

cleanair magazine

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FRESH AIR IN THE CAKE FACTORY

Dutch company Verkade puts its trust in Zehnder

Clean air is no laughing matter

Zehnder cleans air in adventure centre



Dear reader

Welcome to the first issue of Clean Air Magazine 2011.

We are delighted and proud to see the large number of new customers from all kinds of sectors who have chosen to commission us at Zehnder to deal with their dust issues in 2010. This was far and away the best year for Zehnder Clean Air Solutions since the company was founded back in 1998. We expect demand to increase even further, and have therefore decided to move into larger and more appropriate production premises. Read the interview with Carry Turesson, our Production Manager, on page 16.

To accommodate even more customers' requirements, we have started work on developing a new air purifier – the E6000. The intention is for this new model to plug the – sometimes rather large – gap between the E3000 and E12000. It is also to be designed for ceiling mounting, even in places where the ceiling height is limited. We hope to be able to complete the first deliveries after summer 2011.

In this issue, you have the chance to meet a number of our new customers, who explain how we worked with them to come up with solutions to their particular problems. We will also be taking a closer look at the bakery sector. This is a sector where flour is a crucial ingredient, and the work to eliminate as much of the dust as possible is a great challenge for most bakeries. During the past year, we have clearly seen how Zehnder Clean Air Solutions can contribute to improving the baking environment with solutions that are relatively simple to implement – but extremely effective. This is, of course, very important for the health of the people who work in this sector, and it also has a major role to play for the quality and shelf-life of the bread and cakes they make.

Enjoy!

Peter Krantz
CEO, Zehnder Group Nordic AB



Fresh air in Dutch cake factory



Verkade, the Dutch cake factory, previously found it very difficult to keep the facility clean of all the flour dust spread through the air during production. The “Rescue package” consisted of 25 air purifiers from Zehnder.



Arie Visser, a very satisfied Production Manager at Verkade.

“Working conditions have improved remarkably, and much less cleaning is required now.”

Around a century ago, the family-owned company Verkade started out baking bread and biscuits at a facility on the banks of the River Zaan. The company has since grown to become one of the best-known brands in the Netherlands. In 1950, the company was granted the right to insert the word “Royal” in front of its name, and in 2010 Verkade was awarded the title of “Brand of the year” in the Netherlands. The factory on Westzijde in Zaandam currently employs 550 people, of whom 325 work in production, preparing a wide range of cakes, biscuits, butter cookies and waffles.



Breathing in dust does not exactly improve the working environment

“At companies such as ours, the build-up of dust has always been a major problem,” explains Arie Visser, Production Manager at Verkade. “There was previously a lot of dust in all our facilities, particularly the dough preparation and flour-sieving areas. Not only was the working environment unhealthy, but the costs associated with cleaning were also sky high. But no matter how much we spent on cleaning, we never managed to get rid of all the flour dust. In other words, we needed a better approach to dealing with the problem.”

That was the situation in 2007 when Dick Stoorvogel, a sales representative from Zehnder Clean Air Solutions, dropped by and offered to take some measurements and prepare a preliminary study. On the basis of these measurements and a compilation of all the different requirements, Verkade initially ordered seven E3000 air purifiers, with pre-filters and Flimmer filters and a purification capacity of 3,000 m³ per hour. During the period 2008–2010, the company has ordered an additional 18 units from Zehnder, so a total of 25 of these purifiers are now in operation at the factory.

A satisfied production manager

Arie Visser is very satisfied with the new air purifiers from Zehnder.

"The results were fully in line with our expectations, which we have also confirmed through our own measurements. Working conditions have improved remarkably, and much less cleaning is required now. It is also great that the units are simple to install and require neither extra pipework nor extra cables. This has meant that it was simple for us to install air purifiers in our other departments as well," Arie explains. He is also full of praise for the working relationship with Zehnder Clean Air Solutions. Among the many benefits of the collaboration, he highlights the service costs, which have already been fixed for the entire duration of the service agreement that Verkade has signed with Zehnder.



The air in the Verkade factory is cleaned using 25 purifiers from Zehnder.



The factory in Zaandam prepares a wide range of cakes, biscuits, butter cookies and waffles.

About flour

More than half of all bakers and bakers' assistants are exposed to dust levels that exceed the limit values for breathable flour dust*. This high level of exposure is clearly reflected in the statistics concerning occupational illnesses, where bakers are highly over-represented. Flour contains a number of allergenic enzymes, etc. which can cause various kinds of respiratory problems such as runny noses, chronic coughing, itchy eyes and an elevated risk of caries and asthma.

Employees exposed to flour dust – such as bakers, bakers' assistants, pastry chefs, millworkers, pizza cooks and cleaners – must work actively to improve the aspects of their working environment that involve handling flour. This is the best way to reduce the risks of developing allergic reactions.

Risk of occupational illnesses

Flour dust allergy or baker's asthma has long been recognised as an occupational illness. If you start to experience difficulties, it is an indication that must be taken seriously. The difficulties will develop and become more and more serious. Baker's asthma is a chronic condition that you will have live with for the rest of your life. In many cases, the asthma becomes so severe that you cannot continue to work in a job where you are exposed to flour dust. Bakers who develop asthma must therefore often change professions. Over and above affecting your ability to do your job, baker's asthma can also have an effect on your life quality and expectancy.

The major sources of dust in a bakery are*:

DOUGH PREPARATION AND KNEADING This stage of the process generates a great deal of flour dust. As far as possible, use a cover on the dough mixer and start it on slow speed to reduce the risk of whirling up dust.

TURNING OUT Many bakers sprinkle flour out. This causes a high level of dust. Spread the flour out instead to reduce the amount of dust.

CLEANING It is common to use compressed air for cleaning. When you blow dust away, it flies into the air, raising the dust content. Use a vacuum cleaner or wet mop to prevent generating high levels of dust.

Zehnder Clean Air Solutions has extensive experience in working to reduce the level of flour dust in bakery environments. In many baking facilities, we have succeeded in halving the level of airborne dust. In the Netherlands, for example, we have collaborated with a university on a project where Zehnder's positive influence on – and improvement of – the working environment has been proven via numerous measurements carried out by third-party experts.

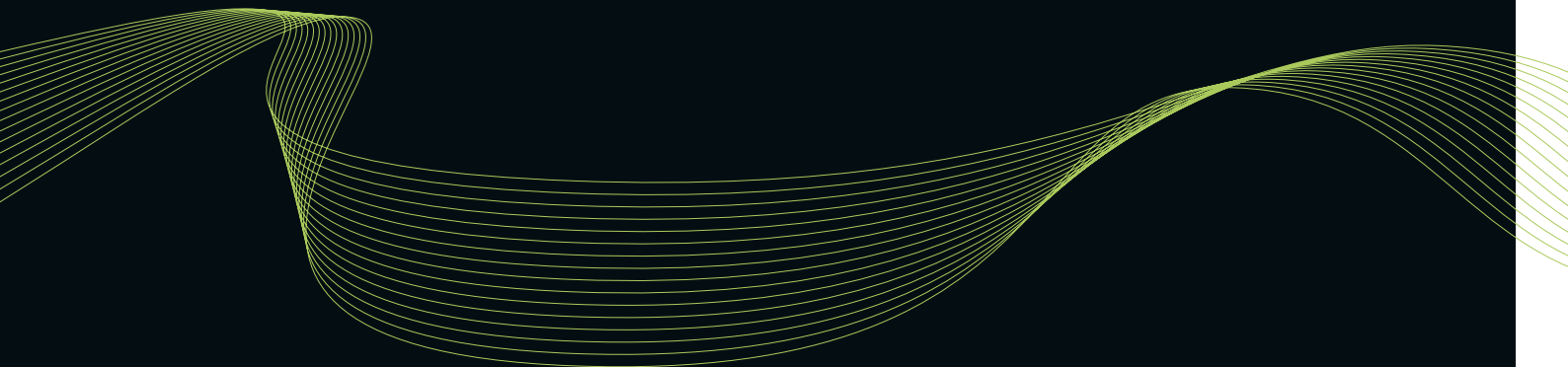


*Source: the Swedish Work Environment Authority

and flour dust



“Flour dust allergy or baker’s asthma has long been recognised as an occupational illness.”



Clean air is no laughing matter



In addition to games and amusements, safety, cleanliness and environmental considerations were all important during the planning of the LATTJO LAND amusement centre in Kalmar. Zehnder Clean Air Solutions assisted in creating a fresh indoor environment that has impressed the visitors. At the same time, the solution helped reduce cleaning costs.





"For us, the air purification system was the last piece of the puzzle to fall into place," explains Andreas Enbom, Operations Manager at LATTJO LAND.

LATTJO LAND is 2,200 m² facility packed with attractions, games and amusements. It provides all kinds of entertainment and amusements for children, teenagers and parents – everything from obstacle courses, interactive games and AV-effects to good food and delicious cakes. The centre is owned by the property company Växer i Kalmar AB, which opened LATTJO LAND in October 2010.

"There had previously been a play and games centre here, but we wanted to develop and improve the attractions," explains Andreas Enbom, who is Operations Manager at LATTJO LAND along with Lee Österdahl.

A good environment is essential

"We both have families and children of different ages, so we drew on personal experience when planning the centre. We gave a lot of consideration to what we wanted as parents, and to what our children would enjoy. Naturally, our top priority was to include all the attractions that children and teenagers like. But it was also important to us to create a good environment in the facilities – everything from safety to ensuring cleanliness and hygiene in all areas. When lots of children are here, running around, jumping up and down and playing, they generate a great deal of dust and dirt in the air. As many people today suffer from allergies and asthma and are oversensitive to certain substances, we wanted to provide an environment that was as safe, clean and dust-free as possible," he adds.

On an unconnected errand, Andreas and Lee visited the food wholesaler Svensk Cater, which has had Zehnder Clean Air Solutions units installed at its Kalmar warehouse for five years.

"When we saw the purifiers at the warehouse, we asked how well they worked and were impressed by the results. We quickly realised that these systems could provide us with a whole range of benefits. In addition to improving air quality, they would have a great effect on the overall experience for our visitors and could even cut our cleaning costs," says Andreas.

A quick decision

Andreas therefore contacted Zehnder for a proposal for an appropriate air purification system for LATTJO LAND.

"Everything happened really quickly," says Dan Årheim, Sales Representative at Zehnder Group Nordic AB. "I visited LATTJO LAND and presented our solutions. The people responsible were very interested and responded positively. I then made some suggestions about where in the rooms the different units should be placed in relation to the different activities, and made an offer for the installation. The order came in the very next day, and we started the installation work immediately after that."

The solution involved installing six Zehnder E3000 air purifiers. The units are positioned above the play sections in the open room and outside the restaurant.

"For us, the air purification system was the last piece of the puzzle, and it was important to have everything installed before our grand opening," explains Andreas.

Reduced cleaning requirement

Since its opening, LATTJO LAND has been visited by around 400 play-hungry children and parents every week, making it a runaway success. In addition to families with children, the centre receives visits from school classes, day care arrangements, after-school schemes and associations. The centre also organises parties.

"We are very satisfied with the air quality and the indoor climate at LATTJO LAND. In fact, a number of asthmatics and people with other allergies who have visited our centre have told us how much they appreciate the fresh air in the various rooms. Those of us who work here also notice the difference that the good air quality makes. And we have also noticed how the air purifiers have helped minimise our cleaning requirements. If we had not installed the Zehnder solution, we would have had to have crawled around vacuuming every nook and cranny with hand-held vacuum cleaners – which would have taken far too long. We can easily handle all the cleaning ourselves, and this makes a real difference to the bottom line, too," concludes Andreas.



Andreas Enbom, LATTJO LAND and Dan Årheim, sales representative at Zehnder, discuss the air purifiers.

"In fact, a number of asthmatics and people with other allergies who have visited our centre have told us how much they appreciate the fresh air in the various rooms."

Clean mountain air in the logistics centre


The pharmaceutical industry makes high demands on its logistics partners' warehouses. With their precisely specified norms for hygiene and climate, manufacturers of pharmaceutical and healthcare products sometimes exceed even the clean room norms of the semi-conductor industry. For this reason, Schenker – the leading supplier of integrated logistics in Germany – has fitted its 3,000 m² logistics centre in Bad Krozingen with the latest air purifier technology from Zehnder.

"Our warehouse facility handles assignments for a great many customers from the pharmaceutical and healthcare sectors," relates Michael Doufrain, CEO of the Schenker facility in Bad Krozingen (overland transport and logistics), which is a part of Schenker Germany.

"Items are distributed to hospitals and GPs' surgeries, for example, where hygiene is naturally accorded the highest priori-

ty. For this reason, it is absolutely essential that we maintain a dust-free warehouse environment.

"In addition, our facility is used for intermediate storage and delivery of electronic modules from the local technology companies – electrical motors for medical pumps, for example – which also demand dust-free surroundings."



"Thanks to the new air purifiers, we can assure our customers of excellent conditions with regard to hygiene levels when it comes to goods handling and warehouse operation."

After the investment in air filter technology, Michael Doufrain, CEO of Schenker's Bad Krozingen facility, refers in jest to his logistics hall as an "air spa".



Precise measurements

"After a consultation interview with Zehnder, precise measurements were taken of various areas. Once we had the measurement results, we could choose the best strategy for dealing with the dust issue. We decided to use Flimmer filter technology to absorb the dust directly at the source, and immediately installed two air purifiers with Flimmer filters above the loading area," says Michael Doufrain.

The air filter technology at DB Schenker has to function under the very toughest conditions. Particles from the vehicles' tyres mix with dust ground up from the concrete floor and the floor coverings. Every time the service doors to the logistics centre are opened or lorries pull up at the loading bays, polluted air flows into the hall. The air inside the facility also contains unwanted cellulose fibres from the boxes and other packaging.

Reduced dust particles by 77 per cent

The measurements taken after the installation of Zehnder's air purifying technology demonstrate that the amount of dust particles in the air has been reduced by as much as 77 per cent, which corresponds to a reduction of 23 micrograms.

"Schenker in Germany now operates an environmental management system certified in accordance with the ISO 14001 standard. Thanks to these ecologically and financially responsible investments in air filter technology here in Bad Krozingen, even more manufacturers of medical equipment will be selecting us as their logistics partner. In addition, our employees can now breathe top quality indoor air. In fact, the air in the warehouse is probably just as clear as the wonderful Alpine air in the Black Forest," concludes Michael Doufrain.



The Schenker subsidiary in Bad Krozingen has specialised in areas such as hospital logistics, which makes high demands on hygiene. This was one of the main reasons why the company needed an efficient air purification system.



Foto: Wåhstedts foto

Improved working environment at Kilafors Emballage



There is usually a lot of dust in the air at industrial facilities where forklift trucks are constantly driving in and out. That was certainly the case at Kilafors Emballage in Bollnäs, Sweden. To improve the working environment, the company therefore invested in Zehnder's air purification system.



Kilafors Emballage was founded in 1981 and has been working with corrugated card since 1985. The company, which is now being run by the second generation of owners, employs 20 people and runs a very modern machine fleet. Kilafors Emballage can handle both large and short batches and can even tailor entire packaging solutions to suit its customers' needs.

"We have customers from all kinds of sectors – from kebabs and furniture to forestry machines. They all need packaging for their products, and we deliver everything from standard boxes to bespoke boxes in all shapes and sizes, with or without fittings and printing. We have customers in all parts of Sweden, and from other parts of Scandinavia as well," explains Hans Englund, CEO and founder of Kilafors Emballage in Bollnäs.

A lot of dust

The actual manufacturing process for the cardboard boxes does not generate a great deal of dust because the machines are fitted with an extraction system.

"The main problem is the forklift trucks that are constantly driving into and out of the facility, bringing in gravel and dust that whirls up into the air," says Hans Englund.

"When we visited the factory in spring 2008, I immediately saw that our air purifiers could make a real difference to the air quality," relates Anders Eriksson, a sales representative at Zehnder.

"Even though we have one of the cleanest factories in the industry, there is no way to eliminate the dust problem entirely. When the sun shone in, you could clearly see the dust in the rooms and on your clothes. So I was very interested in the solution that Zehnder presented. It was a simple way to improve the working environment for our employees even further. At the

same time, there was no risk attached to it for us thanks to the Zehnder business concept which allowed us to run the installation for a trial period. So we quickly decided to give it a try," says Hans Englund.

Great efficiency

Zehnder staff took measurements of the air in the different rooms and halls and then installed the necessary purifiers (five E12000 units and two E3000 units) in the production area and the warehouse at Kilafors Emballage.

"It clearly produced results, so we bought the system at the end of the trial period. Since then, the purifiers have carried on running without any problems. The only time we notice them is when the Zehnder staff come to change the air filters. Just looking at the used filters makes clear how efficient this system is," concludes Hans Englund.



"It clearly produced results, so we bought the system at the end of the trial period."

Trucks driving in and out of the facility bring in gravel and dust that whirls up into the air. Lars Englund at Kilafors Emballage.

More and more companies are choosing Zehnder to help purify their air

Here is a small selection of companies that have recently chosen air purification systems from Zehnder Clean Air Solutions.



SIMS RECYCLING
SOLUTIONS
The Netherlands
Recycling facility
Installation of:
1 x €3000
2 x €12000



WILLIAM SWORD LTD
Great Britain
Food preparation/Bakery
Installation of:
7 x €3000



GEMALTO OY
Finland
Digital security
Installation of:
8 x €3000



GROUPE NICOLLIN
France
Recycling facility
Conversion of:
3 x C51 to €3000
1 x C61 to €12000
Installation of:
1 x €3000
2 x €12000



INVER SPA
Italy
Industry
Installation of:
10 x €3000



BÖ-LA GMBH
Germany
Printing
Installation of:
18 x €3000



ASTRUP
Norway
Logistics
Installation of:
8 x C61



SWISS POST
Switzerland
Logistics/Parcels/Letters
Installation of:
5 x €3000



LEGO
Denmark
Industry
Installation of:
1 x €3000
2 x €12000

Patrull air purifier a success at IKEA

IKEA launched the Patrull air purifier in April 2010, since when sales have skyrocketed. The product will now be added to the standard IKEA range, and the next step is to launch it on the American and Canadian markets.

The air purifier was developed by Zehnder for private consumers, and was sold at 153 IKEA stores in Europe in 2010. "The first 10,000 units flew off the shelves, and both we and IKEA are delighted with the sales," says Peter Krantz, CEO of Zehnder Group Nordic AB. "IKEA has therefore decided to include the Patrull air purifier as a standard product in its range. This spring, it will be launched in the United States and Canada in connection with IKEA starting its Family concept on these markets. The next step will then be to launch the product in Asia. IKEA estimates that sales this year will reach somewhere between 20,000 and 30,000 units.

"The first 10,000 units flew off the shelves, and both we and IKEA are very pleased with the sales."



The Patrull air purifier

Provides a cleaner, more healthy indoor environment. Filters pollen, dust, mites and smoke particles out of the air. At output level 2, it replaces 90 m³ of air per hour (equivalent to a surface area of 35 m²).

Product development:

Zehnder Group Nordic AB

Manufacture:

The Flimmer filter is manufactured by Zehnder in Motala, and the purifier is assembled by one of IKEA's subcontractors.

Sale:

IKEA



“We expect to be able to triple our production capacity in the new premises.”

Carry Turesson, Production Manager at Zehnder Group Nordic AB

New production facility and European training and development centre

Hi There!

Carry Turesson, Production Manager at Zehnder Group Nordic AB

There is a rumour that you are currently moving into a larger production facility – is that so?

Yes, it's true. To keep pace with the company's growth, we will soon be moving into larger and more appropriate facilities here in Motala. The new facility comprises 3,000 m² of space, which is almost double what we have now. Best of all, however, is that we can set up the new plant to match our needs exactly.

What will this mean for your production capacity?

In the new facility, we will be setting up the optimal flow for a modern production process. We will be able to operate with quick change-over times from low to high production, which will naturally improve our delivery readiness. In addition, we will have great loading docks for receiving and shipping goods as rationally as possible. Another bonus is that two of our sub-contractors are based in the same building. We expect to be able to triple our production capacity in the new premises.

What is your forecast for manufacturing this year?

This year, we aim to manufacture around 2,000 purifiers and 50,000 filters. Filter production is principally targeted at the Nordic market and IKEA.

I have heard that you will also be setting up a European training and development centre at the new site ...

Yes. We will be using the new facilities to train our sales representatives and fitters in our system. But it will also be a base for research and development, with all the equipment we need to measure flows, energy output, etc. With this new facility, we will be able to handle even more of the development work required in-house.

When is the move to take place?

Right now, construction work is still under way, but we should be in place at our new premises during the first week of June. By that time, we will have set everything up just the way we want it, so it couldn't be better. And we will have room to expand even further, as we have an option to extend the premises by an additional 3,500 m².



“With the new E6000, we can now help even more companies with solutions for cleaner air.”

Greater opportunities with the new air purifier

In the third quarter of 2011, Zehnder will be launching a new air purifier: the E6000. “With this new model, we will be able to provide even more companies with a cost-efficient solution for cleaner air,” explains Peter Krantz, CEO of Zehnder Group Nordic AB.

Up until now, Zehnder has had two main models in its range: the E3000 and the E12000. The numbers in the model designation refer to the volume flow, i.e. how many cubic metres of air the units can purify per hour.

Ideal for rooms with low ceilings

“It has come to our attention that for many companies, the gap between our two main models is too wide. For example, some companies have large rooms with a relatively low ceiling height. These companies may be active in the fields of logistics, retail trade and recycling or food production, industry and public sector business. With the new E6000, we can now help even more companies with solutions for cleaner air. This is a model that a lot of customers have asked for, and it is good to know that we can now accommodate these requests,” says Peter Krantz.

Zehnder Clean Air Solutions is growing

In order to help meet the increasing demand all over Europe, Zehnder has taken on the following new sales representatives:

Germany

Thomas Prussait

Sales district: Saarland, Hessen, Rheinland-Pfalz

Wolfgang Hommann

Sales district: Nordrhein-Westfalen

Great Britain

Greg Caine

Sales district: the South-east

Russell Hutchinson

Sales district: the Midlands

France

Florian Roger

Sales district: the eastern region of France

Switzerland

Oliver Schlottmann

Sales district: the French-speaking part of Switzerland



Welcome to the Zehnder stand

Zehnder is continuing to participate in trade fairs all over the world. The list below presents a selection of the events that Zehnder will be participating in over the coming months.

Switzerland



Transport and Logistics trade fair
14–15 September, Bern

A trade fair attended by leading companies in the field of transport and logistics.

Industrial and Functional Building trade fair

12–13 October, Bern

A trade fair for companies that supply and support the industrial and construction sectors.

France

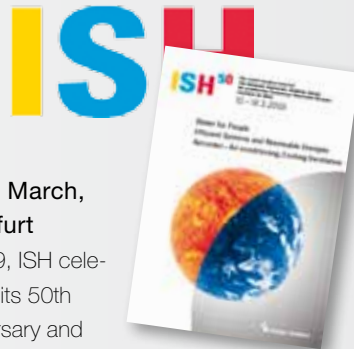


Preventica, 18–19 May, Rennes

Preventica, 27–29 September, Lyons

Preventica is a trade fair for the “health and safety at work” market. Exhibitors include companies active in the fields of hygiene, safety, environmental matters and occupational health.

Germany



ISH

15–19 March,
Frankfurt

In 2009, ISH celebrated its 50th anniversary and focused on sustainable solutions for water and energy consumption. A total of 2,361 companies from 58 countries exhibited at the event. The number of international visitors rose, and an impressive 202,000 people visited the trade fair. The big news for ISH 2011 is that Aircontact will be moving into the newly constructed Hall 11. The Aircontact product group covers exhibitors from the fields of air conditioning, cooling and ventilation technology.

Sweden



Logistics and Transport

25–27 May, Swedish Exhibition Centre,
Gothenburg

Logistics & Transport is the leading trade fair and conference in the Nordic region for the logistics & transport sector, and will be held for the twelfth time in 2011.

Come and visit us at stand B02:09.



Great Britain



Temperature Controlled Storage & Distribution Show

14–15 September, Peterborough

We will be participating through our partner Food Storage & Distribution Federation (FSDF), which will be exhibiting at the event.



The Netherlands



Vakbeurs Bedrijf & Logistiek 2011

9–10 November, Eindhoven

A large trade fair in the Netherlands focusing on logistics.

Zehnder – everything you need for comfortable, healthy and energy-efficient indoor living

Heating, cooling, fresh and clean air: at Zehnder, you will find everything you need for comfortable, healthy and energy-efficient indoor living. Zehnder's wide and clearly structured portfolio can offer the right product for any project, be it private, public or commercial, new build or renovation. And where service is also concerned, you'll find that Zehnder is "always around you"

Heating

.At Zehnder, **heating** doesn't just come in the form of design radiators. We offer solutions in all shapes and sizes, from radiant ceiling panels to heat pumps with integrated ventilation devices.

- Design radiators
- Compact energy station with integrated heat pump
- Heating and cooling ceiling systems
- Comfortable indoor ventilation with heat recovery



Zehnder design radiators

Cooling

Zehnder also offers sophisticated solutions for indoor **cooling**. These range from cooling ceiling systems to comfortable indoor ventilation with a supply of pre-cooled fresh air.

- Heating and cooling ceiling systems
- Compact energy station with heat pump and brine pipe
- Comfortable indoor ventilation with geothermal heat exchanger for fresh air pre-cooling



Zehnder heating and cooling ceiling systems

Fresh Air

Fresh air – a product range with a long tradition at Zehnder. Zehnder Comfosystems provides products and solutions for comfortable indoor ventilation with heat recovery for houses and apartments, for new builds and for renovation projects.

- Comfortable indoor ventilation
- Compact energy station with integrated ventilation device



Zehnder Comfosystems

Clean Air

Zehnder Clean Air Solutions provide **clean air** in buildings which are particularly prone to dust. In residential applications, the comfortable indoor ventilation provided by Zehnder Comfo-systems filters external pollutants out of the air.

- Comfortable indoor ventilation with integrated fresh-air filter
- Compact energy station with integrated fresh-air filter



Zehnder Clean Air Solutions

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