# BMI icopal



# **Steel Gutters**

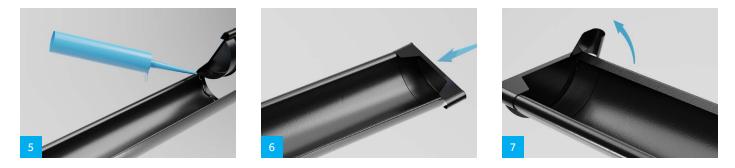
bmigroup.com

# **Downpipe spout**



It is simplest to fit the downpipe spout on the ground. Mark where on the gutter the downpipe should be. Saw out a hole. Bend down the centre of the cut edge to create a drip edge. The front edge of the downpipe should be inserted into the lip of the gutter. Press the spout against the gutter and lock using the four lips around the back edge of the gutter.

# End cap

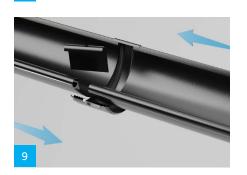


Fit the end cap into place before installing the guttering. The end cap will fit at both ends. Break off the folded edge towards the back edge of the gutter. Twist the gutter piece into the folded edge. Apply sealant to the inside of the gutter. Then bend in the back lip. The distance between the end cap and rake should be 10-15 mm.

## Joint piece



### **Screwed** joint



#### **Gutter hook**

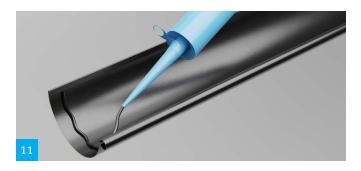


Joint piece: Move the gutters all the way together and make sure they are at the same level. The rear edge of the joint piece should be hooked into the rear edge of the gutter and pulled sharply downwards. Then the front edge of the joint is pressed in over and in contact with the folded edge.

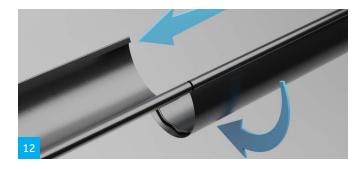
Screwed joint: Bring the gutters together, approximately 5 mm apart. The joint piece consists of 2 parts, the joint piece itself with a gasket and a front edge plate with locking grooves. The rear edge of the joint piece hooks up to the rear edge of the gutter, so that the sealing rubber strip is in the middle of the joint. Press the joint piece into the gutter, so that the screw stick up between the folded edges at the front. Press the front edge plate over the folded edge with the long part down into the gutter, so that the screw appears in the locking groove. Push the front plate to the side so that the screw head is locked in position. Then tighten the screw with a screwdriver until it reaches the necessary tightness.

**Gutter hook:** The hooks should be positioned at 60 cm intervals so that there is a fall in the gutter to the downpipe spout. To lock the gutter, the brace of the hooks should be pressed over the rear edge of the gutter, see fig. 10. N.B. If the gutter is attached to the hooks before joining, this will increase the risk of leakage in the joint. **See page 6 for different types of hook.** 

# Joining with sealant

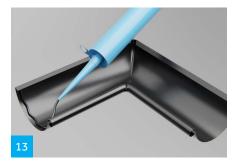


When joining gutters or angle pieces, bend the rear edge up approx. 6 cm on one gutter. Apply sealant.



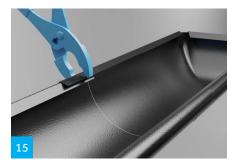
Then gently turn the gutter and push together. The folded edges at the back should be squeezed together with pliers. See figure 15.

### Outside/inside gutter angle





Apply sealant to the gutter angle and rotate so it comes into contact with the gutter. As an alternative, a joint piece can be used, but gutter hooks must then be fitted to the angle to hold it in place.



When joining gutters, the folded edge at the back should be squeezed together, e.g. with pliers. Overlap for gutter 4-5 cm.

## Stay strap



Stay straps should be fitted after the bracket has been mounted. The stay strap is threaded into the hole on the gutter hook and then fastened in the roof batten and down into the counter-batten. In areas with a lot of snow, stay straps/gutter supports must be attached to the rafter with screws.

### **Gutter support**

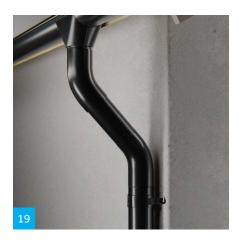


Gutter supports are used where there is a need to fit beside hooks, e.g. to follow the AeroDek profile or where adjustable gutter hooks are used. When using gutter supports, there is a risk that water will flow along the gutter support and over the gutter.

# **Downpipes**



Fit a bend to the downpipe spout. Cut the middle piece from a downpipe 12 cm longer than the distance between the bends.



The middle piece should be lowered into the lower bend and then inserted onto the top of the upper bend. Fit the downpipe. Shrinking tubing is only used when the downpipe is joined.

# **Pipe clamps**



The pipe clamps are placed around the downpipe itself. Maximum distance between pipe clamps should be 3 metres. When using pipe clamps with a brick wall, use an 8 mm drill for the fastener holes. Carefully hammer the clamp lock into place.

# Elbow



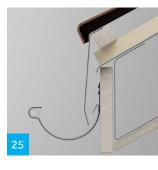
To discharge water into the ground, an elbow is fitted to the downpipe.





If the downpipe is to be connected to a drain in the ground, you can use a cleaning funnel (figure 22), or a self-cleaning leaf trap (figure 23). The downpipe is connected to an inclined drain or to a funnel/leaf trap. The funnel/leaf trap is connected to a reducer.

## **Steel table roof fittings**





Steel table roof fittings are supplied in 2-metre lengths, the same colour as the steel guttering. Types BTS 2-23 and 3-17 are for stone/tile roof, type BPS 9-11 for asphalt roofing and roof shingles. Roof fittings should be mounted with an 8 cm overlap.

## Ladder protection



SST ladder protection should be fitted to the gutter, preventing the ladder from slipping. Positioned at the side of the ladder.

# **Part calculations**

#### **CALCULATIONS FOR GUTTERING HOOKS**

Rule: One hook every 60 cm. Round off to the nearest whole

number and add one. Example: House length  $12.4 \text{ m} / 0.6 = 20,7 \approx 21 + 1 = 22$  guttering hooks. Gutter supports and stay straps should be fitted for each gutter hook.

#### **DOWNPIPE CALCULATION**

For each downpipe there is a downpipe spout, two bends, a 3m downpipe, two pipe clamps and a downpipe shoe. For heights over three metres, one downspout length plus one pipe clamp must be added.

One leaf catcher or leaf trap/cleaning funnel per downpipe.

#### **ROOF FITTING CALCULATION**

Rule: One fitting per 1.9 m in house length. You must always round up. Example: Length of house: 12.4 m:  $1.9 \text{ m} = 6.5 \approx 7$  pieces

#### **OTHER ACCESORIES**

One cartridge of Icopal Butyl sealant per house. One pack of

BMI AeroDek screws, 4.6 x 35mm, for gutter hooks and downpipe clamps.

#### TOOLS

Drill, hacksaw, hammer, tin shears, string, ruler and pencil

Gutters are not just functional.

They are also part of the house façade, and affect the character of the house. With gutters from BMI Group, you are guaranteed a system where all parts are of high quality with a great finish. It gives you protection – and a great end result!



BMI NORGE Kundeservice: Tlf. 67 97 90 10 E-mail: kundeservice.no@bmigroup.com

bmigroup.com