

Purafil Purashield 500 FAQ

How big a room can one unit purify? How many units do I need for my space?

The number of units required depends on the volume of air in the room and the number of air changes required per hour. The WHO recommends 6 air changes per hour as a sensible target to reduce the chance of Covid-19 transmission.

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/media-resources/science-in-5/episode-10---ventilation-covid-19>

If we are aiming for 6 air changes per hour, then the Purashield 500 can achieve this in a room with a maximum volume of 75 m³ running at max power. Considering a ceiling height of 2.5 metres which would be typical for a home this equates to a room of 30m² (square metres). Any bigger and we would recommend multiple units, if the room is significantly smaller then it will be possible to achieve 6 air changes with the unit running at medium or low power.

We would be delighted to calculate your exact requirements. Please provide us with the dimensions of the room including ceiling height and the number of air changes you would like per hour and we will let you know how many units you require.

How often does the filter need to be changed?

- If used 24/7 the filter should be changed every 6 months.
- If used 12 hours per day the filter should be changed every 9-12 months.
- If used 8 hours per day the filter should be changed every 12-18 months.

Will I get a warning when the filter needs to be changed?

No, the Purashield 500 does not include a filter lifespan warning.

How does Purashield 500 compare vs Dyson Pure range?

Air changes – the Dyson Pure humidify+clue (other models are similar) state that it “projects 320 litres of cooling airflow per second” which equates to 1,296 CMH (cubic metres per hour). However, this is using their “Air Multiplier™” technology. Most importantly not all of this air flow is filtered on each pass. It is reported that the Air Multiplier™ technology increases air flow 16 times. If only 1/16th of air is filtered on each pass, then the Dyson Pure only provides 81 CMH of clean air*. This compares to the Purashield 500 which provides 425 CMH of filtered air.

Filters – the Dyson Pure humidify+clue includes HEPA filter, activated carbon filter and UV light for the water tank. However, the unit only weighs 8.29kg in total including filters. The Purashield 500 includes pre-filter, HEPA filter, activated carbon filter and 9.9kg of patented Puraward anti-microbial filter. The replacement Dyson filter including packaging weighs only 1.5kg.

| Purashield 500 | Dyson Pure humidify+clue |
|---------------------------|---------------------------------|
| 425 CMH | 81 CMH (estimated) |
| More than 10kg of filters | Less than 1.5kg of filters |

What if I change my mind?

If you have purchased your Purashield 500 online through our webshop then you have 14 days from date of delivery to return your unit for a full refund. You must have the original packaging, or a surcharge will apply.

What is the warranty?

The warranty is 1 year. Warranty does not cover the filter.

If there is any issue with your unit during the warranty period, we will first attempt to assist you remotely by phone or email. If we cannot solve your problem remotely MSC will arrange to have your unit returned (at no cost to you). Once our engineers have evaluated the problem, we will arrange either a repair, replacement or refund.

What grade HEPA filter is included?

Purashield 500 utilises a H13 HEPA filter.

How much electricity does Purashield 500 use? How much does it cost to run?

Purashield 500 has three power settings – low, medium, high.

At high setting, the maximum energy usage is 147W.

At high setting and running 24/7 the Purashield 500 will use 3.528kWh per day, or 1,287.72 kWh/year. This will translate to a cost of EUR 0.70 per day.

At high setting and running 8 hours per day the Purashield 500 will use 1.176kWh per day, or 429.24kWh per year. This will translate to a cost of EUR 0.23 per day.

If using low or medium setting, then running costs will be lower.

For comparison, a typical washing machine uses 1kWh per cycle, an oven uses 2kWh per hour, and a plasma TV uses 0.33kWh per hour.

*using typical energy cost in Ireland of EUR 0.199 per kWh.

What MERV rating does Purashield 500 offer?

What is MERV? MERV stands “minimum efficiency reporting value” and a filter receives a MERV rating as determined by the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE)

ASHRAE recommends MERV-13 or higher for COVID-19 mitigation.

All HEPA filters are MERV-16 or higher. Therefore the Purashield 500 exceeds MERV-16.

Is the Purashield 500 noisy?

Purashield 500 ranges from 42- 59 dB depending on the setting chosen. This is comparable to the noise of a refrigerator.

Who makes the Purashield 500? Who are Purafil?

Purafil is part of the Filtration Group (<https://www.filtrationgroup.com/>) the global leader in gas phase air filtration media and systems. Filtration Group have a 50-year history and are headquartered in Doraville, GA, USA. Customers such as 3M, Abbot, amazon, Apple, BMW, GE, Siemens, Tesla, and Pepsi rely on Filtration Group to provide gas phase air filtration.

Will the Purashield 500 remove smells/odors?

Yes. There is an activated carbon layer in the filter that removes odours/vapours.

Purashield 500 has a H13 grade HEPA filter – is this sufficient to prevent Covid-19 transmission?

The Purashield 500 utilises a number of technologies to remove/kill viruses including Covid-19. The HEPA filter is the final stage and provides further assurance of safety. It is not the primary mechanism whereby Purashield 500 removes pathogens from your air.

The primary components effective against Covid-19 are the Puraward anti-microbial filter and the Purafil SP media (molecular gas filtration). Each Purashield 500 contains 9.9kg of Puraward fiber.

The manufacturer, Purafil, has had a number of studies carried out by independent third party laboratories which we can share with you. The most important study replicates a real-life environment. In an airtight room-size chamber a surrogate virus was released, a Purashield 500 was run in the chamber. The remaining viral load was tested at various time intervals between 15 mins and 90 mins. After 15 mins the viral load had been reduced by 99.9646%, after 30 mins 99.9995% and after 90 mins 99.9998%. The surrogate virus used was MS2 bacteriophage. It is prohibited at this time (at least in the US) to replicate this kind of test using SARS-CoV-2 due to the dangers involved. However, a more limited form of test has been carried out on behalf of Purafil. This looked at exposing the SARS-CoV-2 to the Puraward and Purafil SP filters and looking at their ability to kill/deactivate the virus. The results were a 99.46% deactivation of the virus.

What filters/technology does Purashield 500 use to remove pathogens?

The Purashield 500 device contains (1) a pre-filter, (2) a molecular gas filtration using Purafil SP patented media, (3) a filter comprised of patented PuraWard fiber which is protected from many viruses, bacteria, and mould, and (4) a HEPA final filter.