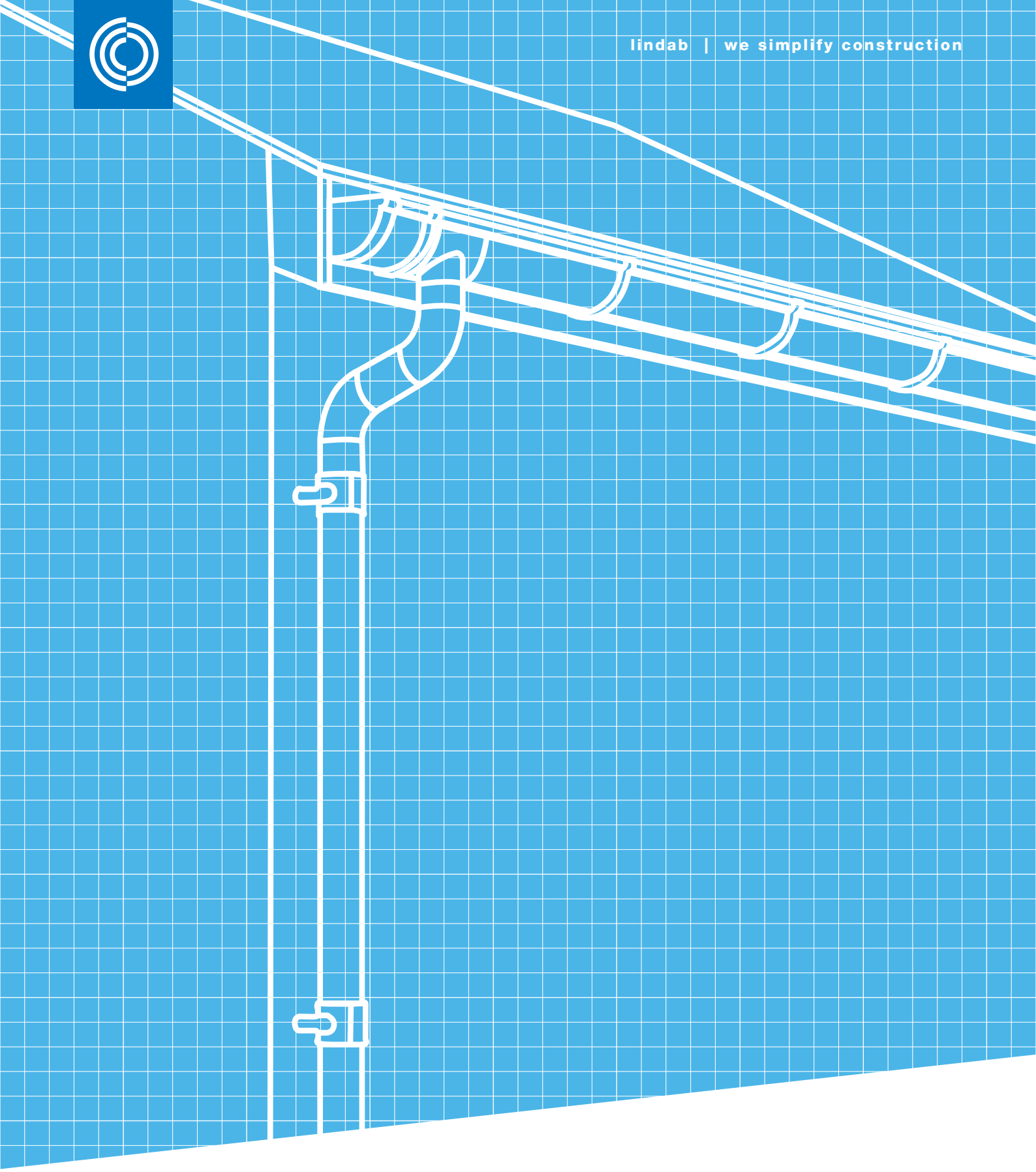


Lindab **Roof Drainage System**

Lindab Rainline™

Assembly instructions quarterround roof drainage system

Lindab®

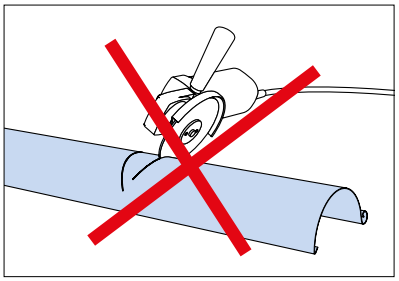
Preparation

Before you start
It is the total area of the roof that decides the dimensions of the roof drainage system. The bigger the roof, the more water the system must take care of. It will pay in the long run to be careful when you measure your roof and calculate dimensions. Take your calculation to your local dealer, who will help you to pick out all the components you need. Please, also visit our web site for dimensioning help.

Measure the roof area
There are various types of roofs but measure each roof part by multiplying the roof length with the roof width. If the area is less than 50 m² use gutters with 100 mm width and pipes with 75 mm diameter. If the area is between 50-100 m² use gutters with 125 mm width and pipes with 87 mm diameter. If the area is larger than 100 m² there are gutters with 150 mm width and pipes with 100 mm diameter or 190 mm gutters and 111/120 mm pipes. If there are different roof sizes on the same building the largest roof part is dimensional.

Transport, storage, unpacking
Make sure that the roof drainage components are handled with care during transport, storage and unpacking. If not, the coating may be damaged or the pipes and gutters dented. Store pipes and gutters on a plane and stable surface. Non coated components must be unpacked and stored in a dry and ventilated place.

Cutting
Cut the gutters and pipes with plate shears or a hacksaw on a firm underlay on the ground. Never use an angle grinder. It heats the steel up up and thus destroyes the galvanization. The coating may also be scorched by hot chips or filings.


Never use an angle grinder

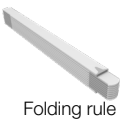
After-treatment
If the coating has been damaged, paint it with Lindab's repair paint to prolong the lifespan of the roof drainage system.

Maintenance
If you want to keep the roof drainage system in mint condition, give the system an overhaul a couple of times a year. Clean the gutter and pipes from leaves and twigs. Wash with water and a mild detergent. Don't use a high pressure washing appliance.

Tools
Lindab's roof drainage system can be mounted with ordinary hand tools like pliers, hammer, hacksaw, screwdriver, folding rule and string. For bending brackets, you need a bracket bender. Contact your local dealer and they will lend you one.

Fastening
The fasteners you need are for fastening the brackets and the pipe holders. We always recommend that you use stainless screws and use the right screws intended for each material. The pipe holders are mounted on the house façade. Check if it´s wood, concrete or bricks.


Spirit level


Folding rule

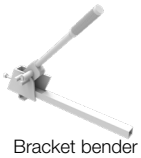

Pencil


Screw driver


Seam plier

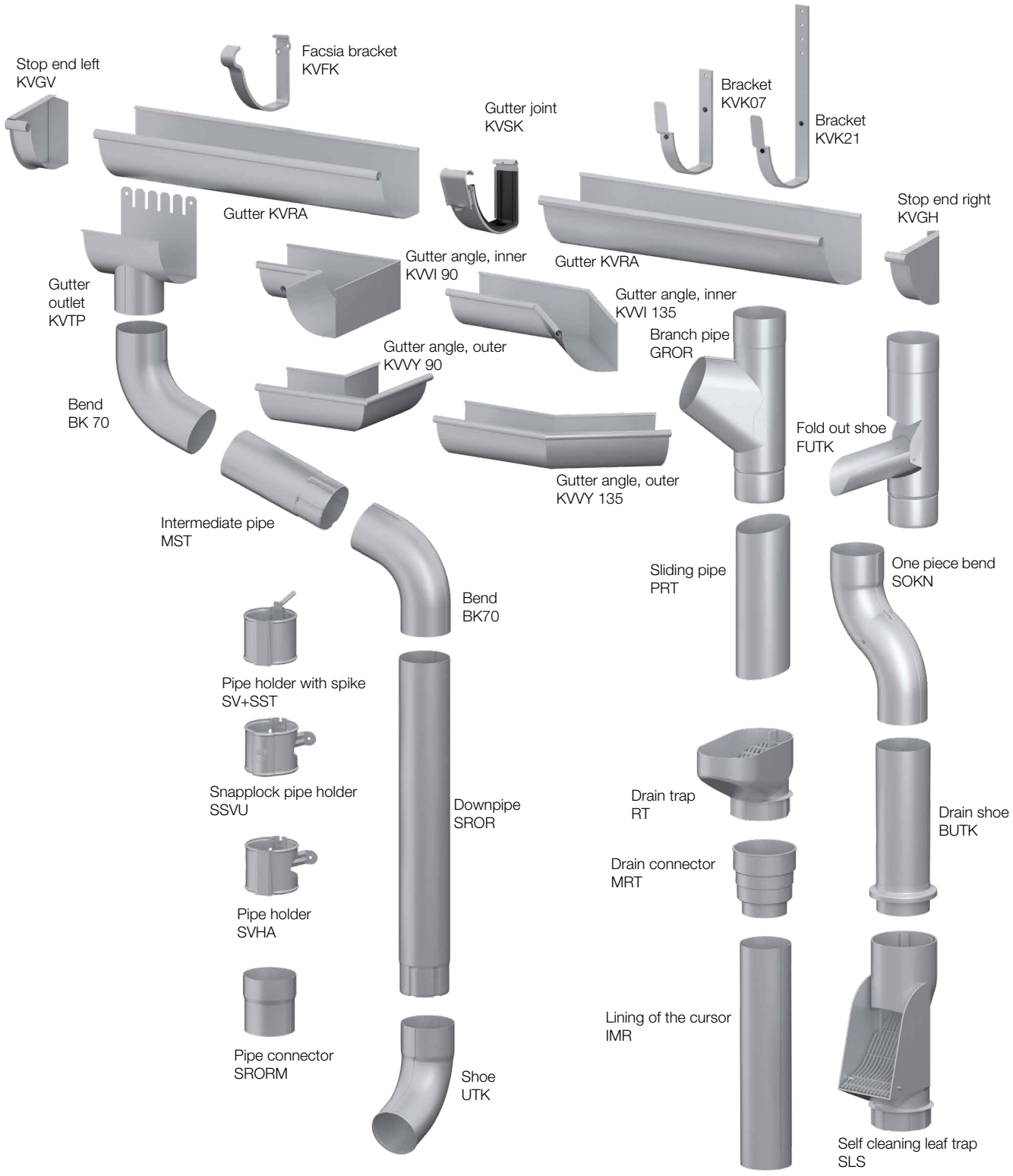

Steel scissors


Hack saw

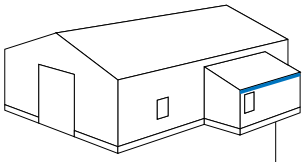

Bracket bender


Rubber hammer

Product overview

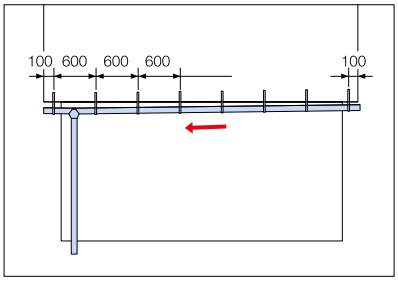


Assembly instructions

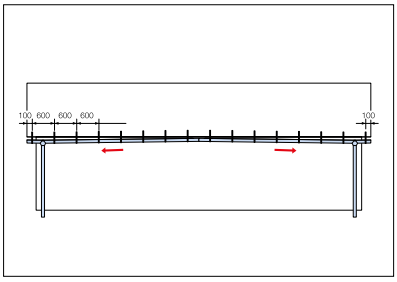




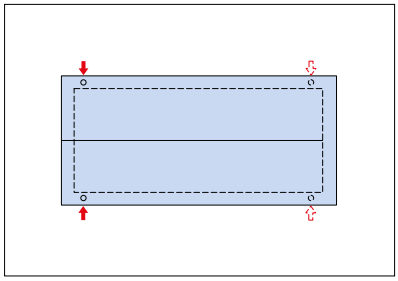
Number of brackets and drain pipes
The brackets should be mounted with c/c 600 mm. The end brackets are mounted 100 mm from the roof edge. The inclination of the gutter towards the down pipe should be at least 2,5 mm/m. Calculate how many brackets you need for each roof part (example 10 m/0,6 m +1 = 18 brackets). Each drain pipe covers maximum 10 m gutter fall (length of the house). For a estethic reasons or if the gutter fall exceeds 10 m, place pipes on each corner of the house.

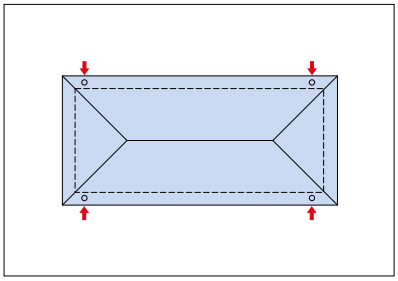


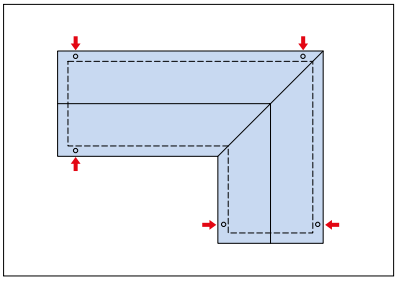
One downpipe for roof length less than 10 m


Two downpipes for roof length exceeding 10 m

Where to place the pipes
The pictures below show recomend-ed placement of drainpipes for different houses.

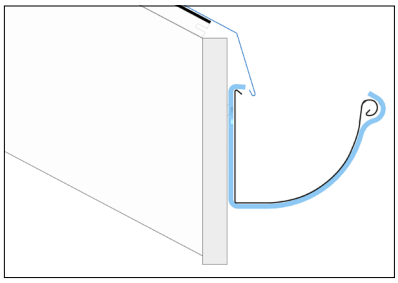

Saddle roof. 1 or 2 per side.


Hipped roof

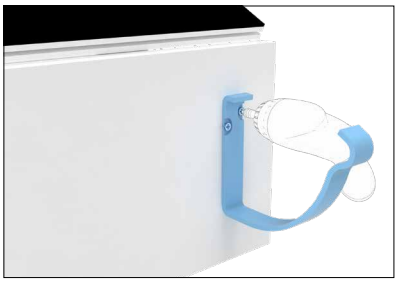

L-shaped roof

Assembly – Quarterround Roof Drainage System

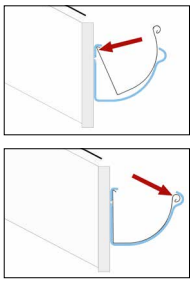
Fascia bracket KVFK assembly



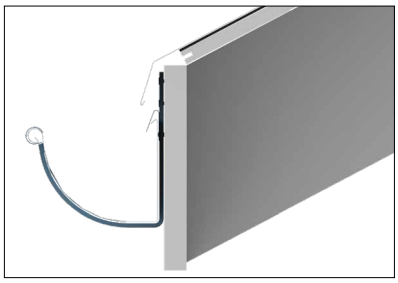
Use bracket KVFK for perpendicular roof base.



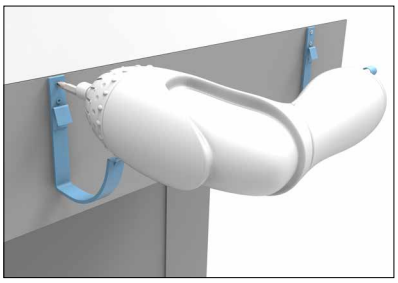
The inclination shall be 2,5 mm/m.



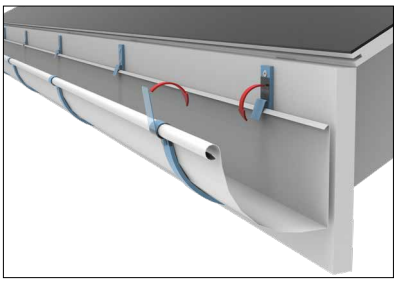
Fascia bracket KVK07 assembly



Use bracket KVK07 for perpendicular roof base.

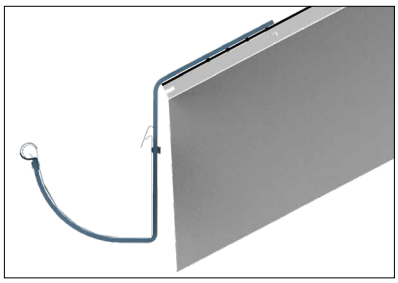


The inclination shall be 2,5 mm/m.

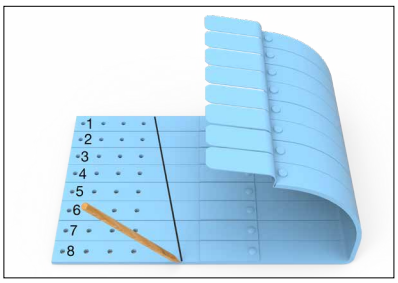


Bend down the tabs while pushing the gutter down towards the bracket.

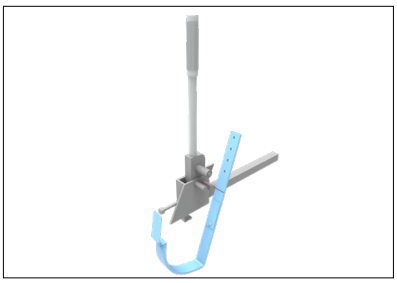
Roof bracket KVK21 assembly



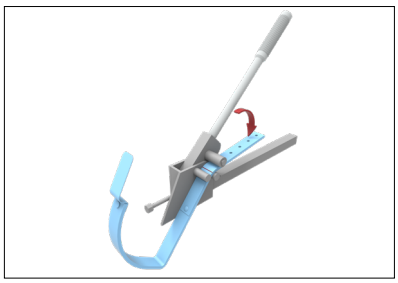
Alternative to use bracket KVK21.

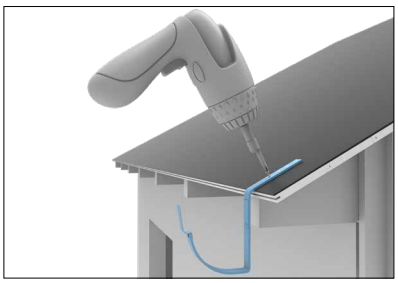


Mark out on the brackets for the gutter incline. 2,5 mm/m. Number the brackets. 1 is for “Lowest bracket”. Last bracket is "Highest bracket”.

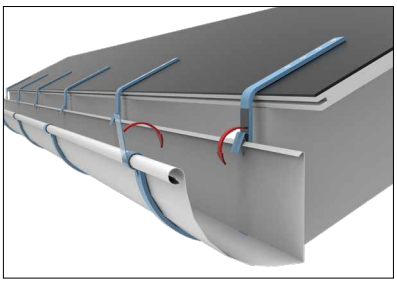


Bend the brackets at the marking. Minimum radius 10 mm.





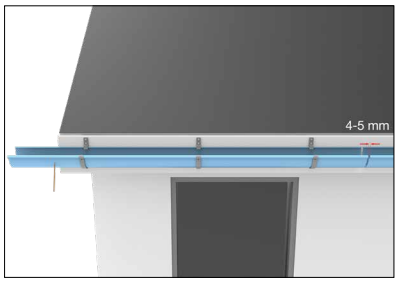
Mount brackets no.1 “Lowest bracket”, and fasten the other brackets accordingly.
Note! This is just an example of how to mount the bracket on top of the roofing felt.



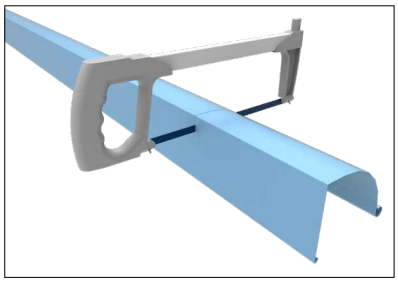
Bend down the tabs while pushing the gutter down towards the bracket.
Note! The brackets could be mounted in several different ways. This is just one example.

Assembly – Quarterround Roof Drainage System

Cutting gutter KVRA

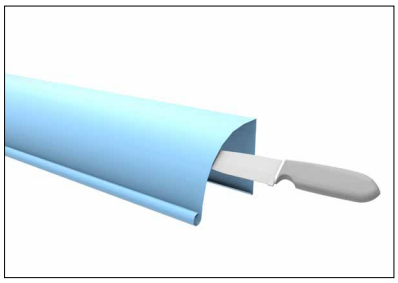


Place the gutter to be jointed in the brackets and mark out the needed length

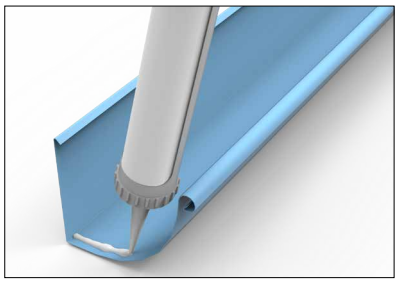


Use a hack saw to cut the gutter.

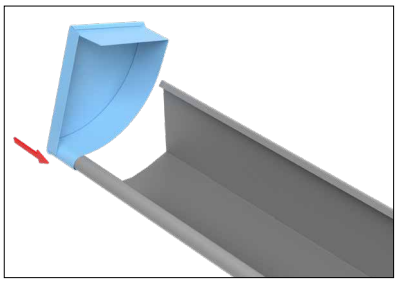
Stop end KVGV & KVGH



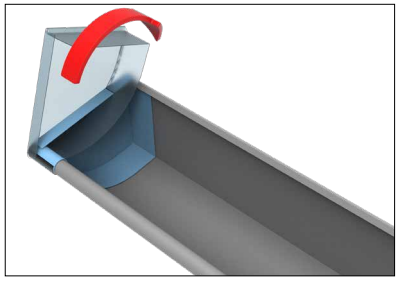
Remove the filings.



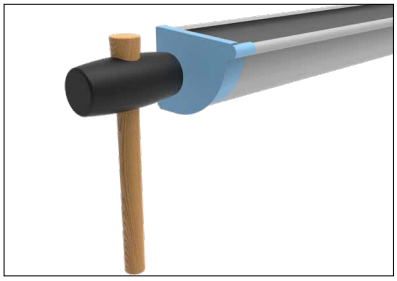
Use silicone as sealing.



Always fit the stop end KVGV or KVGH on the cut edge. Step on the stop end 1 cm.



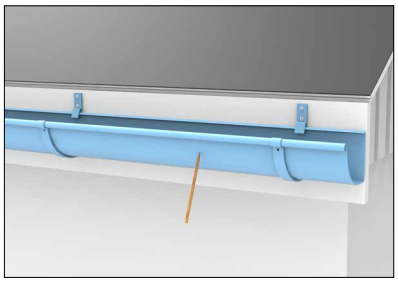
Then bend it down.



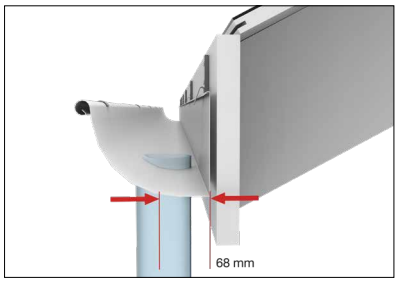
Use a rubber mallet to gently move the stop end into the correct position.

Assembly – Quarterround Roof Drainage System

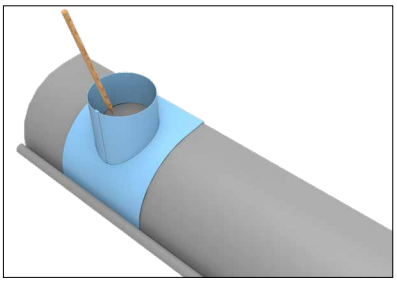
Gutter and gutter outlet KVTP



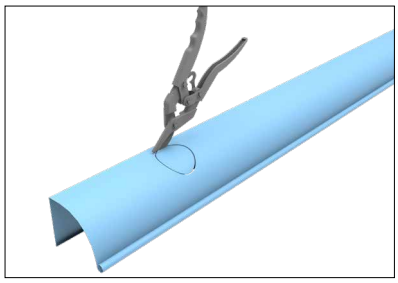
Place the gutter in the brackets and mark out for the gutter outlet KVTP on the gutter.



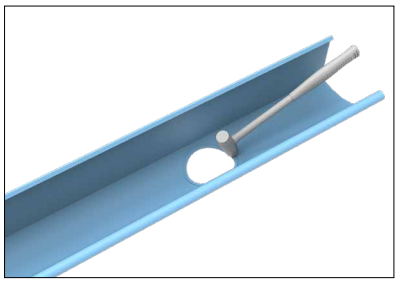
The hole is taken 68 mm from the back edge.



For a correct hole, the gutter outlet can be mounted temporarily and the hole can be marked from the inside of the nozzle.

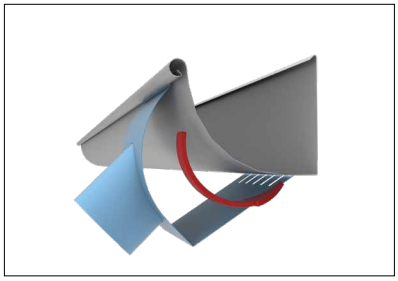


Make a round hole corresponding to the diameter of the downpipe minus 3 mm.

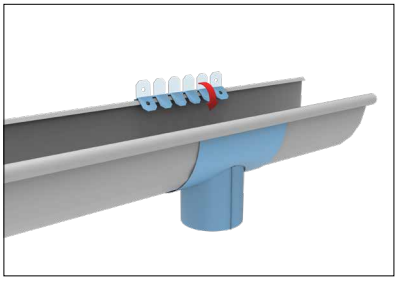


To get a smooth water fall, use a ubber mallet on the edges.

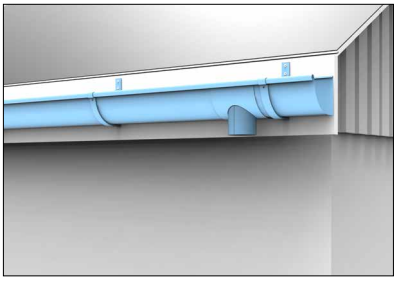




Attach the front of gutter outlet to the bead and then simply turn it up against the gutter.
Put seal between the gutter and the nozzle piece.



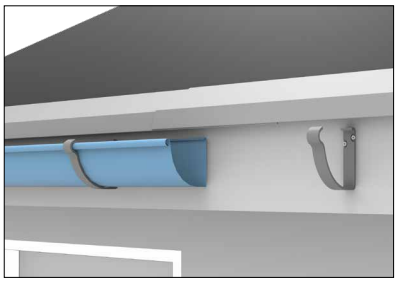
Fold the back of the gutter outlet all the way down.



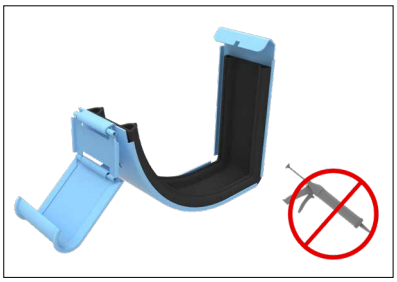
Place the gutter in the brackets.

Assembly – Quarterround Roof Drainage System

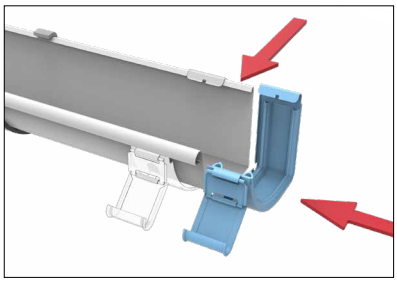
Gutter joint KVSK



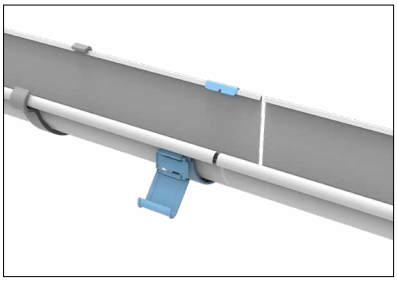
Place the gutter in the brackets.



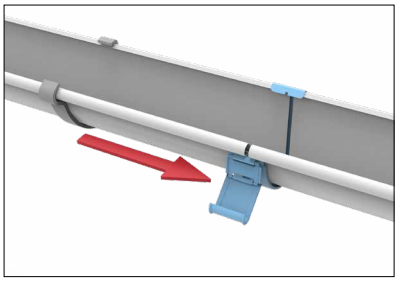
Use selfsealing gutter joint KVSK. Do not use any silicone.



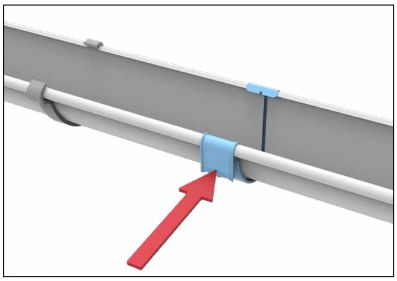
Bend the back of the gutter against the front and put on the KVSK.



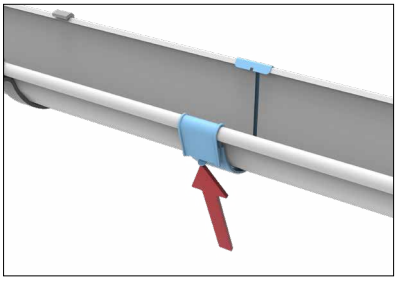
Place the other gutter in the brackets.



Push the KVSK against the second gutter until it covers the gap between the gutters.

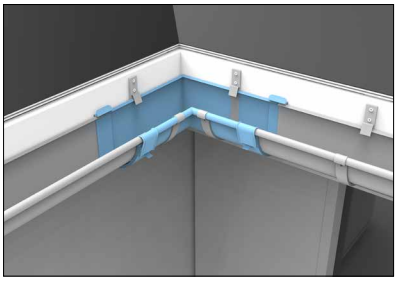


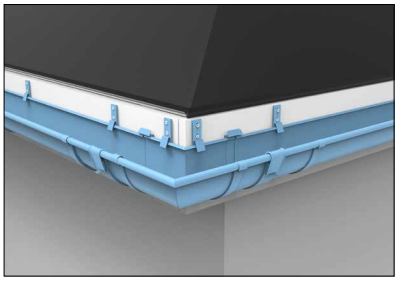
Close the gutter joint.



Lock the gutter joint.

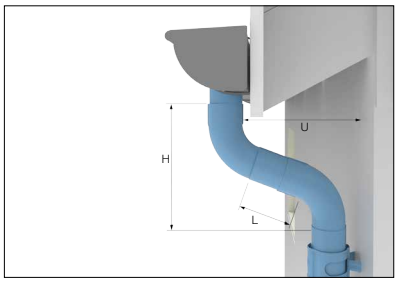
Gutter angle KVVI/KVVY



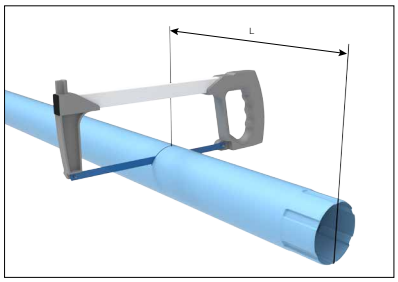


Assembly – Roof Drainage System

Down pipe bends



Check the measures to get the length of the intermediate pipe MST. Use table on the side.

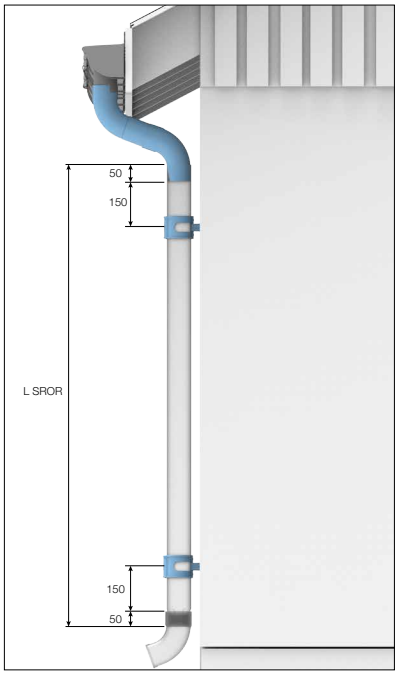


Use a hack saw to cut the intermediate pipe MST. Remove sharp metal filings with a knife.

Intermediate pipelength at BK 70° bends

U mm	H mm	L mm
220	275	0
270	290	100
300	300	135
350	320	185
400	340	240
450	355	290
500	375	345
550	395	400
600	410	455
650	430	505
700	450	560
750	465	610
800	485	665
850	505	720
900	520	770
950	540	825
1000	555	880
1050	575	930
1100	595	985
1150	610	1040
1200	630	1090

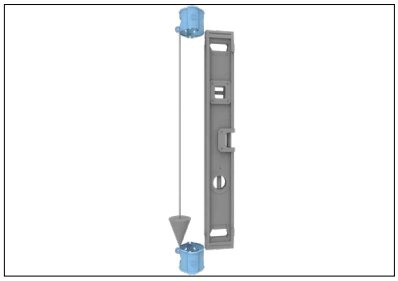
Down pipe and and holder



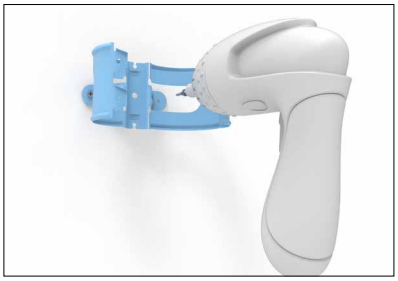
Measure the length of the down pipe. Mark out for the pipe holders SSVU



Assemble the pipe Shoe UTK. Use a self tapping screw on the back side.



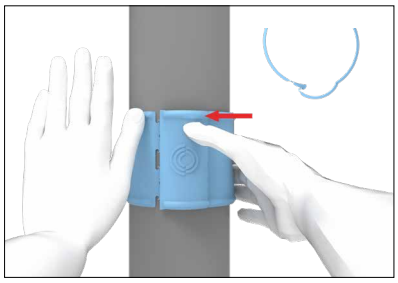
Level the pipe holders with spirit level or plummet.

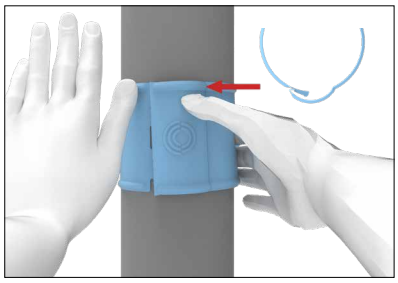


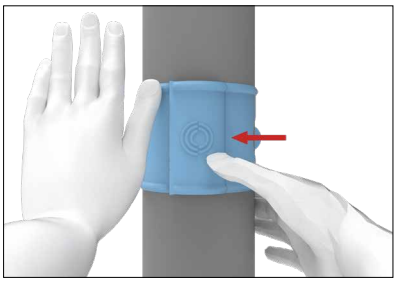
Fasten the pipe holder on the wall.

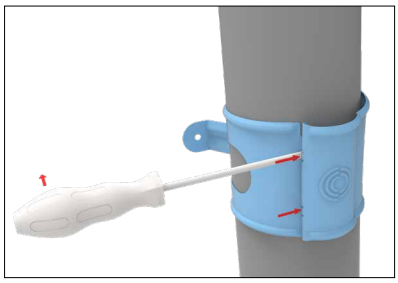
Assembly – Roof Drainage System

Close up assembly pipe holder SSVU



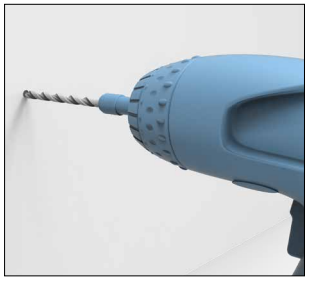


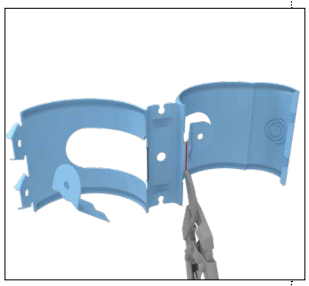




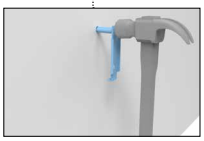
It´s easily done to dismount the holder.

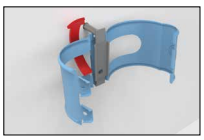
Pipeholder SSVU with SST or SSC



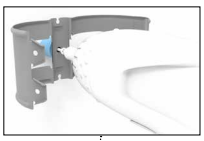


Cut of the legs for use of SSVU with SST and SSC.





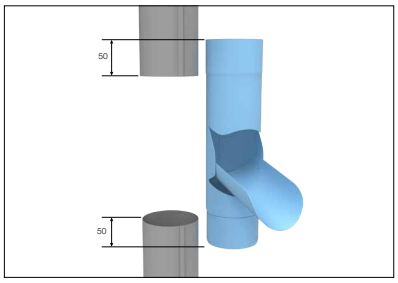
SST...



... or SSC.

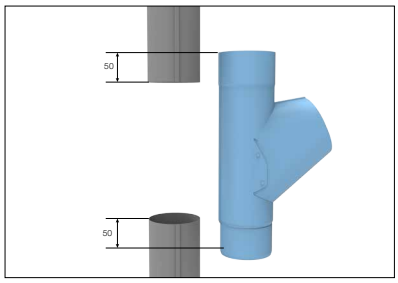
Assembly – Roof Drainage System

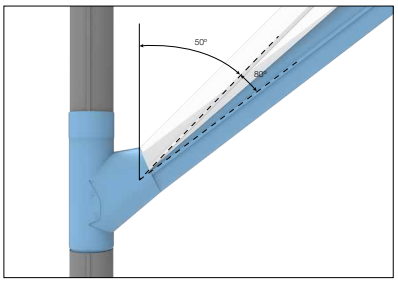
Adjustable shoe FUTK





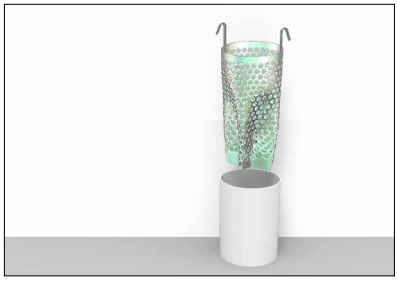
Adjustable branch GROR

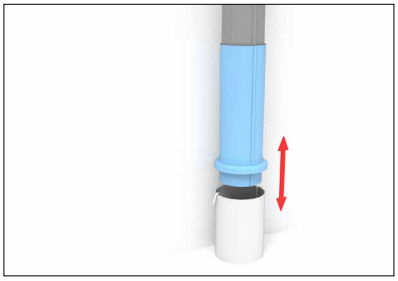




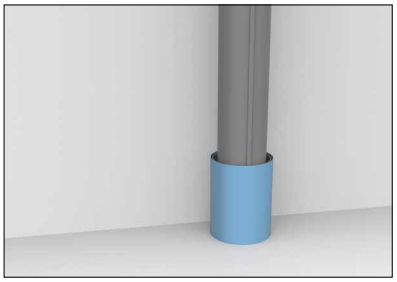
Connect a branch pipe. Can be mounted in angle 50-80°.

Leaf filter DVSIL



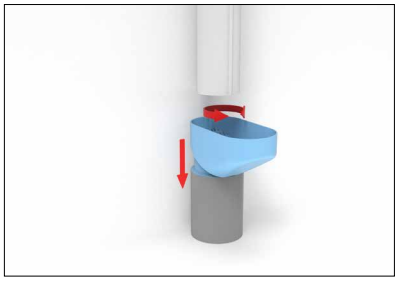


Connect the drain shoe BUTK

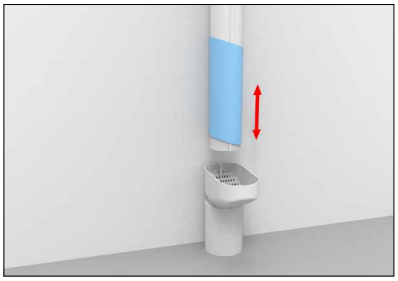


Use IMR in the same color as your rainwater system to cover the pipe from the ground.

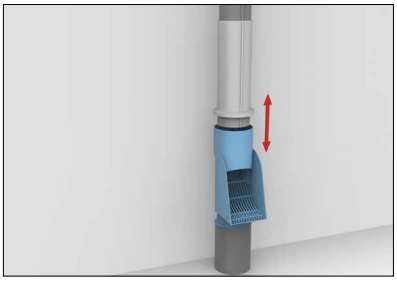
Drain trap RT



Place the drain trap in the ground pipe.



Connect the sliding pipe PRT.



You can also use a self cleaning leaf trap SLS. Use BUTK to connect.



Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

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