# LIFAair®

Innovative solutions for improved air quality







## The global demand for clean air

• Our world has been reminded of the importance of clean air during the past couple of years: raging wildfires, the persistent pandemic and the wider societal shift to live in polluted metropolitan cities, all have changed our relationship with the air we breathe.



# The way for new normal

- The benefit of clean air goes beyond the recent air catastrophes. Healthaware individuals and companies are looking to boost their well-being and cognitive performance by breathing clean air.
- Studies have shown that chess players perform better when breathing clean air and better air quality at the office leads to higher productivity and less sick leaves.





# Challenges in the industry

- While more and more people are adopting new ways to protect themselves against bad air quality, the environmental impacts of cleaning air are becoming bigger.
- Air purifiers and filters, surgical masks and other clean air products are often disposable goods that end up at the landfill.
- The traditional way to clean air is also very energy intensive. We are getting more used to continuously purifying houses, offices and other indoor spaces that, ironically, at the same time are seeing the lowest occupancy rates in the modern history.
- Lifa Air provides an alternative way to purify air on-demand where and when it is needed.





### Overview of Lifa Air

### Lifa Air in brief

- Lifa Air is a Finnish technology company focusing on clean air solutions with production facilities and offices in Finland, UAE and China
- Since establishment in 1988, the company has been a pioneer in the development of machines and equipment that enable clean and healthy air
- Lifa Air's products and equipment is used widely in commercial field including governments and military applications. Lifa air holds numerous invention patents related to air purification
- Lifa Air serves global network of customers in over 100 countries in multiple fields such as healthcare, transportation, hospitality and education

### Established presence & customer relations

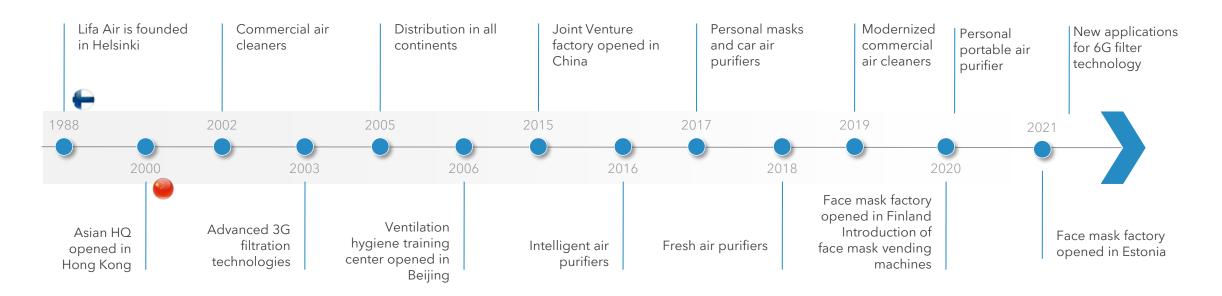


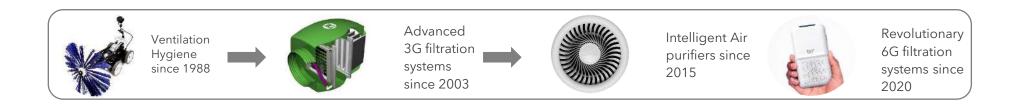
### Trusted by world-class partners & customers





## Key historical events







### Sales Channels

- 1) **Retail:** the company's products are available for consumers in various retails channels such as department stores, supermarkets and brand flagship stores. Domestic ones are managed by Lifa Air
  - Distributors: International distributors buy in bulk, receive marketing materials, training and right to represent Lifa Air locally. Local partner covers regional sales, marketing activities, customer service and other business activities. Distributors sales channels cover B2B and B2C
  - 3) **B2B:** Direct sales to end-users such as hospitals, schools, service companies, construction business and industrial. Domestic and international customers
  - **E-commerce:** Major online sales platforms have been JD.com and Tmall.com & Taobao.com (owned by Alibaba). Lifa Air has +100 000 positive reviews in these stores. In addition to these and online stores operated by local distributors Lifa Air has its own online stores for masks and air purifiers. Latest addition is Amazon store operated by Lifa Air





4)

## Personal protection





### Type IIR surgical mask

- Official European medical device manufacturer (EUDAMED)
- Efficient manufacturing and supply chain
- Successful collaboration cases
- Comfortable and safe products
- Promising R&D projects ongoing



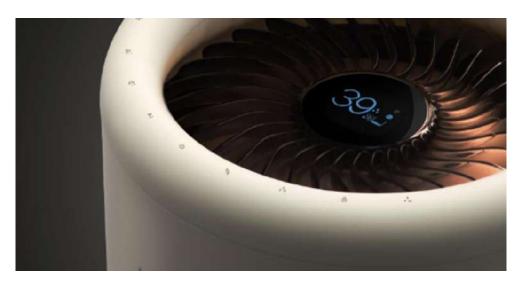
- B Disposable respirators
  - FFP2 & FFP3 highest grade protection
  - Tailor made to fit European users
  - Multiple options for shape, color and headband to serve multiple industries



- C Portable air purifiers 6G Cool
  - First high-tech air purifier you can carry with you anywhere, size of a smartphone
  - Minimalistic Nordic design + world-class function with patented filter technology
  - Filters out over 99% of common air pollutants: smoke, dust, pollen, bacteria, airborne diseases and other air pollution



## 2 Air purifiers - Households (1/2)



- Smart purifying humidifier
  - Lifa Air's Smart air purifying humidifier is fully automatic device that maintains both air cleanliness and humidity in desired levels
  - Equipped with top quality and high capacity H13-Hepa filters
  - Easy to operate and possibility to customize functions widely
  - Smart structure prevents problems usually faced by humidifier devices
  - 99.99% coronavirus removal rate\*(3rd party laboratory test)
  - Launched in 2020



- E Smart plasma purifier
  - Equipped with state-of-the-art 3G-filters
  - 99.99% coronavirus removal rate\*(3<sup>rd</sup> party laboratory test)
  - Launch in late 2021
  - Multiple filtration stages
  - Fully automatic with integrated display panel



## 2 Air purifiers - Households (2/2)





- Lifa Air's car air purifiers have one of the highest available airflows and purification capabilities on the market
- Clean air can be efficiently delivered also to back seat, which is known to be the most polluted place in vehicle
- The two-layer filter offers comprehensive cleaning efficiency
- Equipped with multiple sensors and fully automatic
- As a safety feature will alert if carbon dioxide level is elevated in the cabin







**Wall monitor** 

### G Smart monitors

- Lifa Air's purifiers are equipped with first-rate LIFAsmart™ monitor-controller. It measures multiple pollutant levels, but also acts as the command center of the air purifier
- Can be used as an accurate portable of fixed air quality measuring station ensuring detailed information about pollutant levels
- Accurate laser sensor measures particles ranging 0,3μm-10μm
- Advanced electrochemical sensor for measuring levels of volatile organic compounds
- CO<sub>2</sub> Sensors This is extraordinary among air purifiers and brings the intelligence of the device on a new level



Note: 1) Clean air delivery rate

## 2 Air purifiers - Households & Commercial



- H Smart air purifiers
  - The Lifa Air LA-series comes in two different sizes and with various options for filters and smart monitors in order to satisfy multiple use cases
  - Long lasting and economical protection is obtained by HEPA-filters and activated carbon filters. The air purifiers comprise awarded stylish design with smart monitors.
  - · Luxurious steel body with detailed finish



- LAF 200 Fresh Air Cleaner
  - LAF200 is fully automatic and maintains the CO2 levels at desirable levels by bringing fresh air from outdoors when needed, in addition it removes efficiently pollutants and odours
  - Equipped with heat exchanger and heater element makes the device suitable for any environment
  - Comes with Lifa 3G-filters, high filtration efficiency and approx. one year filter life

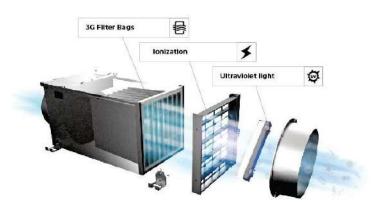


## 2 Air purifiers - Commercial

J Scalable purification solutions for various use cases

High risk patient ambulance protected with Lifa 3G-filters





Lifa 3G-filters in children allergy and asthma hospital







## Professional tools





- Lifa Air full range of ventilation cleaning machines
- Uniquely company offers training services for customers all around the World
- Lifa Air creates products that keep ventilation systems, exhaust ducts, HVAC and air condition units clean
- Product assortment includes brushing, air jetting and spraying machines
- Brushing machines operate with three different technologies: hydraulically, electrically and pneumatically
- **Small sized machines**: residential houses, offices, etc.
- Medium sized machines: offices, schools, hospitals, etc.
- Big sized machines: industrial buildings





- Lifa Air's negative pressure vacuum and air cleaner units are designed for construction, renovation and restoration ventilation cleaning
- The machines are suitable for handling dry air containing asbestos, quartz, hardwood, mineral wool, microorganisms, mold and fungus spores

Negative air machines serve two main sectors;

- 1) Construction industry, dust-free renovation
- 2) HVAC-cleaning, part of Lifa Concept





- · Range of advanced robots consists of
- 1) Inspection robots
- 2) Cleaning robots
- 3) Multi-use robot
- Our robots are capable for doing objectives inside air duct work that has previously been impossible or extremely costly
- Functions; 360° mapping, brushing, air jetting, coating, painting etc.

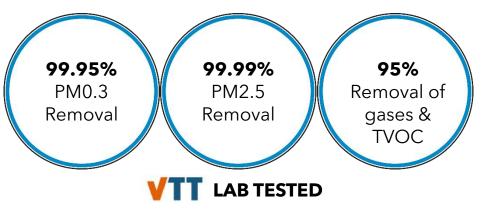


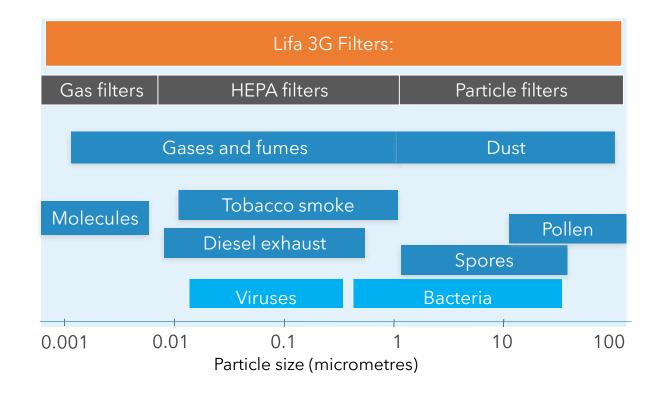
## Technology behind the air purifiers is based on patented 3G- air filtration (2/2)

#### Efficient Filtration for all particle sizes

- 3G-filters are capable of filtering wide range on contaminants, and it is able to remove particles as small as 6nm which matches the size of smallest bacteria and virus without creating harmful secondary pollution such as Ozone.
- Compared to Hepa-filter the advantages of 3G-filter is high capacity, low pressure drop and that fact that it can in addition to particles remove also gases
- The latest breakthrough in filtration technology increases efficiency by combining an electrostatically charged filter with both a particle charging section and a gas filter made of activated carbon media. A nano electric UV light can be added to the system effectively destroying any airborne virus or bacteria, including microscopic molecule

### Standard 3G filters can remove

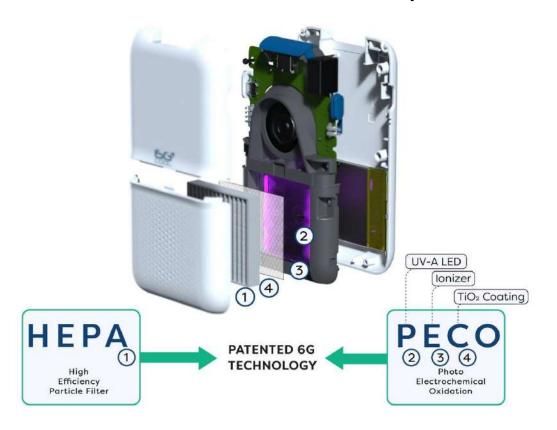




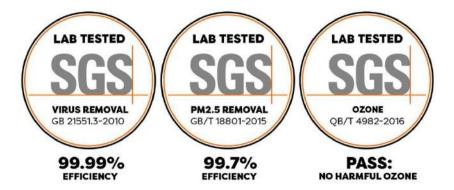


## Overview and technology of the handheld air purifier

### The patented 6G technology combines industry standard HEPA filtration with state-of-art PECO filtration process



### Lab tested efficiency



## The 6G filter comprises of our patented 4-step PECO filtration process to create safe air

- **1. H12 HEPA filter** is the first filtration step and already captures majority of the pollutants and other harmful particles down to 0.01 microns
- 2. UV-A LEDs finalizes the chemical reaction with TiO2 coating which creates mini compounds called hydroxyl radicals. These mini compounds then react with bigger harmful chemicals/compounds (like VOCs and viruses) and chop them down to harmless compounds
- 3. Ionizer creates negative ions and initiates the PECO process
- **4. TiO2 nanocoated mesh** is the reaction surface which breaks down harmful compounds that would otherwise slip through traditional filters



## Overview and technology of the handheld air purifier

### First portable high tech air purifier 6GCool that fits in a pocket

- 6G is about the size of a smartphone, but is capable of cleaning more air than a human normally breathe in a minute
- A revolutionary approach to clean dirty air while on the move: commuting, travelling, at the office or socialising
- First high tech air purifier you can carry with you anywhere and always keep clean air close by
- Filters out over 99% of common air pollutants: smoke, dust, pollen bacteria, airborne diseases and other air pollution



### Summary of 6G Cool Mobile Air Purifier

- R&D goal was to create the best air purification technology and fit it to word's smallest air purifier device. The product premiered in CES exhibition 2020
- Size of a smartphone, but cleans over 10 litres of air per minute and delivers over 5000 litres of clean air on every charge
- Patented 6G filter technology
- Tested by renowned independent laboratories including SGS, Aalto University, VTT
- Draws in dirty air from the bottom and releases clean fresh air out from the top, through an adjustable outlet
- Replaceable filters create significant aftersales business
- Does not emit harmful ozone



### Selected customer cases

### Case Munkka school, Air Purifiers



Munkkiniemen yhteiskoulu has numerous air purifiers installed and their staff is using 6G Cool personal air purifiers. In addition to this they widely use Lifa masks to ensure student and teacher safety

## Case Olympics, Personal protection & professional tools





In Tokyo 2020 team Finland used Lifa Air's personal protection equipment in order to be protected from infectious diseases.

In Beijing 2008 Lifa Air's professional tools were used to clean arenas, training facilities and other facilities used by athletes and visitors

### Case KONE, 3G Air Purifiers



Elevator company KONE has installed Lifa Air 3G-filter systems in some of their elevators to enhance safety and comfort of elevator users

### Case Royal Canin pet foods



Lifa Air has delivered full range of tools and training package for 15 Royal Canin pet food facilities globally to ensure food safety and maintain continuous operation

