



Case study

Healthy employees and happy customers



Customer

BOC Brinsworth



Location

Rotherham (UK)



Sector

Industrial gases



Dust reduction

Up to 80 %

At a glance

“Our employees are healthier and happier as a result of us using air cleaners. And we can show our customers and suppliers around our facilities with pride.”

Neil Broadbent, Site Production Manager, GB & Ireland

Challenges

Air purification in the chemical industry is notoriously difficult. At BOC Brinsworth, for example, the amount of dust in the factory was extremely high – and clearly taking its toll. Employees were frequently absent, often citing asthma symptoms as the reason. Cleaning took around 15 to 20 hours per person per week, which was terrible for productivity, as safety rules meant it was not possible to fill any cylinders with gas during this time. What’s more, the company worried that it was falling short of environmental standards and dust on its products was damaging its reputation with customers.

About BOC Brinsworth

BOC is the largest provider of industrial, medical and specialist gas products in the UK and Ireland. The company has been producing atmospheric gases, including oxygen, nitrogen and argon for over 120 years. Its portfolio today includes thousands of different gases and mixtures, as well as related equipment and services.

Internationally BOC is a member of The Linde Group, a world-leading gas and engineering company with almost 50,000 employees working across 100 countries worldwide.

Benefits

The introduction of Zehnder air cleaners meant the dust load was significantly reduced, which led to major improvements in the health of the employees. After installing the air cleaning systems, work-related asthmatic symptoms fell by over 80 % and cleaning requirements by 87 % – time that the employees can now use productively. Customer satisfaction is currently at an all-time high, as the glass bottles are delivered in first class condition. An audit by the Ministry of Defence was also extremely positive.



The BOC Brinsworth Material Packaging Group (MPG) site was experiencing intolerable levels of dust. This created an unhealthy and unpleasant working environment. **Workers were enduring what’s known as “black nose” syndrome and some were even experiencing asthma attacks and struggling to breathe.**

Every time one of BOC’s gas cylinders was moved, more dust would spread through the warehouse. The forklift truck tyres generated even more dust as they drove around on concrete floors. It was a never-ending problem.

“There was a physical cloud of dust hanging in the warehouse. It just took a short time for black dust to settle in your nose. The air in the warehouse also had a noticeably unpleasant taste.” – Neil Broadbent, Site Production Manager, BOC UK & Ireland.

In an attempt to combat the dirt and dust, staff cleaned the site at the end of each eight-hour shift – and yet the sweeping only polluted the air even more. Professional cleaners were called in and monthly deep cleans were carried out but it didn’t prove to be a long-term solution.

“Our attempts at cleaning the warehouse only circulated the dust and spread it even further. This was worrying – the place was substandard for the purpose of an environmental audit or customer visit and we also had concerns about our staff’s wellbeing.”

A better working environment

It was clear that the BOC employees were in urgent need of a better working environment. Management realised that they would lose staff if they didn’t improve air quality in the workplace.

“At the end of a shift, staff would leave **looking like they worked on the coalface.** They were covered in dust and we had to upgrade our shower and welfare facilities to meet the workers’ needs. We had some employees off on recurring sick leave or experiencing occupational health issues with asthma-related complaints and. The mood in the workplace was grim.”

Not only were workers experiencing adverse health issues from the high levels of dust they had to spend valuable time cleaning the site each day. It amounted to staff spending a staggering 15 to 20 hours of their working week on cleaning duties.

BOC works with gas, so to ensure absolute safety at all times, all cylinder-filling had to be shut down in order to carry out cleaning. This meant that the excessive cleaning not only took up the employees’ valuable time, but also reduced productivity.

“Creating an efficient, clean and safe site was of paramount importance. We couldn’t carry on this way. Something drastic had to be done.”





Clean Air Solutions

After struggling with the problem for some time, BOC Brinsworth asked around to find out if other BOC sites had experienced the same problem and if so, how they had dealt with it. BOC Brinsworth discovered that BOC Glasgow had battled with the same issues – until it installed Zehnder’s air purification systems in 2013. The Brinsworth management team immediately got in touch with Zehnder and the journey to clean air began.

Zehnder came to Brinsworth and measured the amount of dust in the air and then proposed a solution that would reduce dust in by at least 50 %.

Fully convinced BOC Brinsworth installed Clean Air 6 units in its Medical Filling, Medical Storage, and Industrial Filling areas in 2014. **The difference in air quality was almost immediate.**

Reaping results

Subsequent testing has revealed that dust levels at the BOC Brinsworth site have been reduced by 70 to 80 %. **Productivity has greatly improved and cleaning time has been reduced from approximately three hours a day to just two to four hours a week.**

Employee health has also improved. **Prior to installing the Zehnder units six workers complained of work-related asthma issues. Now this is down to one member of staff.**

Feedback from a recent Ministry of Defence audit was also excellent and customer satisfaction is at an all-time high as customers now receive their gas cylinders in a much better, cleaner condition.

“Now that the air at our site is cleaner, it’s a much nicer place to work and our employees are healthier and happier,” says Neil Broadbent. “We can also show customers and suppliers around our facilities with pride as it always looks, and feels, clean and presentable.”

Due to the success of the BOC Brinsworth and Glasgow installations, Zehnder now supplies five other BOC sites in the UK with air cleaning systems. The results so far are equally impressive. Says Neil Broadbent: “This is a partnership – Zehnder looks after us. We have a good relationship with the service team. It’s like a marriage – we work closely together.”