A Rediscover.co.nz project written by Julie Legg © 2019



DIY SOLAR DEHYDRATOR

This project has been built to the size of a standard sheet of Perspex – tough, durable and child-friendly. Add more shelves as required.

Materials Required:

- 1 x sheet of plywood 2400x1200x17mm
- sheet of insect screen or fine mesh
- staple gun and staples
- liquid nails
- assorted deck and timber screws
- contact spray
- tin foil
- 3m x 38x18mm wooden trim
- Resene Lumbersider Waterborne Low Sheen - Black
- 6m x 70x45mm framing timber
- 4 x angle brackets 100mm

- Resene Colorwood Natural Wood Stain - Teak
- 8 x bolts
- 4 x 50mm swivel castor wheels
- 1 x acrylic clear panel 3 x1200x600mm
- 2 x small drawer knobs

How to:

1. Measure, mark and cut sheet of plywood to 1 x 1200x600mm (base), 2 x 1200x300mm (sides), 2 x 600x300mm (ends) and 4 x 566x380mm (shelves).
2. Sand rough edges to remove any burrs and potential splinters.
3. Mark and cut vent holes in the centre of both 600x300mm ends approx 370x100mm wide. To create oval vent ends, use paint tins and trace around them with a pencil.
4. Cut insect screen to cover vents and staple in place. The stapled ends will become the internal ends of the box.
5. Position base, sides and ends in place to create an open box.
6. Use Liquid Nails to affix sides and ends together, one at a time. Drill pilot holes evenly spaced where sides and ends join, then secure together with screws.
7. Turn frame over and screw on base.
8. Using contact spray, affix lengths of heavy-duty tin foil to the inside of base.
9. Measure, cut and screw lengths of trim on the inside of each ends, securing the edge of the foil to each end (optional).
10. Measure, cut and screw 1 x 38x18x600mm trim to protrude 10mm above one end of the frame and 2 x 38x18x1200mm trim at a height of 3mm along each side. Once the Perspex cover is in place it will rest on the lower lip created by the trim.
11. Space 4 x 566x380mm shelves inside the box placed evenly, each at a 45 degree downward facing angle. Screw from exterior side, then directly into the shelves themselves. Once box is tilted to its final position, shelves will be horizontal and square.
12. Paint all external wood with two coats of Resene Lumbersider Waterborne Low Sheen tinted Black.
13. Prop box up on an angle, with lip trim end closest to ground. Adjust recline until shelves are horizontal and square.
14. Measure and cut legs from framing timber: 2 x 550mm (front legs), 2 x 1070mm (back legs) and 2 x 690mm lengths (horizontal supports for each set of legs). Screw 1 x horizontal support to secure 2 x front legs together. Stabilise inside corners with an angle bracket. Repeat for the back legs. Secure both sets of legs together with 2 x 540mm lengths.
15. Stain legs with Resene Colorwood Natural Wood Stain – Teak.

16. Slide leg structure to snuggly fit outside of the box, with taller back legs inset approx 310mm from end of box. Secure with 2 x bolts per leg.
17. Screw castor wheels to the underside of each leg.
18. Screw pilot holes then secure knobs to the front of the Perspex panel, spaced evenly on the front to assist removal and repositioning as required.
19. Slide Perspex panel to rest on the bottom lip lid trip and fit snuggly into sides.
