

# A clean conscience

**Having a clean conscience is usually a guiding principle for anyone who wants to do a good job, not least in the bakery industry. Clean air in the bakery environment is just as important to success. Air quality can be critical to employee health and top-quality products.**

Cereal allergy, baker's lung, baker's asthma... Those are all serious conditions and something that you definitely want to avoid as a company operating in the bakery industry. Unfortunately, this type of illness is quite common, and may occur if the working environment isn't always top notch.

Baker's lung can be caused by airborne substances such as the presence of flour dust and mold spores in the working environment. Mold spores are often released into the air when handling flour.

Employees may experience a variety of symptoms, including gastrointestinal problems, eczema or hives, upper respiratory problems, and asthma. In the worst cases, they may also experience severe allergic reactions, or so-called anaphylactic shock, which manifests itself in a rapid drop in blood pressure.

In severe cases, bakers who are affected will end up having to change professions, because once the problems have developed, it is unwise to remain in that environment.

Compared to many other industries, the food industry has an overabundance of accidents and sick leave among employees. There are many different reasons for this, such as incorrect machine operation, improper handling of chemicals and heavy lifting. However, deficiencies in the organizational and social work environment also have impact.

The Swedish Work Environment Act (AML), states that the employer has the ultimate responsibility to ensure that work can be performed in a healthy and safe work environment and to prevent occupational illness and accidents. With this in mind, an employer needs to identify how to achieve this healthy and safe working environment and conduct a risk assessment.

Air quality is a critical factor and doubly important in a bakery environment. Not only to ensure employee health, but also to keep products clean and free from contaminants. Handling flour products often means that mold spores are an unwanted added ingredient. This isn't something a manufacturer really wants included in their finished bread, as it shortens longevity and shelf life. If air cleaning is not top notch, then other types of allergens can also end up in the products. For companies who bake gluten free products, it is even more important to keep the production area clear of flour particles containing gluten.

There are many technical solutions available to improve air quality. QleanAir Scandinavia is a Swedish listed company headquartered in Solna, just outside Stockholm. We have over 30 years' experience in air cleaning solutions. We supply products and solutions to improve air quality. QleanAir began its journey by manufacturing air cleaners to remove tobacco smoke, but today the company offers solutions for a wide range of applications and environments. The company's products and solutions are sold worldwide. Products including turnkey and modular clean rooms are built to ensure optimal air cleaning in indoor environments in applications such as hospitals, the MedTech industry, the food industry and others. Simply put, this



means minimizing the number of unwanted particles in the air, depending on the type of business and activity.

QleanAir has now developed an air cleaner that is specially adapted for the food industry, and for environments such as bakeries.

“We discovered that the market was missing an air cleaner optimized for the food industry. Solutions are needed here that make it easy for employees to keep their working environment clean, while also complying with the stringent environmental requirements in the food industry,” says Bo Dolk-Petersson, VP Research and Development at QleanAir.

The air cleaner, with a name that can almost be associated with rocket science is called “QleanAir FS 70 FG”. Like all QleanAir air cleaners, it is based on mechanical air cleaning technology and has automatic air flow control. This system also has features specifically adapted to suit food industry hygiene requirements: a stainless-steel chassis, food grade seals and gaskets as well as smooth and rounded edges.

“We faced numerous challenges in designing this system for the food industry, particularly in ensuring that materials do not become stuck in the machine, which could cause mold growth.” “This is why it was important to eliminate gaps between metal parts, cavities for screws and the like. The requirement was essentially for the product to be completely smooth and easy to clean,” says Bo Dolk-Petersson. FS 70 FG is built with that in mind, and of course has a cleaning technology that is adapted to suit current food industry standards.

An air cleaner of this type is a stand-alone machine that can be used in many businesses, and installation is not complex. The only limiting factor is available space. FS 70 FG is approximately 160 centimeters high, 70 centimeters wide, 60 centimeters deep and weighs 120 kilos. The machine is fitted with wheels, which means it is easy to move.

In most cases, an air cleaning solution from QleanAir means the customer rents the system with a service agreement; QleanAir is responsible for all care and maintenance.

“This means that the customer “buys clean air” from us, while we take care of all the practicalities,” explains Bo Dolk-Petersson.

#### **Speaking of “buying”, what does an air cleaning solution from QleanAir cost?**

“Well, that’s difficult to say exactly,” says Bo Dolk-Petersson. “The price depends on many factors, including the contract term, the type/model of air cleaner system required, the type of filter and the service interval. A rough estimate could be a monthly cost between EUR 200 and 400.

For a larger bakery with a more industrial production, so-called clean room solutions can be an alternative. This means constructing a ‘room within the room’ where the air cleaning system is installed, separated from the “normal” environment by fitted airlocks.

Such solutions can be fully adapted to suit the space available, and of course to suit the type of business. Within the bakery industry, I believe that clean room solutions would be suitable during the preparation process, with clean zones for packaging departments. This system would also be useful for a special bakery department producing gluten free products,” says Bo Dolk-Petersson.



Bo Dolk-Petersson, Head of Product Development, QleanAir.

## How it works

### **1 Intake – captures contaminants**

The intake on the FS 70 FG is located on the front of the unit to maximize the intake volume. For safety reasons, the intake is protected by a grid. The filters are located directly behind the intake grid to eliminate empty spaces where particles and microbiological contaminants could accumulate over time.

### **2 Filtration – separation of particles and pollutants**

Through the filtration technology, harmful particles and airborne pollutants are efficiently captured and removed from the air in several steps, using a set of mechanical

filters adapted to the industry’s unique needs.

### **3 Exhaust – cleaned air is returned to the environment**

After the air has been cleaned from airborne particles and harmful pollutants, it is recirculated into the room through exhaust outlets that are adaptable to create optimal circulation or to distribute the clean air to a specific area.

*Pssst...*

Want to know more?

Visit: [www.qleanair.com](http://www.qleanair.com)

**/Johan Hård**