Knockdown Spray Booth Design for Small Home Wood Shops

Knockdown spray booth design centers on a fold-up filter wall and exhaust fan that can be erected or taken down in about 10 minutes, according to Highland Woodworking in 2002. The setup suits home shops without space for a permanent finish room and keeps overspray dust off wet work. The same Highland Woodworking 2002 guide limits use to non-flammable, non-combustible, non-toxic finishes and notes the unit does not meet OSHA commercial rules. Size the enclosure generously and supply steady replacement air.

How Does Knockdown Spray Booth Design Control Overspray?

Knockdown spray booth design pulls overspray through furnace filters before it settles on wet finish, with best guns still wasting close to 20 percent, according to Highland Woodworking in 2002. Conventional equipment runs at efficiencies as low as 50 percent or worse, according to the same Highland Woodworking 2002 guide. The booth creates a steady draft that carries the remaining cloud away from the piece. We check filter loading and transfer efficiency the way described in how we test shop finishes.

What Size Is Knockdown Spray Booth Design for Home Shops?

Knockdown spray booth design uses a 5-foot-wide by 4-foot-high filter frame with a 16-inch-deep draft box, according to Highland Woodworking in 2002. Four 24-inch by 30-inch furnace filters fill the frame and a 24-inch fan sits behind, according to the same Highland Woodworking 2002 description. For furniture, the same Highland Woodworking 2002 guide recommends at least 8 feet wide by 10 feet deep to enclose a 6-foot table, 7-foot armoire, or 8-foot uprights. Shellac work fits the same footprint; see mixing shellac for finish prep before spraying.

How Much Airflow Does Knockdown Spray Booth Design Need?

Knockdown spray booth design needs a fan rated at least 6000 CFM at high speed, according to Highland Woodworking in 2002. Small-shop booths also target airflow of 100 feet or more per minute to pull bounce-back away from the piece, according to Popular Woodworking in May 2016. That Popular Woodworking May 2016 guide lists steel construction, filters, a collection plenum, tunnel walls and ceiling, lighting, and an explosion-proof motor as requirements. Keep replacement air in mind by cracking doors or windows on the opposite side of the shop.

How to Build a Low-Cost Knockdown Spray Booth Design?

Knockdown spray booth design can use an 8-foot by 8-foot plastic enclosure with a box fan, costing about $50 as of March 2010, according to American Woodworker Editors in 2010. Heavy-duty welders curtains can replace steel sidewalls and pull back to free floor space, according to Popular Woodworking in May 2016. Add bright lighting to read the wet film and keep turbine switching within reach inside the booth.

"Wear a chemical vapor respirator whenever you fire up the spray gun", Highland Woodworking advised in its spray booth guide in 2002. Dust control after sanding

matters as much as airflow; see after-sandpaper finishing before topcoating.

Build type | Booth size | Fan and filter

Fold-up plywood booth, Highland Woodworking 2002 | 5-foot by 4-foot filter wall; 8-foot by 10-foot room | 24-inch fan at 6000 CFM; four 24-inch by 30-inch furnace filters
Curtain-side small shop, Popular Woodworking May 2016 | Tunnel with pull-back curtains | 100-feet-per-minute airflow; explosion-proof motor; filter bank with plenum
Plastic sheet booth, American Woodworker Editors 2010 | 8-foot by 8-foot plastic enclosure | Box fan with furnace filter; garage door cracked for makeup air

Knockdown Spray Booth Design FAQs

Can knockdown spray booth design handle lacquer or oil-based finishes?

No, knockdown spray booth design in this guide cannot handle lacquer or oil-based finishes. It is limited to non-flammable, non-combustible, non-toxic finishes, according to Highland Woodworking in 2002. The plywood booth has no fire suppression and does not meet OSHA commercial rules.

What project size fits knockdown spray booth design?

Knockdown spray booth design fits furniture when the enclosed area is at least 8 feet wide by 10 feet deep, according to Highland Woodworking in 2002. That footprint covers a 6-foot table, a 7-foot armoire, or 8-foot shelving uprights. Measure the largest piece before building walls.

How fast can knockdown spray booth design be set up and stored?

Knockdown spray booth design sets up or knocks down in about 10 minutes, according to Highland Woodworking in 2002. Loose-pin hinges and hook-and-eye pins let the filter wall, side walls, and draft box fold flat. Store the flat panels against a wall between jobs.