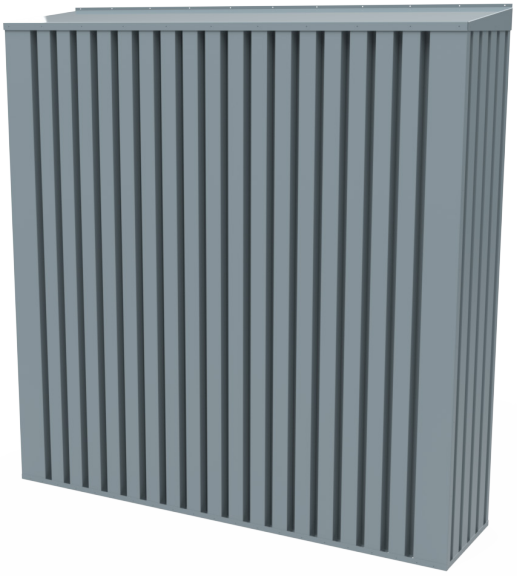
RVR Snow shield

RVR snow shield is designed to protect supply air openings. Very good resistance to water and snow penetration.



Application

The RVR snow shield is designed for protecting the air intake holes of ventilation systems preventing snow and water from getting into the building.

Snow shield is with labyrinth design and air intake is carried out also through the openings on both sides of the shield. Snow and water are efficiently separated from the air flow and drained through an openings in the bottom of the shield.

Snow shield is made of hot galvanized steel and the surface is finished with powder coating.

Can also be manufactured of stainless steel or acid-proof steel.

Structure and Dimensions

Snow shields are manufactured for all sizes of rectangular supply air openings.

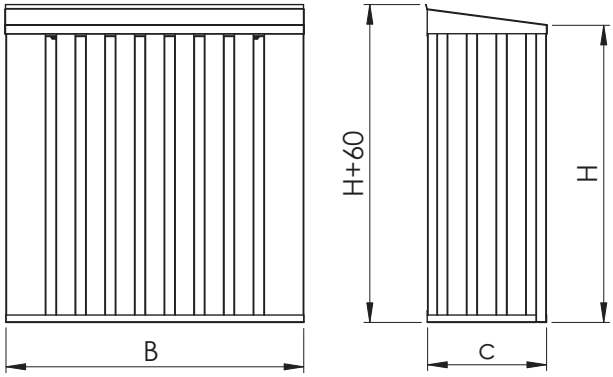
Minimum size 400x400 mm (spacing 100 mm).

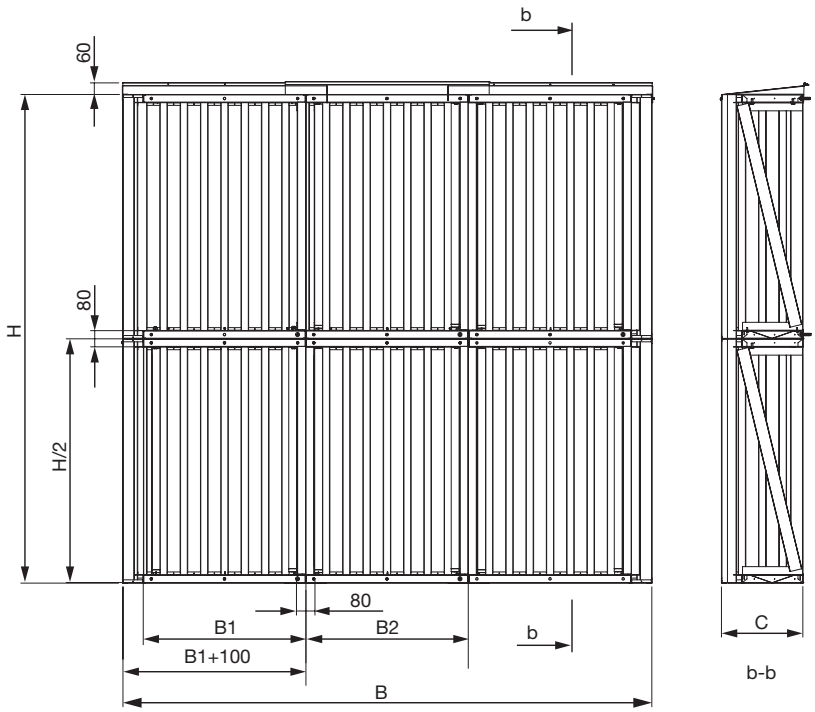
Sizes over 2000x2000 mm are built in modules.

Recommended depth C is 400 mm (min 200 mm and max 500 mm).

The wall opening must be at least 400 mm narrower and 400 mm shorter than the grate (B-400)x(H-400).

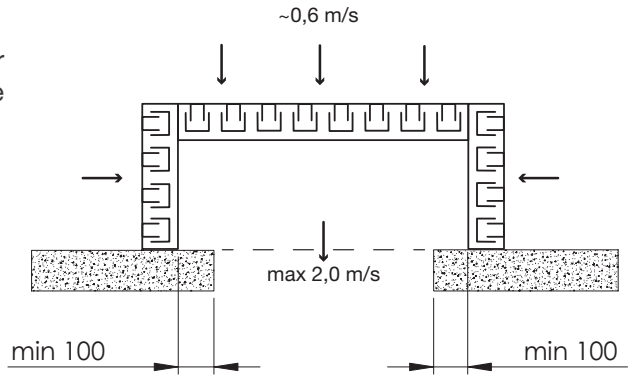
Possibility to deliver in modules.



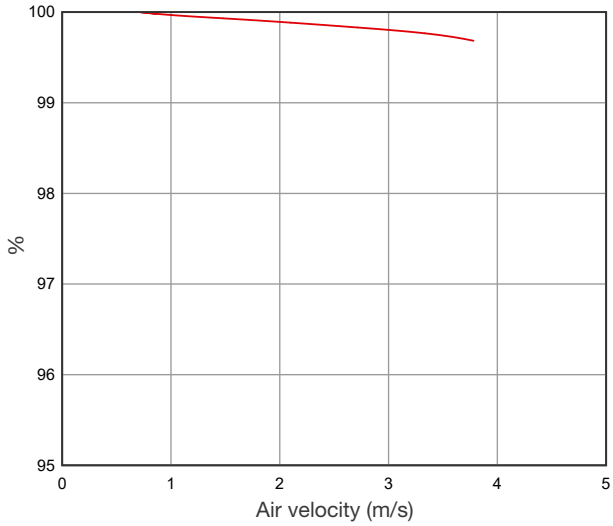


Technical data

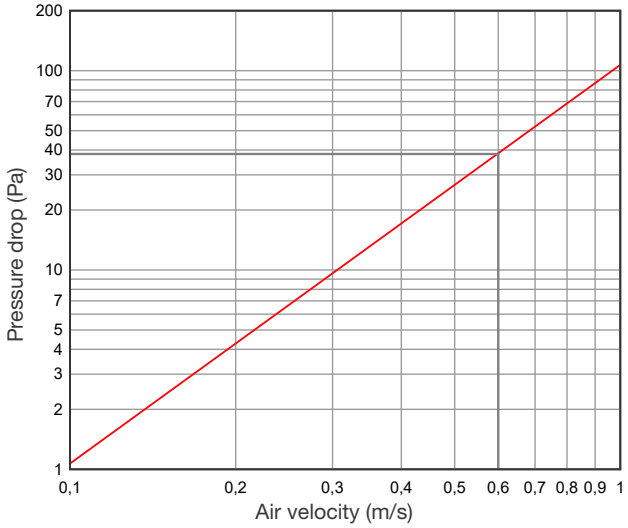
The better results of RVR snow shield resistance to water and snow penetration can be achieved when the louvre face velocity does not exceed 0,6 m/s.



Resistance to water penetration



Intake air pressure drop



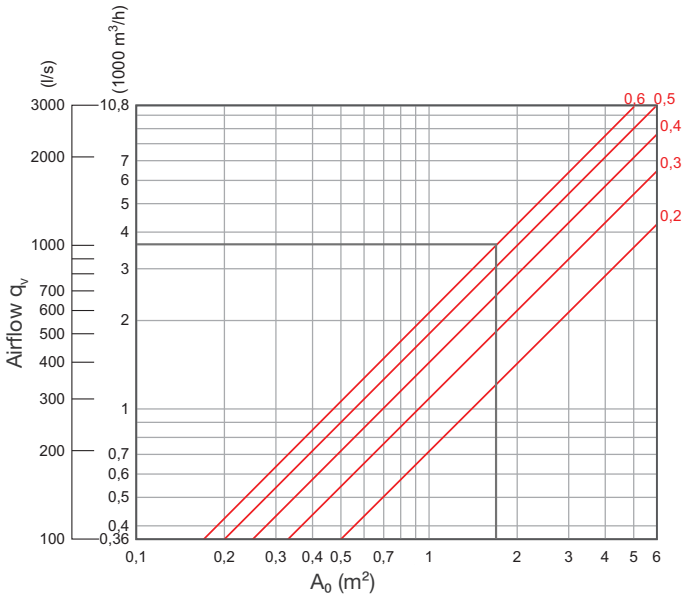
Selection diagram

Example:

Airflow q_v = **1000 l/s** ja
Desired face velocity **v =0,6 m/s.**
Looking at the diagram intake air pressure drop is
Δp_t = 38 Pa.
From the selection diagram we get that the surface area is
A_0 = 1,8 m²
Therefore an appropriate shield is
RVR 1000x1000x400.

Snow shield's RVR 1000x1000x400 max airflow?

Surface area: S=(B+(2*C))*H
S=(1,0 m+(0,4 *2)*1,0 m = 1,8 m²



Maximum airflow: 0,6 m/s *1,8 m² = 1,08 m³/s = 1080 l/s

Product marking

RVR – H – BxH – C RAL 7000

Marking

Material
Standard material galvanized steel+powder coating
ZM – zinc-magnesium coated steel (ZM310)*
H – acid-proof steel+powder coating
Zn – uncoated galvanized steel*

Size BxH
Width can be supplied in 100 mm increments

Depth C
200, 300, 400, 500

RAL Color Code
RAL color: if other than standard color. Standard color RAL 7000.

* Rust warranty does not apply.

Example: RVR 1200x1000x400

Design and Installation

Follow these instructions when planning the installation and during the actual installation of the shield:

1. Snow shield should be placed to the north side of the building, if possible, in order to avoid thermal stress caused in summer.
2. Snow shield must be of an appropriate size. The recommended flow rate is 0,6 m/s measured from the maze surface. Scheme S = (B + (2 x C)) × H ;[m^2] is applied for calculating the surface area.
3. Distance between the inlet and outlet louvres must be enought that outgoing and incoming air would not mix.
4. The height of the shield from the ground must be over 2 meters.
5. In roof applications the shield must be installed at least at the height of 0,9 meters, or otherwise protected from snow.
6. Location of the air inlet shield should be placed as far as possible from vent output holes, trash barrels, chimneys and other sources of possibly polluted air.
7. When designig you must take into account also other general building regulations.

Installation

When installing a snow shield, make sure that this is attached to the support structure. The brackets must be selected according to the wall material.

If the louvre consists of four or more modules, additional vertical supports must be used. A structural beam or wooden beam suitable as an additional support is attached to the junctions of the module frame and to the wall structure of the building.

The opening must be in the middle of the snow shield.

See also RVR snow shield installation instructions.

For best results, we recommend that the ventilation chambers be equipped with a drain connection and, if necessary, an electric defrost.