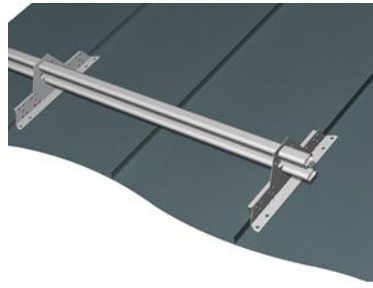


SNOW GUARD

1. Picture of the product



1. Tube-type snow guard meta sheeting and bitumen roofs



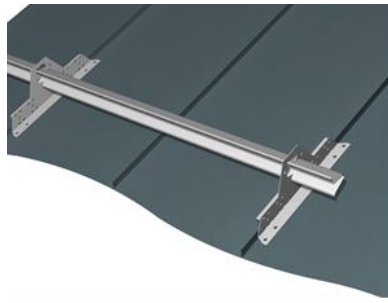
2. Tube-type snow guard standing seam roofs and Classic



3. Tube-type snow guard tile roofs



4. Profile snow guard meta sheeting and bitumen roofs



5. Profile snow guard standing seam roofs and Classic



6. Profile snow guard tile roofs

2. Product description

Entrances and accessways as well as play and recreational areas used during the winter must be protected from snow and ice falling from the roof. This regulation also applies to the streets and other public areas surrounding the building.

When the pitch of the roof is steeper than 1:8, snow guards placed on the roof, canopies above doors or plantings and suitable ground structures are used for protection.

When using a standing roof gutter, the possibility of snow and ice falling from the roof section between the standing roof gutter and the eaves must be taken into account (RT-85-10862 "Metallinen saumakatto"). If the distance between the eaves and the standing roof gutter is over 350 mm, installing a snow guard is recommended. A standing roof gutter is not intended as a snow guard; instead, a separate snow guard should be placed above it.

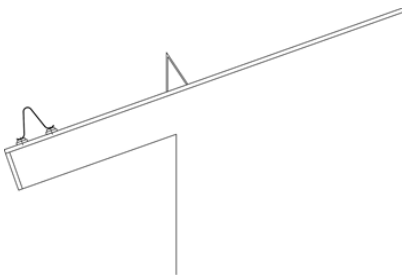


Figure 7. Snow guard placed between a standing roof gutter and the eaves

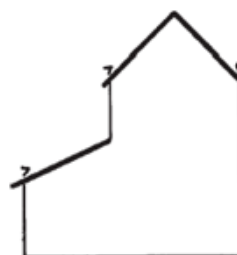
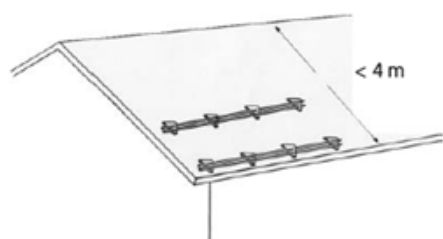
Use the profile snow guard profile or the two-tube snow guard in low buildings. Snow guards are not used as safety line anchor points. The length of the snow guard tube and the snow guard profile elements is 3 m and they can be extended.

3. Dimensioning instructions

RT instruction card 85-11132 (“Vesikaton turvavarusteet”) specifies that the snow guard should be placed as close to the eaves as possible so that the loads are transferred into the load-bearing structure. The snow guard should be continuous in the horizontal direction, and any extensions should be locked on both sides. Structures located on a roof plane should also be protected with snow guards. If the roof plane is long, snow guards should be placed in two or more rows.

Short sections of snow guard (e.g. 3 metres at the entrance) should not be used at all. When the snow freezes, it forms floes so that even a short section will have to sustain the snow load of as much as 100 m² of roof. In such a case, the resulting snow loads exceed the dimensioning values in the RT instruction card by several times.

4. Snow guard dimensioning table



Maximum roof plane length above the snow guard (m)						
Angle (°) and slope ratio of the roof	Distance between snow guard fixtures (m)					
Snow load on the roof 1.8 kN/m ² (2.6 kN/m ²)						
	0.5 m	0.6 m	0.75 m	0.9 m	1.0 m	1.2 m
< 15°, (1:3.7)	21.4 (15.0)	17.9 (12.5)	14.3 (9.9)	12.0 (8.3)	10.7 (7.4)	9.0 (6.2)
15...22°, 1:3.7...1:2.5	11.4 (8.0)	9.5 (6.6)	7.6 (5.3)	6.3 (4.4)	5.7 (4.0)	4.8 (3.3)
22...27°, 1:2.5...1:2	8.4 (5.8)	7.0 (4.8)	5.6 (3.9)	4.7 (3.3)	4.2 (2.9)	3.5 (2.4)
27...37°, 1:2...1:1.3	7.4 (5.2)	6.2 (4.3)	4.9 (3.4)	4.1 (2.8)	3.7 (2.6)	3.1 (2.1)
37...45°, 1:1.3...1:1	9.0 (6.2)	7.5 (5.2)	5.9 (4.1)	5.0 (3.5)	4.5 (3.1)	3.7 (2.6)

- The maximum allowed distance between the fixtures of a grid-type snow guard is 1,085 mm.
- The snow load must be reduced if it exceeds the values of the table.
- Snow guards often need to be placed in several rows due to, for example:
 - the roof plane above the snow guard is larger than allowed by the snow guard table
 - the steep pitch or slipperiness of the roof causes snow to move so that the snow may slide over the tube-type or profile snow guard and cause hazardous situations.
- The table is based on the assumption that the snow guard is used over the entire distance of the eaves.
- Snow must always be prevented from falling from one roof plane to another.