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**Chop Saw Dust Hood #2: Top & Bottom of the Plenum Box Added** posted 11-26-2009 06:15 AM **5** times favorited Unwatch Blog entry by BlankMan **24524** reads **7** comments « Part 1: Top, middle rail, and back glued in place

Part 2 of Chop Saw Dust Hood series Part 3: Outlet & Saw Swivel Clearance » Now I've added the top and bottom to the plenum box in the back of the collection hood. The idea of the plenum box is to equally distribute the vacuum along the whole length of the opening to collect the sawdust. The 4" duct will connect to the top of the box, inside the plenum 2/3 down from the top is a divider board that splits the box into two chambers. The divider board has three holes in it, a 2-1/4" hole in the middle and two 2-3/8" holes one at each end. What I am hoping this will do is evenly distribute the vacuum in the lower chamber which then has the opening along the bench top to collect the sawdust.

VIEW BLOG ARCHIVE I went to this trouble due to the performance of my previous dust collection hood that I had behind my old 🖸 RSS FEED 🔝 B 🎷 ... By subscribing to the RSS feed you will be notified when new entries are posted on this blog.

BlankMan

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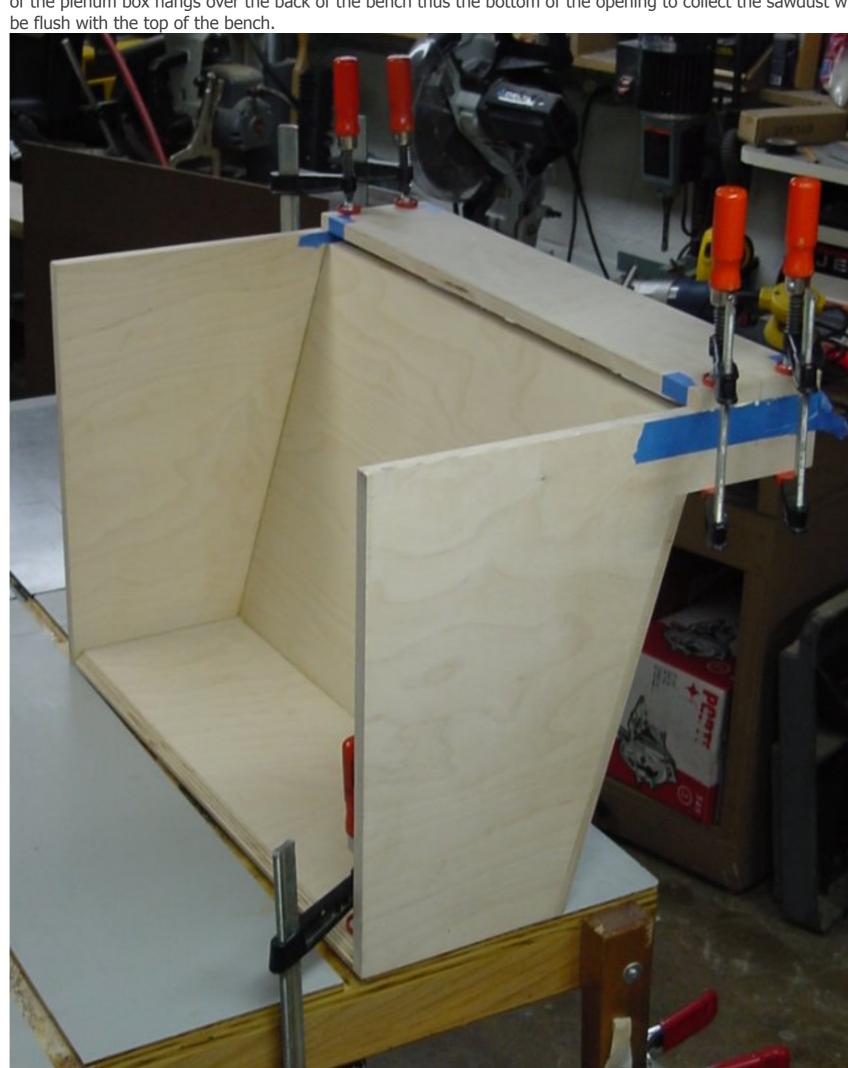
chop saw. That one had the 4" duct connected on the left end coming in horizontally. What happened was that the dust collection was good on the left side but at the right side of the hood it was not good at all and sawdust would collect in the bottom at the right side and never get sucked out. The divider board will allow me to experiment to get the best performance collecting the sawdust by changing

the hole sizes and hole locations. All I have to do is make a different board with different hole sizes and/or locations and slide it in. There are also two dadoes along the entire circumference on the inside of the plenum including the back cover that hold the divider board in place. These two dadoes will allow me to try the divider board at different heights thus altering the size of each of the two chamber. These particular hole sizes where chosen for the first attempt because the sum of their area is equal to the area of the 4" duct that will connect to it. A 4" duct is around 12.5 sq.inches, the two 2-3/8" holes are about

by keeping these areas near the capacity of the 4" duct that will help the performance by keeping the vacuum constant. The hood upside down showing the bottom of the plenum box glued and clamped in place. This bottom cover of the plenum box hangs over the back of the bench thus the bottom of the opening to collect the sawdust will

4.4 sq. inches each and the 2-1/4" hole is about 4 sq. inches so that comes to 12.8 sq. inches. This was also

why I made the opening 1/2" high. That opening's length is 27" so it's area is 13.5 sq. inches. I'm hoping that



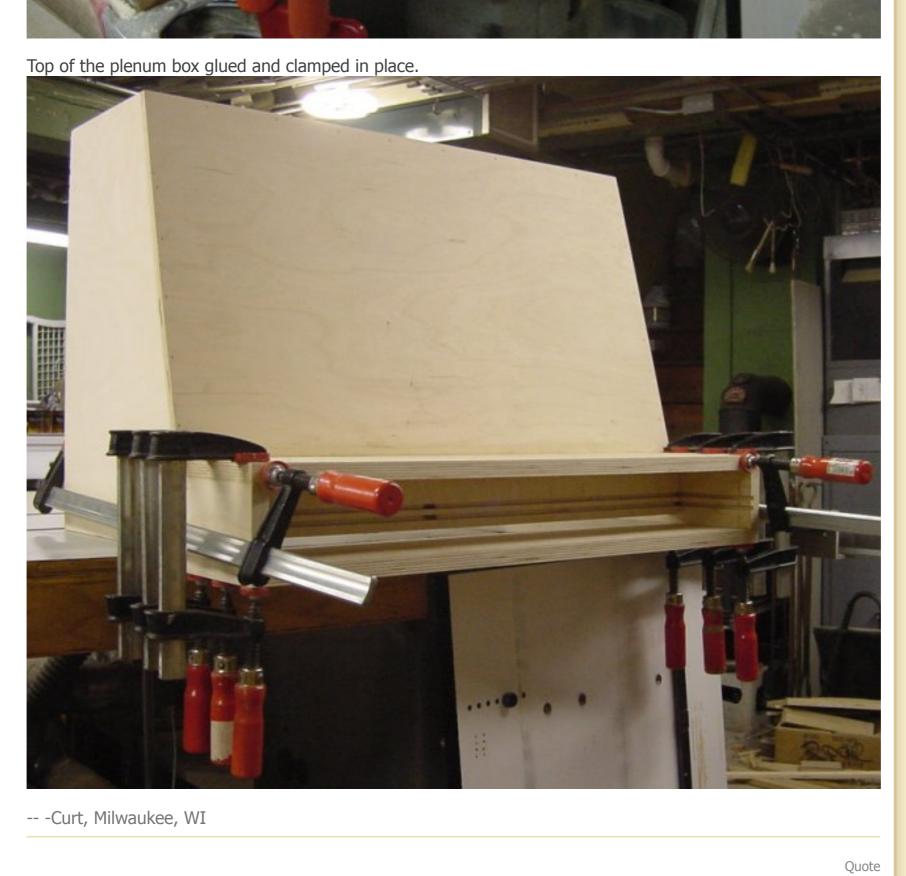
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The plenum divider board in place.



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wondering what would work for the miter station. I watched New Yankee Norm cut a circular hole beneath the home | projects | blog chop saw but did not really like that idea, although he said it did work. Keep the pix coming. 48 posts in 4370 days #1 posted 11-26-2009 09:38 AM -- Davo in Texas Flag Quote slick1 **Great Dust Hood!** Just making one now, but was wondering if you have to calculate in the chop saws 2" dust

Blankman, I will be watching this blog for all entries. I am in process of gettin my shop in order and was

19 posts in 4229 days -- - - Rod , Lloydminster, Saskatchewan, Canada #2 posted 04-13-2010 01:01 AM Quote Good stuff.

-- Ohh mann...pancakes and boobies...I'll bet that's what Heaven is like! 🛧 🛧 💠

pipe hole in the plenum box also to keep the vacuum constant?

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#3 posted 04-13-2010 01:29 AM

#4 posted 04-13-2010 01:30 AM

#6 posted 04-19-2010 02:10 PM

**BlankMan** 

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:)

worked out well.

-- - Curt, Milwaukee, WI

50-760 1-1/2 HP dust collector; FANTASTIC!!!)

BlankMan slick, thanks, and yes, there's 3 holes in the divider board in the plenum, one centered and one at each side. What I did was calculated the sum of the area in square inches of the 3 holes so that they equaled the square home | projects | blog inches of the 4" duct connected to the plenum box. That way I figured I wouldn't exceed the air velocity that 1491 posts in 4616 days

the 4" duct delivered to the plenum thus then causing a reduction in velocity at each end. Seemed to have

the wall. But hey, you'll never have to clean out the plenum, ;) that was one of the things behind using the

plenum box design and distributing the airflow by use of a plenum and the divider board with the holes. I.E. distribute the airflow so that sawdust doesn't have an area where it can build up. I'm hopeful, working so far...

Quote slick1 Slick1 again. Thanks Blankman for a great dust hood! Just finished mine & it works great! Had to add depth & width of hood because of Bosch sliding saw & make box wider & re-calculate plenum box hole sizes to adapt, home | projects | blog (trail & error big time!!), but finally got it right! Plus on back of plenum box I just added wing-nut fasteners to 19 posts in 4229 days back board so I could clean-out or adjust plenum box. ( Plenum box to Phil Thien cyclone separator to Delta #5 posted 04-19-2010 01:21 AM

-- - - Rod , Lloydminster, Saskatchewan, Canada Quote **BlankMan** Rod, sounds good! I'd really like to see some pictures of it. home | projects | blog Yeah wing nuts are a good idea, I had to use screws for the back cover because I've only got 1/8" clearance to 1491 posts in 4616 days

-- - Curt, Milwaukee, WI Quote scturner blankman, thanks for the posts. i'm getting with slick1 to see what he did to accomodate the slider. Chuck

home | projects | blog 3 posts in 3913 days -- Chuck ---- one good turn deserves another #7 posted 02-24-2011 10:36 AM Quote

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