



2 inch (40mm) thick, solid EPS hive top prevents heat loss and heat radiating into the hive during hot weather

1<sup>9</sup>/<sub>16</sub> inch (40mm) thick solid EPS walls

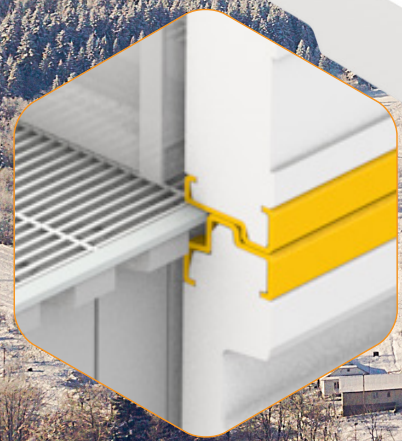
Recessed queen excluder enables a perfect seal between the brood box and second box

Ventilated floor allows the colony to manage airflow, humidity in the hive.

Cooler in summer



Warmer in winter



Interlocking design ensures a perfect seal between hive bodies, eliminating hot or cold drafts & prevents water entering the hive



# Insulation really matters

Honeybees are the masters of climate control in their hives, and they need to be. Maintaining brood temperature at a substantial 34°-36°C is critical for honeybee colonies to rear brood and survive and flourish as a colony.

Keeping warm in winter and cool in summer takes energy (honey) and honeybees (Heater bees) assigned to the task of maintaining the temperature. The better insulated the beehive, the less honey and less honeybees are required.

Wild honeybees choose to live in the hollows of large trees and logs because they provide a large protective thermal mass, reducing the amount of energy required to maintain the hive's climate.

In contrast, most domesticated colonies are housed in fabricated timber hives with a typical wall thickness of half an inch offering very little insulation against the outside elements.

The insulation is further decreased when the timber becomes waterlogged during damp cold winters leading to the rapid consumption of honey stores, winter clustering, and susceptibility to diseases such as Nosema and Chalk brood.



## How do honeybee colonies stay warm in winter?

The honeybee colony's ability to survive the winter depends on their food stores. Keeping warm takes energy in the form of honey. In winter, the bees cluster around the brood to keep warm. The more thermally efficient the hive, the less honey is consumed for generating heat energy, the bees are required to be heater bees – freeing up the hives resources for other important activities such as foraging, hive hygiene and brood raising.

## EPS beehives help you keep more productive bees...

With more than six times the insulation value of a standard wooden beehive, The HivelQ beehive provides an environment more akin to living in a large hollow tree with a large thermal protective mass.

The excellent thermal performance of the HivelQ EPS beehive provides a healthy environment for honeybees all year round. It keeps the colony dry and warm throughout cold and damp winters and cool, productive and healthy throughout hot summers.

## Improved survival rates

The warm dry conditions inside the HivelQ beehive dramatically improves overwintering survival rates. The thermal qualities of our hives also improved survival in extremely hot conditions.