Diagram, engineering drawing

Description automatically generated

**Where to Buy:**

|  |  |
| --- | --- |
| Box Fans | MERV 13 Filters |
| [Home Depot](https://www.homedepot.ca/product/lasko-20-inch-box-fan/1000682449) | [Home Depot](https://www.homedepot.ca/product/filtrete-healthy-living-elite-allergen-filter-mpr-2200-20-inch-x-20-inch-x-1-inch/1001114001) |
| [Lowe’s](https://www.lowes.ca/product/portable-fans/utilitech-20-in-box-fan-white-939342) | [Home Depot](https://www.homedepot.ca/product/filtrete-healthy-living-20-inch-x-20-inch-x-1-inch-mpr-1900-maximum-allergen-furnace-filter-3-pack-/1001106318) |
| [Home Hardware](https://www.homehardware.ca/en/3-speed5-blade-20-box-fan/p/3828685) | [Pure Filters](https://purefilters.ca/collections/furnace-filters/products/pleated-furnace-filters-20x20x1?variant=28250775879773) |

You can easily assemble air cleaners for a fraction of the cost of HEPA filters. This design, named the [Corsi-Rosenthal box](https://cleanaircrew.org/boxfanfilterfaq/) after the [engineers](https://encycla.com/Corsi-Rosenthal_Cube) who designed it, is well studied and can effectively filter SARS-CoV2 virus from the air. For optimal results, masks need to be worn by those indoors in addition to the protection offered by this air cleaner.

All you need is

* Duct tape
* A 20 inch box fan
* Some cardboard
* 4 MERV 13 filters

Step-by-step [instructions](https://www.youtube.com/watch?v=aEn2xzlvrdo)

By Dr. Kashif Pirzada [@kashprime](https://twitter.com/KashPrime)

How to make your indoor spaces safer:

Build Your Own Air Cleaners

**How Many Do You Need?**

Assuming each box has a Clean Air Delivery Rate of [200 CFM](https://www.built-envi.com/wp-content/uploads/IIT-CADR-Testing-C-R-Box-September-2021.pdf) (cubic feet per minute) and you are aiming for 10 air changes an hour

Make sure to run each fan on maximum speed when assembled.

**Step 1: Measure the room volume (in feet)**

**Step 2: Divide the room volume by 1200**

Example: a 30x30x10 foot room is 9000 cubic feet. Divided by 1200, that is 7.5, rounding up, that’s 8 CR boxes

Chart

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