

# Improving dust collection

- Methods and ideas to make your shop cleaner and safer



## Why does it matter?

- Better Chip collection
  - Hassle of dealing with wood chips and dust
- Cleanliness
  - Fire safety, clean workspace
- Health concerns of breathing fine dust
  - Fine dust is proven to cause lung issues such as cancer and emphysema
- Think about the fact that your dust collector runs as much as all of your other power tools combined! It makes sense to have a good system.



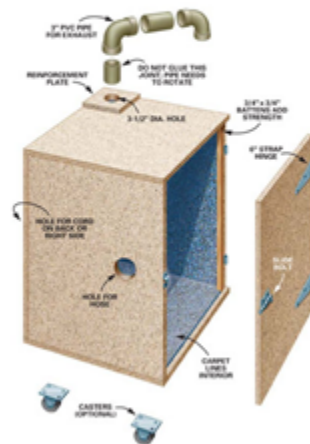
## The lowly shop vac

- Improvements can be made to even these simple machines
- Upgrade the filter to H.E.P.A. grade, and try to buy washable versions for long life. True H.E.P.A. media filters to .3 microns at 99.97% efficiency. It should say this on the box.
- Many imposters use the word HEPA with no periods to skirt federal regulations



## More Shop vac tips

- Add a paper bag filter ahead of your cartridge filter to help prevent clogging
- Add a pre separator like a Dust Deputy for jobs like chip collection from small planers. This greatly extends the life of the filters, and increases air flow by preventing clogging
- Build a Shop Vac muffler or housing to reduce noise



## Bag style collectors

- Upgrade to a finer bag media
  - Look for .5 micron filtration
- Upgrade to a canister type pleated filter
- Upgrade flex tubing to ducting
- Build a Thien pre separator. Search the internet for “build a thien separator for information and instructions



## Canister collectors and Cyclones

- Upgrade to larger, smoother ducting, using the largest ducting the collector can support
- Lose the flex-pipe where possible
- Upgrade to central collection/ blast gates
- Seal ducting



### POOR



This PVC tee's sharp bend raises static-pressure loss by slowing airflow.

### BETTER



A more gentle arc creates less resistance, but you can do better.

### BEST



A shallow bend reduces static pressure resistance and improves airflow.

## Central Dust collection Tips

- All systems benefit from a smart tool layout
  - Place the largest dust producers closest to collector, use the shortest runs possible
  - Each drop can serve several machines to save cost and space
  - Build custom dust hoods and ports
  - Add blast gate switching



## Capture the dust at the tool

- Increase duct size to tool, keep it as large as the collector inlet
- Build hoods, baffles, etc.
- Fewer smoother turns, shorter runs, wyes instead of 90's, seal the ducting!



## Types of blowers

- Each type of blower does a different job. Choose the best type for your application

