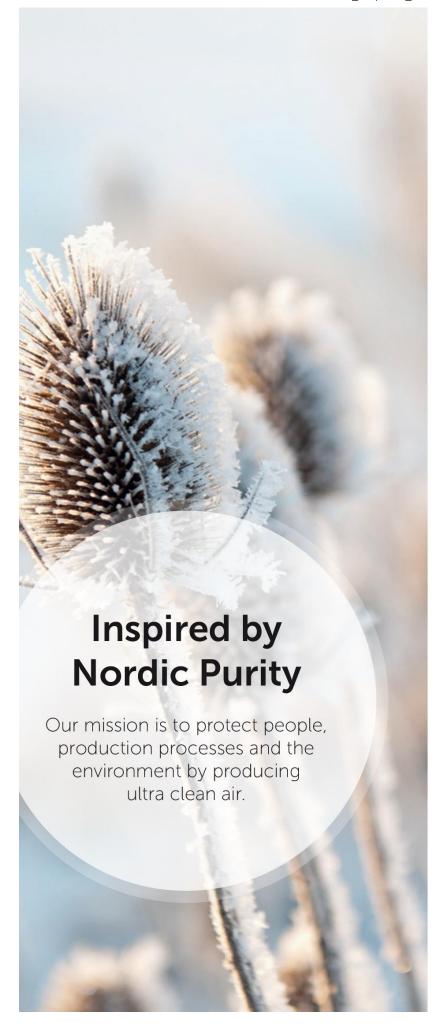


Genano — group —



#### Genano — group —

Company established

1999

\*\*\*

Finnish health technology since

1960

\*\*

>7000

manufactured decontamination units

\*\*\*

Operates in

30+

countries

\*\*

>50

distributors worldwide

\*\*\*

Own

### **PATENTED**

technology

\*\*\*

>50

employees worldwide

# Our service based concepts for clean air cover the following areas



## Why clean air matters for us?

#### We all inhale ~10000 liters of air every day

- We can stay without water for 1 day
- We can stay without food for 3-5 days
- We can stay without air less than a minute
  only a few of us can choose what kind of air to breathe!

#### The world is more polluted than ever

- · Emission control
- CO<sub>2</sub> pattern & energy consumption

#### We spend more than 90% of our time inside

- Sick buildings with mold toxins, VOC's cause symptoms
- Air pollutions from outside enter the buildings through ventilation, windows and doors

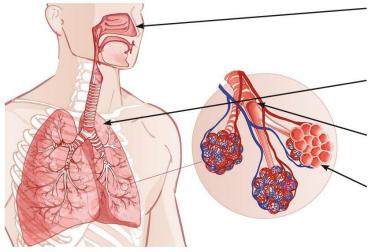
### Healthcare Associated Infections are a global problem

- Cost is billions of \$ annually for the communities
- Increased usage of asthma medication

#### New technologies in manufacturing industries require cleaner environments

- Nanotechnology
- DNA, Biotech & pharma
- Electronics, MEMS, optics

#### WHY ULTRA-FINE PARTICLES ARE DANGEROUS FOR US?



**Large particles** are mostly captured by mucous membranes of nose and throat.

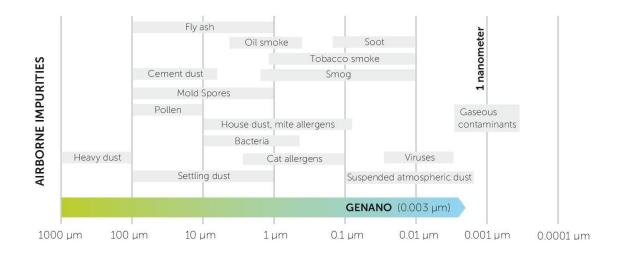
**Inhalable particles** < 10 μm (called PM<sub>10</sub>) can enter the lungs.

Fine particles  $< 2.5 \mu m$  (called PM<sub>2.5</sub>) can penetrate into alveoles.

Ultrafine particles < 0,1 µm (100 nm) can be absorbed directly into bloodstream and are the most dangerous ones, according to WHO.

4









#### **CLEAN INDOOR AIR AS A SERVICE**

#### Solutions for

- Sick building syndroma cases: schools, offices, daycare
- Preventive care against gaseous compounds for new buildings
- Renovation sites
- Workplaces & Gyms etc.

Full scale Service Concept for comprehensive solution

– from initial assessment to symptom survey service, continuous monitoring  $\boldsymbol{\vartheta}$  service.

6



### SMART GENANO CONTINUOUS MONITORING SERVICE

### Remote condition monitoring is done today with sensors using global Sigfox network

- Connected AirWits sensors for control of temp.  ${\rm Co_2}$ , humidity, motion, pressure,  ${\rm PM_{25}}$  and  ${\rm PM_{10}}$ 

### FoxerIoT platform for easy management – also mobile application available

- One multi-tenant service for full end-to-end IoT solution
- Provisioning, device management, data perishing and dashboard in same easy service.

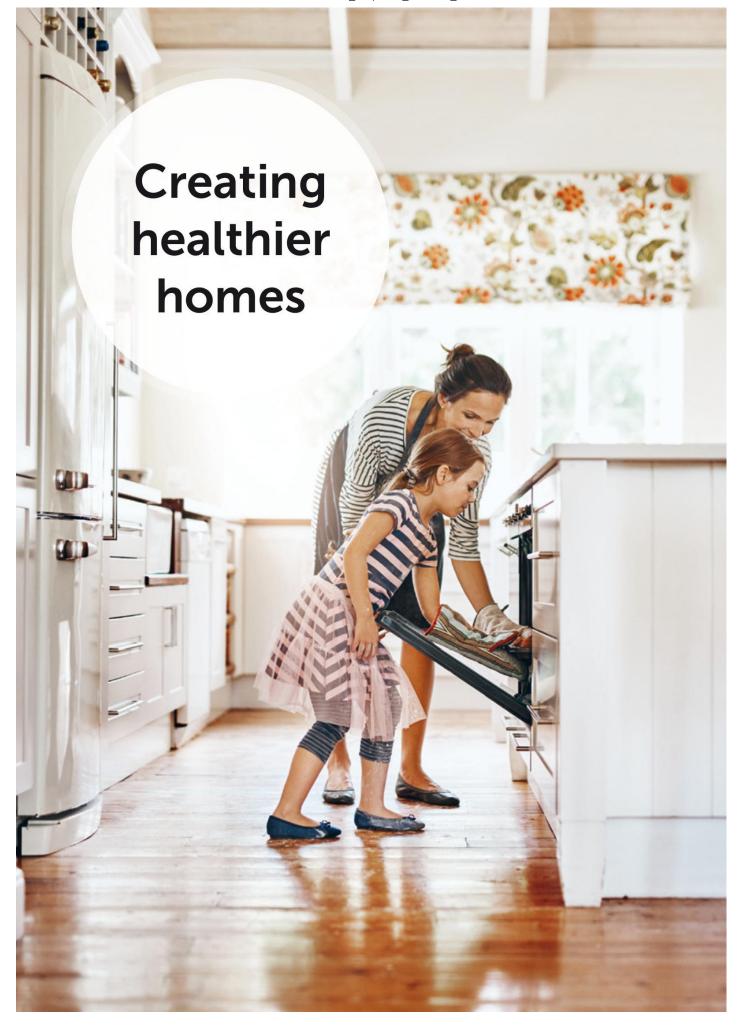


### NANOSCALE AIR DECONTAMINATION SOLUTIONS FOR FACILITIES, WHERE HEPA IS NOT ENOUGH

### Solutions against the spread of airborne impurities in critical areas, and in cleanrooms

- Fighting against impurities in i.e. DNA, Biotech or Pharma laboratories
- Fighting against Particulate matter in production facilities i.e. coating, electronics, optics or Nanotech
- Solutions for flexible, plug & play isolation rooms in hospitals, with negative or positive pressure kits
- Solutions for ensuring hygiene in patient rooms, operating theathres and ICU.



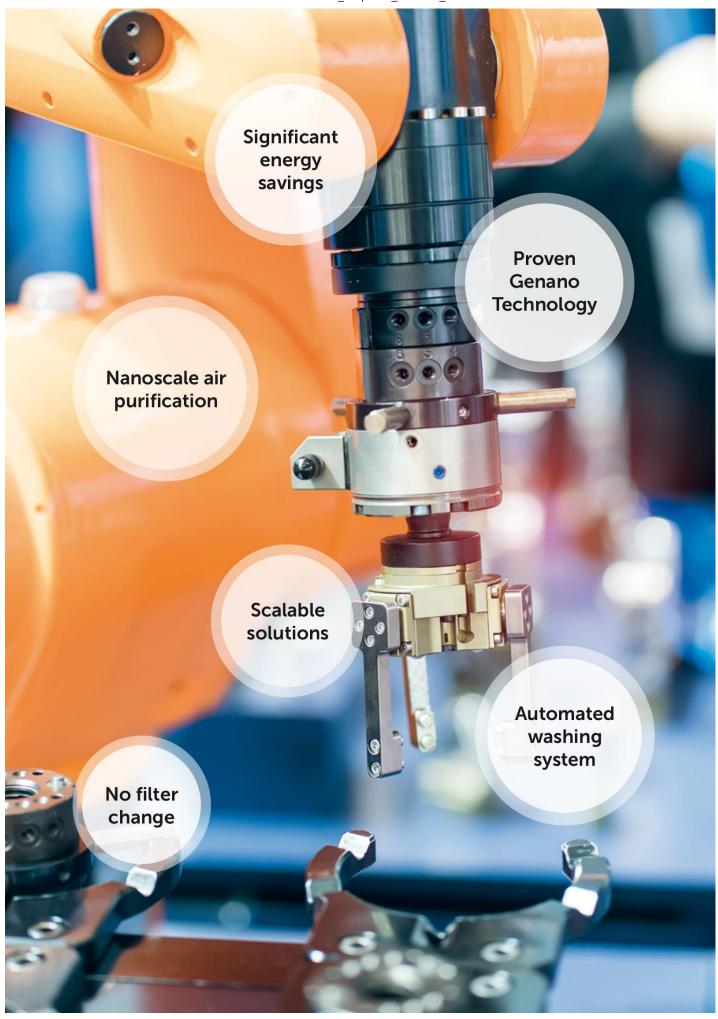






### AN INTEGRATED PART OF FUTURE BUILDING TO ENSURE HEALTHIER HOMES

- Built in filter free air purification for housing / office buildings to ensure clean and fresh indoor air
- Prevent from indoor air quality problems and sick building syndroma
- Prevent outdoor pollution from entering living spaces
- Energy saving & increased standard of living
- Increased property value



# INNOVATIVE SOLUTIONS FOR INDOOR AIR PURIFICATION IN PRODUCTION, LOGISTIC AND PARKING HALLS

**Scalable solutions** for halls, where manufacturing processes generate impurities that compromise workers health; such as welding fumes or oil mist.

**Nanoscale air purification** to protect stored goods, sensitive robotics and production processes that require high indoor purity level.

**Proven Genano Technology** enables low operation cost and long life-time.

**Significant energy savings** with circulated air flow solution.

Automated washing system for reduced maintenance need.

**No need for filter change** – continuously high particle filtration efficiency lowers the cost of changeable parts.

**Retrofit solution** for existing premises.

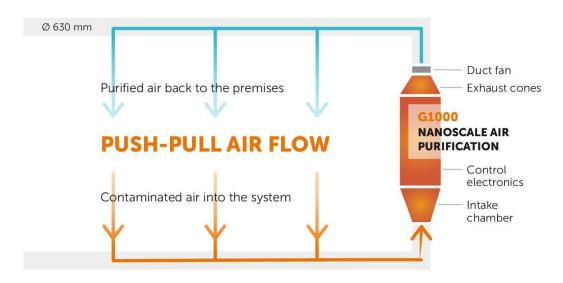


Illustration shows how the air can be circulated within the premises.



### SMART AND EFFICIENT VOC ABATEMENT WITH CATALYTIC OXIDATION

### Compact, state-of-the-art catalytic VOC and odor abatement system with high purification efficiency

- VOC emissions are significant greenhouse gases, and therefore regulated by national and European directives
- Regenerative catalytic oxidizer is an energy efficient control of VOC waste gases
- The operation temperature is up to 500°C lower than in thermal oxidation!
- Due to low operating temperature, the system does not produce harmful by-products such as carbon monoxide (CO) and nitrogen oxides (NOx)
- Developed in research collaboration with Oulu University and VTT Technical Research Centre of Finland



# Genano® technologies

#### NTP (Non Thermal Plasma) – stand alone purifiers

- Internationally patented till 2038
- Filtration rate 99,5% down to 3 nm particle size

#### **ESP Lamell technology** – duct filters & small applications

- Widely known concept also by a few others
- Filtration rate >95% down to 300 nm particle size

#### Combined NTP+ESP – purification solutions, G1000

- Industrial & centralized Real estate solutions
- Filtration rate >85% down to 20nm particle size

#### **RCO technology** – VOC installations

- Regenerative Catalytic Oxidizer for industrial VOC
- For concentrations 0,3–3 g/Nm<sup>3</sup>

#### GENANO® TECHNOLOGY IS TESTED BY VARIOUS INDEPENDENT **RESEARCH INSTITUTES**

Research Studies include among other, factors like

- · Particle matter
- Elimination of microbes
- Gas absorption





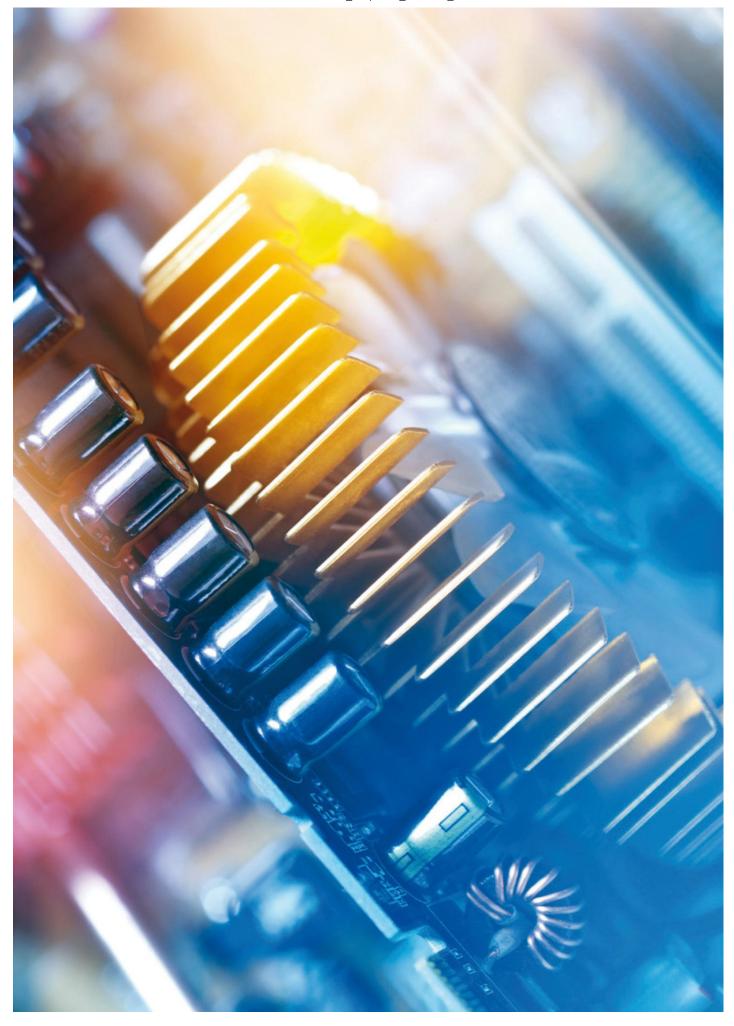














### Genano worldwide

#### Finnish corporation with Finnish ownership

- Part of Rentto Group
- HQ in Espoo Finland
- Genano Solutions Ltd & Elixair Ltd fully owned subsidiaries

### Own subsidiaries & organization in Sweden, Benelux, Germany, UK, Taiwan, Hong Kong and China. Sales Sales representation in Germany, Canada, Italy.

- Around 50 experts in indoor and outdoor air impurities
- Distributors in over 30 countries
- Genano products footprint in over 50 countries

#### GENANO HEADQUARTERS IS LOCATED IN ESPOO, FINLAND.

### Our modern Technology Center is located Hyvinkää Finland, offering laboratory environment for

- Environmental tests, particulate tests, sound lab, gaseous compunds, air flow & electronics measurements etc.
- Training center
- Service & Logistics

Our promise to you, our customer:

# Trust

built through our understanding of your activities.

# Expertise

based on knowledge of air impurities and effective ways to remove them.

# Ease

achieved with our comprehensive service concept.



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