

DIY: Adaptable honey warming cabinet

By Steve Davies (alias The DIY Slave)

Not everyone has the space to store a full size honey warming cabinet, useful though it is. Also, it can be a bit excessive should you only need to warm up a few jars. By utilising existing equipment, this is where the warming unit comes in handy.

Inspired by Peter Coxon's unit at last year's AGM, I decided to be 'creative' and this is what I came up with.

Equipment needed:

- 1 x old super or brood box
- 1 x old queen excluder
- 2 x heat tubes
- 1 x thermostat
- 1 x piece of 5mm plywood to match the external measurements of the box
- 1 x piece of 10mm plywood to match the external measurements of the box
- Selection of stripwood
- Selection of Celotex insulation
- 1 x roll of aluminium foil tape

Method:

I used an old Commercial super but any box would do. With the discounted prices offered during the sales/shows, it's tempting to buy new (second quality) boxes.

- Although not strictly necessary, I first cut both the top and bottom edges removing all rebates to provide a flat surface.
- Using the box as a template, mark and cut one section of 10mm plywood to match the external dimensions. This will be the floor.
- Again, using the box as a template, mark and cut one section of Celotex to match the internal dimensions of the box.
- Glue and nail the plywood to the bottom of the box. Once the glue has dried, sand down all edges so there are no overlaps.
- Push the Celotex 'floor' into place. There is no need to glue and probably best not to as you may need to remove it at some future date.
- Cut four pieces of Celotex to match the internal sides. Cover the top edge with silver tape.
- Position the two heat tubes in place and then mark two strips where the 'feet' will be secured.
- Remove all Celotex and then carefully cut out the marked sections on the Celotex floor.



- Cut two pieces of stripwood to match the cut outs, preferably to the same depth as well.
- Return the Celotex floor into the box and put the two wooden strips in place. If a loose fit, then glue the bottom of the strips first.
- Drill two holes in one end of the box to run the electric cable through.



- Fit all Celotex side pieces in place.
- Cover all joins and the wooden strips with silver tape. This does make a difference in retaining the heat. I also taped over the top of the box covering all wood although this may not be necessary.
- Drill two holes through the Celotex in line with those previously made in the box then feed the electric cables through. I used interior hole covers to seal the gap in the Celotex and these can be bought cheaply from Screwfix.
- Fit the feet and then the heaters in place.

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- You will now need something to rest the jars etc. on and I eventually settled on an old queen excluder. Not only is this the right size, but the grill is strong enough to take the weight – I hope 😊
- The QE needs to be removable and should not be glued in place. This will allow you to clear up any spillages that may occur.
- First, line the underside of the QE with foam backed draught excluder to seal any imperfections between the QE and box.

- Connect to the thermometer and it's ready for use.



- I chose an Inkbird ITC-306T dual relay temperature controller as used for reptiles, greenhouse and incubation (£30.99 from Amazon). As a 'plug and play' unit I didn't need to worry about wiring everything together!



- This is the basic set up and can be used for keeping supers warm during the extraction process.
- If using a wooden super or brood box to warm some jars, I would recommend using more Celotex for the internal sides and roof or wrapping the complete unit with thick material to keep the heat in.

However, it is named 'Adaptable' for a reason and we need to go back to the workbench.

- I used Paynes polyhive supers and brood boxes for better insulation but the process will apply whatever you use. Although the internal dimensions are the same be it wood or poly, the external dimensions are different.
- Put the selected polybox onto a piece of 5mm plywood. Mark, and cut to size.
- Place the heating unit on top of the plywood and mark around the outside edges.
- Place the plywood central on top of a QE and mark the grill edges. Cut out the marked hole and you will then be left with a picture frame.
- Cut four lengths of stripwood to size, then glue and pin along the marked lines. This will keep the board in place during use.



- To stop the QE moving during use, I have tried a couple of methods. Firstly, I drilled and screwed the QE and box together but this distorted the frame producing gaps along the top surface.
- Next I considered a couple of dowels just to hold the QE in place. If the dowel was too tall I felt this may prevent the QE from sitting down evenly but it remains an option.
- As the QE is slightly larger than the box, I decided to put a frame around it, in effect, a mini roof.



- Turn it over and place on top of the heating unit.



4. Two 14x12 brood bodies will take one 50kg settling tank.



- Repeat the process with another piece of 5mm plywood to accept a Polynuc box. I used the same external dimensions as the Polyhive and the internal dimensions of a Polynuc as a template. Whereas the Polyhive is heavy enough to stay in place, the PolyNuc can be moved easily. To prevent this, frame the upper face of the hole with 10mm stripwood. The undersides of both frames are also lined with 10mm stripwood as per the photos above.




Although this is designed to use your existing boxes, those using poly hives have an thermal advantage. However, all is not lost as it is worth watching out for the sales. In August 2019, I bought second quality 14x12 polyhive brood boxes for £24.50 each thereby saving £21 total. When not in use, they could be used to store spare equipment or frames.

Once you have finished warming the honey, all the boxes can be put back in your apiary and you just have to find space for the heating unit (50cm x 50cm x 30cm), how easy is that!



These 'frames' will give you more versatility depending on your needs:

1. One Paynes polynuc super will take 12 x 1lb. jars or 15 if the internal feeder is removed.
2. One super (wood or poly) will take 20 x 1lb. jars.
3. One 14x12 brood body will take one large honey bucket or 60 x 1lb. honey jars stacked on top of each other (see picture top right column).

If you've made it this far, you must be interested! It may sound a bit of a rigmarole but take it slowly and you'll have this done in a day. Good luck :) 

Supplies:

60w tubular heaters; £16.98 each ([Toolstation](#))

Inkbird ITC-306T Dual Relay Thermostat; £30.99 (Amazon)
Kingspan TP10 Insulation Board – 2400x1200x25mm; £27 (Wickes)

Self Adhesive Foil Tape – 50mmx45m; £6.00 (Wickes)

Interior hole covers (5); £2.29 ([Screwfix](#))