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TRAP DOOR KEEZER



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THE TRAP DOOR KEEZER

BY STEVE KIEBZAK

Gain access without lifting the tower

As most beginning homebrewers do, I first bottled my homebrew in saved 12-oz. longnecks. After a few batches under my belt I found bottling was a hassle, and I really wanted a beer refrigerator with taps at my newly-built bar. The quest began for the perfect beer fridge/kegerator. My wife thought that having a refrigerator with multiple taps through the door would not be a fitting addition to our family room, and I had to agree even though we already had a 14 cu. ft. (0.24 cu. m) fridge in the basement we could modify. Nixing the beer fridge, I turned to the homebrew forums where members highlighted their beer fridge/kegerator/keezer creations and discussed pros and cons.

I wanted something that would integrate into my bar and hold at least 3 corny kegs. The keezer (kegerator + chest freezer) option was the way I decided to go. Many keezer builds utilize a wooden collar with taps mounted through the collar. Having taps sticking

out the front of the keezer would be in the way so a keezer with a tap tower was the next logical step. However, one big con of fixed towers is having to pull the keezer away from the wall when lifting the lid because the tap tower will hit the wall. My solution was to build a keezer with a fixed tap tower and section in the rear with a removable lid in front.

I found a 7.1-cu. ft. (0.2-cu. m) chest freezer on sale that would hold three 5-gallon (19-L) corny kegs. If a future fourth keg is wanted, a 2.5-gallon (9.5-L) keg will fit on the internal compressor shelf. I had some 2-in. (5-cm) thick boards available, milled from trees taken down when we built our house, and I used those to make the top. As an option, you could use any 2-in. (5-cm) wide lumber or plywood sub-deck with a zinc sheeting or a tile surface could be used. But one key with this build is that the front section shouldn't be too heavy. This section lifts off for access to the inside of the keezer. I attached an apron to the top sections that keeps the two top sections aligned. I installed a pull-type latch on each side of the apron sections to help keep the sections tight and flush. The front "trap door" section is only attached to the fixed rear section via the apron with the two pull-type latches. The bottom of each section is insulated with XPS foam board that I had lying around. The tower box is made from leftover cherry wood with an oak front and rear. As an add-on, I slipped a piece of hard copper pipe inside each pipe riser and ran one beer line through each. I insulated the insides of the tower box, and the first pour does not take too long to run cold.

I made my tower box big enough for a fourth tap if I ever wanted that option, but I chose to use that space to mount my temperature controller. I use the 4th port in my CO₂ manifold for purging kegs before filling. Cheers!

Materials List

- Chest freezer
- Wood for the top (freezer size dependent)
- ¼-in. x 1-in. (6-mm x 2.5-cm) foam weatherstripping
- ½-in. (13-mm) XPS foam board
- (2) pull-action latch clamps
- 1-in. x 3-in. (2.5-cm x 8-cm) wood for apron
- 1-in. x 6-in. x 4-ft. (2.5-cm x 15-cm x 1.2-m) wood for tower box
- ¼-in. x 6-in. x 3-ft. (6-mm x 15-cm x 91-cm) wood for front and rear tower box covers
- (2) 1¼-in. x 10-in. (3-cm x 25-cm) black iron pipe nipples
- (4) 1¼-in. (3-cm) floor flanges
- Temperature controller (STC-1000, UNI-STAT, or Inkbird)
- Kegeing setup (including 3 taps and a 4-port manifold)
- Miscellaneous screws, glue, electrical box, wiring

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Photos by Steve Kiebzak

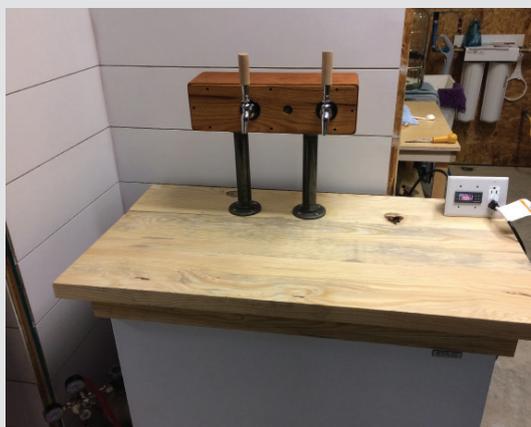
1. REMOVE LID AND INSTALL NEW GASKET

Remove the chest freezer lid and hinges, then install foam weatherstripping around the top edge of freezer. This gasket stops air leakage and keeps the cold where it belongs. Now is a good time to paint the freezer if a color other than white is desired. I spray painted my freezer black.



2. MAKE NEW TOP SECTIONS AND INSTALL APRON

My 2-in. x 10-in. (5-cm x 25-cm) boards milled from my trees were rough cut. Being a woodworker, I had equipment to plane the boards and joint the edges. I used wood glue and clamps to assemble each section. I used 1-in. x 3-in. (2.5-cm x 8-cm) boards to craft the apron, which was glued and screwed to the underside of the top sections. My fixed section ended up being 8-in. (20-cm) deep and the removable front section is 16½-in. (42-cm) deep.



3. FINISH THE TOP SECTIONS

When the glue is dry, drill 1¼-in. (3-cm) holes for the two black pipe tower risers. Add XPS insulation to the back of each section. Stain and varnish. Add pull-action latches to secure front to back section (pull latch is visible in lower right corner in top photo to the right)



4. BUILD THE TOWER BOX

I built the tower box from cherry wood (1 in. x 6 in./2.5 cm x 15 cm) I had left over from another project. I bought some 1/4-in. (6-mm) oak board from a big box store for the front and back of the box. I added a single receptacle in the back cover of the tower box to plug in the freezer. The receptacle is switched with the temperature controller. The temperature sensor cable runs into the freezer through one of the black iron pipe risers.



5. INSTALL FIXED SECTION AND ASSEMBLE TOWER

The fixed section of the lid was secured to the back of the freezer with bolts through the apron into the freezer top hinge holes. I slipped two sections of 3-ft. (91-cm) long, 3/4-in. (19-mm) copper pipe into each black iron pipe riser and used aluminum duct tape to secure to the inside of the freezer. This is an optional addition I utilized to keep the beer cold as copper conducts heat really well. One beer line runs inside each copper pipe. Insulate the tower box once all fittings and lines are secured.



6. DROP IN THE KEGS, CHILL, SERVE!

I set my temperature control at 36 °F (2 °C) with a 2 °F (1 °C) differential. The keezer turns on at 38 °F (3 °C) and turns off at 36 °F (2 °C). The temperature continues to drop to around 34.5 °F (1 °C) before it starts to rise and begin the cycle again. The keezer runs about 2 minutes every 30 minutes, so as to not strain the compressor. 

