

HOW "COVID-SECURE" CAN ALCOHOL TESTING BE?



Senseair Wall Unit - A unique combination of benefits

1. Contactless / touch-free operation
2. Face covering OK
3. Controlled air flow

SOME FACTS

Minimizing disease transmission risks during alcohol testing

The key protective measures of social distancing and wearing face coverings are both compromised with traditional alcohol testing methods using manual breathalysers. Concerns regarding disease transmission risk have led to a widespread reduction in alcohol testing. Many Police forces have suspended regular roadside alcohol testing during the Covid-19 pandemic, e.g. Sweden¹.

In addition, many workplaces have temporarily halted or dramatically reduced alcohol testing, just at the time when the stresses of the pandemic have meant increased alcohol consumption, particularly among high risks groups. A recent article in the Lancet summarises:

“lockdown represents a risk factor for increasing alcohol consumption in people with alcohol use disorders and relapse for those who were previously abstinent.”²

Respiratory viruses are transmitted in three main ways³

- **Contact transmission**, where someone comes into direct contact with an infected person or touches a surface that has been contaminated.
- **Droplet transmission** directly from an infected person.
- **Airborne transmission** of smaller droplets and particles that are suspended in the air over longer distances and time than droplet transmission.

We all expel small droplets and particles every time we breathe and if we are infected, this can include virus. Early in the Covid-19 pandemic this was not widely appreciated as a risk but increasing evidence has shown it to be implicated. The amount of particles expelled from the airways greatly increases with deep breathing, singing or even talking loudly (for example there have been some super-spreader events linked to choirs)⁵.

“The coronavirus SARS-CoV-2 is transmitted predominantly through the air - by people talking and breathing out large droplets and small particles called aerosols⁴.”



¹ <https://sverigesradio.se/artikel/7426121>

² [https://www.thelancet.com/journals/langas/article/PIIS2468-1253\(20\)30251-X/fulltext](https://www.thelancet.com/journals/langas/article/PIIS2468-1253(20)30251-X/fulltext)

³ <https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html>

⁴ E. Goldman Lancet Infect. Dis. 20, 892–893; 2020

⁵ <https://www.cdc.gov/mmwr/volumes/69/wr/mm6919e6.htm>

1. CONTACTLESS / TOUCH-FREE OPERATION



100% touch-free

There is no need to physically touch the device at any point during the test. If standard procedure is followed the contact transmission risk is removed.



Completely automated

Droplet transmission requires two individuals to be in close proximity. This risk is also removed because the test is automated. The employees perform the test themselves.

Each test is triggered by identification with a RFID card at a distance of a few centimetres (no need for the card to even touch the device). There is a filter over the inlet that the individual breathes towards and a screen provides information to the user (no touch screen functionality).

This means that additional personnel to physically supervise the test are not required.

2. FACE COVERING OK



You can keep your mask on

A face covering can be worn during the test as an extra precaution. A short, normal breath is all that is required, so the test does not provoke extra aerosol production.



Just breath normally

The exhalation can take place 3-5 cm from the inlet. No need for an extended, forceful, deep lung sample that is typically required for a manual breathalyser test. This will minimize the amount of particles expelled.

3. CONTROLLED AIR FLOW



The Wall unit contains an internal fan. The fan system exchanges air in the sensor chamber between each test. It draws air into the system, from the front inlet and expels the air from the rear of the equipment, away from the individual.

The image to the right, shows visible smoke used to demonstrate air currents during exhalation.

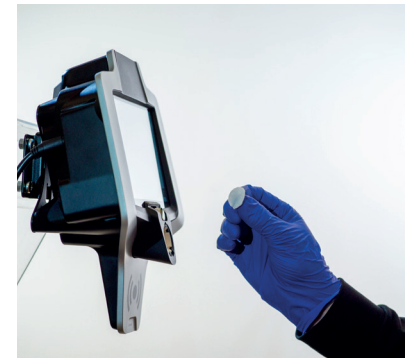


HYGIENIC ADVANTAGES



Hygienic aspects

As additional precaution, we recommend that you clean the unit and change the filter regularly. Use protective gloves and clean according to your infection control procedures. When cleaning / disinfecting the surface of our units you may use high alcohol cleansers or tersano water. It is safe to do so as our sensor is not degraded by alcohol (unlike fuel-cell based sensors).



RISK ASSESSMENT

This is an example of a real life risk assesment conducted by one of our customers.

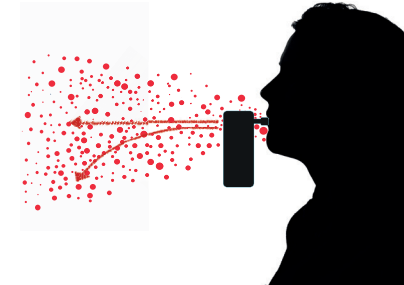
Potential risks during alcohol test	Low risk	Moderate risk	High risk	Main advantages
Risk of airborne transmission from one user to the next.	•			The internal fan actively draws air into the system, exchanges the air and expels it away from the individual. As additional precaution, using face covering during the test and regularly changing the filter should further minimise the risks.
Risk of contact transmission from a contaminated surface.	•			Automated test. No need to touch the device at any point during the test. The exhalation can take place 3-5 cm from the inlet with normal breath (less particles expelled in the air). The unit can be cleaned regularly using protective gloves and according to infection control procedures.
Risk of droplet transmission directly from an infected person	•			User-operated without need for additional testing personnel



Automated and touch-free operation.



Minimum exposure with face covering and controlled air flow.



Maximum exposure with deep lung sample using a manual breathalyser.

Senseair Safe Start

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