



## Case study

# Powerful air cleaning devices safeguard the pioneering role of a market leader



### Customer

Oerlikon Balzers  
Coating AG



### Location

Balzers (LI),  
Brügg (CH)



### Sector

Surface  
treatment



### Dust reduction

78 %

## At a glance

*“The industrial air cleaning systems from Zehnder are paving the way for us in our quest to remain pioneers within the surface coatings sector”*

Andrea Hürlimann, Managing Director

### Challenges

Oerlikon Balzers is the world’s leading supplier of surface coatings for components and tools used in sectors such as the automotive and medical technology industries. During the treatment process for components (such as microblasting or sandblasting), a large amount of dust and material particles is produced, which is deposited in the air, on the ground and on the components themselves. There was also considerable dust build-up in the incoming and outgoing goods sections. An extensive amount of cleaning was required here to achieve the ideal production conditions and protect employees.

### About Oerlikon Balzers Coating AG

When it comes to innovative surface coatings, Oerlikon Balzers is also a global technology leader. The company’s headquarters are located in Balzers, Liechtenstein, although it also owns another major site in the Swiss city of Brugg. Oerlikon Balzers coating centres can be found in 35 countries around the world, where its 5100 employees create state-of-the-art coatings designed to significantly increase the performance and service life of the tools and components they treat.

### Benefits

Thanks to the air cleaning devices from Zehnder Clean Air Solutions, particle load has been reduced by an average of 78%. This has enabled Oerlikon Balzers to optimise its production conditions and reduce costs for quality assurance and cleaning. In addition, the machines are exposed to far less particle-related wear. And above all, the employees benefit from healthier breathing air. That’s not to mention the bonus points when it comes to corporate image, as the cleaner production areas are now even more impressive when customers come to visit.





## Pioneering surface coatings from the market leader

The company's customer base spans a wide variety of different sectors, with the spectrum covering general engineering, the automotive industry, aviation, oil and gas, power generation, watchmaking, and medical technology.

Andrea Hürlimann, Managing Director at Oerlikon Balzers for Liechtenstein and Switzerland, sums up the company's winning formula as follows: "When it comes to surface technologies, we are constantly aiming to **push the boundaries of what is possible and set new standards.** What's more, we have always complied with all legal requirements whilst consistently working on improving ourselves and remaining within prescribed limits."

## Ultimate cleanliness: Essential for premium-quality results

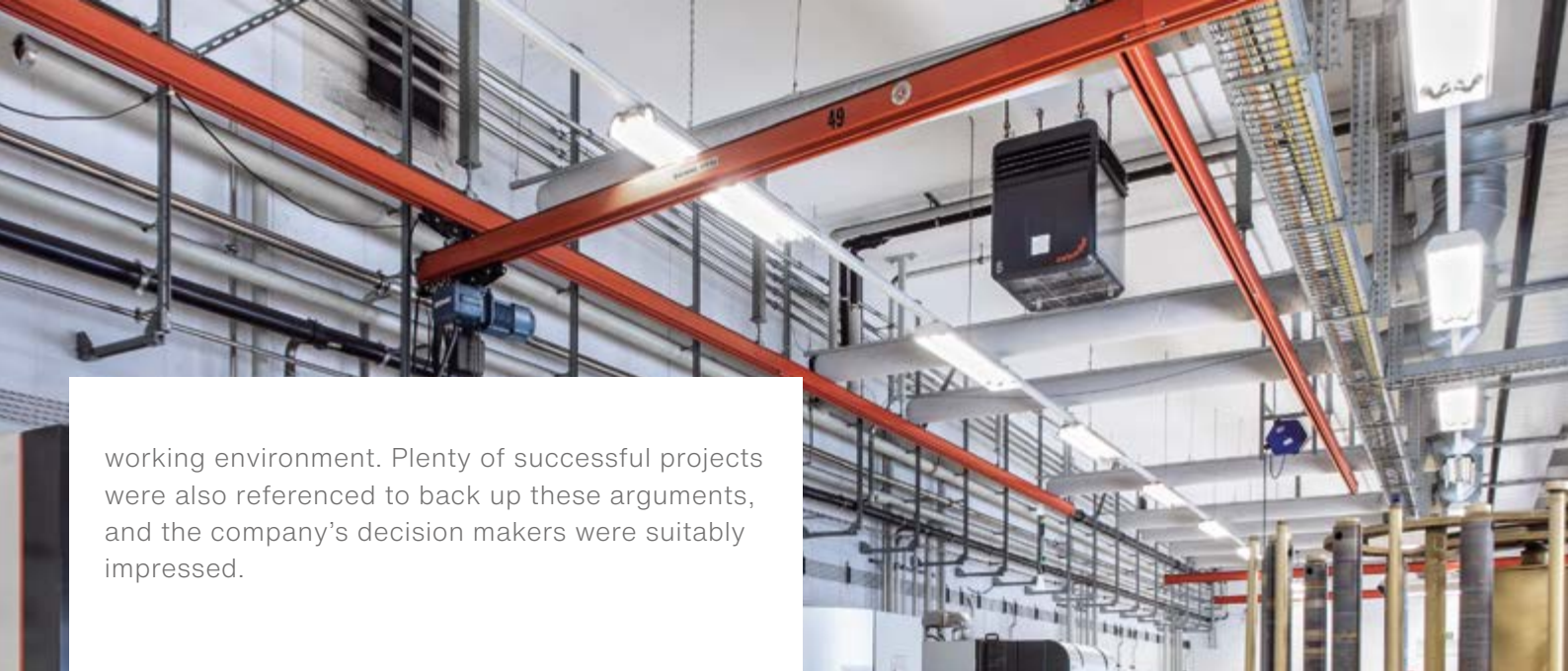
For Oerlikon Balzers, there's nothing quite like providing outstanding quality, 100% customer focus and first-class service. This is why the company's own vehicles collect components and tools directly from the customer's site. Once the incoming goods inspection is complete, the components are cleaned and any "old" coatings are removed before the pretreatment process – for example, microblasting – begins. The components are fixed in place on substrate holders before being coated in high-tech materials and then undergoing a post-treatment process. They are only delivered to the customer once they have passed the final quality check.

**All of these phases result in the creation of dust and material particles that collect in the air, on the floor, and even on the components.** A particularly high particle concentration can be found in areas where tools and components undergo pretreatment or post-treatment involving microblasting or sandblasting. Nevertheless, ultimate cleanliness is essential at all production stages to ensure premium quality. As Production Site Manager for Balzers, Alexander Vogt, explains, "The cleaner the surfaces are, the better the coatings adhere."

## Powerful arguments for powerful air cleaning systems

An extensive amount of cleaning was required to achieve the ideal production conditions and protect employees. That said, Oerlikon Balzers was not content to simply stick to the status quo. According to Andrea Hürlimann, **"we have always made sure that our working environments are exceptionally clean, and we never stop striving to improve in everything we do – it's just part of our DNA."** So when Patrick Frei, one of the experts at Zehnder Clean Air Solutions, got in touch with Oerlikon Balzers one day, he was already preaching to the converted. He held a presentation to demonstrate how Zehnder's industrial air cleaning systems significantly reduce the concentration of airborne particles and thereby largely improve the air quality. What's more, employees also stand to benefit from a health perspective on account of the reduction of particles within their





working environment. Plenty of successful projects were also referenced to back up these arguments, and the company's decision makers were suitably impressed.

## High-performance technology along the entire value chain

The Zehnder experts recorded, in Balzers and Brugg, the particle concentration at every stage of the process chain to establish a solid planning base. These results could then be used by the Zehnder team to develop an appropriate unit configuration. Air cleaning systems were installed at all relevant stations across both sites, from the incoming goods area, to the production zone, and finally in the outgoing goods section. The microblasting and sandblasting zones were heavily scrutinised, as this is where the highest particle concentration was recorded. The major advantage of the high-tech units from Zehnder Clean Air Solutions stems from their exceptional and instantaneous efficiency: from the moment they are installed and configured, the systems are incredibly effective at picking up particles – even before they have had chance to build up in the ambient air or on the components.

## 78% reduction of particles on average, below the legal thresholds

The impact of the newly installed devices has not gone unnoticed. Alexander Vogt confirms that **“as soon as the employees entered the microblasting area after the units had been commissioned, they noticed how clean the air was immediately.”**

The dust concentration was measured once again and the figures spoke for themselves: overall, the particle load had been reduced by 78% on average. This is how Oerlikon Balzers was able to improve its production conditions further still and reduce its costs associated with quality assurance.

**The machines involved in the process now suffer significantly less from particle-related wear,** which serves to maximise productivity. Another crucial aspect is that **the workforce can also benefit from the healthier breathing air.** And last but not least, the clean air has a real impact on the company's image, as the cleaner production areas are now even more impressive when customers come to visit.

So what are the plans for the future? According to Managing Director Andrea Hürlimann, “the industrial air cleaning systems from Zehnder are helping us in our quest to remain pioneers within the surface coatings sector. What's more, we are also planning on expanding our range for customers in the fields of dental and medical technology, and striving to achieve clean-room conditions according to ISO classes 6 to 7. The particle measurements that have already been taken since the installation by Zehnder Clean Air Solutions clearly demonstrate that the systems could certainly help us to meet these quality requirements.”