HONEY PAW POLYESTRENE BEEHIVES FOR PRODUCTIVE BEEKEEPING

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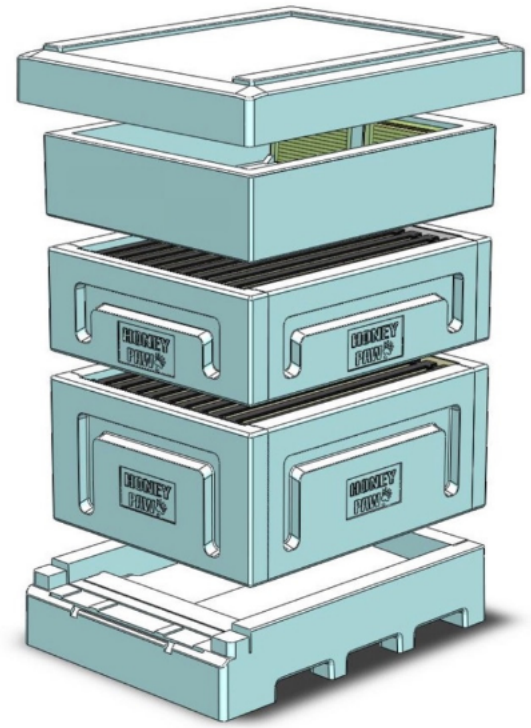


Honey Paw Polystyrene Beehive Introduction

The Honey Paw polystyrene beehives have been designed in Finland by a team with over 25 years of beekeeping experience.

Our hives were tested for many years within a beehive colony operation containing over 1000 hives, before introducing it to commercial use. Tests have been carried out in the extreme conditions that Finish beekeepers face every year, where the temperatures range from -45 °C in the winter, to +35 °C during the summer months.

The hives are made of expanded polystyrene (EPS) material with density of over 100 kg / m3. This makes it 10 times thicker than the polystyrene used for general packaging and 2 times thicker than polystyrene used in motorcycle helmets.

Honey Paw polystyrene beehives not only offer the best thermal performance, they are extremely lightweight, will help to increase honey production and will improve the health of the beehive colony. By using the best polystyrene material and superior manufacturing process we do not compromise on quality and provide a long lasting product.

Selection of beehive parts

Honey Paw offers wide range of products to suit every beekeepers needs and requirements to best fit their beekeeping operation. Like any other hive, the Honey Paw hives are made up of 4 main components:
Hive Roof, Hive Floor, Brood Box and Honey Super.

As an additional option, Honey Paw also supply a Hive Top Feeder and special Pollen Trap. We also have a selection of Nucleus hives available, used for queen rearing and the ability to split hives. Nucleus hives can be used within honey production and for wintering spare queens.

Hive Body

Honey Paw hive bodies come in both Langstroth and Medium Langstroth sizes (2/3 Langstroth). Each body has a capacity of 10 frames (Hoffman spacing) but can also be used with 8 and 9 frames. They are sold as an unassembled items and will need to be put together before use. They have locking joints that are fitted in place after gluing. (You can r*ead more about hive assembly in the section: Preparations before use)*

Hive Roof

Our hive roofs are multifunctional, allowing them to be dynamic and ready for the changing climates - keeping the beehive warm during the winter and offering ventilation when turned upside down.

The Honey Paw hive roof is 45mm thick in the middle and has overhanging outside edges to provide protection against all weather types. If the hive temperature should rise to high, the roof can be turned upside down forming an exit tunnel for warm air to escape.

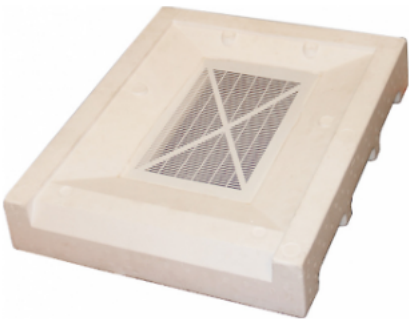
Hive Floors

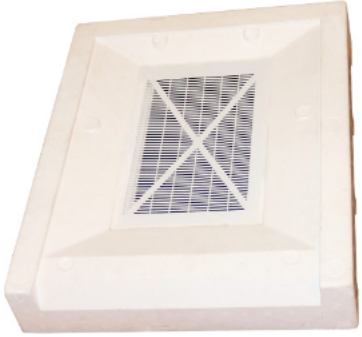
Honey Paw offer three different types of polystyrene hive floors: with mesh, a thermal floor and a hive floor with ventilation board. Therefore something for every beekeeper seeking the best results.

All the hive floors are designed in such a way to ensure that the hive stays within an optimal temperature without excessive moisture, therefore preventing mold from forming inside of the hive. They are functional in use and easy to work with.

Hive floor with mesh

The Honey Paw hive floor with mesh is supplied with either a plastic or aluminum mesh. The floor is the same size as the Honey Paw bodies and we have designed the entrance in such a way that there is no need for an entrance block or mouse guard. The floor with mesh should be placed above ground level (i.e. on a wooden pallet) so that there is an "open space" directly under the hive floor. As an option you can close the bottom opening by using a separate closing board. The hive entrance should be blocked only when moving or splitting the hive. The hive ventilates through the bottom mesh/net and the moisture exits by draining through the bottom mesh.





Thermal hive floor

The polystyrene thermal hive floor is like a normal wooden bottom, but has the added benefit of keeping the hive much warmer. Honey Paw's thermal hive floor can be used with either polystyrene hive bodies or wooden ones. The hive floor entrance is 3cm high and will work as a vent with regards to ventilation. The thermal hive floor is definitely the best option to ensure that the hive stays warm during the colder seasons.

Hive floor with ventilation board

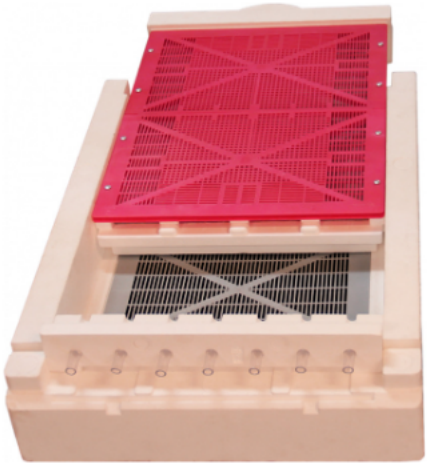
This is an all-around and multipurpose hive floor which can be used throughout the whole year. The bottom board has two options: open or closed. By turning the bottom board you can either keep the hive ventilated from the edges (open position) or the board can be turned (closed position) so that the bottom hole is completely shut to ensure that the hive stays warm. This hive floor has a plastic mesh under the reversible polyurethane board. This hive floor has been known to reduce the brace comb (or burr comb) from being formed under the brood chamber frames. When wintering the bees will form the cluster "bee ball" directly on the warm styrofoam board. This floor also has the option to be used with Honey Paw's pollen trap.

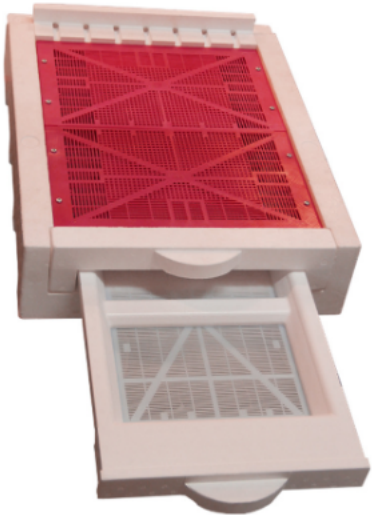
Pollen Trap

The Honey Paw Pollen Trap ensures that the pollen is effectively collected, safely stored and has easy access.

Honey Paw provides an integrated pollen trap which can be used with the Honey Paw floor with ventilation board. The pollen trap replaces the ventilation board but without blocking the hive ventilation. This pollen trap does not change the hive entrance, so the bees will still immediately how to enter - through the entrance pipes in front of the hive.

Pollen is stored under the hive within the pollen drawer which can be accessed from behind the hive. Since the pollen is stored under the hive, it stays secure from external weather conditions (i.e rain). This pollen collector doe not cause swarming or disturb the bees like some of the external pollen collectors tend to do.





Hive Top Feeder

Honey Paw designed the hive top feeder to help make the feeding process both easy and effortless. Feeding can be done without disturbing the bees, simply by opening the hive roof and adding the liquid sugar. The hive feeder has an internal access from inside of the hive. The bees will climb through the tunnel entrance under the clear plexy to feed. This feeder has been designed to offer easy access by the wide entrance, plus providing "bee steps" to help them climb.

A see-through plexy is placed in the feeder so that the air flow or daylight doesn't disturb the hive, but provides an inspection window for the beekeeper to observe. The feeder inside bottom is slightly tilted by material thickness so that the feeder will empty even if the beehive is not adjusted straight on the ground (the side inside of the beehive is completely even so that no brace comb will form). This feeder should also be painted on the inside to help keep it clean.

Nucleus Hive

A Nucleus hive is a small beehive that can be used in various ways. Nucleus hives come in a 4 frame capacity and can be used when splitting the hive, queen rearing or when wintering "spare queens". Nucleus bodies are made of the same high quality material as the normal size Honey Paw hive bodies (expanded polystyrene "EPS" with density of over 100 kg / m3).

A complete nucleus hive will include a roof, floor, body for frames and a nucleus feeder. Honey Paw nucleus hives have special interlocking small notches on the side, which help the parts stay in place and when moving the hive. This doesn't prevent using nuc boxes together with normal 10 frame boxes ("double nuc hive or Palmerized hive"). As an advantage compared to other small queen rearing boxes, Honey Paw's 4 frame nucleus does not get "robbed" as easily as the smaller and weaker ones.

Preparing the Honey Paw polystyrene hive for use

Honey Paw polystyrene hives require some attention before use. Some of the parts require assembly because the parts are provided as flat packed to save space and money in transportation costs.

Assembling polystyrene beehive boxes:

1. Install T-shaped frame rests (plastic lists) to the both side of the hive body. Frames rests provide protection to the hive body against the wooden or plastic honey frames / combs.

2. Apply good quality water resistant glue to the joints of the boxes. (We recommend polyurethane glue)

3. Connect the hives corresponding pieces together by pressing firmly.

4. Paint the beehive parts using an exterior waterproof paint. If you have lot of hive parts to paint, we suggest using a spray panting gun. **(It is important that all polystyrene hive parts are painted before use, even if it is just on the outside of the hive parts. This provides protection from UV-rays, but also helps to maintain the cleanliness of the hive)**

Honey Paw hive floors and feeders are easy to assemble. The feeder will only need the plexys to be inserted in place and the floor will need the plastic or aluminum net inserted. (TIP: you can also use silicon for the plastic bottom nets, which will keep it in place all the time)

Migration, ventilation and wintering

When transporting a hive, we recommend that you do any preparations a day before. The polystyrene hive should be secured with hive strap or belt so that the hive roof and bottom are pressed tightly against the strap/belt. The hive doesn't need any extra precautions to keep the parts in place, as the bees would have sealed the boxes together. The greatest threat during a hive migration is chance of it overheating. If you think that hive should be prepared for a potential rise in temperature, you can do the following:

1. Place the propolis screen or another bee tight net on the top*
2. Turn the hive roof upside down to make the "tunnel ventilation"
3. Remember to keep the bottom screen open (if you are using a floor with mesh or ventilation bottom)
4. Alternatively you can replace the hive roof with another type of cover that has ventilation (a hot air) exit. In this case you can leave the hive roof aside during the transportation.

Ventilation within the Honey Paw hives are managed by the hive floor ventilation intakes. Or if you are using a thermal bottom, through the hive entrance gap. The ventilation will ensure that the hive stays at its optimal temperature during the summer and prevents moisture when wintering.

During the summer season if the temperature rises above +30, we recommend that you remove any inner cover plastics and replace it with a propolis screen or another bee tight screen. Then place the hive roof in the tunnel ventilation position (the opposite way around to the normal position)

When wintering the Honey Paw polystyrene beehive, it is very important to keep the ventilation intake open and clear from any objects or plants that may block it. We recommended that you keep your hives on a wooden pallet or something similar.

If you are worried that your hive may gather moisture, you can place 2-3 fiberboards on the top of the honey super, directly under the hive roof. The fiberboard will gather extra moisture but will still keep the hive warm.

NOTE! IF YOU ARE USING ANY PLASTIC INNERCOVERS AND SEE MOISTURE GATHERING, PLEASE REMOVE IT AS IT WILL MAKE THE MOISTURE GATHERING WORSE.

**Polystyrene hives will not mold even inside if the hive ventilation is carried out correctly.*

Accessories

- Queen excluder: Our queen Excluder are available in either plastic or metal. A queen excluder prevents swarming and will help the beekeeper to maintain the hive.

- Propolis screen: A propolis screen is mainly used for the propolis collection, but it is very useful when transporting the hive or if the inside temperature is likely to rise too high. A propolis screen is placed directly under the hive roof.

- Varroa board: A varroa board can be used with a hive floor that has a net/mesh. It helps when counting the number of varroa mites.

- Fiberboards: These are very handy if you have problems with moisture during the winter months. Place the fiberboards under the hive roof to trap moisture, while still keeping the hives thermal capabilities at a good level.

- Entrance block: Entrance blocks can be used with hive floors when migrating / transporting a hive or if you want to reduce the hive entrance size.

- Mouse guard: As the name states, this is a guard is for preventing mice or other small animals from entering the hive.

Maintenance and care

With proper maintenance and care your polystyrene beehives will easily last over 20 years.

The outside surface of the hives should be painted with an oil or water based paint to protect them from UV radiation and to help keep the hive clean. All surfaces of the hive should be painted, including the roof, floors, hive bodies, bottom boards and feeders. Painting may be done by brushing, rolling or spraying. Light colors are recommended to be used in hot climates and darker tones in colder climates. Unlike wooden hives, you will only need to paint the polystyrene hive once.

Polystyrene hive maintenance is very easy and minimal as the polystyrene does not absorb moisture, it does not rot or suffer any warping due to changes in temperature or humidity.

Cleaning the polystyrene hive should be started by scrapping the wax and propolis leftovers from the hive parts. For this you can use a hive tool or any special scrapper. After the scrapping, hive parts can be washed with washing soda (diluted with water as instructed within the product) and then scrubbed. If you need to sterilize the hive, you can do so by using hypochlorite diluted to 0.5%. Ensure you wash with water after the sterilization process.

Benefits of the Honey Paw polystyrene beehive

- **Minimal weight:** An empty hive kit (roof + floor + brood box + 2 x honey supers, will weigh approximately 6kg. This helps when migrating, stacking, lifting and moving the hives.

- **High material density:** Honey Paw polystyrene hives have a density of over 100kg / m3. This makes the hive extremely durable. The material is 2 x thicker than the polystyrene used in motorcycle helmets.

- **Exceptional thermal performance:** The outstanding thermal capabilities helps bees to survive in cold winters and the innovative ventilation system keeps the hive dry all year round. The warm and stable environment helps to build the colony and the bees don't have to make so much effort to keep the brood chamber warm.

- **Higher honey production:** Field tests have proven that the Honey Paw polystyrene hives achieve an increased honey production compared to wooden hives. Higher production is due to the healthier colony and higher number of bees. The bees can also concentrate on honey production instead of maintaining the hive in optimal temperatures. In some cases the production of honey has been at over 25%.

- **Ergonomic and compatible design:** Honey Paw's polystyrene hives offer an ergonomic design to work with. The hive 'box' handles are designed to allow you to get a good grip of the box even when working with hives that have many boxes on top of each other. The Honey Paw polystyrene bee hives are also compatible with other hives that have similar dimensions (including wooden ones) as it doesn't have any "special" stepped profiles.

- **Easy maintenance:** The hive is very easy to clean and doesn't require much effort to maintain it. Since it doesn't suffer from vermin, rotting, molding* or moisture absorption, the hive stays more hygienic and healthier compared to wooden hives.

- **Improved feeding system:** Honey Paw offers a compatible top feeder with a capacity of 15 litres. The feeder is placed directly under the hive roof and has an internal entry from the hive and a protective corner plexy cover so that the bees do not get disturbed if the hive roof is removed.

- **Easy Pollen Trap:** Honey Paw offer an option for hive to have a floor with an integrated pollen trap. Pollen stays safe from external weather conditions under the hive. It has easy access from a drawer behind the hive.

- **Environment and cleanliness:** The Honey Paw hive EPS material is environment friendly. Both the manufacturing process and daily use do not generate any risks to the environment or health. EPS on Honey Paw hives meets the international regulations and is approved material to be directly in contact in any food material. Polystyrene material is 100% recyclable.

**Polystyrene hives will not mold even inside if the hive ventilation is carried out correctly.*