



STEP INTO MY WORLD OF OXYGEN

A STORY ABOUT INDOOR AIR QUALITY

**DUCO**



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# Welcome to my World of Oxygen

A STORY ABOUT INDOOR AIR QUALITY

*Emma testifies*

I get up, go to school, come home, play for a short while outside, wash and see a nice film before going to bed. Conclusion: I spend most of my time indoors. How about you?

We don't often stop and think about it, but did you know that **indoor air quality** is often up to five times worse than that of outdoor air? The consequences for your health as well as mine cannot be disregarded, since everyone needs fresh air.

Have a quick read through the rest of this brochure and find out all there is to know about a healthy indoor climate.

***Welcome to my World of Oxygen!***

**DID YOU KNOW THAT ...**

## **you spend 90% of your time within four walls?**

At home, at school, at work... We spend 90% of our time within four walls and yet indoor air quality is often well below par. Healthy air is a basic requirement to function properly. The indoor climate can turn into a breeding ground for diseases if the temperature, humidity/or the CO<sub>2</sub> concentration in the home reach high levels.

Insulation is important to cut energy losses but **efficient ventilation** is needed in order to create an optimal indoor climate. Air cannot circulate properly in poorly ventilated houses or apartments for instance which are built completely airtight. This causes stale air to hang around, with unpleasant odours, moisture condensing on the windows and in the walls, as well as enabling bacteria to spread easily. This is harmful to the occupants in terms of health as well as state of mind.

VENTILATION WITH **SMART DEMAND CONTROL**: ESSENTIAL FOR A **HEALTHY** AND **ENERGY-EFFICIENT** INDOOR CLIMATE



**THE SOLUTION:**

VENTILATION WITH STALE AIR EXTRACTION  
AND FRESH AIR SUPPLY



**DID YOU KNOW THAT...**

## **indoor air is up to five times more polluted than outdoor air?**

Before, fresh air used to slip into the home through poorly fitting doors and windows, roll-down shutter housings, etc. which made ventilation superfluous. Homes are being built increasingly insulated and airtight in order to cut energy losses and raise energy performance. Observation: indoor air is up to five times more polluted than outdoor air. Ventilation is required in order to ensure extraction of stale air and a **supply of fresh and healthy air indoors**.

In order to select the correct ventilation system, you need to consider your lifestyle. It is important that stale air is extracted, with or without heat recovery. In addition to this, a supply of fresh air into the dry rooms/living spaces as well as a CO<sub>2</sub> or moisture-based smart control are essential requirements.



**Did you know that...**

***30% of people born after 1980 in industrialised countries are clinically allergic?***

Airtight construction and good ventilation are hot topics. This is logical given the great energy benefits for the occupants. As many as one in six Europeans live in an unhealthy building. In other words, too little attention is being paid to ventilation, which is unhealthy!

Harmful indoor air must be capable of exiting the building. Otherwise, the risk of health problems and moisture accumulation increases considerably. Accordingly, as many as 30% of people born after 1980 are clinically allergic.

Making buildings increasingly airtight in construction and renovation raises the question moreover as to how to prevent overheating during the warmer months. Efficient ventilation as well as **external solar shading** have a major contribution to make in this regard to a healthy building.



EFFICIENT EXTRACTION  
OF MOISTURE-LADEN  
AND STALE AIR USING  
A **SMART VENTILATION  
BOX** IS THE SOLUTION.



Did you know that...

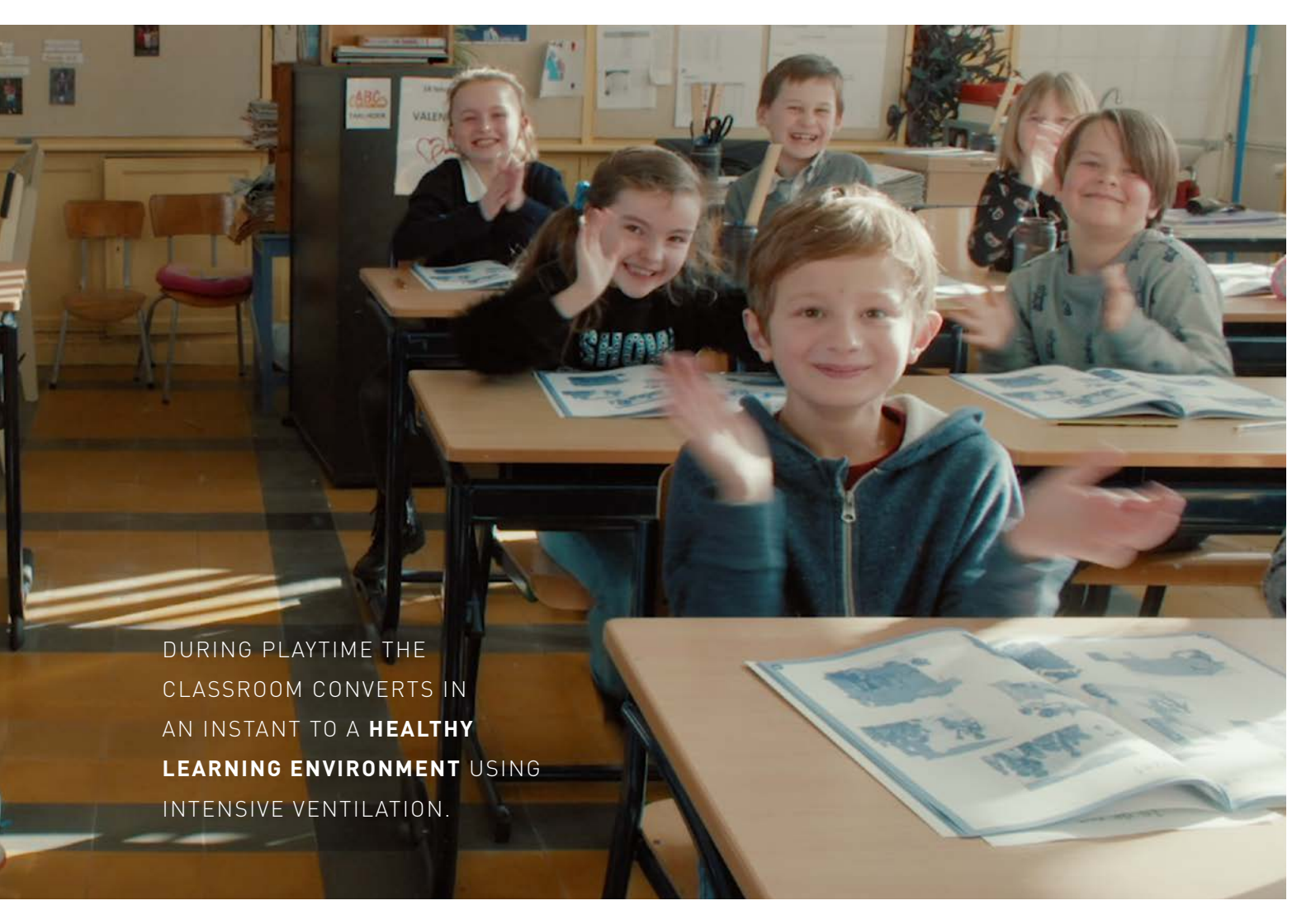
## a healthy indoor climate improves learning performance by up to 23%?

Ventilate not only for today but tomorrow too. Consider future generation(s): your children, grandchildren etc.

Do not underestimate the consequences of insufficient ventilation in a classroom for example: headaches, reduced productivity, absenteeism due to sickness, etc. A learning environment must be healthy, enabling everyone to perform to the best of his or her ability at any time of the day. Did you know that research shows that a healthy indoor climate improves learning performance by up to 23%?

This is achieved thanks to a **smart mix of ventilation and solar shading systems**. Each project needs to consider the use of basic ventilation, through ventilation, air extraction, ventilative (night) cooling and external solar shading to create a sustainable customised system.





DURING PLAYTIME THE  
CLASSROOM CONVERTS IN  
AN INSTANT TO A **HEALTHY  
LEARNING ENVIRONMENT** USING  
INTENSIVE VENTILATION.



A man in a grey hoodie and dark pants is sitting on a brown leather chair at a dark grey desk. He is looking down at a small object in his hands. The desk is cluttered with papers, a laptop, a pen, and an orange. To the left, there is a large window with white horizontal blinds. The room has a modern, minimalist aesthetic with light-colored walls and a wooden pillar. The lighting is soft and natural, coming from the window.

THERMAL COMFORT AT THE FOREFRONT!  
**ARCHITECTURAL SOLAR SHADING**  
FOR EFFICIENT PROTECTION  
FROM THE SUN'S RAYS.

Did you know that...

## a combination of ventilation and solar shading cuts the cooling load by up to 63%?

Making buildings airtight reduces heat demand but only increases the need for cooling. What is more, building and homes with large areas of glazing are increasing in popularity. This gives the sun free rein, which has quite an adverse impact on **thermal comfort**.

That is why opting for solar shading and ventilation is fully justified. Together, these systems can reduce the cooling load by up to 63%.

An external solar shading system of this type play a key role in this. After all, it can lower the average indoor temperature by up to 12%. It will also have a beneficial impact on energy bills due to better energy performance in buildings. Furthermore, better energy performance is synonymous with a **more energy-efficient house**.



**EXTERNAL SOLAR SHADING** GIVES YOU THE  
PRIVACY YOU NEED WHILE STILL PROVIDING  
SUFFICIENT DAYLIGHT AND THE VIEW OUTSIDE.

Did you know that...

## solar shading lowers the average temperature by up to 12%?

During the summer months **external solar shading** lowers the average temperature by up to 12%. The choice is extensive:

- **Structural solar shading** with fixed or adjustable louvre blades which can be fitted horizontally or vertically and featuring a discreet or striking design.
- A solar shading system with a range of **sliding or folding panels** which can be shifted in front of the windows completely on a rail.
- **Fabric or canvas solar shading**, which may or may not be mounted on an extension bracket or may or may not be combined with ventilation.

**Purge ventilation** combined with architectural solar shading can also offer a way forward. Wall and window louvres, louvre wall systems – which may or may not be burglar-proof – ensure high ventilation flow rates.





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VENTILATION  
SUN CONTROL

DUCO

## ***My solution = Home of Oxygen***

Are you familiar with Duco? Duco is a major player in the European **ventilation and solar shading systems** market. The company extends over as much as 101,000 m<sup>2</sup> and is located in Veurne, Belgium.

Duco's aim is to create the **optimum indoor climate**. There are three key principles in every development: health, comfort and energy-efficiency.

A full range of **innovative total solutions** for homes, offices, schools or healthcare institutions is the ultimate guarantee of the optimum indoor climate in which everyone will feel at home.

**Duco, Home of Oxygen**

*Emma*





**DUCO**  
Ventilation & Sun Control

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## Team of Oxygen

Duco provides the necessary **oxygen and atmosphere** among employees through a variety of activities. The ultimate goal is a healthy mix of functionality and ... fun!

Join the Duco family! Visit [jobs.duco.eu](https://jobs.duco.eu) and find a job which is tailor-made for you.

## Home of Innovation


Innovation is at the forefront with Duco. The entire team is permanently dedicated to putting **new/innovative products** on the market.



## Step into Emma's World of Oxygen

Dive into the entire story with us. You won't go wrong at [www.worldfoxygen.com](https://www.worldfoxygen.com).



A young girl with long, flowing brown hair is running through a lush green field. She is wearing a light grey long-sleeved shirt and blue jeans. She is holding a white paper airplane in her right hand, and her hair is blowing in the wind. The background is a dark, out-of-focus forest.

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