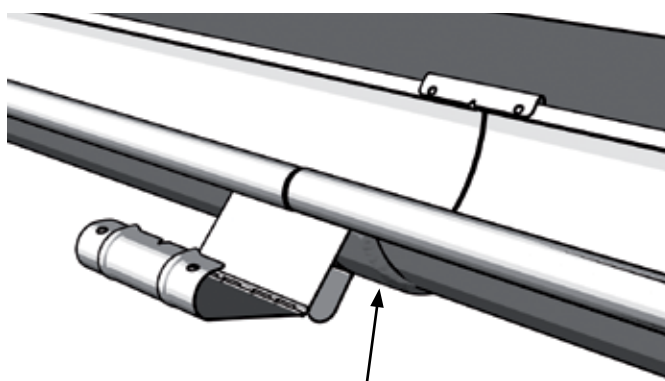
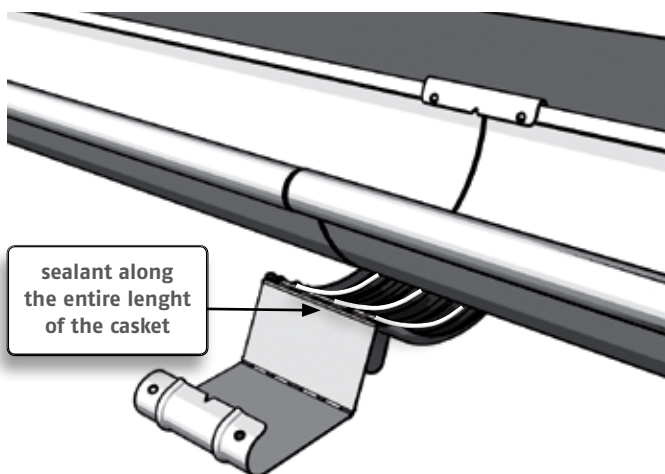
Fix the gutter to the brackets by first pressing the back edge of the gutter firmly against the bracket.

Then press the front edge of the gutter into the bracket.



Place the gutter in the brackets as close to the final locations as possible. It is not recommended to move the gutter lengthwise after installing it in the brackets because this might scratch the paint.

The instructions for laying and fixing of the sheets take into account issues such as the possibility of wind lifting the sheets' edges, thermal movement, and the tightness and appearance of the sheet joints.



Installing gutter joints

The semicircular gutters can be extended with the help of a gutter joint.

Place the ends of the gutters you want to join against each other. Leave 1-2 mm space between gutters.

Squeeze sealant along the entire length of the rubber casket - in the middle and on both sides.

Fix the back edge of the gutter joint in place.

Press the joint firmly against the bottom of the gutters.

Keep pressing the joint, moving from the back towards the front, making sure that the joint is tightly against the bottom of the two gutters along its entire width.

Fix the front of the joint in place and at the same time press the joint firmly against the bottom of the gutters.

Lock the joint in place by pressing the fold in the front of the joint towards the bottom of the gutters while at the same time pressing the joint firmly against the bottom of the gutter.

Fix the fold at the front by bending the flap in the gutter joint over it.

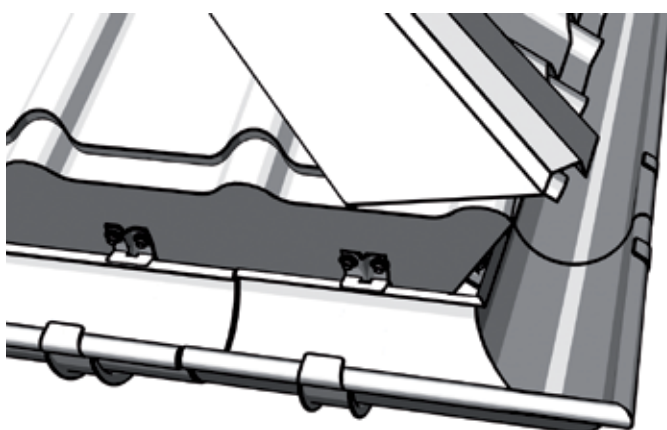
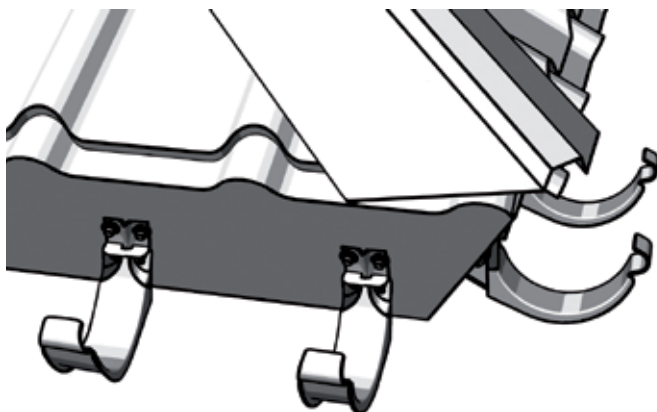
Tidy the sealant on the inside of the gutter.

Installing corners

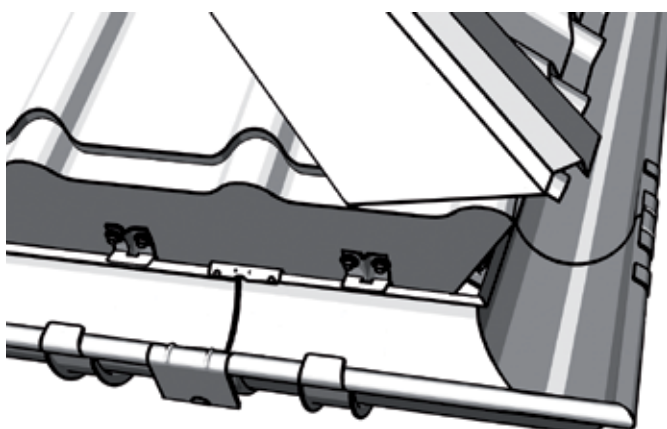
Assembling the parts of the downpipe

Install the brackets around the corner as described (page 5).

N.B. Remember to keep the slope towards the downpipe.!



Install corner piece in place and continue with the gutters. Leave 1-2 mm space between corner piece and gutter.



Finalize the installation with joint pieces as described (page 8).

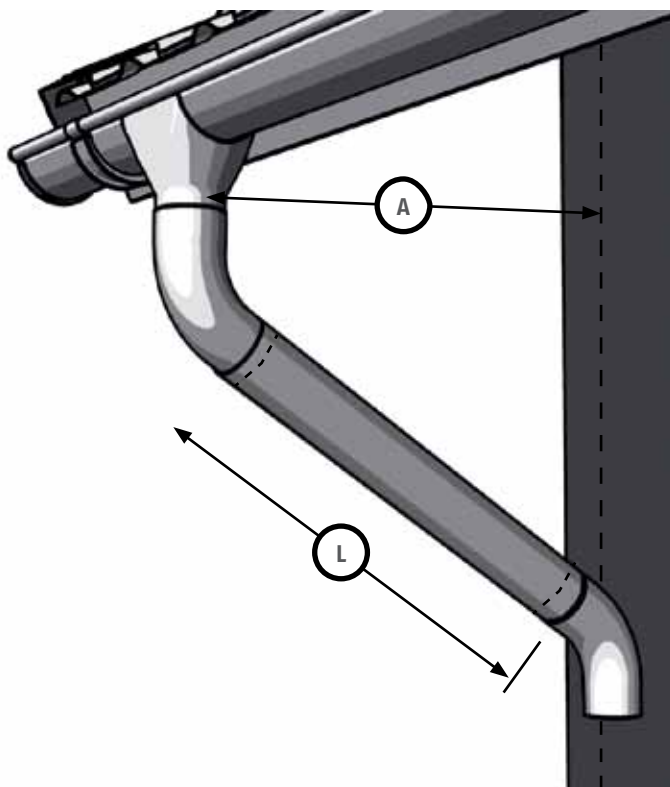


Installing downpipes 1/2

Assembling the parts of the downpipe

The bends and straight pieces of the downpipe are fitted so that they overlap. If needed, the downpipe can be shortened with a hacksaw.

NB! Shorten the pipes from the end that is not tapered!



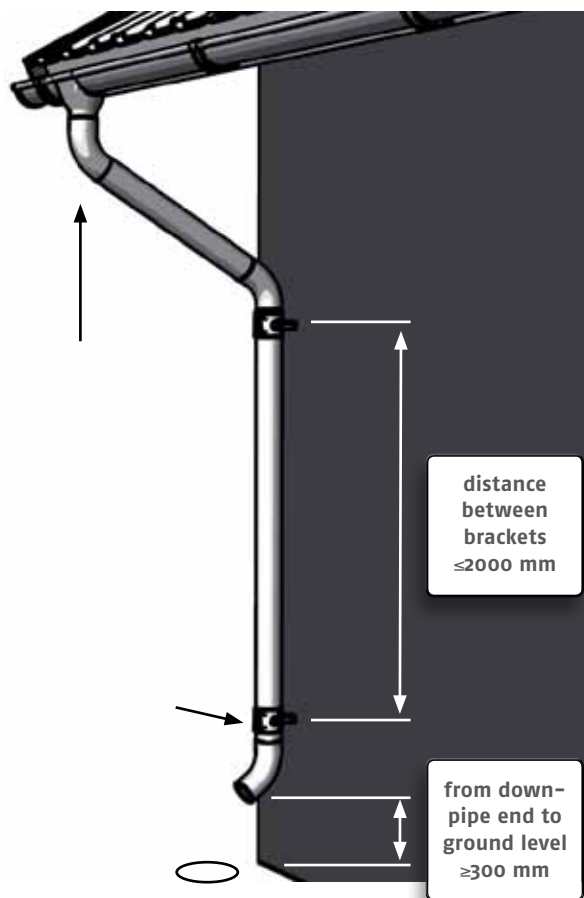
Cutting a sloping downpipe to length

A sloping downpipe is cut to length as shown in the adjacent table. When estimating the distance between the bends, keep in mind that the downpipe must be roughly 40 mm from the wall and the other end of sloping pipe will be inserted into a bend. Before cutting make sure that the measurements are correct for the location.

Measure the distance from the gutter outlet to the wall (A). Check the table for length (L) of the downpipe.

| A | L | A | L |
|-----|-----|------|-----|
| 500 | 390 | 760 | 690 |
| 520 | 410 | 780 | 710 |
| 540 | 430 | 800 | 730 |
| 560 | 450 | 820 | 760 |
| 580 | 470 | 840 | 780 |
| 600 | 490 | 860 | 800 |
| 620 | 510 | 880 | 830 |
| 640 | 530 | 900 | 850 |
| 660 | 550 | 920 | 870 |
| 680 | 570 | 940 | 890 |
| 700 | 590 | 960 | 920 |
| 720 | 610 | 980 | 940 |
| 740 | 620 | 1000 | 960 |

A = the distance from the gutter outlet to the wall
L = sloping downpipe to length



Installing downpipes 2/2

Cut the straight downpipe to the correct length. The end of the downpipe, with the outlet pipe installed, should be at least 300 mm from the ground.

Determine the locations of the downpipe brackets on the wall. They should be as close to the joints of the downpipe as possible.

Use at least two brackets for each downpipe.

NB! The brackets should not be placed more than 2000 mm from each other.

Use long installation screws (2 screws/bracket) for wood and plugs for brick walls.

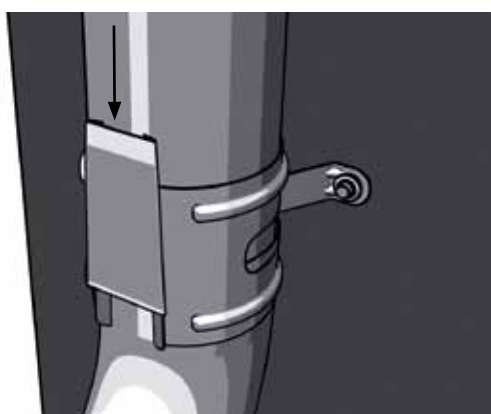
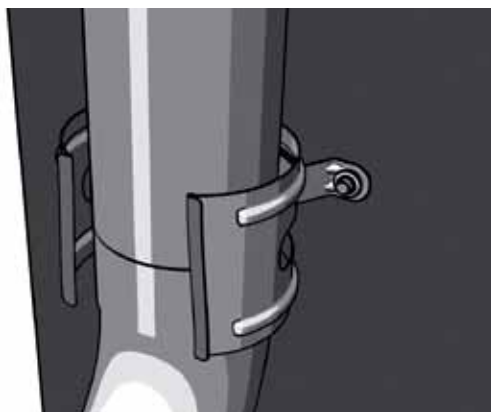
NB! Install the brackets so that the clamp which locks the downpipe in place can be installed top to bottom.

Assemble the downpipe on the ground before installing. Lift and install the assembled downpipe into the gutter outlet installed in the gutter and turn to fit into the downpipe brackets.

NB! Rainwater gullies must be about 250 mm from the outer surface of the wall when measured from the middle of the gully.




Place the downpipe in the brackets.

NB! Install the lower bracket at the joint between the outlet pipe and the downpipe. If this is not possible, use a pop rivet or a screw to secure the downpipe to the outlet pipe.



Tighten the clamps that lock the brackets by tapping them with a rubber mallet or similar tool. Protect the downpipe with a piece of cardboard, for example, while tightening the clamps on the downpipe brackets.



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