



# Murtech INDUSTRIES, LLC

## Filtration Unit.

### How does the unit work?

- Air enters through lower side intake louvers of unit and is pulled through 4 stages of progressively finer mesh filtration containing odors, dust, pollen, bacteria, mold, allergens, and pathogens to an ultra-modern UVC air disinfection system for virus destruction.
- Fresh, clean safe air is then discharged through two adjustable discharge nozzles on the top of the unit to create air rotation in a room or area.
- Unit is designed to provide effective filtration with 4 air changes per hour and UVC virus destruction in an enclosed room or area 20' x 25' x 8.5'H.

### What does the unit do?

- Actively protects people from viruses, allergens, pollen and dust creating and promoting a healthy/safe living and working space.
- Provides an effective method to contain / destroy airborne viruses and pathogens.
- Provides safety and comfort for people through improved air quality.

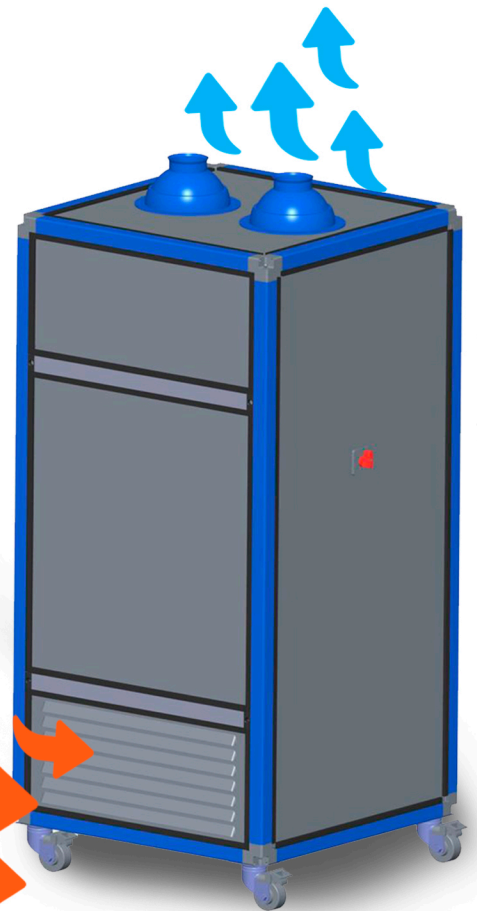


Figure. 01

## Customers.



RETIREMENT  
HOMES



KID'S AREAS



CHURCHES



MOVIE THEATERS



GYM



RESTAURANTS



OFFICES



AUDITORIUMS



SCHOOLS



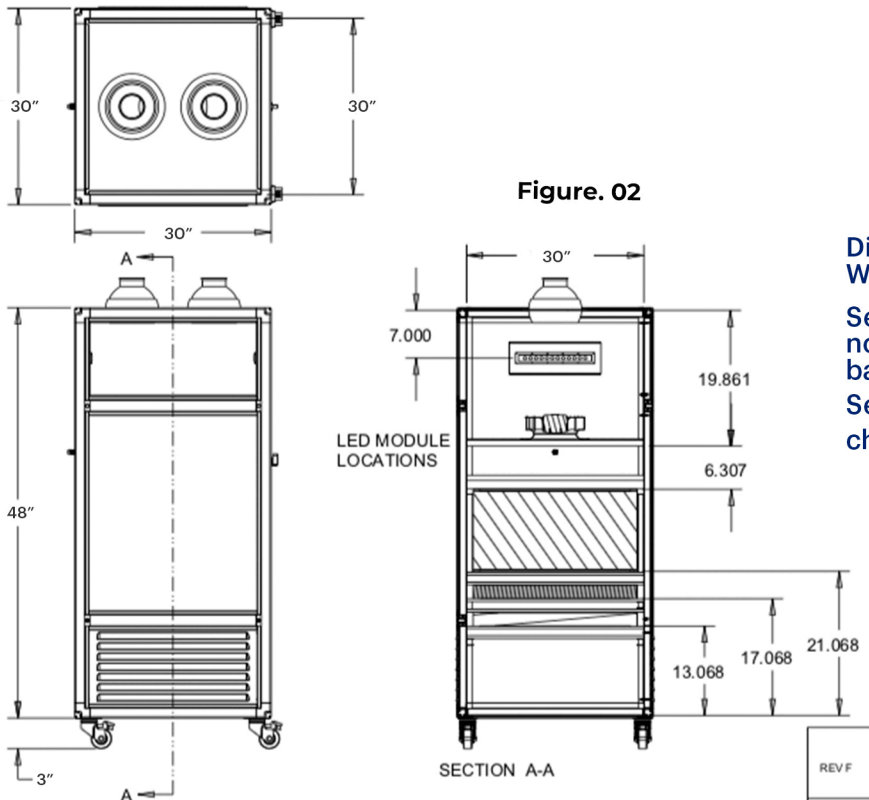
HEALTH CENTERS

# Filtration Unit.

## When and why should be used?

- Used as part of an overall air health plan for a virus containment strategy when groups of five to twenty people are gathered in close proximity to each other.
  - CDC guidelines should be followed when mandated and common sense used to protect others. If you not feeling well wear a mask or if you are sick don't attend a gathering putting others at risk. Viruses are airborne pathogens, cough or sneeze into a tissue or your sleeve.
  - Wash your hands regularly or use hand sanitizer.
- Proactively create an environment to protect people, especially elderly and kids who are most susceptible / at risk to contract viruses.
- Helps promote a company or organizations image and reputation of being socially and ethically responsible in taking actions to create safe environments for employees, customers.
- Supports long term policy of helping to prevent future pandemics and the negative economic and societal impact that they cause.

## Dimensions.



## Exterior Finish

- Procryl industrial enamel primer in foggy day gray.
- Shurcryl Industrial enamel topcoat in foggy day gray as standard color. *(Can be color matched to customer specific request or school/company logos added).*
- InfiniGuard silicone based UV / chemical resistant final coat to allow for daily cleaning of exterior surfaces with disinfectant spray or wipes.

## Interior Finish

- UVC air sterilization chamber, fan and filter panel sections done in bright aluminum.

# Filtration System.



**Stage 1**  
**Pre Filter**

1" x 24" x 24"  
MERV4, UL  
Classified,  
polyester /  
fiberglass media  
for large dust/  
particle collection,  
disposable every  
30-45 days.



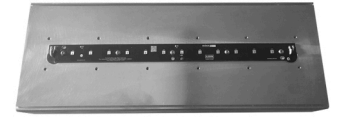
**Stage 2**  
**Carbon Filter**

1"x24"x24"  
MERV8, spun  
carbon fiber filters  
for odor, pollen,  
dust mite,  
mid-size dust/  
particle collection,  
disposable every  
90 days.



**Stage 3**  
**HEPA**

(High Efficiency Particle  
Absorbing) filter; 99.97%  
efficient MERV rating, glass  
microfiber media for removal  
of .3Micron size particles.  
Filtered contaminants, mold,  
bacteria, smog, smoke,  
pollen, allergens, pathogens  
like flu and covid19 viruses.  
Rated for up to 250FPM



**Stage 4**  
**UVC**

LED based technology  
which provides radiation in  
the 240-300nm range with  
germicidal effect being able  
to disrupt nucleic acids  
(RNA or DNA) in viruses for  
effective air disinfection  
should viruses with smaller  
than .3Micron size pass  
through HEPA filter.

## Fan

CSA and CE approved backward curved fan with integrated direct drive motor assembly and solid state speed control to allow for precise air movement adjustments. This arrangement creates a compact design that allows for excellent motor heat dissipation.

## Sound

Fan at full operational capacity / discharge creates 64-66 dB sound levels measured at 5' away from unit discharge nozzles. Sound is minimized through insulated panel construction materials, sealed motor/fan shaft bearings and isolated fan mounting.

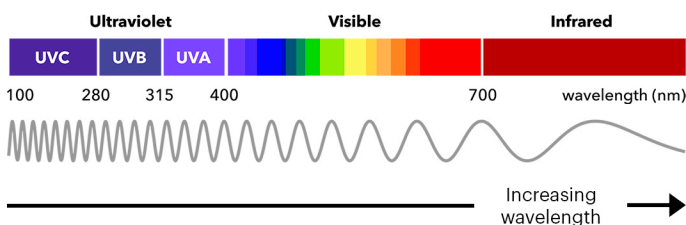
## Electrical

Unit is designed to be plugged into any standard 120V/15A / single phase 60Hz grounded outlet and has a single on/off switch to operate it. Unit will have a grounded plug and 8' power cord with neoprene bulkhead gasket to protect wire insulation from rubbing/wearing on cord. Wire shall be run from bottom of unit to minimize trip hazards.




Unit draw when motor and UVC system are both in operation is 1.9A Motion sensor / on/off switch is mounted on exterior side of unit facing room which will turn of unit when room or area is not available. Limit switch safety feature disables power to unit when maintenance access panel is removed for filter changes.

Turn off and unplug unit before any maintenance work is performed.

## UVC Light.



## Precautions.

-  Do not look directly into the UVC ultraviolet light source.
-  Avoid direct contact with the UVC light source.
-  Use personal protective equipment to perform maintenance and filter change.

### IMPORTANT

Avoid eye and skin exposure to the light source, it may cause BURNS, wear gloves and safety glasses when using the lamp. The voltage and amperage correspond to the input voltage of the ballast and the watt consumption of the lamp.