Calculating the net free area of vent openings
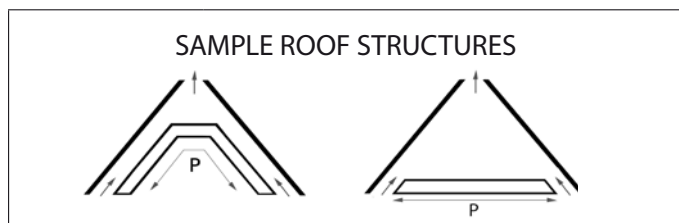
The air gap between the insulation and the roof deck must be 4 to 6 cm.
Air should flow in from the bottom of the roof (eaves) and out through the top of the roof (ridge).
The air flow between the eaves and ridge vents must be unobstructed (by insulation or roof beams) to ensure cross-flow ventilation. The total required net free area (NFA) of vent openings is a function of the insulated roof area (P) and the pitch of the roof.

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│         SAMPLE ROOF STRUCTURES          │
│                                          │
│        /\              /\                │
│       /P \            /  \               │
│      /    \          /____\              │
│                      <- P ->             │
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Roof pitch	Required NFA of vent openings
15° - 40°	P÷300
41° - 85°	P÷600

Example:

Roof area (P) = 120 m²
Roof pitch = 35°
NFA Armourvent® Multi = 275 cm²/linear m of vents
Total required NFA of vent openings:
120÷300 = 0,4000 m² = 4000 cm²
Minimum linear m of vents required over total roof:
4000÷275 = 14,54 m
Linear m of vents at ridge: 14,54÷2 = 7,27 => 7,50 m
Linear m of vents at eaves: 14,54÷2 = 7,27 => 7,50 m

Ventilation should be equally divided among the number of vents at eaves and ridges.

Note:

Roofs with vapour barriers need 40% less ventilation.
In certain regions (mountainous areas, the coast) special building regulations may apply.

ARMOURVENT® MULTI