

Construction Directions

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2021

1. Cut the plywood for each hut end. The front sheet has a 24 inch by 32-inch door and that door is on center and 10 inches from the floor.
2. After the door corners are located on the sheet, drill a 3/4-inch hole at each corner and then cut out the door. The holes make for a clean corner cutout.
3. The front sheet is then set on top of the second sheet of plywood and I mark the edges so I cut an identical size and shape rear panel but it has no door cutout.
4. Cut 4 2 X 4s 54 inches long. These are then screwed to the hut end sheets with care to inset them the thickness of the side building material. These 2X4s are attached on edge and not flat.
5. I then cut treated 2X4s with 15 degree angles and screw them into the hut end frames. The top piece needs to be outside of the plywood by .75 inches. The bottom is flush.
6. Cut 4X4 with 15 degree angles and inset them 5.5 inches from the floor 2X4s. On the front sheet this will make them even to the top of the door.
7. Cut treated 2X4s 37 inches long and attach two of them to each side of the door. They fit on top of the 4X4 and under the top 2X4.
8. These 2X4s must sit $\frac{3}{4}$ inch inside of the plywood to create a ledge for the removable door to sit against.
9. Attach a 4X4 with 15-degree angle cuts to the rear end plywood sheet and again 5.5 inches above the ground 2X4.
10. Cut 2 2X8 pieces 9 feet long. Then cut a 15 degree corner out of each 2x8 so they will fit into the front and rear plywood sheets and on top of the 4X4.
11. Set the front and rear plywood panels up so that the 2X8 planks connect them. Take care to square this arrangement.
12. When the diagonal measurements indicate a square frame then drill and bolt the 2X8s to the 4X4s with 5/16 bolts - 2 per end.
13. Cut 2 2X6s 9 feet long treated. In-cut each end 3.5 inches and .5 inches deep. Bolt these to the very bottom of the front and rear end panels.
14. Cut 2 4X4s 9 feet long and then in-cut each end 3.5 inches by 1.5 inches then bolt these to the end plywood panels.
15. Cut 2 2X 4s 9 feet long and screw them to the very top of the end panel 2X4s.
16. Cut 1 2X6 5 ft long measure 22.5 inches from the rear plywood on each side and attach this 2X6 at that location flat mark on the door side
17. Cut 1 2X6 64 inches long with 15 degree angles on each end and screw this to the flat 2X6
18. Bolt the front guard rail bracket to the door one on each side 5/ 16 bolts one through the 4X4 and 1 through the door side.
19. Bolt the rear guard rail bracket to the rear 2X6 so the guard tube will be parallel with the 2X8.
20. Cut 2 1X1 12 ga flat tubing 80 inches long slide these into the rear rail support and then slide them ahead into the front pipe.
21. Drill a hole into the front pipe to secure the rail with a locking pin.
22. Cut a piece of metal flashing 28 inches long and about 10 inches wide and install this on the door bottom

23. Cut 1 24-inch-long piece of 10 in smooth core tile and then cut a 4-inch segment from the entire tile this then slips into the front door
24. Cut a treated 2X4 to a dimension of 1.5 X 3 and drive this into the front of the door guard on edge. Secure this through the tile with 5/16 lags 6 inches long
25. Cut 2 pieces of 1/8th X 1.5 flat steel 8 inches long and bend as shown in the diagram drill hole for the screws screw these to the door sides as shown
26. Cut 1 piece of 1/8th X 1.5 flat steel 8 inches long and bend as shown for the door latch on top.
27. Construct the removable door from the original cut out using a piece of steel tubing 28 inches long
28. Cut 2 cattle panel sections full 50-inch width and 5 1/3 feet long and bend as shown for the roof support.
29. Cut 8 fastening clips from sheet metal and drill them out use these to attach the panels to the roof.
30. Purchase and install a fabric cover about 10 feet long and about 5 feet wide.

Construction Notes

The intention of this design is to closely imitate the many good features of the Natural Farrowing systems Nesting Box. This commercially manufactured farrowing hut has a great performance record and it was the product of extensive research. This plastic hut is no longer available. The Practical Farrowing Hut has internal specifications that are very close to the Nesting Box.

The Frantzen farm has used 9 of these Nesting Boxes for many years. We use them exclusively in the pasture. To make this work outside, we designed a fabric roof supported by curved cattle panel sections. Our design is for cool to hot weather farrowing and not suited for cold. The Nesting Box as provided by the manufacturer is designed for cold weather use. It comes with a flat plastic lid.

The Practical Farrowing Box retains the internal measurements of the Nesting Box but the exterior is different. The sidewalls slope to the inside 15 degrees. The roof opening is 38 inches wide. The box as shown in the drawings has a cattle panel frame and fabric cover. If the farmer wants to use this hut in cold weather this roof is easily removed and an insulated roof built from plywood can be installed.

There is a small waste of wood incurred in order to build a box with the same dimensions as the Nesting Box. If the Practical Hut is reduced in length from 9 feet to 8 feet 8 inches, then 14-foot-long lumber can be cut with no waste. When the box is a full 9 feet long then 16-foot wood is needed.

Weather has a significant impact on design. Metal covering is hot when it is hot and cold when it is cold. Wood with a metal cover is suitable for many conditions. That construction is more expensive than wood frame with metal covering. One possible option would be to use a wood frame with metal coverings and then have the interior spray foam insulated. That would provide for good cold weather comfort for the stock. In extreme heat the fabric cover could be rolled down or easily removed.

The cattle panel fabric roof can be made tall enough for a person to stand up inside the box. The guard rail is nearly identical to the Nesting Box. We have had the rails bend in use but that is resolved by

removing them and just rotating them to a better position. The Practical Box has the same features but it does not have adjustments like the Nesting Box. We have never made use of the adjustment feature so this was not included in the Practical Design.

The guard rail is held in place by a weldment on the door end. This weldment serves two purposes. It holds the rail and the angle iron is long enough to have a bolt go through the 4X4 on the bottom and the 3.5-inch-thick door frame on top. This greatly reinforces the door. In spite of many efforts to make for a strong door, the "E Huts" were plagued with door maintenance issues. The Practical Box has a near indestructible door frame. The door itself is not intended to stay with each box but to be stored inside and used when needed. The door has only one moving part and no hinges. The plastic door guard made from 10-inch smooth interior tile is a new way to cover the door bottom and is not field tested.