

# 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.



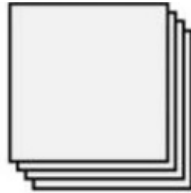
## Supplies Needed:

Cost Estimate: ~\$50-\$100

- 4 MERV13 Air Filters
- Duct Tape
- Box Fan
- 2 Cardboard Sheets
- Plywood \*optional\*
- Scissors

## 1 Gather Materials

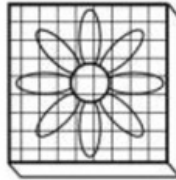
MERV 13  
AIR FILTERS  
(20"x20")



X 4

+

BOX FAN  
(20"x20")



+

CARDBOARD  
SHEET  
(20"x20")



X 2

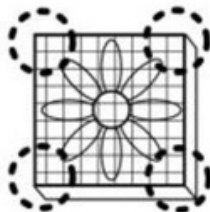
+

DUCT  
TAPE

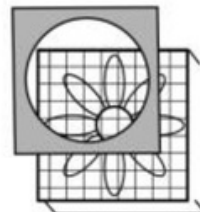


## 2 Prepare Fan Cover

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

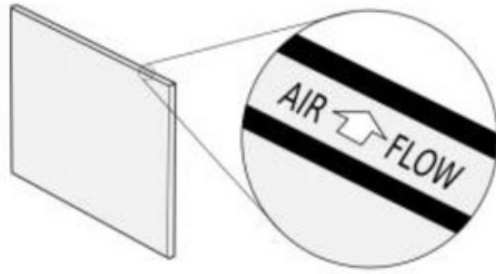


THIS CAN BE  
PREVENTED  
BY MAKING A  
COVER FROM A  
CARDBOARD  
SHEET

### 3

## Arrange Box Parts

Note the direction of airflow for the MERV13 filters.

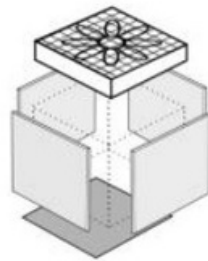


**MERV13 FILTERS  
HAVE A PREFERRED  
AIRFLOW  
DIRECTION,  
INDICATED ON THE  
FILTER FRAME**

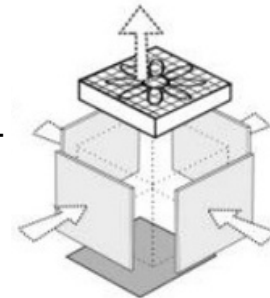
Connect the filters in a vertical orientation.

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

**TOP: FAN**  
**SIDES: FILTERS**  
**BOTTOMS:  
CARDBOARD SHEET  
OR PLYWOOD**



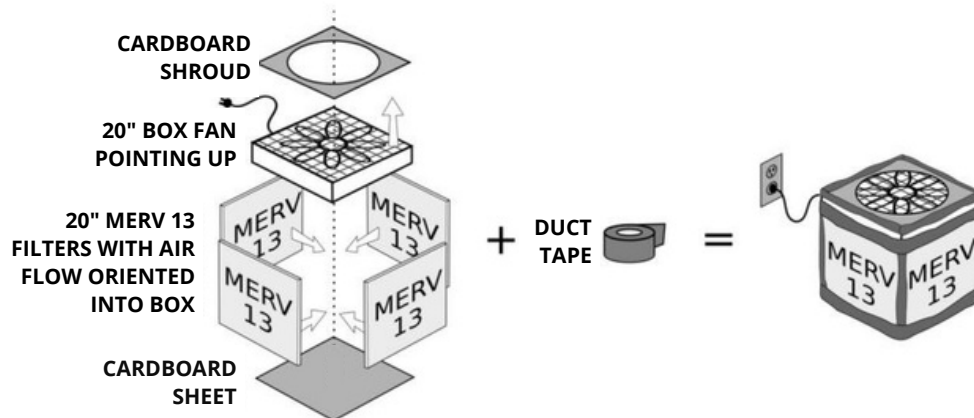
**SET UP FILTERS  
AND FAN SO THAT  
AIR FLOWS INTO  
THE SIDES AND  
OUT TOP**



### 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 \(wgbh.org\)](#)