

# CASE STUDY

PHARMACEUTICAL DUST



## 'LEADING EDGE TECHNOLOGY' PARTNERS WITH 'LEADING EDGE TECHNOLOGY'

### PRODUCT

<b>Product</b>	Gold Series Dust Collector
<b>Model</b>	GSC2
<b>Air Volume</b>	1,000 CFM
<b>Application</b>	Pharmaceutical Dust
<b>Customer</b>	G-Con Manufacturing

### CHALLENGE

Flexible. Scalable. Mobile. Revolutionary. G-CON and Camfil team up to provide turnkey solution.

G-CON Manufacturing, a mobile cleanroom provider since 2009, and Camfil recently partnered to provide their leading edge technologies together to meet the needs of a well-known customer. G-Con provided its POD technology, a unique technology that represents a quantum leap in the cleanroom arena. PODs are readily deployable, mobile and scalable cleanroom solutions that are ideal for multi-product sites, rigorous containment needs, and on demand scaling of production and laboratory space. Camfil provided its Gold Series Camtain GSC2, a cartridge dust and fume collector that combines enhanced performance with ease of service while cleaning the work environment of irritating dust and fumes.

### SOLLUTION

In this application, multiple PODs were combined to produce a 36'W X 42'L X 20'H manufacturing facility for an oral solid dosage form where dust control and mitigation is essential. G-CON immediately recognized the need for collaboration with a well-known dust collector company.



The GSC2 sits in one section of the POD, which is divided up into six sections.

### SOLUTION Continued

"We seek to provide turnkey solutions to our customers and that often requires working with other equipment and system manufacturers," said Dennis Powers, Director of Sales Engineering at G-Con. "We are designing our PODs around the process, which often includes process equipment and mechanical support equipment."

The project required 1000 CFM total capacity throughout the PODs but with limited mechanical space available. Design teams from both G-CON and Camfil worked together to design the Camtain into the POD for customer approval.

"We looked at a few different solutions but in the end the Camtain provided the best option with regard to the equipment design, integration, and technical support from the Camfil team," Powers said.

In this application, as is the case in other pharmaceutical applications, there are two areas of concerns when handling pharmaceutical dusts – the potent, toxic or allergenic properties of the compound as it relates to personnel exposure and the explosion properties of the compound.

The first issue involves understanding the toxicological properties of the material, reviewing the Occupational Exposure Limit (OEL) and performing a risk based exposure evaluation to determine the methods for proper control. In most cases, some level of isolation and containment is required due to the fact that the pharmaceutical dust is extremely potent while being captured in a non-production area and cannot be released into the surrounding environment.

The second concern involves deflagration and explosion potential. Control measures such as explosion venting, chemical suppression and isolation systems may be required depending on the physical characteristics of the dust relating to Kst, Minimum Ignition Energy (MIE) and the location of the collector.

"The design of the processing equipment for this particular POD needed a dust collection system," David Steil, Camfil APC North America Pharmaceutical Market Manager, said. "We met to see if we were a good fit with height limitations and floor space. In the end, we fit the best."



The Gold Series Camtain contained dust collection system has been independently surrogate tested for validated performance verification.

"This is a new direction for pharmaceutical manufacturing," Steil said. "Instead of having to build a product dedicated building that is expensive and inflexible, POD-based facilities can be built at a more affordable price and within a much shorter timeframe."

G-Con's PODs come in various sizes including standard, miniPODs, Transmissible Disease Containment (TDC) PODs and the megaPOD. POD benefits include lower cost of growth, on-demand scalability, fast-track construction, affordability, predictable cost and timeline and repurposability.

"Customers want turnkey solutions," Powers said. "This project is a great example of how we can work with a company like Camfil APC to integrate multiple leading edge technologies into one offering."

For more information for this application contact  
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