

Breathe healthier, work healthier, live healthier

Feel safe and protected

Version 1

 Made in Germany - the original from TROTEC
Used successfully in schools, health departments, ministries and hospitals

- Eligible for funding: complies with all points of the German federal and state funding guidelines
- Scientifically proven effectiveness

TROTEC

**99% of all infections occur indoors.** That's why infection control is a duty, not an option.

Air is our most important commodity. Clean air is healthy create your own "climatic health resort"!



### **COVID** has changed everything, and is yet to change a lot of things.

Because 99 % of all infections will continue to take place indoors in the future. Breathe healthier, live healthier - air is becoming a megatrend for infection and health protection.

Clean, good air and a safe feel-good climate for your customers, guests, employees, patients or students become a duty and not an option.

# Turn rooms into climatic health resorts!

A place where you feel safe and where you know that there is no danger from the air.

Because "good air" has never been as valuable as it is today, and that will not change tomorrow!

### Invest in air.

Do you feel safe? Do you want others to feel safe too? But what about the air that surrounds us?

Take a deep breath in and out... because now it's getting exciting...

What happens if you spend some time indoors with other people? In schools, nurseries, at the gym or hairdresser, in restaurants, pubs or boutiques?

We guarantee: everything you breathe in there certainly contains some oxygen... **but not only...** 



### A pure source of strength. Healthy air.

Pure, unpolluted air is the best and most valuable thing we can offer our bodies. Air is our most important commodity, the basis of our life and necessary for us to stay healthy.

Unfortunately, the air has given us little pleasure, especially during the last months, because the air quality is a cause for alarm in many rooms.

We breathe in aerosols all the time. In addition to viruses and bacteria, pollen, fine dust and allergens also take our breath away. Measles, colds, coughs, flu, allergic reactions and COVID are all carried towards us through the air. Then, the most luxurious air conditioner is useless because it is about cleaning the air effectively to provide for a healthy air balance.

So what to do?



### Quite a bit going on in the air.

While there is always talk of dangerous outdoor air pollution, studies show that our indoor air is up to 100 times more polluted than outdoor air.

Infectious viruses, bacteria, spores, mites and allergens plan an aerial assault on our health with every breath. But that's not all, because every time you open doors or windows, it is not only oxygen entering the room but also fine dust and pollen, which are a burden for your body.

More than 95 % of airborne infections and allergic reactions have always occurred indoors. It was just never noticed to the extent that everyone is now becoming aware of in the pandemic. Just take a deep breath, and a selection of air stressors will have already entered your body. Just like that, with every breath you take. You have seen nothing, smelled nothing, felt nothing and tasted nothing. **But they're there.** 





### Feel safe.

As one of the international market leaders in the production of filter devices for air filtration of suspended matter and viruses, Trotec develops mobile high-performance air purifiers for the prevention of SARS-CoV-2 infections.

No matter where you go - Trotec air cleaners operate for your protection and health all over the world.

Whether you are at the doctor's or in a restaurant. Whether in the daycare centre, at school, at the gym, optician or in the office.

We turn the room into a "climatic health resort" and invite you to experience healthy air wellness with every breath.



## Together with many people being responsible for air quality, we will establish "climatic health resorts".

Rooms in which you can stay without having to worry about your health. Our air cleaners of the TAC series and the Airgo-Clean® One are recommended by numerous leading research associations in order to reduce the airborne infection risk from virus-laden aerosol particles to a minimum. They are used worldwide by top companies, in schools, ministries and health facilities.

Treat your body with respiratory health, look out for "climatic health resorts" in your surroundings and enjoy your stay in fresh indoor air.

Healthy air 365 times a year. Breathing power 365 times a year. Enjoy this service yourself and provide it to others, too! Because effective infection and health protection is a duty and not an option.

### Inhale safety.

Trotec offers a solution: the professional air cleaners of the TAC series and the AirgoClean® One.

Clean air is simply healthier and, if used purposefully, effectively protects against airborne infectious diseases - without any side effects.

Just healthy, clean air, without viruses, fine dust, allergens and bacteria. Even despite regular ventilation to let in fresh oxygen.

We can promise all of this if you stay in rooms where the **air is "healthily filtered" with a Trotec air purifier.** 



### Come in, breathe in, and enjoy the moment.

"Climatic health resort. TAC inside" - if you get to see a sign or sticker like this, you can be sure to be safe.

You can be sure that there is no danger from the air. Enjoy your coffee, your pizza or your shopping trip. The secret behind this logo are people who are responsible for maintaining a good air quality. People who want children, customers, guests, patients and employees to be well taken care of.

In a reassuringly pure "air space".

"If you run this system (TAC V+\*) continuously, **no one will manage** to generate an aerosol concentration of an infectious level!"

Prof. Dr. Kähler (University of the German Federal Armed Forces in Munich)





**References:** Satisfied customers report on the use of our air cleaners de.trotec.com/tacv-plus-kunden

### AirgoClean<sup>®</sup> One: The compact designer H14 air cleaner



## Creating your climatic health resort: for smaller shops, offices, medical practices, law firm or exclusive private rooms.

Places where you feel safe and where you know that there is no danger from the air. Because "good air" has never been as valuable as it is today.

The name says it all: AirgoClean® is Trotec's brand name for professional air purification in an upscale ambience. And here the AirgoClean® One is our number 1 and first recommendation for professional virus filtration and effective air pollution control in conference rooms, waiting rooms, medical and veterinary practices, offices, law firms or in your home.

#### **Design for high demands**

COMPARATIVE TEST, UNIVERSITY OF THE FEDERAL ARMED FORCES IN MUNICH

Thanks to its classically stylish design, the air cleaner blends in elegantly with smaller shops and any living or working environment. High-quality materials and manufacturing make the difference.

#### If safety is your top priority

The AirgoClean® One is a high-performance air purifier originally produced by Trotec, developed and manufactured in Germany according to the highest of quality standards, which houses only efficient branded components of the latest generation of technology supplied by leading component manufacturers. Each quality filter integrated is produced in Germany, tested and certified individually. As with the TAC V+, the effectiveness of the AirgoClean® One with its H14 DIN 1822 filter system has been scientifically proven by the University of the Federal Armed Forces in Munich.

#### AirgoClean<sup>®</sup> One - if premium is your standard

The AirgoClean<sup>®</sup> One is your guarantor for that reassuring "coming home feeling" when entering shops, your own four walls, your office, law firm or medical practice. Enter. Close the door, take



a deep breath, feel safe. Air pollutants, infectious viruses, germs or fine dust stay outside - all that remains inside is clean, filtered breathing air.

Protect yourself and your environment with H14-filtered clean air that is 99.995 % free from dangerous air pollutants.

### Maximum protection against airborne infections

ROTEC

The H14 filter removes airborne pollutants down to a size of 0.1 micrometres from the room air: bacteria and viruses, volatile organic compounds (VOC), dust mites, house dust, mould spores, activated carbon filter dander, fine dust, pollen (farina), odours (with optional activated carbon filter).

#### Performance, comfort and design forming a perfect trio

The AirgoClean® One not only impresses with its efficient air filtration, but also offers numerous comfort functions: e.g. room climate indication of humidity and temperature, air quality indication (VOC and fine dust PM2.5), night mode, turbo mode, automatic mode\*, remote control, timer function, consumption-based filter lifetime indication, PIN lock ...

#### Breathe healthier, work healthier, live healthier

Things are not up in the air. Trotec offers the right air cleaner for every need and budget - both for commercial applications and for private use.











Intuitive touch display

Timer function with weekly schedule

Intelligent filter lifetime monitor

Air quality indication with 14-day history

### "Touch & play" via touch display - high-class comfort functions

### \* Automatic operation by means of air quality sensors (VOC and fine dust PM2.5)

The air purification capacity cannot only be controlled manually in 6 levels. In addition, the AirgoClean® One is equipped with a comfortable automatic mode. Highly sensitive sensors determine the particle load in the room air and the concentration of volatile organic compounds (VOC). The values are shown on the touch display in real time and at the same time regulate the air and filter performance of the device fully automatically to remove suspended particles from the room air in next to no time (if used for virus filtration, see page 6).

### Turbo mode

The turbo mode is used especially for accelerated ventilation of the room, where, for example in acute situations, particularly fast and effective cleaning of the indoor air is required. In this mode, the air is quickly cleaned to an optimum level at the highest fan stage. This is a fast and simple way of cleaning the air in meeting, break and staff rooms to achieve a good quality level.

Allergy sufferers who open the window to ventilate the room are able to have the air filtered from intruding pollen or particulate matter within minutes. When the AirgoClean® One is set to turbo mode, airborne pollutants and suspended particles are removed from the room air with maximum air cleaning performance so that the room air is cleaned to an optimum level.

### Night mode

With its low noise emission, the night mode offers clean room air even during sleep. The display illumination is dimmed and the air flow rate is set to the lowest blower level.



### **Room climate indication**

Additional sensors installed in the AirgoClean<sup>®</sup> One also record the current room air temperature and quality as well as the relative humidity and show these room climate values on the display.

### Timer function with weekly schedule

While conventional timers are usually limited to selecting the time of switch-on and switch-off, the AirgoClean® One comes equipped with a top-class operation planner. The respective switch-on and switch-off times can be specified as desired for the individual weekdays or for all days at once.

### Intelligent filter lifetime monitor

The condition of the filters is monitored and displayed for all three filter compartments. The condition monitoring does not simply work hypothetically, based on time for instance, but it records the actual filter status and provides precise information about a necessary filter change. For more safety and an optimum filter lifetime.

### Air quality indication with 14-day history

This unique function indicates the air pollution level of the past 24 hours up to 2 weeks in the form of a graph based on the data logger principle. Broken down by VOC and particle load as bar charts and the air quality in total as a line chart.

### Tamper-proof screen lock with PIN protection

PIN protection is used to prevent unauthorized use of the  ${\rm AirgoClean}^{\circledast}$  One.



Clean air engineering "made in Germany" - 100 % professional technology, 100 % Trotec. AirgoClean® One offers a multi-stage HEPA filter system certified according to EN 1822. An activated carbon filter (\*) eliminating odours is optionally available.



F7 fine particulate air filters Activated carbon filter

### AirgoClean<sup>®</sup> One: Technical data

Prefilter	F7 (EN 779:2002), ePM10 85 % (ISO 16890)			
HEPA filter	<b>TROTEC HEPA H14 filter, EN 1822</b> 99.995 % filter efficiency Each filter is tested and certified individually.			
Max. air volume	<b>HEPA filter: H13</b> ≤ 650 m³/h <b>H14</b> ≤ 600 m³/h			
Filter change indication	Usage-related, sensor-controlled <b>filter change</b> <b>indicator</b> for the prefilter and HEPA filter. The filter lifetimes can thus be extended. For more safety.			
HEPA filter change interval	approx. <b>1 year</b> (depending on the application) <sup>1)</sup> )			
Mains connection / Ø power consumption	220–240 V 50 Hz / 0.17 kW <sup>2)</sup>			
Exemplary Ø total energy consumption	approx. 0.6 kWh per day / approx. 12 kWh per month <sup>21</sup> (at approx. 350 m³/h air volume)			
Weight	16.9 kg (incl. filter)			
Control panel	Touch display with PIN-protected lock function			
Sound pressure level <sup>3]</sup>	32 dB to 57 dB			
Dimensions (L x W x H)	435 x 400 x 835 mm			
Connection plug	CEE 7/7, H07RN-F			
Equipment and functions	6 fan stages, turbo mode, night mode, VOC sen- sor, PM2.5 sensor, graphical air quality indication with 14-day history, room climate indication, manual and automatic operation, remote control, timer function with weekly schedule, carrying handles, transport wheels			
Optional accessories Activated carbon filter, HEPA H13 filter				
<sup>11</sup> In very dusty environments, shorter filter change intervals are also possible <sup>21</sup> for a 5-day week with 10 h operating time per day and approx. 350 m <sup>3</sup> air volume <sup>31</sup> at a sound pressure level according to ISO 11201, 1 m distance, in db(A)				

Application-specific room size suitability of the AirgoClean® One					
SARS-CoV-2 virus filtration control (influenza, common	H14				
6 air changes	Maximum	40 m <sup>2</sup> / 100 m <sup>3</sup>			
for rooms sized up to	Recommendation by Trotec*	<b>23 m<sup>2</sup> / 58 m</b> <sup>3</sup>			
10 air changes	Maximum	<b>24 m<sup>2</sup> / 60 m<sup>3</sup></b>			
for rooms sized up to	Recommendation by Trotec*	14 m² / 35 m³			
Suspended matter/fine par	H14				
Fine dust, pollen, animal hair	Maximum	<b>78</b> m <sup>2</sup> / <b>195</b> m <sup>3</sup>			
for rooms sized up to	Recommendation by Trotec*	<b>50 m<sup>2</sup> / 125 m</b> <sup>3</sup>			

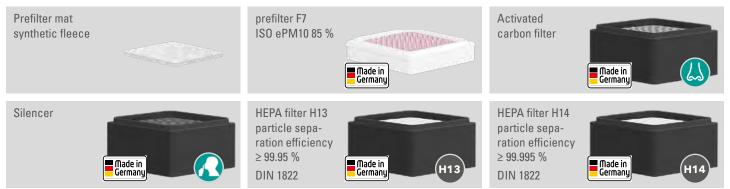
\* Usually, the maximum value is advertised as the "recommended room size". In order to achieve a good combination of air pollution control and background noise, the room sizes we recommend are based on a sound level of approx. 46 dB(A).

### Automatic mode and virus filtration:

Do not use the automatic mode if the device is used for virus filtration. The integrated sensors only respond to air pollution caused by fine particulates, pollen or VOC. The device cannot determine the virus load. It is possible that the automatic mode indicates a "good" air quality even though the virus load in the room is very high.

For this reason we recommend using the fan stage requested by the respective specifications with regard to the circulation rate (air volume) when the device is used for virus filtration in order to reduce the risk of indirect infections.

### Available accessories / supplies:







### AirgoClean® One: the air cleaner for professional continuous operation

- Multi-stage HEPA filter system certified according to EN 1822
- Powerful and quiet air purification removes 99.995 % of all airborne viruses, bacteria, fine dust particles and pollen
- Elegant design with an effective aerodynamic shape air intake close to the floor, room-filling clean air flow
- Automatic output control through sensor-supported air quality monitoring
- Highly efficient HEPA H14 filter system with prefilter and odour filter
- Proven to reduce the aerosol concentration of the room air - scientifically tested
- Air quality indication (VOC and PM2.5) with 14-day history

- Powerful, air circulating, steplessly self-regulating EC radial fan for constant circulation rates
- Enables 6-fold air circulation rates/h in rooms sized up to 40 m<sup>2</sup>
- Quiet operation, effective results
- Omnidirectional clean air distribution with 360° working radius



- Optional elimination of unpleasant odours
- Tamper-proof screen lock with PIN protection
- Practical remote control included in the scope of delivery
- Professional quality "made in Germany" originally produced by Trotec





Whether for your home or for professional use - Trotec offers you air cleaners for every need, in every performance level and for every budget





### High-performance air purifiers of the TAC series

The solution for medium-sized and larger rooms where many people come together, work, play, study, shop or celebrate: robust, powerful and unbeatably efficient.



**TAC BASIC** 



TAC ECO



TAC M



TAC V+

**TAC XT18 TAC XT 27** 







## AirgoClean<sup>®</sup> series: comparison of models

	<b>A</b> *	<b>A</b> <sup>1</sup>	<b>A</b> <sup>1</sup>	<b>A</b> *	<b>A</b> <sup>1</sup>	<b>A</b> *	<b>A</b> <sup>1</sup>				
Pa	Airgo- Clean® 10 E	Airgo- Clean® 11 E	Airgo- Clean® 15 E	Airgo- Clean® 100 E	Airgo- Clean® 110 E	Airgo- Clean® 150 E	Airgo- Clean® 170 E	Airgo- Clean® 200 E	Airgo- Clean® 250 E	Airgo- Clean® 350 E	Airgo- Clean® One
12	1	2	3	4	5	6	1	8	9	10	11
247		A	Ţ								E
								reddot		U	
HEPA filter efficiency	<b>95</b> %	<b>99.97</b> %	<b>95</b> %	<b>95</b> %	<b>99.97</b> %	<b>99.97</b> %	<b>99.7</b> %	<b>99.97</b> %	<b>99.97</b> %	<b>99.97</b> %	<b>99.9<u>95</u> %</b>
Filter class H14-certified EN 1822											
Infection protection / virus filtration	—	+	—	—	+	+	_	+	+	+	+++
Suitable for continu- ous commercial use	_	_	—	—	—	—	_	+	+	+	+++
Room size max.	<b>16 m²</b> 40 m³	<b>15 m²</b> 38 m³	<b>21 m²</b> 53 m³	<b>21 m²</b> 53 m³	<b>25 m²</b> 63 m³	<b>42 m</b> ² 105 m³	<b>42 m²</b> 105 m³	<b>66 m²</b> 165 m³	<b>88 m²</b> 220 m³	<b>120 m²</b> 300 m³	<b>78 m</b> ² 195 m³
<mark>6 air changes</mark> Trotec recommendation <sup>1)</sup> for rooms sized up to						<b>18 m²</b> 45 m³	<b>17 m²</b> 42 m³	<b>18 m²</b> 45 m³	<b>30 m²</b> 75 m³	<b>43 m²</b> 108 m³	<b>23 m</b> ² 58 m³
10 air changes Trotec recommendation <sup>1)</sup> for rooms sized up to						<b>11 m²</b> 27 m³	<b>11 m²</b> 27 m³	<b>11 m²</b> 28 m³	<b>20 m²</b> 50 m³	<b>26 m²</b> 65 m³	<b>14 m²</b> 35 m³
Air flow rate	<b>135</b> m³/h	<b>120</b> m³/h	<b>180</b> m³/h	<b>180</b> m³/h	<b>205</b> m³/h	<b>355</b> m³/h	<b>350</b> m³/h	<b>550</b> m³/h	<b>740</b> m³/h	<b>1000</b> m³/h	<b>600</b> m³/h
Sound pressure	<b>41 dB(A)</b> to	<b>25 dB(A)</b> to	<b>34 dB(A)</b> to	<b>38 dB(A)</b> to	<b>31 dB(A)</b> to	<b>29 dB(A)</b> to	<b>20 dB(A)</b> to	<b>31 dB(A)</b> to	<b>42 dB(A)</b> to	<b>32 dB(A)</b> to	<b>32 dB(A)</b> to
level	54 dB(A)	43 dB(A)	45 dB(A)	49 dB(A)	56 dB(A)	52 dB(A)	50 dB(A)	54 dB(A)	56 dB(A)	60 dB(A)	57 dB(A)
Activated carbon filter	—	-	optional	-	-	-	-	-	-	-	optional
Particle sensor PM2.5											
VOC air quality sensor	_									_	
Air quality indication							-		-		
Temperature / humidity indication										-	
Filter cleaning indicator	_	time- dependent	_	time- dependent	consump- tion-based						
Ionization			•		•			-		-	
Timer											
Remote control											
Automatic operation <sup>3]</sup>											
<sup>1]</sup> Usually, the max	imum value	is advertise	ed as the "r	ecommende	d room size	" In order	to	<sup>2]</sup> VOC meas	urement and	d display	

<sup>1]</sup> Usually, the maximum value is advertised as the "recommended room size". In order to achieve a good combination of air pollution control and background noise, the room sizes we recommend are based on a sound level of 37 dB(A) to 48 dB(A), depending on the model.

<sup>3]</sup> Automatic operation for virus filtration see page 6

### Why air purification is so important for health protection and will remain so even in post-COVID-19 times

While the dangers of increasing outdoor air pollution are heard in the media every day, studies show that our indoor air is up to 100 times more polluted than outdoor air. 99% of infections occur indoors!

After the coronavirus pandemic, nothing will be the way it used to be. SARS-CoV-2 has demonstrated how vulnerable we are and how important healthy, uncontaminated indoor air is. The virus will not disappear once the pandemic is over. Leading virologists assume that the coronavirus with its mutations will accompany us for the next ten years - along with other infectious diseases (measles, influenza etc.), whose pathogens spread through the air just like the SARS-CoV-2 virus.

### Infection control

### Virus transmission through the air has long been underestimated

"If we want to get a grip on the pandemic, we need to raise the awareness that the danger lurks INSIDE," warns the German Society for Aerosol Research in the current coronavirus pandemic. The scientists call for more consistent measures to be implemented in the future and for more air cleaners to be used to prevent the airborne transmission of viruses.

Apart from COVID-19, other airborne infections include in particular measles and influenza. According to estimates by the Robert Koch Institute (RKI), the exceptionally strong flu wave in 2017/2018 claimed the lives of around 25,100 people in Germany. The main reason for this record value is a "strong wave of influenza" with a correspondingly high number of respiratory diseases and infections, according to the health report of the Association of Company Health Insurers (BKK).

### Flu case numbers approx. 350 times higher before COV-ID-19 than during the pandemic

These figures can be noticeably reduced by using mobile air cleaners, as current studies impressively prove. In winter 2020, a total of only 533 cases of flu were registered, compared to 185,000 cases in the previous year. Similarly, the number of measles cases decreased by 85 % in the same year, reports the RKI in the Epidemiological Bulletin of 15 April 2021.

### According to the scientists, the reason for this exorbitant decline in cases of infection is increased self-protection indoors, for example by keeping a distance, wearing masks and using partitions and air cleaners

Therefore, the AirgoClean® One not only protects against an indirect infection with the SARS-CoV-2 virus, but is also equally effective against all other airborne pathogens and thus offers additional safety when staying indoors. Whether in the office, meeting room, waiting room, restaurant, hotel or at home, the AirgoClean<sup>®</sup> One with its certified H14 filter offers the greatest possible protection against an infection for your customers, guests, patients and employees.

### **Scientific studies:**



Leopoldina – German National Academy of Sciences Scientific paper "Saubere Luft – Stickstoffoxide und Fe der Atemluft" (Clean air – nitrogen oxides and particula the breathing air) (April 2019) Scientific paper "Saubere Luft - Stickstoffoxide und Feinstaub in der Atemluft" (Clean air - nitrogen oxides and particulate matter in



#### **University of Oxford**

Scientific paper "Regional and global contributions of air pollution to risk of death from COVID-19" (October 2020)



### **European Environment Agency**

Scientific paper "Air Quality Report 2020" (November 2020)

### Fine dust

### An invisible danger for the lung, heart and vessels indoors and outdoors

Despite all efforts to reduce the fine dust pollution outdoors, the tiny particles we breathe in with every breath are one of the world's biggest environmental risks. Harmful levels of particulate matter in the outdoor air also cause indoor levels to rise. Through increased ventilation in times of COVID-19, for example to exchange stale air, the tiny particles enter living spaces even more. Not only those who live in city centres or along busy roads breathe in significantly more of these very fine particles, which are significantly smaller than 1 micrometre and are emitted by road traffic, the industry and household heating systems, when they ventilate frequently. The German National Academy of Sciences Leopoldina therefore demands additional efforts to further reduce the air pollution with particulate matter. They say that the sources of particulate matter are more diverse and the resulting damage to health more serious than previously assumed.

### Fine dust favours the development of serious diseases

Fine dust particles are respirable particles with a diameter of less than 2.5 µm. The smaller these fine particles are, the deeper they can penetrate the body and organ systems. Particulate matter can cause inflammation in the bronchi and lungs and slow down children's lung growth. According to the Leopoldina, other consequences of particulate matter include heart attacks, strokes and accelerated arteriosclerosis. Inflammatory processes have also been observed in the brain and have been linked to a faster development of dementia in older people as well as delayed intelligence development in children. In addition to inflammatory reactions, fine dust can also cause damage to the cardiovascular system in other ways. The European Environment Agency EEA puts the number of premature deaths in Europe alone at more than 400,000 in 2018.

### Particulate matter is responsible for 15 percent of global **COVID-19** deaths

Researchers have long suspected that the pollution with particulate matter has an influence on the course of disease in COVID-19 patients, since particulate matter weakens the immune system and attacks the lung tissue. This is now confirmed by new research results from the renowned University of Oxford, published in the medical journal "Cardiovascular Research". The results show that there is a correlation between high pollution with particulate matter and an increased risk of dying from COVID-19. The scientists have calculated that on average 15 percent of global corona deaths are due to victims having inhaled polluted air over a long period of time. The research results suggest that particulate matter pollution is an important factor increasing the mortality risk from COVID-19.

## Information with regard to CO<sub>2</sub> traffic lights, climate gauges, particulate matter, pollen and particle counters

TROTEC solutions not only allow you to generate clean air that is free from viruses, bacteria, particulate matter and pollen but also make the quality of the room air visible!

### CO<sub>2</sub> traffic light, climate, particle and fine dust gauge for completely fresh room air: Our BQ air quality measuring devices indicate all important values at a glance.

The air quality monitor BQ30 should be an integral part of every classroom, waiting room, conference room, open-plan office and restaurant, since this environmental monitoring station shows you 5 key values for a good room air quality at a glance: in addition to the  $CO_2$  load and the climate data for temperature and relative humidity, the pollution with particulate matter is also displayed in particle size PM2.5 or PM10. The  $CO_2$  load is an important indicator for ventilation measures, and the particle sizes for particulate matter determined not only include respirable and often harmful particulate matter (e.g. by traffic load), but also pollen – e.g. important to allergy sufferers!

### CO, value as an indicator of air quality

In rooms with a large number of people,  $CO_2$  traffic lights can serve as a rough guide help to indicate good or poor air quality, since carbon dioxide ( $CO_2$ ) is a reliable indicator of a poor air change. A  $CO_2$  concentration of up to 1,000 ppm under normal conditions shows a hygienically sufficient air change. Already at a  $CO_2$  value of 1,500 ppm, the ability to concentrate decreases noticeably, and headaches as well as fatigue or even drowsiness may be the result. With values above 1,000 ppm the room should be ventilated so that the values reach the range between 400-500 ppm again.  $CO_2$  traffic lights can therefore reliably indicate whether, when, and in particular, for how long the room has to be ventilated.

### **IMPORTANT:**

### CO, values tell you nothing about the risk of infection!

The installation of CO<sub>2</sub> sensors does not mean that a CO<sub>2</sub> concentration lower than 1,000 ppm offers protection against an infection with SARS-CoV-2. The CO<sub>2</sub> concentration is not a measurand of the infection risk, since there is no correlation between the CO<sub>2</sub> concentration and a viral or bacterial load. Even with a low CO<sub>2</sub> concentration a risk of infection may be posed, for instance if infected persons enter a freshly aerated room.

In turn, however,  $CO_2$  concentrations that are considerably or constantly higher than 1,000 ppm in schools, offices, restaurants and private households indicate an insufficient ventilation management with a potentially increased risk of infection. This does not only apply to window ventilation, but also to the operation of ventilation systems. Apart from the  $CO_2$  values and the pollution with particulate matter, which is often harmful, from a hygienic point of view and independently of SARS-CoV-2, also the right relative humidity level between 40 and 60% is important, on the one hand to prevent the mucous membranes from drying out when the air is too dry below 30% RH, and on the other hand, to prevent mould growth with a high relative room humidity above 60%.

All this information can be found at a glance at the BQ30 room air monitor. Apart from the BQ30 you'll also find further professional air quality measuring devices such as the BQ20, PC200 or PC220 in the TROTEC range, which, In addition to room air control, can for example also be used to test filter systems.

CO<sub>2</sub> concentration and ventilation requirement

۲	CO <sub>2</sub> in ppm	Evaluation
Ventilation requirement	6,000	CO <sub>2</sub> concentration poses a health threat; load should only be there for a short time; further impairments occur
requi	5,000	Max. workplace concentration; limited time for persons to stay, max. 8 hours a day
ation	2,000	Indicator of an enhanced risk of infection due to an increased density of aerosol particles!
Ventil	1,500	Max. guideline for interior spaces; headaches, fatigue and drowsiness may occur
	1,000	Comfort level, still acceptable as regards air hygiene (as specified by Max von Pettenkofer)
	500–800	CO <sub>2</sub> concentration at harmless level for interior spaces
	350–450	Fresh, natural ambient air

BQ30





**Product website** The official website of the AirgoClean<sup>®</sup> One



uk.trotec.com/airgoclean-one

sorted by areas of business

uk.trotec.com/tacv-plus-branches

Satisfied customers report on the

de.trotec.com/tacv-plus-kunden

The largest selection

of air cleaners for offices,

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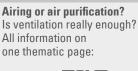
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