



# ULPA Filter

**Ezi-Duct & Polex Environmental Engineering**, Australia's leaders in Air Filtration Equipment, have combined their many decades of experience to design and manufacture an air filter to meet the demands of the COVID-19 health crisis currently affecting the world.

The **ULPA Filter** is a powerful yet portable air filtration apparatus that can filter and remove 99.99% of the particulates that are 0.12 µm or more in diameter. Constructed from hygienic stainless steel material, the **ULPA filter** can be easily disinfected after use.



Even with the high airflow the **ULPA Filter** is only 750 mm wide and can be wheeled through a standard doorway and runs on single phase power.

The ULPA Filter Hi-Efficiency Fan has a powerful yet variable air flow of up to 3500 m<sup>3</sup>/h @ 1000 Pa pressure.

The **ULPA Filter** can either operate as a standalone unit in larger areas or ducting can be connected to it to filter the air from several smaller rooms.

It can be used in such areas as hospital or medical centre waiting rooms, schools or university classrooms, office environments, shops, supermarkets, age care facilities, restaurants, clubs and anywhere where people gather.

## What is the difference between HEPA and ULPA filters?

The key **difference between** industrial **HEPA filters** and **ULPA filters** is in the size of the particles they can remove. While **HEPA filters** can remove up to 99.97% of contaminants as small as 0.3 µm in diameter, **ULPA filters** can remove 99.99% of the particulates that are 0.12 µm or more in diameter.



# ULPA Filter

The team at Ezi-Duct and Polex Environmental Engineering have combined their decades of industry experience in designing and manufacturing to meet the demands of the health crisis affecting the world.

## What

The ULPA filter is a powerful yet portable filtration apparatus that can filter and remove 99.99% of the particulates that are 0.12 µm or more in diameter. It can conceivably lower the amount of particulates, including pathogens from the environment, both from the air and potentially from surfaces.

## Why

The ULPA Filter air recirculation unit has been developed in response to the international outbreak of COVID-19 virus. This unit has been specifically designed to be used inside enclosed spaces where multiple people are present. Contaminated air is efficiently extracted from within the room and is filtered through an array of ultra high efficiency filters before releasing filtered air back into the room.



ULPA Filter

## How

The filters use advanced filtration media (ULPA 16) specifically designed, sized and selected to filter particles as small as 0.12 µm. Filtering such small particle sized produces high resistance which is overcome with a powerful high efficiency backward curved extraction fan.



Main Filter & Pre Filter

## Specifications

Dimensions (W x L x H)	700 x 1050 x 1300 mm	Main Filter	ULPA16
Airflow	Up to 3,500 m <sup>3</sup> /h	Pre Filter	Synthetic G4
Pressure	Up to 1,000 Pa	Speed control	Infinite
Power	1.5 kW	Materials	Stainless steel 304 (#4)
Full Load Current	10 A	Construction	Bolted
Speed	2,850 rpm	Wheels	Lockable castors
Phase	Single	Electrical Connection	3 pin plug (10 A)
Frequency	50 Hz	Certification (electrical)	CE
Protection	IP55	Certification (filtration)	ULPA 16



### Warning

All servicing (including replacing filters) need to be carried out by qualified and trained personnel only. The used filters may contain dangerous contaminants and may require special disposal methods.

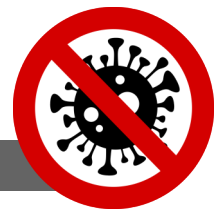
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## Benefits

### Reduce risk of viruses being spread

Continuously extract and filter air and reduce the risk of potentially contaminated air.

### Assist HVAC systems

Assist existing HVAC systems and to avoid recirculating air between rooms.

### Minimise contaminated PPE

One of the highest-risk activities is the removal of contaminated PPE for Health care workers treating infected patients.

Having an additional filter to purify surrounding air and not just the air being breathed may reduce the amount of contamination of PPE and other objects and surfaces in the vicinity.



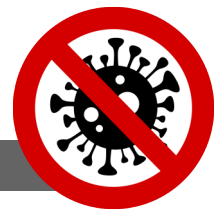
## Applications

General hospitals	Temporary hospitals	Medical centres
Operating theatres	Patient treatment rooms	Chemists / Pharmacies
Schools and universities	Childcare centres	Retirement homes
Shopping malls	Service stations	Centrelink centres
Clubs and bars	Restaurants	Cafes
Banks	Post offices	Offices
Cinemas	Waiting rooms	Medicare centres



### Disclaimer

Not all virus particles will be removed from the area where the filter is located. The filter performance is affected by air drafts from nearby doors and windows. The filter performance is affected by the geometry of the area that it is being used within. The filters are designed to filter particles from 0.1 µm and larger. It will not filter particles smaller than this. The airflow and filtration performance of the unit will reduce if the filters are not replaced as directed.



## Configurations

The unit can be used in many configurations.

- A. Recirculation unit: The ULPA filter can be used for patients with a known or suspected infection in hospital rooms with multiple beds, whether in a hospital room or in self-quarantine. The units can be kept near the patients at all times and left by their bedside while resting. This configuration can be used in many general areas such as school classrooms and restaurants.
- B. Negative pressure: The ULPA Filter can be used as a negative pressure isolation room for use with patients.
- C. Positive pressure clean air system: The ULPA Filter unit can be used as a positive pressure clean air recirculating system in clinics, waiting rooms, hospital emergency rooms and other confined areas for air being exhaled from patients.
- D. Positive and Negative: Introduce filtered air and exhaust contaminated



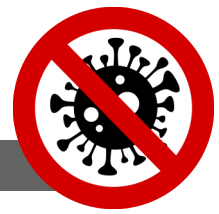
Configuration	A Recirculate the air within the room	B Filter the air leaving the room	C Filter the air coming into the room	D Filter the air coming into and out of the room
Schematic				
Number of units	1	1	1	2

Number of units required (based on room size and configurations A, B and C)

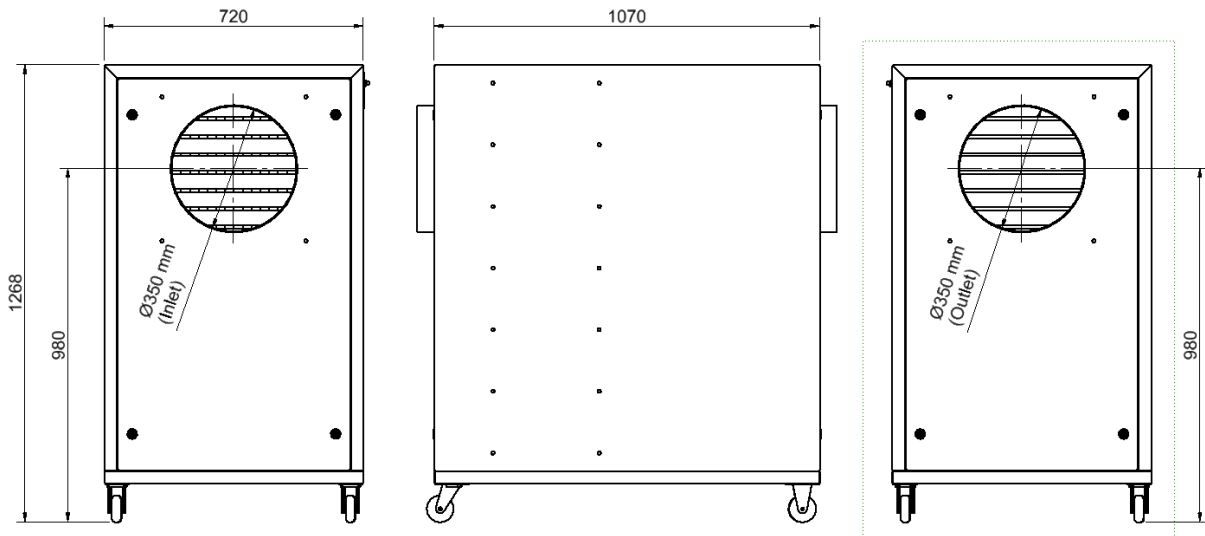
The number of units required can be calculated by multiplying the width, length and height of the room in metres and referring to the table below.

Room volume (m <sup>3</sup> ) *	Up to 250 m <sup>3</sup>	Up to 500 m <sup>3</sup>	Up to 750 m <sup>3</sup>	Up to 1000 m <sup>3</sup>	Up to 1250 m <sup>3</sup>
Number of units required	1	2	3	4	5



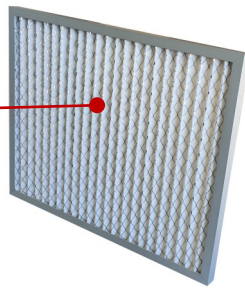


## Dimensions

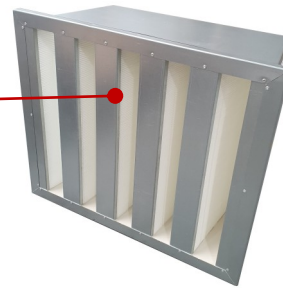


## Features

Synthetic G4 Pre Filter



ULPA 16 Main Filter



Contaminated air inlet

On/off speed controller  
Filter replacement indicator

Clean air exhaust

