asecos®

PURIFI AIR.620

Air purifier to reduce indoor viral loads and pollutant levels
with multi-component filter system

very quiet

≈ 620 m³/h

PURIFI AIR.620

***Improve your hygiene concept with the PURIFI** AIR.620*

Viruses and other microorganisms are transmitted via extremely fine airborne liquid droplets, called aerosols.
These can float and survive in the air even for long periods of time. There is an increased risk of infection in poorly ventilated indoor areas. Therefore, effective room ventilation is a high priority in hygiene concepts, in order to counteract elevated concentrations of hazardous materials. However, room characteristics and winter weather can make natural ventilation more difficult.

Using an asecos PURIFIAIR.620 can significantly reduce viral loads and pollution in indoor areas. Fresh air must be supplied to the rooms via natural or technical ventilation.

The PURIFIAIR.620 offers the following advantages:

- The mobile design allows the purifier to be used flexibly in different areas of the building.
- The built-in PM1.0 sensor and colour display allow users to quickly identify and easily read off the particle concentration in the indoor atmosphere in four levels (green/low to red/high concentration).
- PURIFIAIR.620 stand out for their high-quality materials and robust design.
- Large filter units ensure a long service life. The purifiers have low energy requirements, resulting in low usage costs.

Air purifiers should not be considered a substitute for a fresh air supply.

Over time, they only deliver efficient results if the filter is replaced at regular intervals according to the electronic display.

Air purifiers can be used in a wide range of different areas.

PURIFI AIR.620

- Every PURIFIAIR.620 handles a volume flow rate of 180 to 620 m³/h (5 operating levels) and is suitable for approx. 100 m³ room volume (corresponding to a surface area of 40 m² and a room height of 2.5 m). A larger number of devices should be used in larger rooms. Our Sales team is happy to help determine the optimal number of air purifiers for a specific application.
- The built-in combination of pre-filters, a combi filter and H14 HEPA filter in accordance with EN 1822 has an efficiency of up to 99.995 % while keeping out particles from 0.1 to 0.3 µm in size.
- Included filters:
  - One metal mesh pre-filter on each side of the unit.
  - On the left side of the unit: Combination filter consisting of EPA filter E12 and activated charcoal filter.
  - On the right side of the unit: HEPA filter H14 according to EN 1822 incl. G4 coarse dust filter.
- H14 HEPA filters are used in areas where protection against infection plays a key role.
- The effectiveness and performance of the unit has been proven by the independent I.F.I. (Institut für Industrieaerodynamik GmbH), which tested the sound level, the volume flow and the reduction of the aerosol particle concentration.[1]
  Thereby, the measurement of the room effect according to VDI-EE 4300 sheet 14, resulted in a proof of the reduction of the aerosol particle concentration by more than 90% in 30 minutes.

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- **The coronavirus is approx. 0.12–0.16 in size, which is within the effective range of an H14 filter in accordance with EN 1822.**
- **Therefore, H14 filters can reliably capture the SARS-CoV-2 virus.**

What does H14 mean? Detailed technical information is provided on the following page.

Other features of the air purifier:

- Removes mould spores, pollen and allergens, halts germs and bacteria and neutralises them
- Removes unpleasant odours and harmful gases from indoor air
- Continuous filtration of fine dust particles

TECHNICAL DATA

Model	**PURIFI**AIR.620 *		
Nominal voltage	**220 – 240 V~**		
Rated frequency	**50/60 Hz**		
Rated power (5 level)	Sleep mode **5.5 W** to turbo mode **40 W**		
Noise level (1 m distance)		Ideal conditions[2]	Real conditions[3]
	1st stage (Sleep)	**26 dB(A)**	**approx. 28 dB(A)**
	2nd stage	**34 dB(A)**	**approx. 38 dB(A)**
	3rd stage	**43 dB(A)**	**approx. 47 dB(A)**
	4th stage	**47 dB(A)**	**approx. 50 dB(A)**
	5th stage (Turbo)	**48 dB(A)**	**approx. 51 dB(A)**
Quantity of purified air (CADR)	**≈ 620 m³/h in full load operation**		
Net weight	**14 kg**		
Product dimensions (W x D x H)	**400 x 400 x 669 mm**		

FILTER TECHNOLOGY

Dual suction air purifier with multi-component filter unit consisting of:

- **Metal mesh pre-filter** for separating coarse dust, to lower the load on downstream stages of filtration
- **G4 pre-filter** for separating coarse contamination, extends the service life of the filter (particle size > 10 µm, such as pollen, spores, fibres, hairs, insects, etc.) and to protect the downstream stages of filtration
- **Combi filter with an efficiency ≥ 95%.** Inserted on the left side of the unit: to separate medium-size particles (particle size > 0.3 µm, including bacteria, germs, etc.)
- **HEPA filter, filter class H14** according to EN 1822 used on the right-hand side of the unit for separating of smallest and nano particles with an efficiency of 99.995 % against MPPS (viruses, germs)
- **Activated carbon filter** adsorbs unpleasant odours and gaseous pollutants

An electronic display informs the user when the filter needs to be replaced.

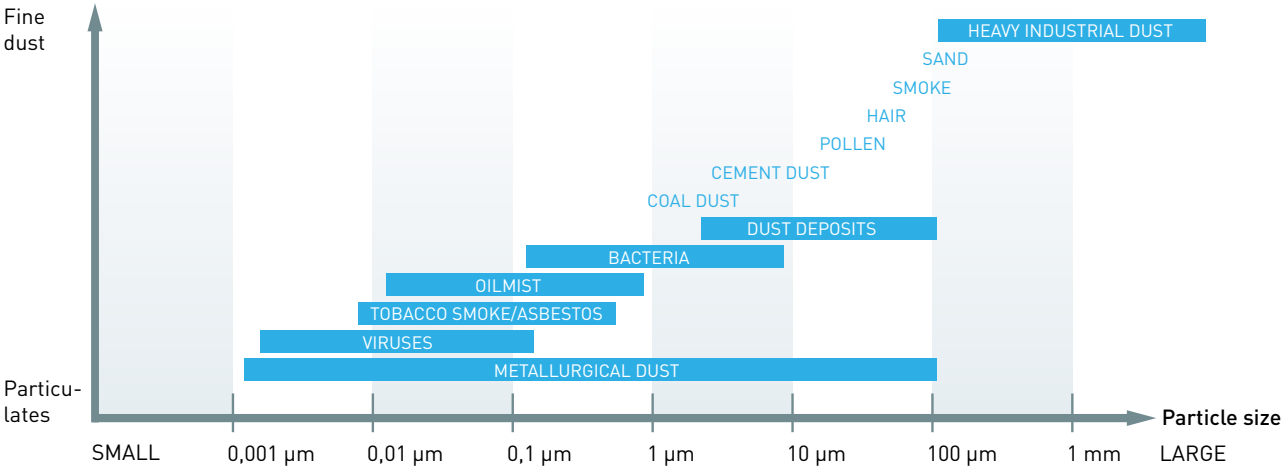
** The scope of delivery includes the air purifier with remote control, as well as an initial multi-component filter unit*
[1] https://www.asecos.com/dokumente/asecos_IFI_Pruefbericht_PURIFIAIR620_en.pdf
[2] Measurement in an idealised environment, similar to an anechoic room
[3] Measurement in a realistic environment, e.g. office (the measured values deviate depending on the room conditions)

Professional expertise

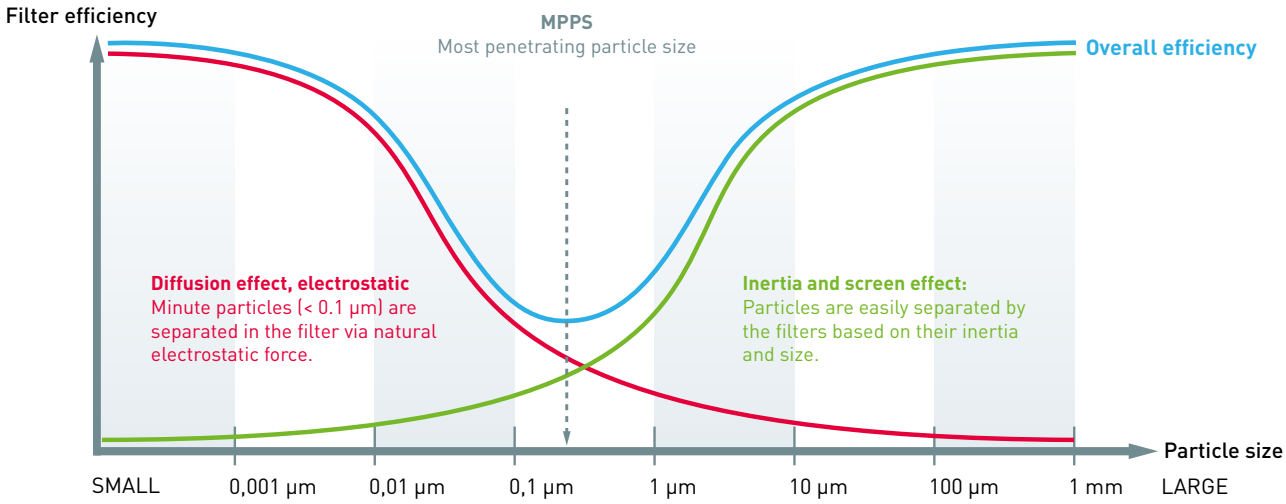
To use air purifiers to remove fine dusts and particulates from the atmosphere, the correct filter must be used for the type and size of particles in question. How do fine dusts and particulates differ, and what kinds of filters can be used to clean dirty indoor air? This information will help you find answers to these questions.

If you have further technical questions on basic filter technology, our experts will be happy to help. Contact us at info@asecos.com or +49 6051 9220-0.

Airborne particles come in different sizes:

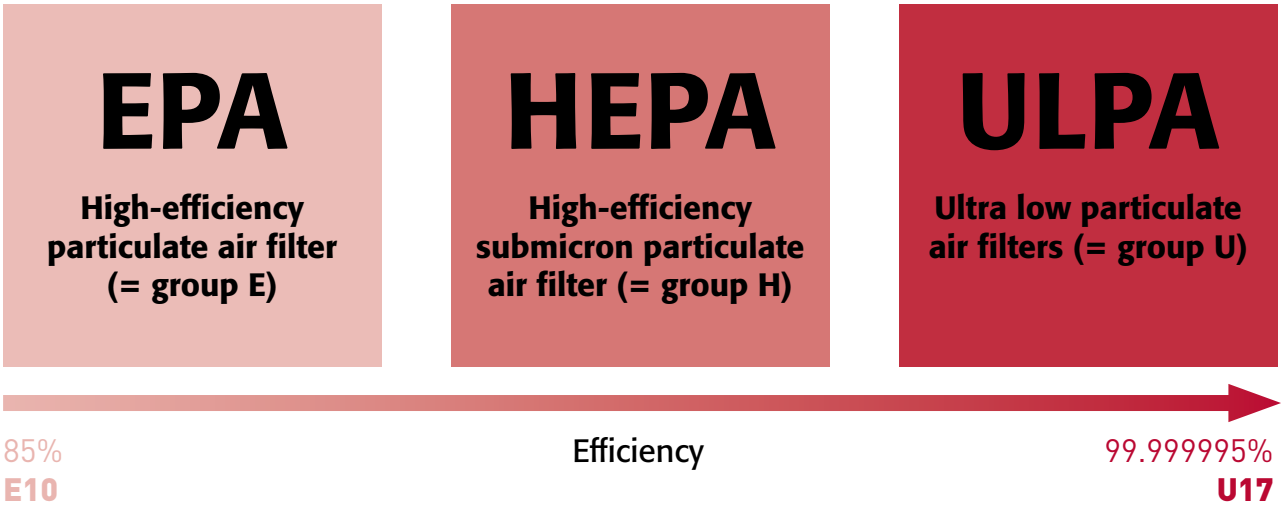


Basic filter technology principles



The most critical particles have a diameter of approx. 0.3 µm and are the most difficult to remove (technical term MPPS = Most Penetrating Particle Size). The MPPS serves as the basis for defining the efficiency of particle filters.

The filter classes are defined based on the efficiency of separating MPPS. In Europe, particulate air filters are differentiated into **three groups**:



Overview of filter classes, incl. relevant degree of efficiency:

Filter classes	Integral value Average value over the entire filter surface		Local value Point value at the weakest part of the filter	
	Efficiency (%)	Penetration (%)	Efficiency (%)	Penetration (%)
E10	≥ 85	≤ 15		
E11	≥ 95	≤ 5		
E12	≥ 99.5	≤ 0.5		
H13	≥ 99.95	≤ 0.05	≥ 99.75	≤ 0.25
H14	≥ 99,995	≤ 0,005	≥ 99,975	≤ 0,025
U15	≥ 99.9995	≤ 0.0005	≥ 99.9975	≤ 0.0025
U16	≥ 99.99995	≤ 0.00005	≥ 99.99975	≤ 0.00025
U17	≥ 99.999995	≤ 0.000005	≥ 99.9999	≤ 0.0001

Efficiency: Percentage of particles separated / penetration: Percentage of particles that pass through the filter

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asecos is one of the world's leading manufacturers of safety cabinets for storing flammable hazardous materials and compressed gases in accordance with EN 14470 part 1 and part 2. Since it was founded in 1994, ***asecos*** has been successfully focused on researching and developing products to safely extract and store hazardous materials.

"Technical air purification concepts" have now been added to the company product range, with smoking cabins and air purifiers. In its development of high-performance systems for extracting and filtering cigarette smoke and air contaminated with pollutants and pathogens, ***asecos*** has employed its many years of expertise in hazardous materials extraction technology.

Are you interested in asecos air purifiers, and need further information? *From air purifiers for use in private homes to industrial applications, we offer products to meet your needs.*

Contact our experts at ***info@asecos.com*** *or* ***+49 6051 9220-0****. We will be happy to help!*

asecos GmbH

Sicherheit und Umweltschutz
Weiherfeldsiedlung 16–18
DE-63584 Gründau

+49 6051 92200
F +49 6051 922010
@ info@asecos.com

Asecos BV

Veiligheid en milieubescherming
Christiaan Huijgensweg 4
NL-2408 AJ Alphen a/d Rijn

+31 172 506476
F +31 172 506541
@ info@asecos.nl

asecos SARL

Sécurité et protection de l'environnement
7 rue du Pré Chaudron
FR-57070 Metz

+33 3 87 78 62 80
@ info@asecos.fr

asecos S.L.

Seguridad y Protección del
Medio Ambiente
C/ Calderí, s/n – Ed. CIM Vallés, planta 7,
oficinas 75-77
ES-08130 – Santa Perpètua de Mogoda
Barcelona

+34 935 745911
F +34 935 745912
@ info@asecos.es

asecos Ltd.

Safety and Environmental Protection
Profile House
Stores Road
Derby, Derbyshire
DE21 4BD

+44 1332 415933
@ info@asecos.co.uk

asecos

Safety and Environmental Protection Inc.
c/o Schumann Burghart LLP
1500 Broadway, Suite 1902
NYC 10036, New York, USA

+1 727 251 9491
F +49 6051 922010
@ info@asecos.com

asecos Schweiz AG

Sicherheit und Umweltschutz
Gewerbe Brunnmatt 5
CH-6264 Pfaffnau

+41 62 754 04 57
F +41 62 754 04 58
@ info@asecos.ch

asecos AB

Säkerhet och miljöskydd
Skyttelgatan 23
753 42 Uppsala

+46 18 34 95 55
@ info@asecos.se

For all other countries *please contact asecos Headquarters in Germany.*