

asecos®

AirOne

***A new dimension in  
air purification***





# AirOne

## THE NEW STANDARD FOR AIR PURIFICATION

*The new air purifier by asecos® is very convincing due to its intelligent air guide, innovative filter technology, modern design and unique minimisation of airflow noise.*



The room air quality is a major factor for well-being and performance. However, it is very difficult to measure room air quality and everyone has a different subjective feeling of it. The first thing that counts for people in a room is the personal (smell) sensation: "Good" room air should not be perceived as being stuffy, stale or polluted. However, from an objective point of view, there are thousands of invisible pollutants, to which people with physical disorders react. It is important to effectively filter out these pollutants.

This is why the new AirOne air purifier from asecos® has been developed. It collects and filters harmful substances right up to viruses and bacteria – so thoroughly

that the air is measurably improved.

Hence the AirOne air purifier adapts ideally to your needs. There are two versions, which are specially adapted to your application needs: AirOne Type B for minimising pollutants in indoor rooms and AirOne Type S for the additional tasks of removing pollutants from rooms that are full of tobacco smoke.

Give room air a new quality: Discover the AirOne air purifier from asecos®!

# AirOne TYPE B



# CREATES CLEAN AIR IN INDOOR ROOMS.

*Type B minimises pollutants in all types of inside spaces – a real all-rounder!*

Room air is always (ubiquitous) loaded with pollutants, even if this is often only noticed by people when they start to feel unwell.

According to a list from the statutory accident insurance and prevention organisation (HVBG) the following substances among others are found in "normal" room air: Formaldehyde from chipboard furniture, ozone and fine dust from office equipment, organic solvents from cleaning agents, pesticides from carpets, pollen and mould from plants and walls as well as viruses, bacteria and odorous substances, coming from people.

## **Room users have two main requirements for air quality:**

That there are no dangerous concentrations of pollutants. That air is not found to be stuffy or stale, which usually depends on personal perceptions.

## **Now what's the purpose of the AirOne Type B?**

Our air purifier removes the pollutants and pathogenic germs from the air (viruses, bacteria, mould, pollen, etc.), that can impair our health.

AirOne Type B increases well-being and hence helps maintain our health and performance.



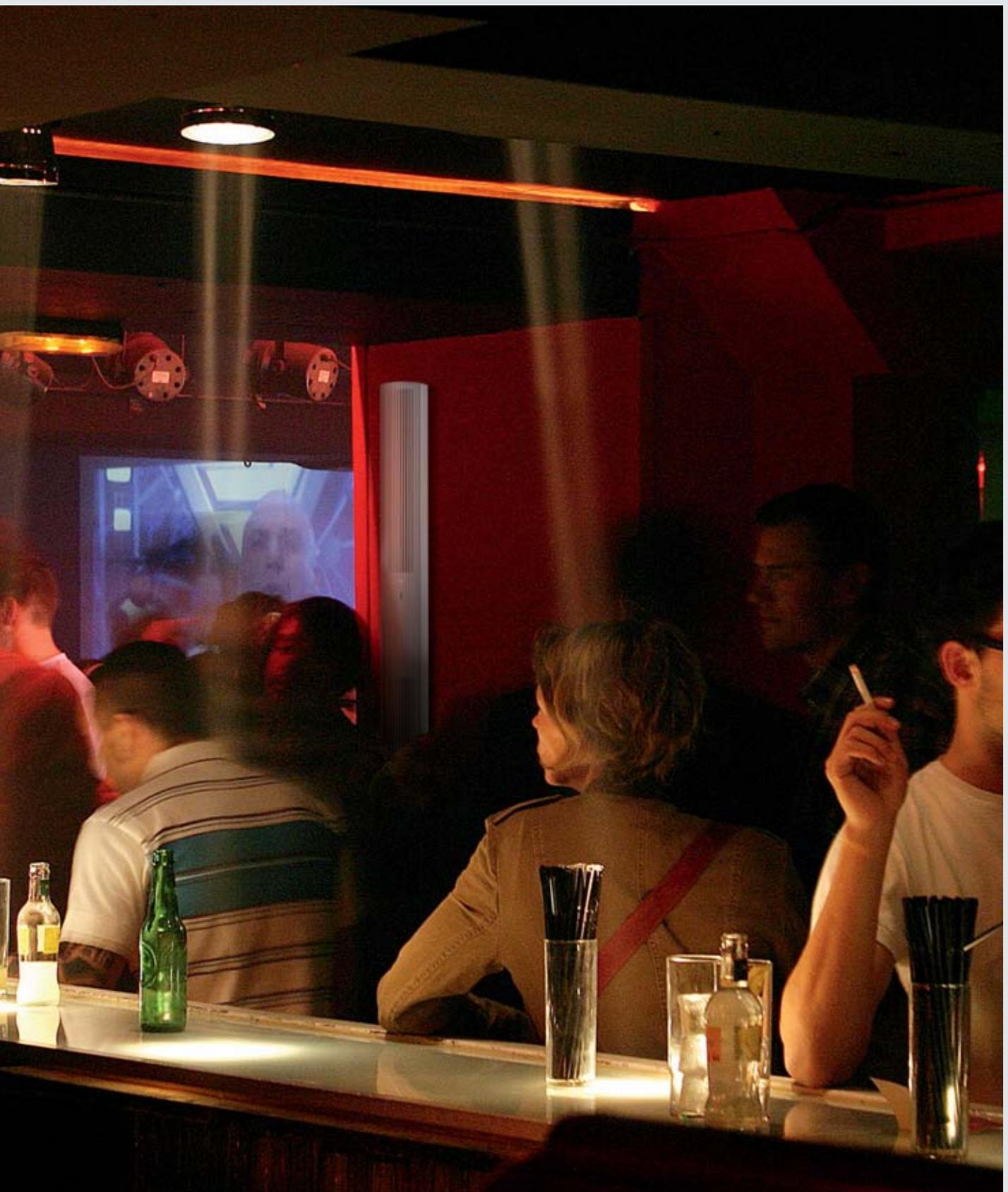
## **Room air – a sensitive gas mixture.**

Air is the gas mixture of the earth's atmosphere. Air consists of two main gases, nitrogen (78 %) and oxygen (21 %). There are other components as well, argon (0,9 %), carbon dioxide (0,04 %), hydrogen and traces of water vapour. In its natural form air is odourless and tasteless.

If the oxygen content goes below 21% then tiredness, burning eyes, etc. are the result – the percentage of carbon dioxide and other gases increases.



AirOne TYPE S



# FILTERS BLUE HAZE VERY EFFICIENTLY.

*Pleasant atmosphere in smoking rooms? Type S makes this possible!*

Without a doubt smoking damages your health. In the meantime it is forbidden to smoke in public buildings in most EU countries. Smokers have to find specially equipped rooms. What do these smoking rooms look like in terms of the amount of pollutants? The directives of the lawmakers foresee „adequate ventilation options“ for smoking rooms in some Federal states. However, what does “adequate” really mean and which technical requirements are needed to achieve this?

Fact is: Anyone who has been inside such a smoking room knows that air is usually filled with pretty thick smoke, whether smokers are in the room or not.

Problems like this simply disappear into thin air by the AirOne Type S. Because tobacco smoke not only damages your health but also has a bad smell, Type S has a special active carbon filter. Hence the air filter minimises not only the health risks caused by the tobacco smoke in the room but also the amount of cold smoke that stays in the room long after the last cigarette has been smoked. Even the deposition on surfaces and furniture is reduced.



## **asescos® – competence in capturing pollutants.**

The effective filtering of tobacco smoke requires special know-how in the area of filter technology.

asescos® has built up a thorough knowledge in this area, through the development, testing and certification of smokers cabins. Moreover we assisted the committee for development of principles for testing and certification of non-smoker protection systems (GS-BGIA-M14 Issue 11/2007) and have many years of experience, in effectively filtering the air pollutants coming from tobacco smoke.



# USED EVERYWHERE – FOR CLEAN AIR!

*Be it for a company, public buildings or private areas:  
AirOne performs well everywhere.*



**AirOne air purifiers are extremely versatile.**

**Here are some examples:**

- » Companies such as offices, open plan offices, conference rooms, canteens, recreational rooms, computer rooms etc.
- » Gastronomy and the hotel business, such as smoking rooms, hotel rooms, breakfast rooms, employee's offices, canteens etc.
- » Public places such as airports (smoking rooms, VIP lounges), libraries, banks, hospitals, museums, nursing homes, doctor's practices, chemist's, fitness studios, dance schools etc.
- » Private households

**By the way: The air purifiers from asecos® are the tailor made solution for smoking rooms in the gastronomy business and in companies when combined with partition wall systems!**

# ADVANTAGES IN EVERY RESPECT!

*Well designed, powerful and economical: The air purifiers from asecos® have many advantages.*

## **AirOne Type S for smoking areas:**

- »» Effective cleaning of the smoky air
- »» Minimisation of the cold smoke smell in smoking rooms
- »» Improved working atmosphere for service and cleaning staff

## **AirOne Type B for all types of indoor rooms:**

- »» Pleasant working and living environment
- »» Effective reduction of the ubiquitous pollutants in the air
- »» Filters germs and viruses sustainably (e. g. in doctor's waiting rooms)
- »» Clean room air has a positive effect on work performance and reduces inactive periods due to sick leave

## **... And in general:**

- »» Long service life of the filter unit – low maintenance costs
- »» Quality "Made in Germany": High quality materials chosen with excellent finishing and superior design
- »» Plug-in delivery
- »» Easy to use
- »» Long lifetime



# THE TECHNOLOGY: NOTHING BUT THE BEST!

*Is AirOne comparable with traditional air purifiers found on the market?  
A question that you can answer yourself – when we have explained the operation in the example for Type S.*



→ polluted air  
→ filtered clean air

## **Intelligent air guide.**

Due to thermal convection and heated air, a smoking room slowly fills up from top to bottom with tobacco smoke. To quickly remove tobacco smoke from rooms, the air in the upper area of the room should be extracted by suction. AirOne Type S exactly follows this principle: With a construction height of 2.20 m, it quickly and reliably captures tobacco smoke even in high rooms, thus preventing too high concentration.

## **Innovative filter technology.**

The asecos® air purifier AirOne has a five-stage filter system with coarse, fine, HEPA filter, active carbon and formaldehyde trap. Filter stages 1 to 3 extract all particulate pollutants from the air. Stage 4 filters all gaseous pollutants and odorous substances. Filter stage 5 eliminates finally harmful aldehydes. The air containing the tobacco smoke is purified by AirOne using the five filter stages and is slowly blown back into the bottom of the room as clean air.

## **The contact time is important.**

The duration of the presence of smoke-filled air in the filter medium is decisive for the optimal filter performance (contact time). The design of AirOne with its height and diameter makes the perfect interaction possible from filter surfaces and flow speeds and thus gua-

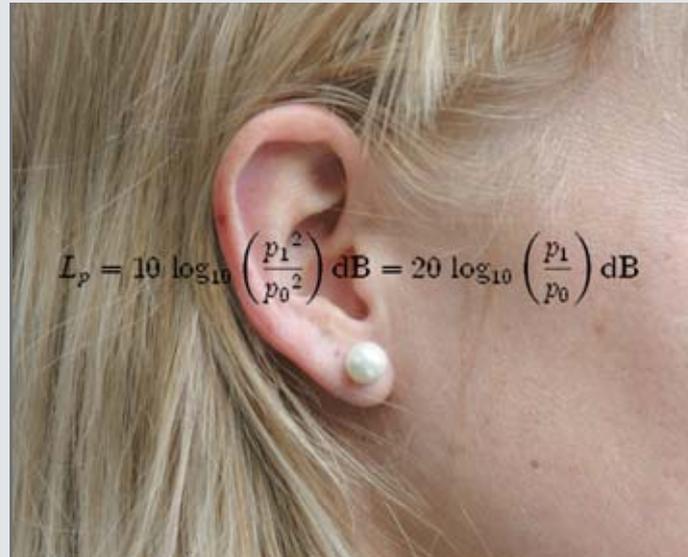
ranteeing the optimal duration of the presence of the pollutants in the filter medium. Another important criteria is the quality of the filter medium itself: To absorb the tobacco related pollutants adequately, the AirOne Type S has a special active carbon filter with fine grain and specific impregnation for tobacco smoke, together with a purposely low flow speed the contact time of the tobacco smoke with the filter medium results in a high filter efficiency.

### Minimisation of flow noise

A further differentiation feature is the uncompromising avoidance of noise emissions: Even here the very low flow speed eliminates draughts and noise: The air purifier is very silent (42 dB at full load, which is equivalent to the usual background noise in an office), but its performance is unbelievable! This is also verified by the protective right registered at the Deutsche Patentamt (German Patents Office) which comprises 54 protective claims and deals in more than 20 chapters with the topic of acoustics.

### Easy to service.

An important economic aspect: The filter packages are so spacious that the filter service life exceeds usual expectations by far. Only when there is a substantial pressure loss in the system an electronic pressure monitor indicates the saturation of the filter and the necessary filter replacement which you can carry out easily with a simple twist. This fact and the economical replacement filter keep the running costs low. The filter can be disposed of easily with the household waste. If necessary you can have a maintenance contract for your device.



$$L_p = 10 \log_{10} \left( \frac{p_1^2}{p_0^2} \right) \text{ dB} = 20 \log_{10} \left( \frac{p_1}{p_0} \right) \text{ dB}$$

### How many air filters does your room need?

The ideal operation of the air filter depends on the size of the room, the air recirculation rate, the erection conditions and of course the level of pollutants in the room (e. g. tobacco smoke).

Our team of experts will gladly advise you, to get the best results for setting up the air filters.

# THE AIR PURIFIER AS A DESIGN OBJECT.

*The AirOne air purifier series set the standard both in form and function.*

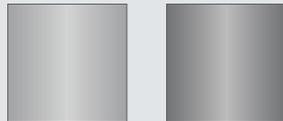


reddot design award  
honourable mention 2008

The clear, slim design and the confident shape, makes AirOne an object that is very pleasing to the eye. This is also confirmed

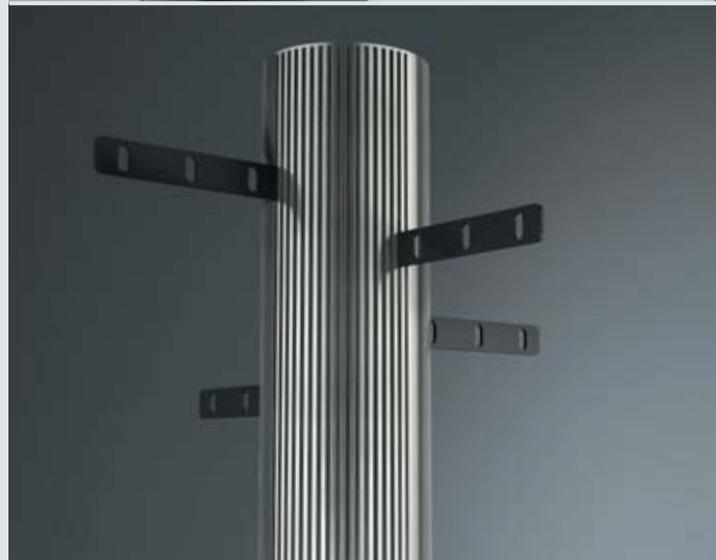
by the red dot Design Awards 2008.

The attractive air purifier from asecos® are available in silver and anthracite.



## **AirOne. Can do much more than just clean the air.**

AirOne is both a very useful and highly elegant piece of furniture with a wide range of accessories. For example as a wardrobe, prospectus holder, table ashtray or magnetic board. Here are some example of how you can customise AirOne with accessories.



# DEFINITELY BETTER ROOM AIR: THE TECHNICAL DATA.

*How does the AirOne air purifier perform? Here you can read it in black and white.*

<b>Dimensions:</b>	without feet: $\varnothing$ x H 250 mm x 2200 mm; with feet: $\varnothing$ x H 550 mm x 2222 mm
<b>Material:</b>	Aluminium housing, sheet steel inside parts, steel feet
<b>Surface:</b>	anodised (silver or anthracite)
<b>Weight:</b>	approx. 55 kg
<b>Full load noise level:</b>	approx. 42 dB (A)
<b>Partial load noise level:</b>	approx. 34 dB (A)
<b>Full load volumetric flow:</b>	306 m <sup>3</sup> /h
<b>Partial load:</b>	103 m <sup>3</sup> /h
<b>Filter (5 filter stages):</b>	<b>1<sup>st</sup> stage:</b> Dust filter, G4, protects against dirt up to particles of 0.01 mm in size (hair, pollen, etc.) in accordance with EN779 <b>2<sup>nd</sup> stage:</b> Fine dust filter, F7, protects against dirt up to particles of 1 $\mu$ m in size (ash, bacteria, tobacco smoke, viruses etc.) in accordance with EN779 <b>3<sup>rd</sup> stage:</b> HEPA-Filter H13, efficiency 99.995 MPPS (most penetration particle size) up to 0.1 $\mu$ m EN1822 <b>4<sup>th</sup> stage:</b> <b>Activated carbon filter</b> to remove gases, vapours and smells (TVOC, CO, CO <sub>2</sub> ) <b>5<sup>th</sup> stage:</b> <b>Special-filter</b> , special aldehyde-trap filter in the outlet duct
<b>Nominal voltage:</b>	230 V
<b>Frequency:</b>	50 Hz
<b>Current input:</b>	0,7 A
<b>Watt (full load):</b>	59 Watt
<b>Watt (partial load):</b>	31 Watt

In rooms with tobacco smoke we recommend 16- to 20-fold air recirculation per hour. All information corresponds to the state of the art at the time of going to press. We reserve the right to effect technical modifications.

The efficiency of the AirOne was tested according to the requirements for testing and certification of non-smoker protection systems (GS-BGIA-M14, Issue 11/2007).

We will gladly send you the test results on request.



The name of asecos® stands for security and ecology when handling hazardous materials. For many years asecos® has been seen as one of Germany's leading experts for the handling and extraction of hazardous substances. The AirOne air purifier series has been developed with this know-how. Trust our quality "Made in Germany" and maximum capacity.

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