

Clean Indoor Air With Do-It-Yourself (DIY) Air Filtration (Corsi-Rosenthal) Boxes

The Corsi-Rosenthal Box is low-cost, easy to assemble, and effective in reducing the levels of airborne particles in indoor settings.



Supplies Needed:

Cost Estimate: ~\$50-\$100

- 5 MERV13 Air Filters
- Duct Tape
- Box Fan
- Cardboard Sheet
- Plywood *optional*
- Scissors

1 Gather Materials

MERV 13
AIR FILTERS
(20"x20")

+

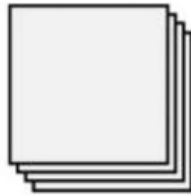
BOX FAN
(20"x20")

+

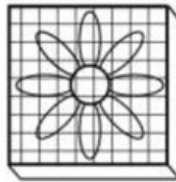
CARDBOARD
SHEET
(20"x20")

+

DUCT
TAPE

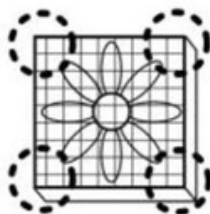


X 5

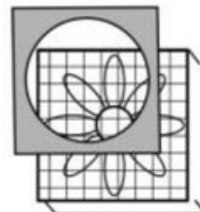


2 Prepare Fan Cover

Create a small cover using cardboard to place over the edges of the box fan to prevent air from flowing back in.



CORNERS OF THE
BOX FAN CREATE
BACK FLOW
WHICH CAN
REDUCE
PERFORMANCE

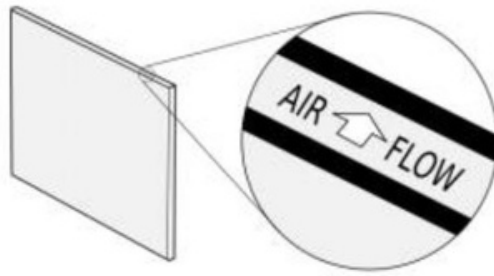


THIS CAN BE
PREVENTED
BY MAKING A
COVER FROM A
CARDBOARD
SHEET

3

Arrange Box Parts

Note the direction of airflow for the MERV13 filters.

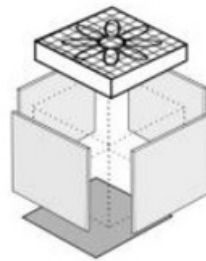


**MERV13 FILTERS
HAVE A PREFERRED
AIRFLOW
DIRECTION,
INDICATED ON THE
FILTER FRAME**

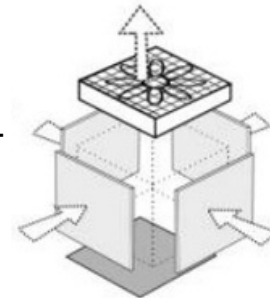
Connect the filters in a vertical orientation.

Place MERV13 filter OR *optional* plywood at the base for extra support.

TOP: FAN
SIDES: FILTERS
**BOTTOMS: FILTER OR
PLYWOOD**



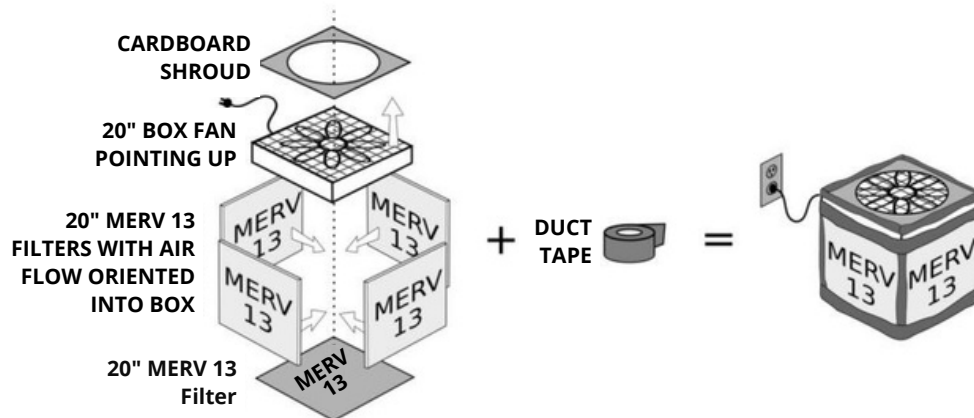
**SET UP FILTERS
AND FAN SO THAT
AIR FLOWS INTO
THE SIDES AND
OUT TOP**



4

Assemble and Seal

Use duct tape to connect all parts and make an air-tight seal.



For more information about the Corsi-Rosenthal Box or how to build it, visit:

- [DIY Step By Step Build Video Corsi Rosenthal Thomas CR Box Wales Cymru - YouTube](#)
- [Science in Action: How to Build a Corsi-Rosenthal Box](#)
- [DIY Air Filters For Classrooms? Experts Are Enthusiastic — And A Citizen Scientist Makes It Easy \(wgbh.org\)](#)