



Case study

Reduced metallic odour that disappears into thin air



Client

GEWA
Blechtechnik
GmbH



Location

Ried im
Traunkreis (AT)



Sector

Metalworking



Dust reduction

Up to 81%

At a glance

“Our goal is to deliver first-class quality while providing a clean, healthy working environment for our employees. We were able to achieve this thanks to the air cleaning systems from Zehnder. Our employees instantly noticed the difference. I can certainly recommend these units.”

Walter Zwicklhuber, Owner and Managing Director

Challenges

GEWA Blechtechnik GmbH is a leading contract manufacturer in the metal industry in Austria. The company produces a broad range of metal components that are laser-cut, stamped, edged and welded. The manual workshop and welding shop are full of oil vapours, dust and welding fumes, which can be detected in the form of metallic odours, a build-up of particles and visible mist. The managers at GEWA Blechtechnik wanted to change this situation. The goal was to implement measures designed to create a healthier working environment and significantly improve the general level of cleanliness and quality.

About GEWA Blechtechnik GmbH

GEWA Blechtechnik GmbH is a leading contract manufacturer in the metal industry in Austria. Founded in 1990, the company currently employs 70 members of staff and serves around 250 customers in Austria and neighbouring EU countries. The customer portfolio features leading companies from the machine and rail vehicle construction industries, as well as electronics manufacturers, SMEs and major corporations.

Benefits

Thanks to solutions from Zehnder Clean Air Solutions, the particulate-matter load has been reduced by an average of 81% in the manual workshop and an average of 72% in the welding shop. The metallic odour disappeared immediately after commissioning. What's more, the units take care of air circulation, creating a pleasant indoor climate that is especially welcome on hot days. The amount of cleaning required has also been reduced substantially, as there is significantly less build-up of dust on the floor and on the machines.



Excellent metalworking for quality-conscious customers

GEWA Blechtechnik supplies its customers with laser cuts, stamped parts, edgings and complete solutions in the area of housing construction, and serves as a system supplier for entire assemblies. Among the products produced at the plant are housings for industrial computers and door components for public transport, as well as machine components for industrial manufacturing.

The challenge: metal dust and metal smoke

GEWA Blechtechnik focuses on producing tailor-made solutions for its customers. In general, the customer supplies the data for the components and blanks. This is then used to produce a broad range of metal components at the plant in Ried. Depending on the nature of the task at hand, the parts produced at the plant are laser-cut, stamped, edged or welded. The portfolio also includes components featuring a variety of surfaces as well as standard parts such as bolts and threaded bushings. Using the aforementioned processes, the plant produces bespoke products to the highest degree of precision.

However, wherever metal is processed, oil vapour, dust and welding fumes are simply unavoidable –

for example, in the manual workshop where components are ground or drilled. In these environments, a significant amount of fine particulate matter is generated, which emits a typical metallic odour – a palpable sign that the air is polluted. Walter Zwicklhuber, owner and Managing Director of the company, explains what conditions in the plant used to be like: “Of course, we already had an air cleaning system installed, but the metallic, cold, sweetish odour still persisted.” Another critical area was the welding workshop. Even though each of the welding stations installed here is fitted with an extraction system, significant amounts of visible, fog-like welding fumes were still a frequent occurrence – a problem that GEWA Blechtechnik decided needed to be tackled.



The key focus: a proactive commitment to employees

Zwicklhuber explains: “Our aim is to produce products of the highest quality while also providing our staff with a clean, healthy environment in which to work.” **It goes without saying that GEWA Blechtechnik has always fulfilled all regulatory requirements, but the company was not content to simply stick to the status quo.** The main concern was to show the company's active commitment to its employees. The desire to achieve the greatest possible level of cleanliness in the hall prompted a renewed interest in the use of air cleaning solutions. Workstations with a low level of particles make work easier and facilitate quality assurance, while simultaneously generating a positive image. Katja Zwicklhuber, a member of the marketing team at GEWA Blechtechnik, explains the situation: “We are an important partner for a world-leading machine construction company. Around 40 times a year, delegations from around the world come to us to experience the machines from this provider first hand. Having an impeccable, exemplary appearance is of great importance here.”

Persuasive measurement results and practical tests

When one of Zehnder Clean Air Solutions' experts paid a visit to GEWA Blechtechnik, he was welcomed with open arms. He suggested carrying out particle measurements in the critical areas, which served as a meaningful basis for the project outline. The measurements clearly showed an extremely high level of particulate-matter load.

However, Walter Zwicklhuber wanted to go into even finer detail. One of his customers and suppliers, a company specialising in the processing of metal and plastics, had already installed air cleaning systems from Zehnder. Zwicklhuber went to see the appliances in situ and discussed them with the on-site production manager. This conversation proved to be the perfect endorsement: the production manager explained that the level of dust had been significantly reduced, as had the company's sickness rates. From there, everything moved very quickly. Zwicklhuber explains: **"When I'm sure about something, I don't waste any time."** The air cleaning systems from Zehnder were installed in the welding workshop and in the manual workshop quickly and efficiently. Zwicklhuber adds: "There was virtually nothing for us to do. All we did was fit the sockets. The experts from Zehnder took care of the rest without any impact on our processes."

Up to 81% fewer particles and a reduced metallic odour, giving way to clean air

The impact of the high-tech appliances from Zehnder Clean Air Solutions was felt immediately. Thanks to innovative flimmer filter technology, particles are caught in the air before they can disperse in the room and negatively impact the breathing air, systems and staff. Staff noticed the positive effects immediately after the systems were installed. **The climate in the manual workshop and welding workshop was significantly more pleasant and the metallic odour virtually "disappeared into thin air"**. What's more, the air cleaning systems from Zehnder take care of the air circulation, ensuring that the air is cleaned before it flows back out. The

air circulation means that there is no stagnant air in the hall – something which is especially welcome in the summertime. The reduction in particles on the floor was also considerable and staff were pleased to report much lower levels of dirt when sweeping up. The new-found lack of particles also revealed itself in some surprising places. Katja Zwicklhuber explains: **"During an income tax inspection, the inspector joked that we might no longer need to pay our employees extra for working in an unclean environment, it is simply too clean at GEWA Blechtechnik."**

The impressive numbers also speak for themselves. The particulate-matter load was reduced by 81% on average in the manual workshop, and 72% on average in the welding workshop.

Summary: positive precedent

It wasn't just the performance of the appliances themselves that turned heads, but also the collaboration with the Zehnder team. GEWA Blechtechnik appreciated the expert advice, quick installation and results which delivered in every way on the promises made. And the collaboration didn't stop there, as improvements were also required in the laser cutting area. Here, very fine metal dust is produced during the cutting process and when cleaning the machines which can only be partially removed by the internal machine extraction system. Following on from the positive experiences in the manual workshop and the welding workshop, Zwicklhuber wanted to establish optimal working conditions in this area too. Industrial air cleaning systems from Zehnder Clean Air Solutions have also recently been installed here, creating clean conditions throughout.

So what's next? Walter Zwicklhuber: "All the necessary areas now have the right level of protection. But we have always been a highly automated industry, and this is set to continue with Industry 4.0. As soon as we expand and the need for further protection arises once again, we will certainly return to Zehnder for help. I can wholeheartedly recommend the company's air cleaning systems."