



waag society

institute for art, science and technology



BioHack Academy Flow Hood Design



Sterile hoods



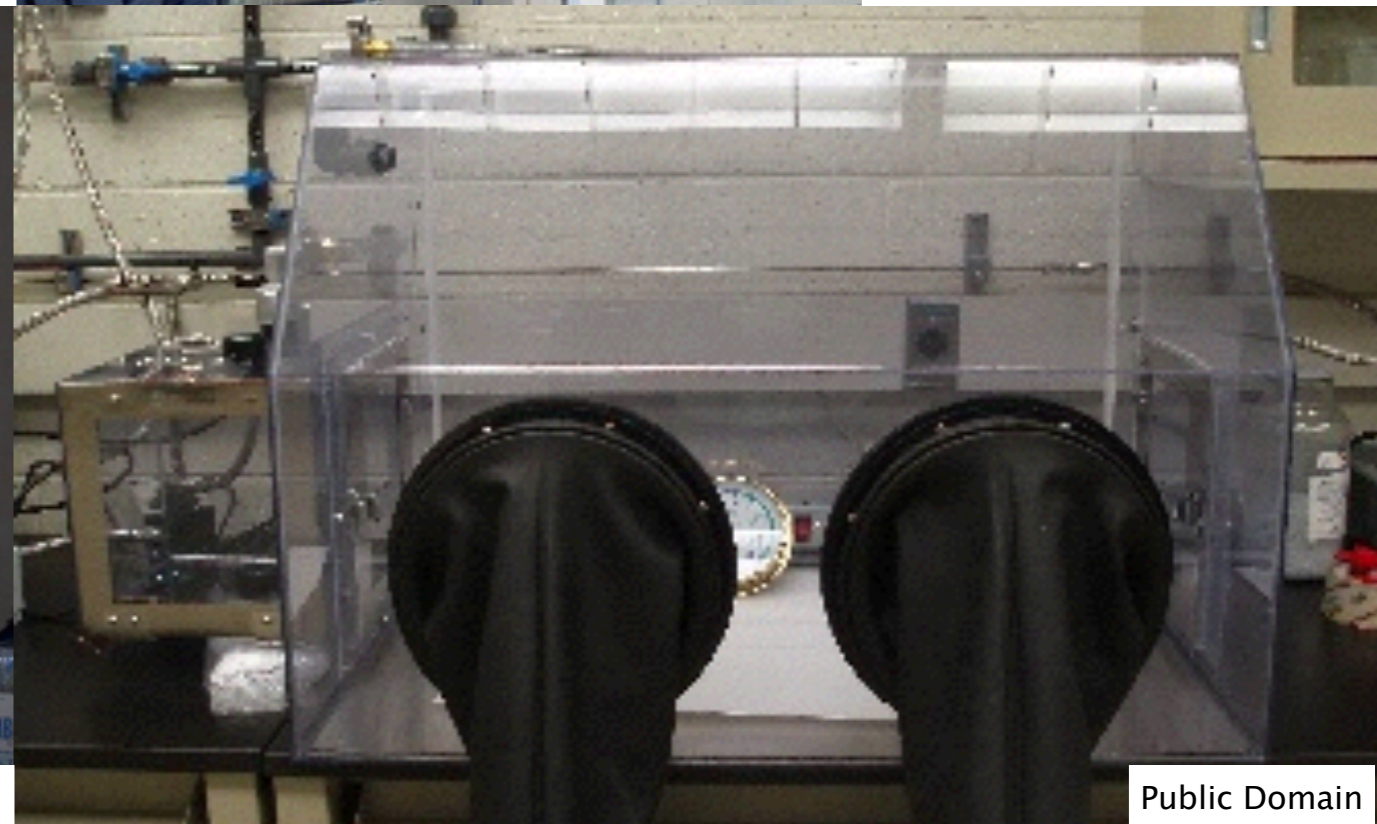
Public Domain



Rudolph Simon - CC-BY-SA 3.0



José Eugenio Gómez Rodríguez - CC-BY-SA 2.0

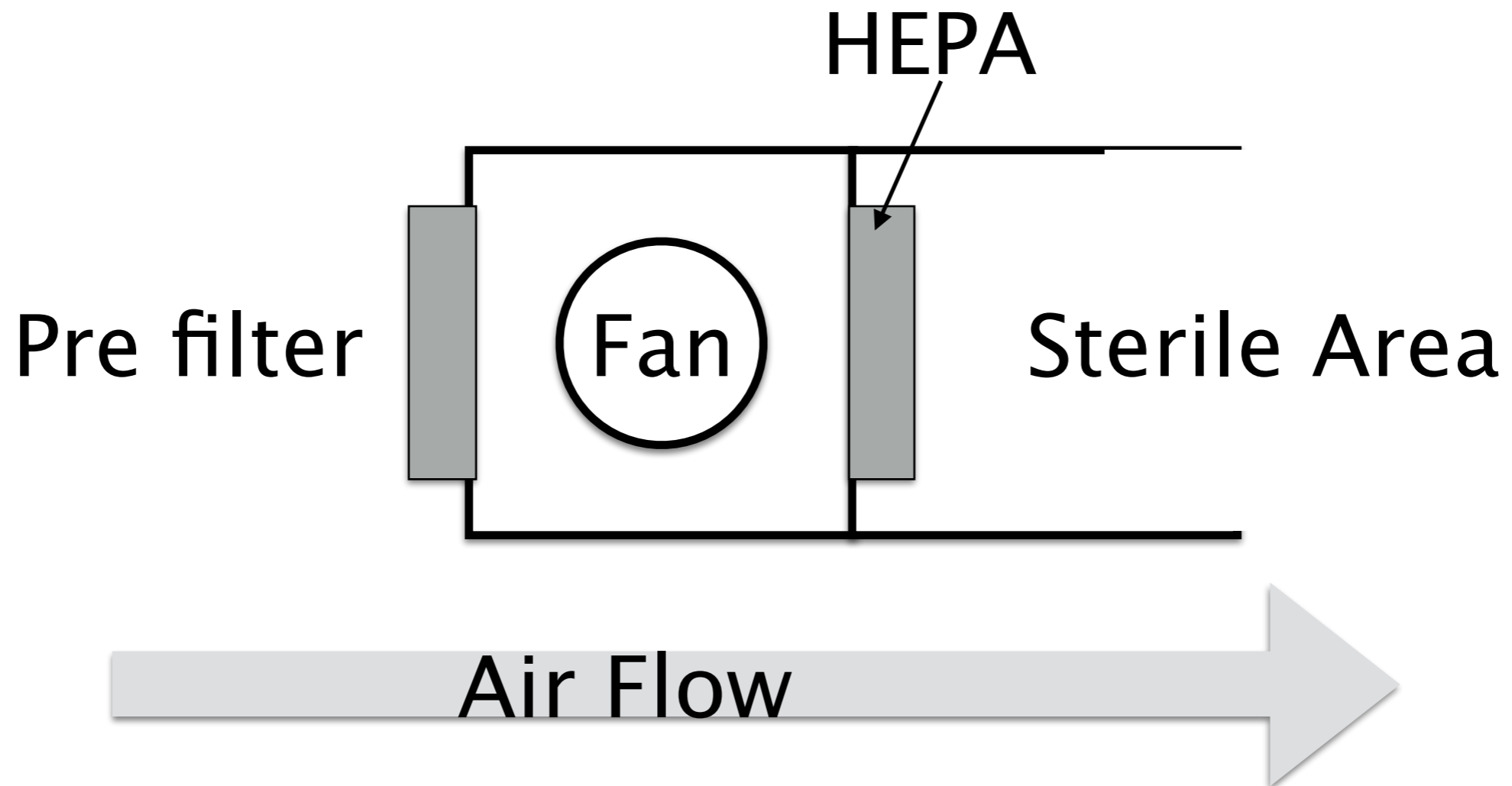


Public Domain



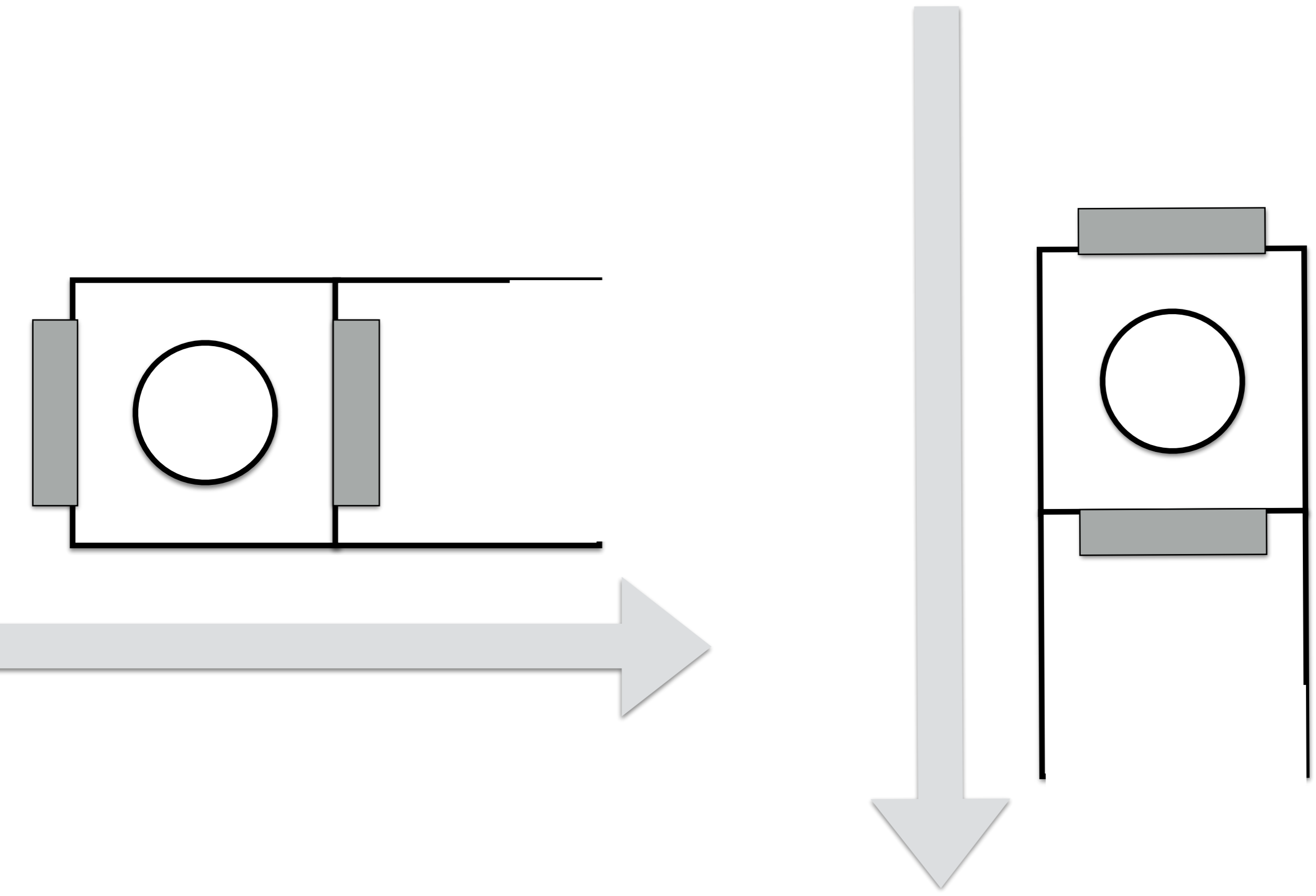
Components

- Pre filter
- Fan
- HEPA Filter
- Minimal air flow of 0.5 m / second



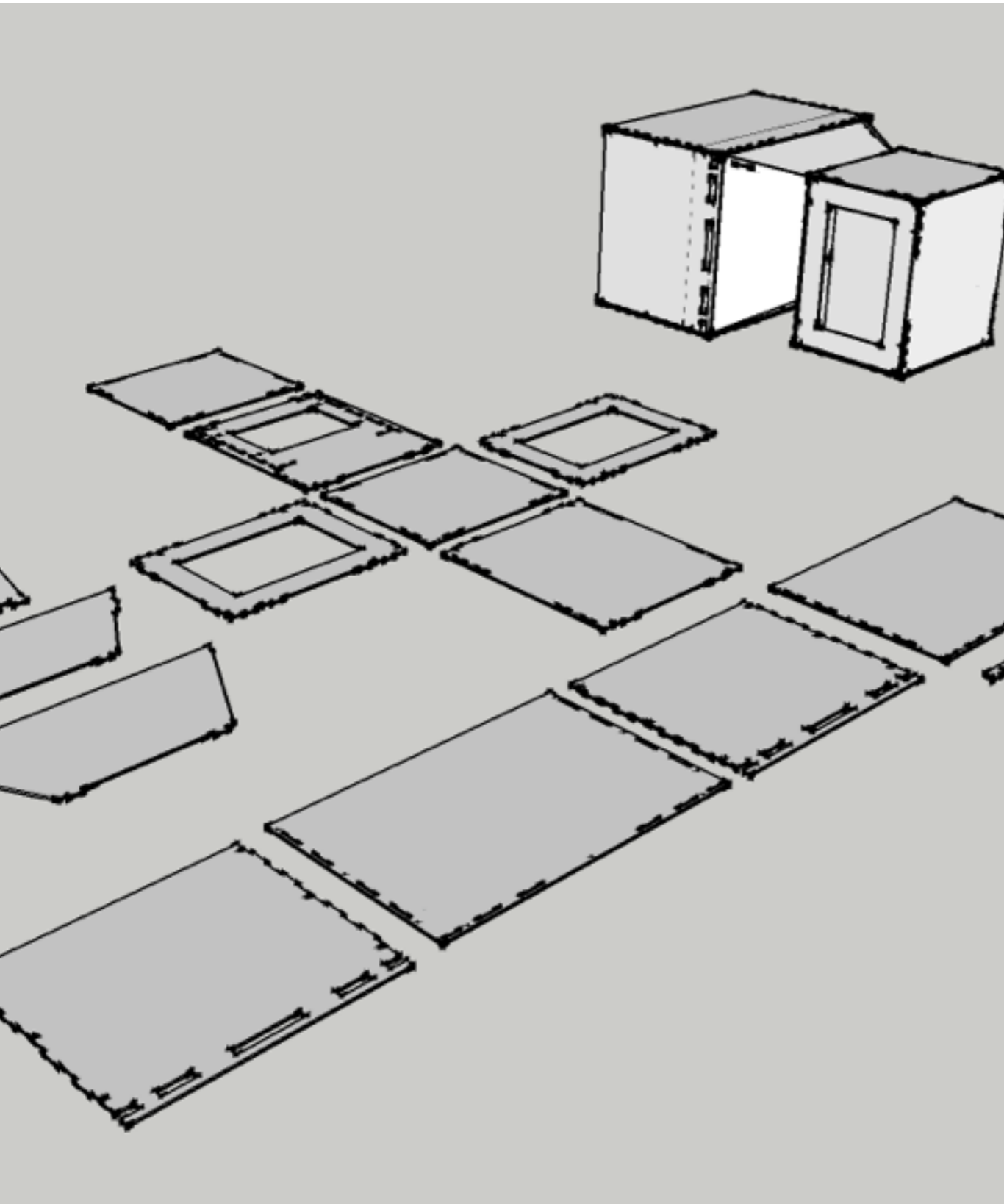


Horizontal vs Vertical airflow





BioHack Academy Design





HEPA filter

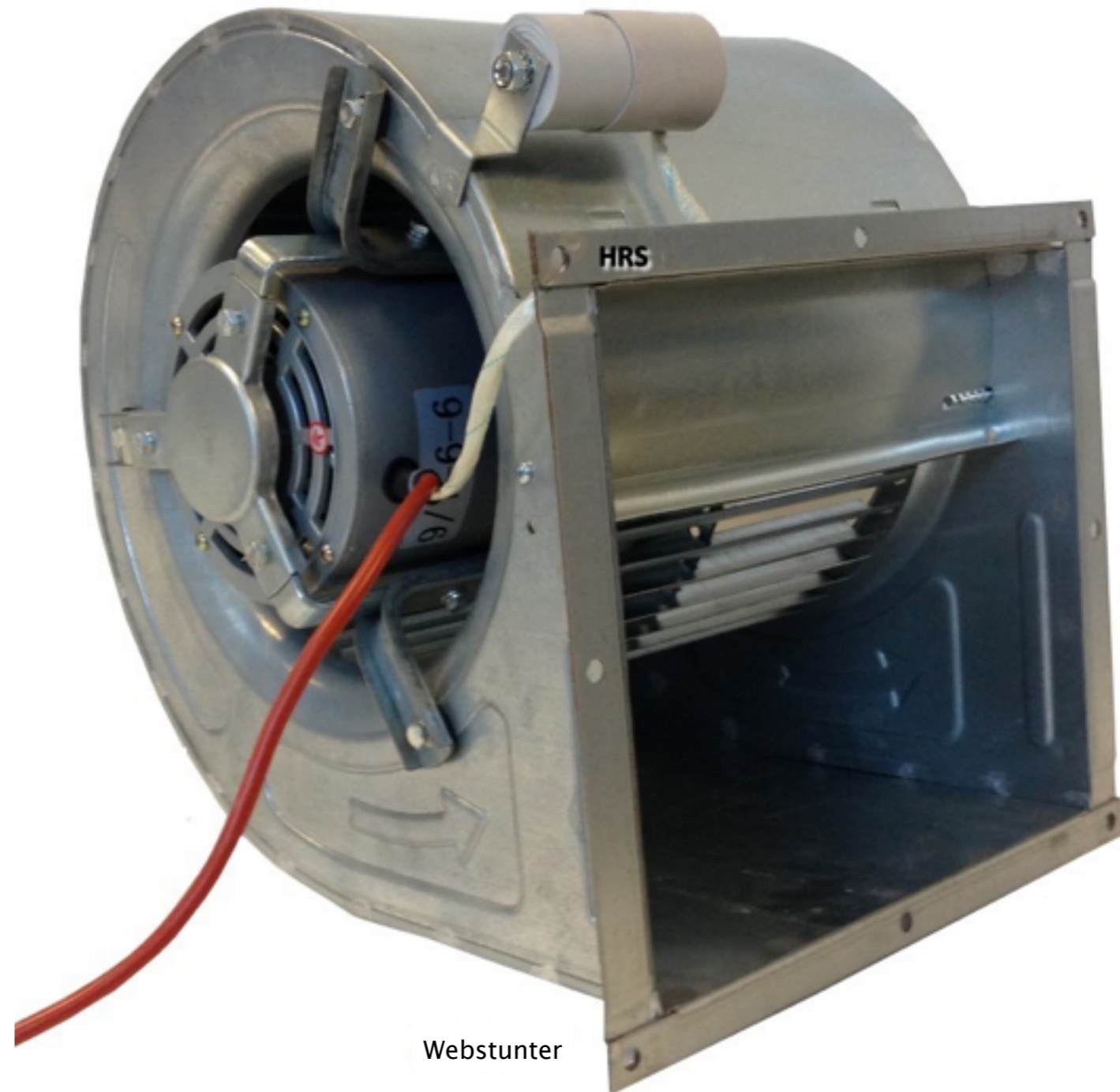
- Fellowes office air filter
- 0.3 micron pores
- 99.97% filtering
- H14 class
 - EN1822 standard





Blower

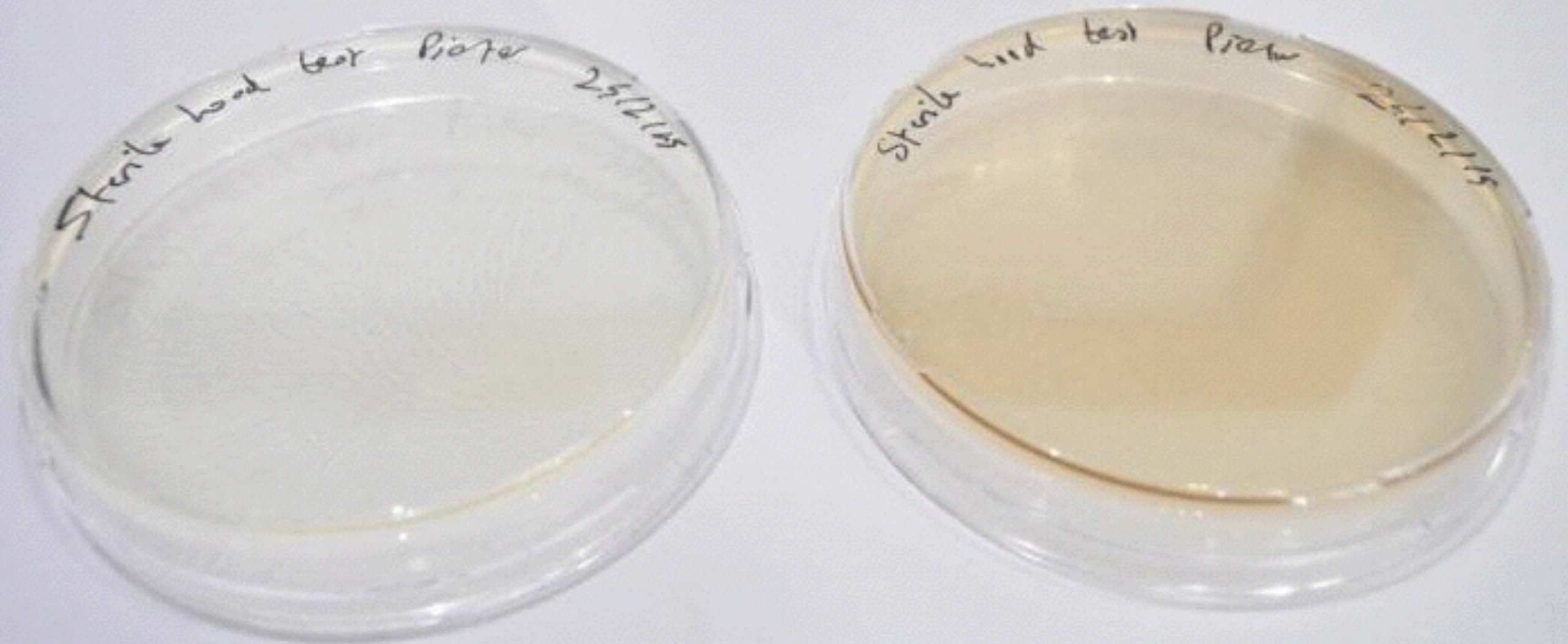
- Calculate the airflow
- Needed:
 - $0.41 \times 0.32 \times 0.5 =$
 - 0.0656
 - cubic meter / second
 - 236.16
 - cubic meter / hour
- We choose 250 cubic meter / hour



1 CFM = 1,6990 m³/h



Test results





some

rights

reserved