

Facing the threat of COVID-19, **WHAT ELSE CAN WE DO** besides, wearing masks, washing hands frequently, taking body temperature regularly?

Control "Indoor Air Quality" to decrease virus infection risk.

- ➔ **Nearly 90% of people's lives are lived indoors.** The virus-infected person exhales the pathogen-containing aerosol and carbon dioxide together, which can easily lead to the accumulation and spread of the virus, an overall reduction in the indoor airborne needs to be a priority.
- ➔ **The concentration of Indoor CO₂ is a good indicator of infection risk.** Choose a reliable air quality monitor to maintain a safe and comfortable indoor environment.
- ➔ **A well-designed ventilation system,** which can guarantee the correct air exchange in indoor environments, can help in reducing the spread of the virus and the risk of transmission.

▼ Click images for more information. 🖱️



ZG1583RUD



ZG1683R(U)

- ZG1583RUD
ZG1683R(U)**
- CO₂, Temp., RH
 - 3 LED Display



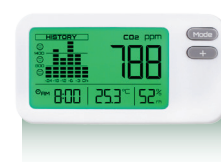
ZG390C

- IAQ/HVAC applications
- CO₂, THi, Temp., RH



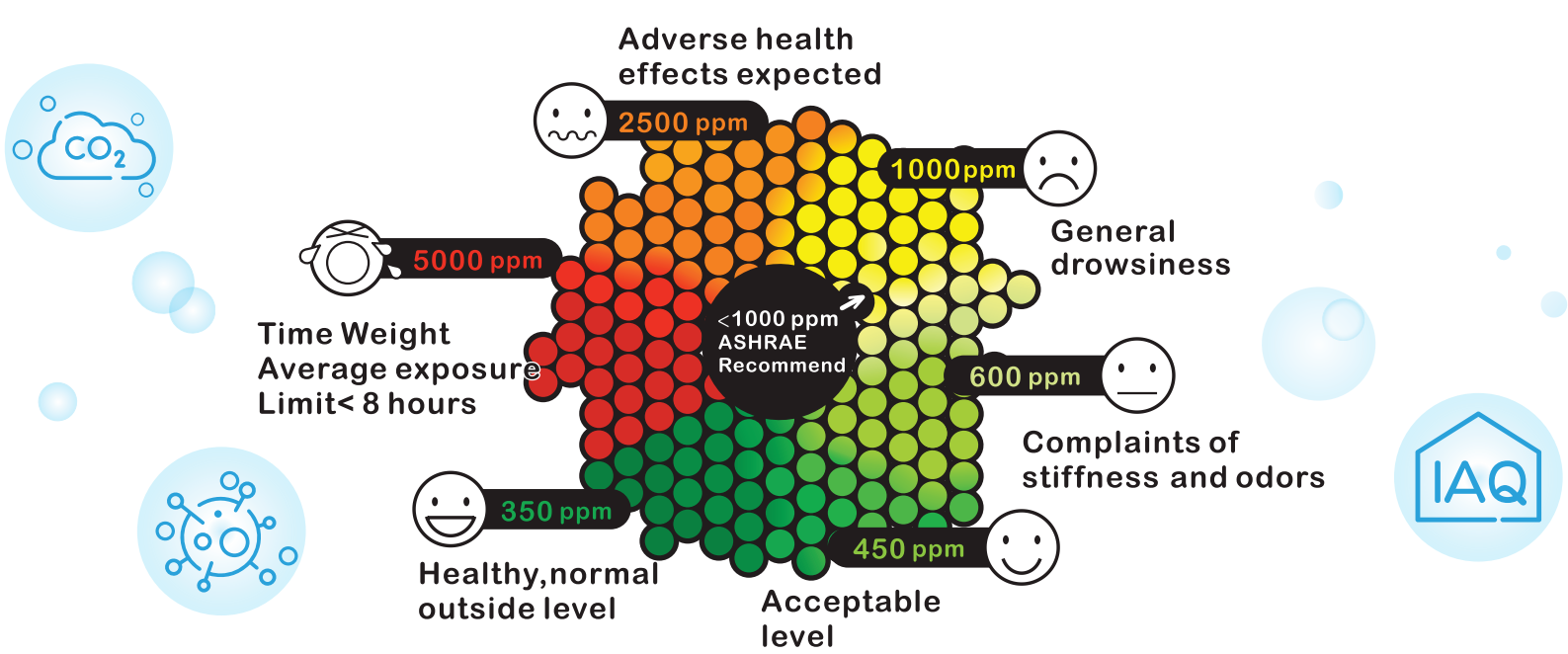
ZG106

- CO₂, Ventilation
- Portable CO₂ Monitor



ZGm27

- CO₂, Temp., RH, Real-time clock
- 3-color Backlight Display



REFERENCE

Germany improves ventilation to chase away Covid

The German government is investing €500m (£452m; \$488m) in improving ventilation systems in public buildings to help stop the spread of coronavirus. The grants will go to improve the air circulation in public offices, museums, theatres, universities and schools. Private firms are not yet eligible.

Each upgrade is eligible for a maximum of €100,000. Funding is also available for CO₂ sensors which indicate when the air in a room is unhealthily stale. The grants will be allocated from Tuesday. (20 October 2020)

Reference: [BBC NEWS](https://www.bbc.com/news/world-europe-54599593)
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Exhaled CO₂ as COVID-19 infection risk proxy for different indoor environments and activities

Indoor CO₂ has been suggested as a practical proxy of respiratory infectious disease transmission risk, as pathogen-containing aerosols and CO₂ are co-exhaled by those infected. Since ambient CO₂ level is stable and indoor excess CO₂ is usually only from human exhalation, measurements of indoor CO₂ concentration by low-cost CO₂ sensors can often be good indicators of infection risk and suitable for mass deployment.

Reference: [Z. Peng, J. L. Jimenez: Exhaled CO₂ as COVID-19 infection risk proxy for different indoor environments and activities.](https://www.medrxiv.org/content/10.1101/2020.09.09.20191676v1.full.pdf)
(available at <https://www.medrxiv.org/content/10.1101/2020.09.09.20191676v1.full.pdf>)

Effects of low-level inhalation exposure to carbon dioxide in indoor environments: A short review on human health and psychomotor performance

Human experimental studies have suggested that short-term CO₂ exposure beginning at 1000ppm affects cognitive performances including decision making and problem resolution.

Reference: [Environment International](https://www.sciencedirect.com/science/article/pii/S0160412018312807?via%3Dihub#)
<https://www.sciencedirect.com/science/article/pii/S0160412018312807?via%3Dihub#>

Ventilation systems may increase the risk of exposure to novel coronavirus

While direct monitoring of droplets and aerosols in indoor spaces is difficult, we exhale carbon dioxide that can easily be measured and used as an indicator of the risk of infection. Small respiratory aerosols containing the virus are transported along with the carbon dioxide produced by breathing, and are carried around a room by ventilation flows. Insufficient ventilation can lead to high carbon dioxide concentration, which in turn could increase the risk of exposure to the virus.

Reference: <https://www.news-medical.net/news/20200929/Ventilation-systems-may-increase-the-risk-of-exposure-to-novel-coronavirus.aspx>

Ventilation control for airborne transmission of human exhaled bio-aerosols in buildings

"Increasing ventilation rate is believed to reduce the cross-infection of airborne transmitted diseases by removing or diluting pathogen-laden airborne droplet nuclei. A higher ventilation rate can dilute the contaminated air inside the space more rapidly and decrease the risk of cross-infection."

Reference: <http://jtd.amegroups.com/article/view/18723/17349>

Heating, ventilation and air-conditioning systems in the context of COVID-19

Transmission of COVID-19 commonly occurs in closed indoor spaces.

HVAC systems may have a complementary role in decreasing transmission in indoor spaces by increasing the rate of air change, decreasing recirculation of air and increasing the use of outdoor air.

Reference: <https://www.ecdc.europa.eu/sites/default/files/documents/Ventilation-in-the-context-of-COVID-19.pdf>