



# SUPAIR-LUX

## MOLEKULÁRIS ÉS BIOLÓGIAI LEVEGŐSZŰRŐ MOLECULAR AND BIOLOGICAL AIR CLEANER

	NINC VENTILÁTOR	NO FAN
	ÁLACSONY ZAJKIBOCSÁTÁS	NO NOISE
	LAMINÁRIS LÉGÁRAM	LAMINAR AIR FLOW
	NINC SZŰRŐBETÉT	NO FILTER
	KÖNNYŰ KEZELHETŐSÉG	EASY MAINTENANCE
	ENERGIA- TAKARÉKOSSÁG	ENERGY-SAVING
	MOLEKULA- SZŰRÉS	NANO-FILTRATION
	STERILIZÁCIÓ HIGIÉNIA	GERM FREE HYGIENE
	IONIZÁCIÓ JÓ KÖZÉRTET	IONIZATION
	NINCSENEK ALLERGÉNEK	NO ALLERGENS
	NINC POR NINC ATKA	NO DUST OR MITE
	NINC FÜST NINC KÖRÖM	NO SMOKE OR SOOT
	NINCSENEK SZAGOK	NO ODORS
	NINC SPÓRA NINC POLLEN	NO SPORE OR POLLEN

## MOLEKULÁRIS ÉS BIOLÓGIAI LEVEGŐSZŰRŐ

MOLECULAR AND BIOLOGICAL AIR CLEANER



### No FAN

SupAir™ units apply innovative solutions with non-mechanical, high-voltage systems to generate airflow.



### No FILTER

SupAir™ units need no filter cartridges, repair, recalibration, or any other maintenance throughout protracted operation.



### No NOISE

Without mechanical parts, units run without the stressful, annoying low frequency noise usually generated by traditional fans.



### NANO-FILTRATION

The solution coagulates and extracts particles even from the most dangerous size range of 0.001 µm and below.



### ENERGY-SAVING

The high cleaning efficiency comes with low electric power requirement, saving energy in a sustainable way.



### IONIZATION

SupAir™ units improve the general condition of users by generating negatively charged, ionized particles that also neutralize electro smog.



### GERM-FREE HYGIENE

Viruses, germs and bacteria are neutralized and extracted. Radon removed. O<sub>3</sub>-enriched air for enhanced cleaning.



### No ALLERGENS

Besides strong hygienizing effect airborne allergens and irritants are also removed together with chemicals and vapors.



### No ODORS

Smelling airborne chemicals and household odors are also neutralized and removed hurting the nose & lungs no more.



### No DUST OR MITE

Even tiny, floating dust particles with the size of a molecule are also grown and removed together with mites living and spreading attached on.



### No SMOKE OR SOOT

Even atomic sized vaporized liquid or solid aerosol particles, smoke, tobacco, loose soot and other agents are removed.



### No SPORE OR POLLEN

Floating pollens and fungous flakes like highly allergen mold spores and other pulmonary irritants are neutralized and firmly extracted.



### EASY MAINTENANCE

SupAir™ units are easy to maintain, with no mechanical moving parts or filter cartridge of any kind.



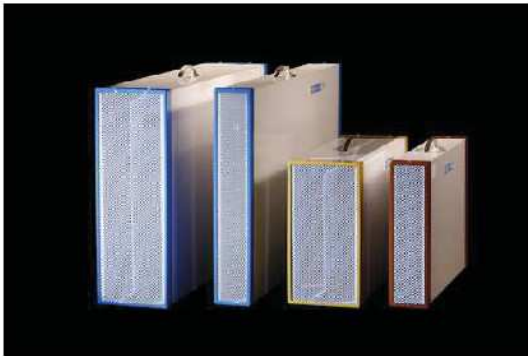
### LAMINAR AIR FLOW

While cleaning and driving the air flow no stirring is made, thus no dust, germ or pollutants already subsided are whirled up again.





## *Air purification by the latest Sup-Air™ Technology*



The Superior Air (SA) Series product line uses the latest Sup-Air™ Air Cleaning Technology to purify the air without fan or moving parts. Due to its innovative design it is silent, does not require filter cartridge, chemicals or UV lamp. The SA devices will give you high efficiency (~100%) and low energy consumption ( $1\text{W}/\text{m}^3/\text{h}$ ) while capturing floating contaminants (well below the  $0,001\ \mu\text{m}$  range!) and eliminating all known airborne germs, allergens or irritants. The built in collector system uses only stationary blades which are driving the airflow. This revolutionary design significantly increases the capture rate of airborne

allergens and irritants like mold spores, pollen, mites, tobacco, smoke and dust, viruses, germs and bacteria. Chemical contaminants such as hydrogen sulphide, silicon oxides, styrol, asbestos dust or metal vapors, even radioactive radon are removed.

The innovation is a non-mechanical, high-voltage system that uses electricity to draw air inside the unit and charge the air borne particles while creating positively and negatively charged ions and moving the air with electrostatic forces.

SA devices, based on the patented Sup-Air™ working principle, circulate the air and airborne particles like an electrostatic linear motor. The air-cleaning units use the gaseous medium itself as the rotating part of the linear motor while coagulating molecules, aerosols and solid particles from the polluted air flowing through the unit. The Sup-Air™ Technology makes it possible to grow and extract particles even from the most dangerous range of  $0.001\ \mu\text{m}$  and below while their diameter reaches the size of  $0.8\text{--}1.5\ \mu\text{m}$ .

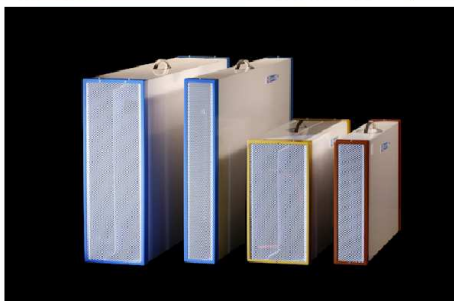
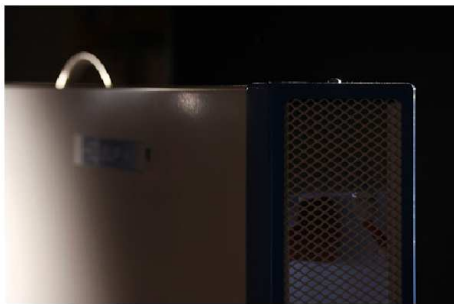


The coagulation process of the airborne particles is the function of the stationary electrode system. During this process, the SA air purifying units increase the mass and volume measures of the airborne particles about 500.000 times of their original weight. Consequently their flow velocity gradually decreases till the coagulated particles, agents and contaminants simply drop out of the drift space and cling to the collector blade-system and can be manually removed. SA devices are tested and proven to produce and use chemical catalytic effect.



SA devices are absolutely silent ( $10\ \text{dB(A)}$ ), they completely eliminate the stressful, annoying low-frequency noise usually made by traditional HEPA filters equipped with motor-driven fans. SA devices need no filters to replace or roundabout maintenance throughout protracted operation. They operate with negligible power requirements ( $1\text{W}/\text{m}^3/\text{h}$ ) for circulating and cleaning the gaseous medium with an efficiency of ~100%. The modular structuring provides a wide range of custom-built appliances with an applicable air delivery rate from  $50\text{--}20.000\ \text{m}^3/\text{h}$ .





**SUPAIR-LUX**

## **SUPAIR-LUX Kft. – SA Product Line 2012**

The Superior Air (SA) Series product line uses the latest Sup-Air™ Air Cleaning Technology to purify the air without fan or moving parts. Due to its innovative design it is silent, does not require filter cartridge, chemicals or UV lamp. The SA devices will give you high efficiency (~100%) and low energy consumption (1W/m<sup>3</sup>/h) while capturing floating contaminants (well below the 0,001 µm range!) and eliminating all known airborne germs, allergens or irritants.

The built in collector system uses only stationary blades which are driving the airflow. This revolutionary design significantly increases the capture rate of airborne allergens and irritants like mold spores, pollen, mites, tobacco, smoke and dust, airborne viruses, germs and bacteria. Chemical contaminants such as hydrogen sulphide, silicon oxides, styrol, ultra fine aerosols from the most dangerous range, asbestos dust or metal vapors, even radioactive radon are removed.



[www.supair-lux.hu](http://www.supair-lux.hu)

### **SA-25**

Clean Air Delivery: 25-30 m<sup>3</sup>/h

Area of premises: 15-20 m<sup>2</sup>

Degree of pollution: average

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Weight: 5kg

Measures: (w/h/d) 600/400/100 [mm]

Efficiency: η>80% - while sustained operation

Voltage: 230V - 50Hz - 0,4A - through grounded wall-socket

Wattage: ~15W - depending on actual pollution density

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Where to apply: children's area and family bedrooms, kitchen, smaller premises, bathrooms, desk-offices, workshops etc.

### **SA-50**

Clean Air Delivery: 50-60 m<sup>3</sup>/h

Area of premises: 40-50 m<sup>2</sup>

Degree of pollution: middle

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Weight: 8kg

Measures: (w/h/d) 600/400/200 [mm]

Efficiency: η>80% - while sustained operation

Voltage: 230V - 50Hz - 0,4A - through grounded wall-socket

Wattage: ~17W - depending on actual pollution density

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Where to apply: home and official premises, smoke-rooms, health offices, medical wards, waiting rooms, community and public areas etc.

### **SA-100**

Clean Air Delivery: 100-110 m<sup>3</sup>/h

Area of premises: 80-120 m<sup>2</sup>

Degree of pollution: middle-high

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Weight: 12kg

Measures: (w/h/d) 960/600/100 [mm]

Efficiency: η>80% - while sustained operation

Voltage: 230V - 50Hz - 0,4A - through grounded wall-socket

Wattage: ~20W - depending on actual pollution density

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Where to apply: home, official and medical premises, sterile labs, operational and waiting rooms, catering and public areas, hotels etc.

### **SA-200**

Clean Air Delivery: 200-220 m<sup>3</sup>/h

Area of premises: 200-250 m<sup>2</sup>

Degree of pollution: middle-high

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Weight: 16kg

Measures: (w/h/d) 960/600/200 [mm]

Efficiency: η>80% - while sustained operation

Voltage: 230V - 50Hz - 0,4A - through grounded wall-socket

Wattage: ~30W - depending on actual pollution density

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Where to apply: large official and medical premises, warehouses, sterile labs, operational and waiting rooms, catering and public areas, hotels etc.



## TECHNOLOGICAL MARKET REVIEW & BENCHMARK of

„traditional” cleaning technologies applied in air-cleaner devices designed for personal, family or office air purposes, for portable or wall-mounted operation in stand alone mode (not integrated into centralized air-conditioning coursing systems), and characterized with max. 0,3 m<sup>3</sup> cubage.

## TECHNOLOGICAL FACTS, FEATURES AND PROPERTIES ON THE MARKET

revealed by our research based on the Hungarian air cleaner devices' market in 2012:

- ❖ General purpose cleaning for improving overall air quality (neutralizing and/or extracting mainly allergens, dust, pollens, smoke, spores, odors, bacteria and certain chemicals etc.)
- ❖ Filter cartridges applied (generally 0,1-0,5 µm, HEPA or static) with coal, optical or catalytic inlay.
- ❖ Germ-free rendering achieved by light (UV, germicide etc.) or applying ozone.
- ❖ Air flow is generated by multi-speed fan or applying convection (heated air flow.)
- ❖ Ionizing effect is not a standard feature, nano-filtering option is a premium rarity.
- ❖ Technical data range within the segment: mass 6-42 kg, room size 50-700 m<sup>3</sup>, wattage 30-190 W, air-delivery 40-1750 m<sup>3</sup>/h, max noise level 20-66 dB(A), cubage of the device is 0,028-0,28 m<sup>3</sup>.

## ADVANTAGES, EXTRA FEATURES AND ADDED VALUES OF SUPAIR™

Air Cleaning Technology and the latest generation of revolutionary SA Product Line:

- ❖ Nano-piko filtration under 0,001 µm range, neutralizing and extracting chemical agents and Radon.
- ❖ Operating without fan, filter, catalyzer, heat-emission or UV light (nor germ-free rendering module.)
- ❖ Low noise-emission (10 dB(A)), minimal wattage (15-30 W) and high energy efficiency rate.
- ❖ Open module-based architecture makes serial or parallel clustering easy, embedding option behind walls or hung ceilings, optional interface to centralized remote monitoring systems.
- ❖ Added ionizing effect to enrich the air output with negatively charged ions for enhanced cleaning.
- ❖ Beyond neutralizing contaminants by ionization airborne particles are also extracted from the air.
- ❖ The last electrode of the SA device – beyond physiologically beneficial ionization – also enriches the air with ionized oxygen (ozone level is adjustable) for enhanced germicidal effect.
- ❖ Portable applicability, solar cell or battery based operation, LED display, high CADR values.
- ❖ Laminar air flow for turbulence-free and steady micro environment.

Details of the technological benchmark are collected on the next chart without noting the brands.





