Helios AntiVirus range

# Reliable ventilation solutions
## for school, office & co.


Helios


7 8 9 0

# Why window ventilation **is not enough.**

All windows in a room must be opened for several minutes (at least once per hour) for a sufficient air exchange. This process should take place every 20 minutes in conference rooms. In addition, it is recommended to permanently leave the windows in the tilted position.

- Draughts, noise disturbance and negative environmental impacts such as dust, exhaust fumes and pollen are unavoidable.
- Colds and infections due to the cold outside air are inevitable – which in turn puts a strain on the immune system and increases the risk of infection.
- Rooms often do not have enough windows that are large enough to ensure the desired air exchange.

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# Healthy air – **child's play.**


- Suitable ventilation systems permanently ensure that stale, contaminated air is removed and fresh intake air flows into the room.
- Fully automated, demand-controlled operation does not require any user intervention and can thus be guaranteed at all times.
- The unpleasant side effects of window ventilation are completely eliminated by controlled, mechanical ventilation.

# Why Helios is your partner for safe and healthy air.


For a healthy indoor climate and sufficient protection against airborne infections, it is important to deal with the respective requirements individually. As an experienced specialist in ventilation technology and a provider of high-quality system solutions, there is always the right answer to your problem in our programme. Be it AirPal, the mobile air purifiers that are immediately ready for operation thanks to plug & play and ensure reliable safety within minutes. Helios $CO_2$ monitors, which help you keep track of indoor air quality, or KWL Yoga, the decentralised ventilation units that bring the necessary air exchange into individual rooms with little installation effort. And Helios AIR1, the central ventilation units with heat recovery that bring air exchange safely and comfortably to every new building and renovation project.

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## Air purifier with air circulation **Helios AirPal**

- No installation costs – plug & play
- Floor-standing units and mobile solutions
- Unit performance from 100 to 2,200 $m^3/h$
- Optionally combinable for any room size

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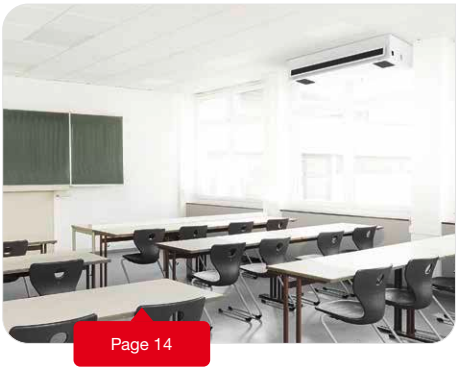
## Recognise air quality. **Helios $CO_2$ monitor.**

- The traffic light display immediately shows the $CO_2$ concentration
- Intelligent measurement range from 0 to 3000 ppm (parts per million)
- The units are immediately operational and completely maintenance-free
- Available in three different versions



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## Ventilation with heat recovery for individual rooms **KWL® Yoga**

- Ideal for retrofitting due to decentralised design
- Reliable ventilation combined with heat recovery
- In performance classes 400, 700 and 1,000 $m^3/h$
- For individual rooms, such as e.g. classrooms

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## Ventilation with heat recovery for buildings **Helios AIR1®**

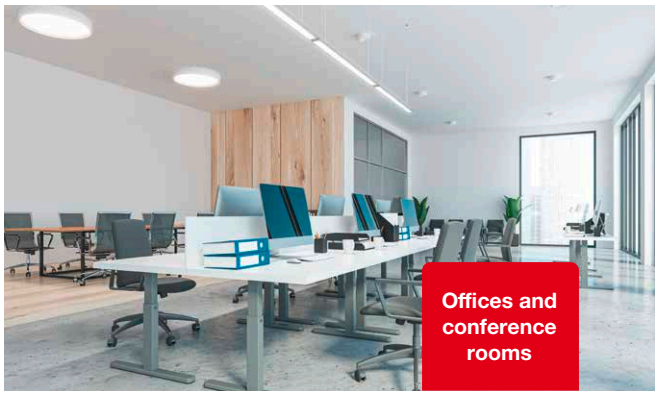
- Sustainable efficiency – for new builds and renovations
- Multi-level filter concept for pure, healthy air
- For flow rates from 500 to 15,000 $m^3/h$
- Central building solution for residential, commercial and industrial areas


Healthy air
brings joy...

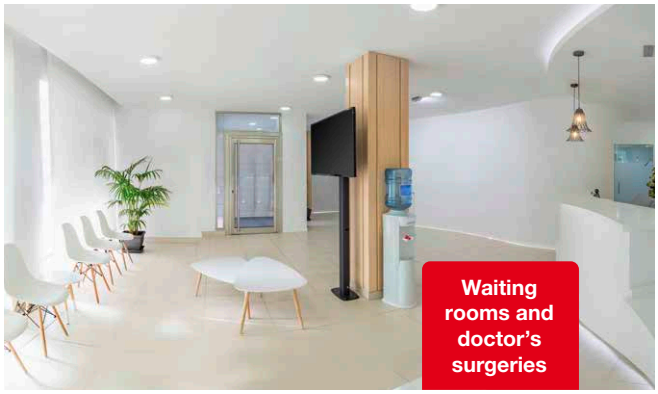
# ...everywhere and **at any time!**










# Air purification in air circulation. **Helios AirPal.**

**From classrooms and dining rooms through to office facilities. Wherever people are present in enclosed spaces in large numbers, viruses and bacteria can be transmitted from infected persons to other persons. AirPal air purifiers from Helios are a reliable way of efficiently removing aerosols from the room air.**

Of course, they are equipped with all the features that you can expect from a leading ventilation specialist. The units not only operate quietly in an energy-saving manner, but they are also extremely robust and designed for continuous operation. In order to provide the ideal solution for each of your areas of application, AirPal are available as floor-standing units for e.g. classrooms, restaurants, waiting rooms as well as rollable mobile units for flexible use in different meeting rooms depending on usage. Sensibly graduated unit sizes also cover all common room sizes – even several units can be combined for maximum flexibility!

Discover all highlights at **www.HeliosAirPal.com**

**Unpack and get started**
Helios AirPal are delivered preconfigured and fully assembled – all you need is one free power socket.

**Optimal air filtration**
AirPal has a multi-level filter concept. Up to three filter levels are used depending on the type.

**Optimal acoustic properties**
AirPal impresses with quiet operation so you are not disturbed at work. This is ensured by an elaborate sound insulation concept.

**High performance, few resources**
The latest EC fan technology ensures that your air purifier not only operates reliably and safely, but also in an energy saving manner.

# The Helios AirPal range.
## As diverse as your requirements.

**AirPal Mix & Match**
Stationary and mobile units can be optionally combined – for practically any room size!


**AirPal**
**Four floor-standing units for stationary application.**
Available in performance classes 300 – 2,200 $m^3$/h.
For room sizes up to 180 $m^2$*.

- AirPal with three level filter concept incl. HEPA 14 remove 99.995 % of all viruses from the room air.

**AirPal Go**
**Four units for mobile application.**
Available in performance classes 100 – 850 $m^3$/h.
For room sizes up to 70 $m^2$*.

- With multi-level HEPA 14 filter concept for eliminating 99.995 % of all viruses.

*At 4x air exchange and maximum flow rate.


# Helios $CO_2$ monitors
## as indicators of air quality.

**With increasing $CO_2$ content, performance and concentration decrease. What is often not considered, however, is that the number of aerosols in the room air also increases in an unventilated room. Pathogens are absorbed via aerosols and distributed unhindered throughout the room – high time to ventilate! Keep control with the Helios $CO_2$ monitors:**

The sensors continuously measure the room air quality and signal when it changes. The five level LED display in traffic light colours immediately shows the current range of the $CO_2$ concentration. The measurement range extends from 0 to 3000 ppm (parts per million). A concentration of 1000 ppm is regarded as a critical value in connection with the aerosol problem. At this value, the $CO_2$ monitor prompts the user to introduce ventilation measures via the yellow warning LED. You see – Helios $CO_2$ monitors provide a simple option for making the air quality visible. They are therefore suitable for various areas of application. Whether it is classrooms, training rooms, offices, or retail stores - you always have an overview of the room air quality.

# Three versions for **maximum comfort:**


**CO2 AP-A**
CO2 AP-A is ideal as a mobile solution thanks to the power plug and high-quality stainless steel stand holder. Simply take it into the desired room, plug it in and feel safe.

**CO2 AP**
CO2 AP has a power plug and is ideally suited for wall installation.

**CO2 UP**
CO2 UP is provided with a power supply unit (included in delivery) for flush-mounting. The $CO_2$ monitor is installed in a flush-mounted box.

## How the traffic light system works:

The $CO_2$ measurement takes place via a NDIR sensor (non-dispersive infrared technology). The measurement range extends from 0 to 3000 ppm (parts per million).

**LED 1** ●
No measures necessary

**LED 2** ●
Prompt ventilation recommended

**LED 3** ●
Supply ventilation recommended

**LED 4** ●
Ventilation necessary

**LED 5** ●
Intensive ventilation necessary

# Your **advantages:**

**At a glance.**
The $CO_2$ monitor has a traffic light display with five different LEDs which provide information about the concentration of $CO_2$ content in the room air in three colours and graduated brightnesses.

**Immediately operational.**
The units with power plugs only require a free power socket and are fully operational after one hour at the latest.

**Entirely maintenance-free.**
Helios $CO_2$ monitors are maintenance-free. Even the calibration is fully automated.

**Intelligent measurement range.**
$CO_2$ values are measured in the range from 0 to 3000 ppm (parts per million). The room air quality is continuously displayed via the glowing LEDs.

**Sustainable air exchange** for individual rooms

# Room by room ventilation with heat recovery. **Helios KWL® Yoga.**

**The new, decentralised ventilation units with heat recovery KWL Yoga offer the ideal solution to the spread of viruses via aerosols and represent a sustainable investment due to efficient heat recovery.**

The highest performances, extremely low operating noises and flexible control options are convincing advantages for use in schools, offices and commercial facilities of any kind. The extremely compact design and simple installation without an air distribution system also make KWL Yoga perfect for renovation projects. Once installed, the unit can operate fully automatically as required due to the integrated $CO_2$ sensor and thus permanently ensures the required air exchange – for a healthy and safe environment. With three unit sizes for flow rates up to 400, 700 and 1,000 $m^3/h$, various operational options and advanced automatic modes, KWL Yoga ensures maximum comfort and air quality – without any user intervention.

# Why KWL® Yoga is an uncomplicated and convenient solution for healthy air:

The $CO_2$ level and aerosol concentration continuously increase in highly frequented rooms. The **$CO_2$ concentration in the room air is permanently monitored** and the ventilation is adapted by the integrated sensor technology in KWL Yoga. The critical air exchange for reducing the aerosols in the room is guaranteed **fully automatically and continuously without any user intervention.** There is no need for usual window ventilation, disturbing outdoor noise and supercooled rooms are a thing of the past. Speed is of the essence in the fight against the spread of viruses in enclosed spaces: the laying of air ducts is no longer required due to the decentralised design of KWL Yoga. The units can therefore be **retrofitted easily and quickly,** even in existing buildings.

**Take a deep breath thanks to the automatic air exchange**
Guaranteed, automatic air exchange without user intervention is especially important in public establishments.

**Optimisation of high energy costs**
With KWL Yoga, you can significantly reduce heating costs through efficient heat recovery.

**Feel good in the ideal climate**
The best air quality with low $CO_2$ concentration promotes mental receptiveness and performance.

# All advantages at a glance:

**Lightening speed and space-saving.**
The often expensive laying of air ducts in renovations is no longer required with KWL Yoga. The compact unit construction also ensures extremely low space requirements.

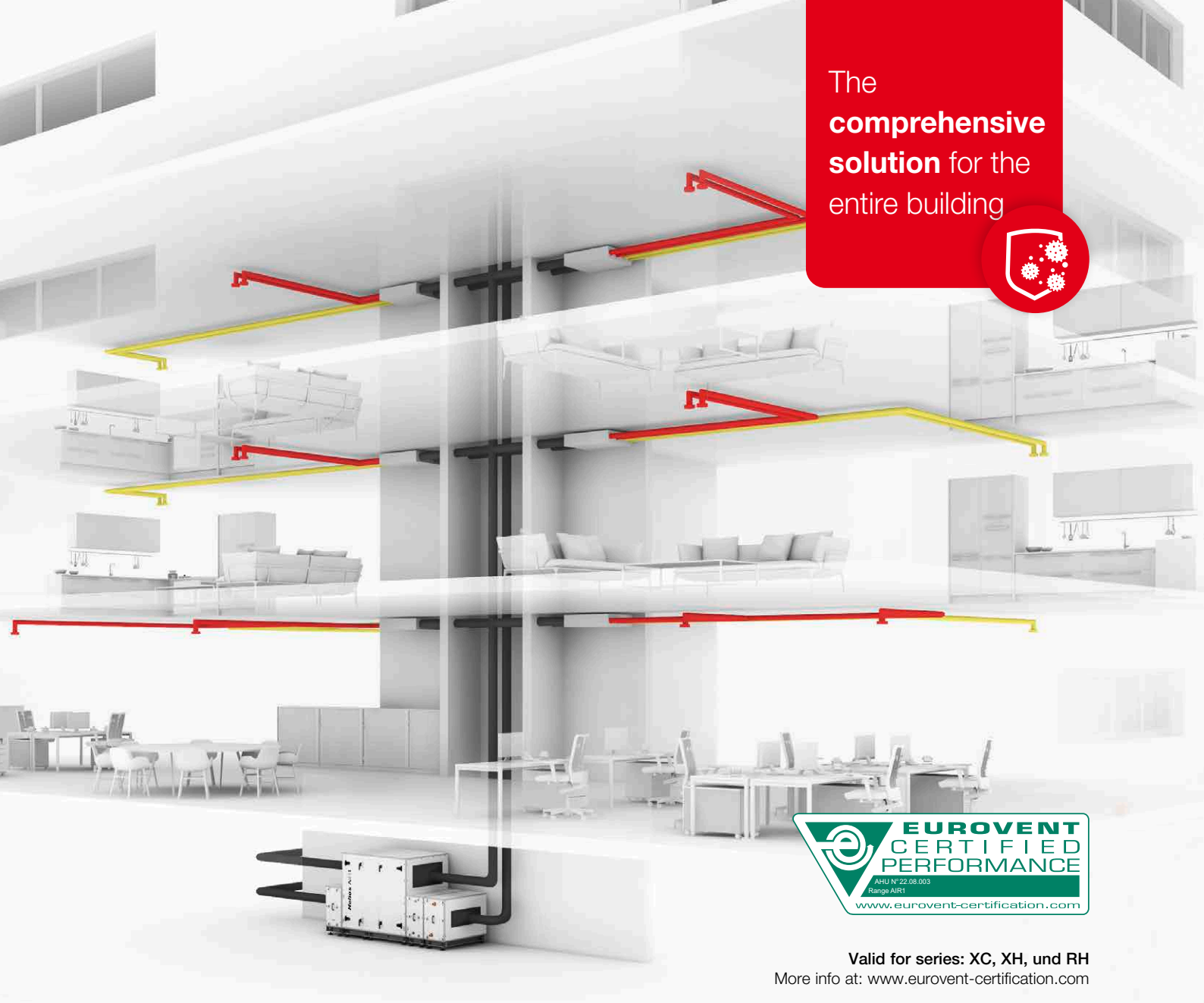
**Virtually invisible.**
The decentralised KWL Yoga units can be integrated in suspended ceiling systems up to the supply air grille. This saves space and room height.

**Hardly noticeable.**
The rapid, straightforward installation of KWL Yoga makes it easy to complete the installation process, even while school and business activities are ongoing.

**Simple installation.**
The units are preconfigured and delivered to the site in one piece. There is no need to install additional components. This simplifies the installation process and also saves time and money.

**Individual and comfortable.**
Every room can be individually aerated and ventilated. Our multiple sensors and technical equipment help to make the optimal choice for the respective deployment location.

**Find out about technical details and the various control options in the new KWL Yoga brochure:**




**Valid for series: XC, XH, und RH**
More info at: www.eurovent-certification.com

# Central ventilation with heat recovery. **Helios AIR1® compact ventilation units.**

**Are you looking for an efficient solution to the spread of Covid-19 and would you also like to invest in the future in this context? The energyefficient compact ventilation units Helios AIR1 are precisely what you are looking for.**
With four unit series, Helios AIR1 offers different technical variants: for ceiling installation or floor-standing installation, with highly efficient cross counterflow or rotary heat exchangers and for internal and external application. In this respect, no less than 27 unit types in a flow rate range from 500 to 15,000 $m^3/h$ guarantee a suitable selection for virtually all areas of application and performance classes in the areas of living, leisure, working and learning. Whether it is aerosols, pollen or fine dust – the reduction of harmful environmental factors is essential for a healthy indoor climate. Helios AIR1 create ideal indoor conditions thanks to the numerous room air quality sensors, multi-stage filter concept and low-noise operation. However, the experience of wellness also includes fresh and appropriately conditioned room air. Helios AIR1 always offers the right solution with wide-ranging accessory components for heating and cooling the room air. Moisture recovery is also possible thanks to rotary heat exchangers.

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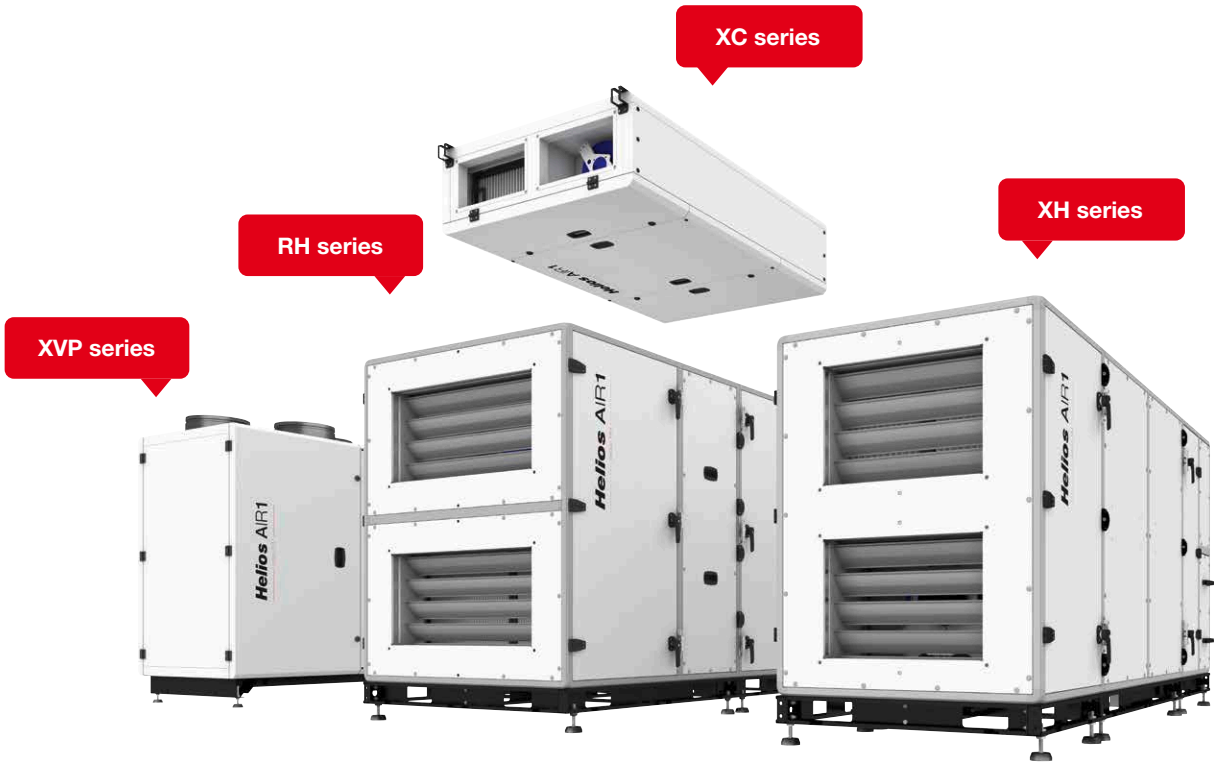



# The details make the difference:

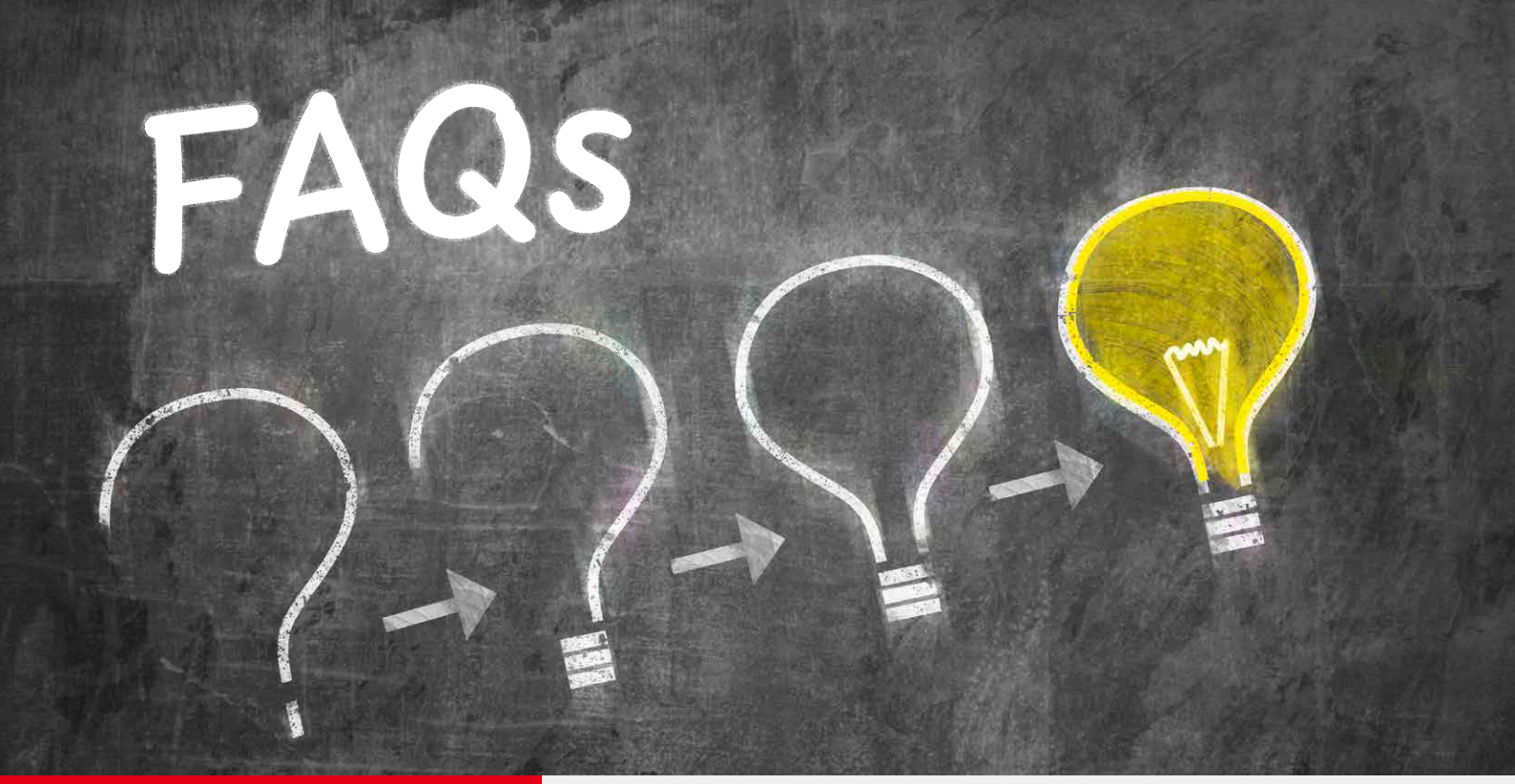
**A long-term solution – available at short notice!**
Helios AIR1 offers a sustainable and permanent solution for virtually all areas of application and performance classes. Most units are immediately available from stock.

**Do not lose valuable time:**
**Planning, installation and commissioning.**
From the convenient design via AIR1Select.de, and the flexible unit installation options through to the assistant-supported commissioning process: everything at Helios AIR1 is designed to be simple and easy for you.

**Multi-level filter concept.**
The multi-level filter concept, which enables the optimal adaptation to individual circumstances and requirements, provides the perfect indoor climate.

**Best fresh air and heat recovery.**
Helios AIR1 permanently ensures the required air exchange in the room due to customised sensor technology. In this respect, nobody has to freeze and valuable energy is saved thanks to integrated heat recovery.

**Further information and technical details can be found in the new Helios AIR1 catalogue:**




# Why the focus is on air

**Why is it so important to provide sufficient ventilation?**
Aerosols can freely spread throughout enclosed spaces without sufficient ventilation. This takes place within a just few minutes – in the worst case scenario, viruses be transmitted from one infected person to all other persons in the room through aerosol circulation. A sufficient, continuous supply of fresh air to the room is the only way to ensure that the room is flushed with uncontaminated air and the aerosol concentration is reduced.

**Is window ventilation sufficient?**
It is possible to ensure the sufficient air exchange required to reduce the aerosol concentration through window ventilation under ideal conditions. Experts recommend opening the windows so that the $CO_2$ concentration in the room does not rise above a value of 800 ppm. In this respect, a $CO_2$ monitor ensures that an overview of the room air quality is maintained. If people sneeze or cough in the room, the room should still be ventilated immediately. Of course, these measures presuppose that there are enough sufficiently sized windows and the required temperature difference (indoor/outdoor) is present.

**Ventilation in winter – what are the differences?**
Window ventilation is most effective when the pressure and temperature differences between the room air and intake air are largest. Flushing the room with fresh intake air in the cold season is more efficient and thus quicker than in the summer, when e.g. the temperature differences between the room air and intake air are significantly smaller. On the other hand, it is precisely these temperature differences which make regular or permanent ventilation a test of endurance and colds are inevitable.

**What makes classrooms different?**
In principle, all enclosed spaces must be sufficiently ventilated – as soon as several people are in the room, otherwise the air quality diminishes. Unfortunately, the conditions for dispersion of viruses are particularly “ideal” in classrooms. On the one hand, this is due to the relatively large number of people in the room and the longer duration of their stay, and on the other hand, it is also due to the increased activity of the people – a class in which people do not speak much and loudly is hard to imagine.

**What air exchange / flow rate is required in classrooms?**
According to some studies, the required air exchange (fresh air) is 6x air exchange. The German professional association for buildings and air-conditioning (FGK) recommends a calculation based on the normative guidelines of the DIN EN 16798-1, increased by the level of activity of the people in the room.

# What ventilation technology is helping now

**Why is mechanical ventilation usually the better solution?**
Suitable ventilation systems continuously ensure that stale, contaminated air is removed from the room and fresh intake air flows into the room. Ventilation systems for controlled supply and extract ventilation, such as KWL and AIR1 from Helios, rely on a 100 % fresh air supply – there is no renewed supply of room air via the ventilation unit. This significantly reduces the potential virus concentration. The unpleasant side effects of window ventilation are completely eliminated through controlled, mechanical ventilation: draughts are excluded if executed correctly and cooling effects do not occur due to integrated heat recovery system.

**What is particularly important when it comes to mechanical ventilation?**
With regard to ventilation through room ventilation systems, it is paramount that these are not operated with recirculating air if possible, but rather they exclusively supply fresh intake air to the room. If these systems are operated with recirculating air, virus separation must be ensured via high-quality filters (HEPA 14 / HEPA 13). It is essential that the ventilation system is in operation for the entire room usage period – it should also be in operation two hours before and after the usage period. Regular maintenance and functional inspections of the system by specialist personnel are just as important as the timely replacement of filters for the safe operation of the system.

**What can be done in the short term to reduce the aerosol concentration through ventilation?**
Classic room ventilation systems for supply and extract ventilation usually require significant system-related planning and installation work, which requires a corresponding lead time due to necessary, structural measures. This is where decentralised ventilation systems such as KWL Yoga from Helios excel. They ensure reliable supply and extract ventilation in e.g. offices, classrooms and commercial premises with low installation costs and few structural measures. The unit is delivered as a single unit and comes preconfigured. Fresh air is distributed directly throughout the room without draughts through direct installation on the external wall with sustainable, pleasant preheating via the integrated heat recovery system. In this respect, the air flows are hermetically separated from each other, so that intake air contact with the potentially contaminated room air is ruled out.

**Are air purifiers operated with circulating air also an option for enhancing the level of safety in rooms without ventilation systems?**
In contrast to ventilation systems, which reduce the virus concentration through the permanent supply of fresh air, air purifiers operate according to the principle of virus elimination. In this context, it is important that the air purifiers are properly dimensioned according to the room size and the number of people to be expected in the room and effective filter technology (HEPA14) is used, which ensures the required virus separation. Alternatively to filtration, units operate with UV-C according to the principle of disinfection and kill viruses without leaving any residue. These units should be equipped with corresponding prefilters for complete air purification. In addition to UV-C technology protection, the majority of viruses, but also harmful substances and other air particles are thereby filtered from the air and the air purity is maximised, depending on the quality of the prefilters.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