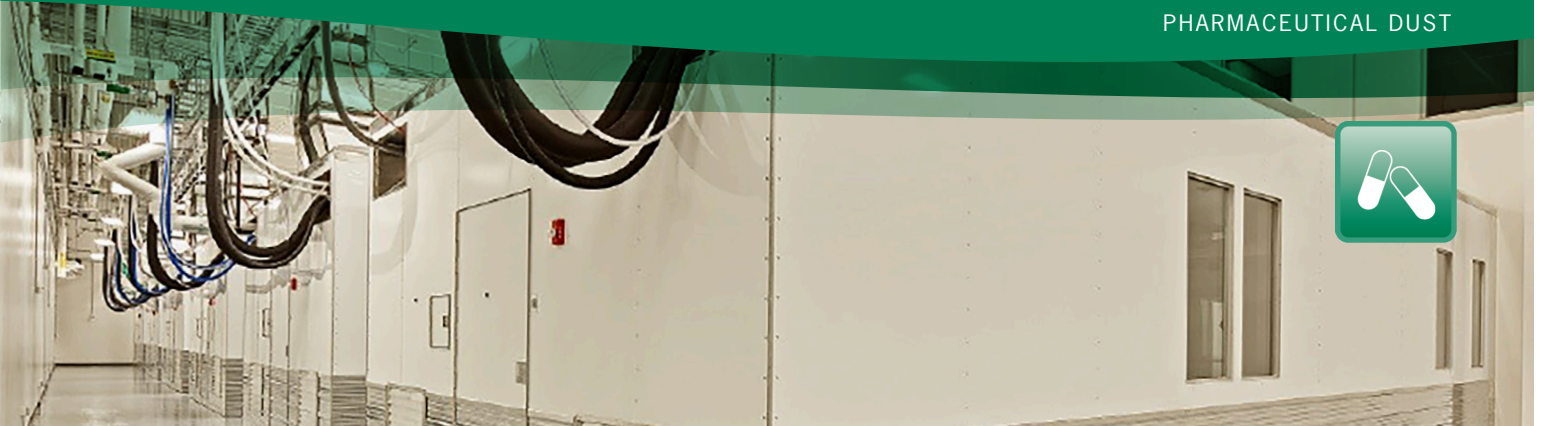


CASE STUDY

PHARMACEUTICAL DUST



PARTNERING IN LEADING-EDGE TECHNOLOGY FOR CRITICAL CLEANROOM APPLICATIONS

PRODUCT

Product	Gold Series Camtain® Dust Collector
Model	GSC2
Air Volume	1,000 CFM
Application	Pharmaceutical Dust
Customer	G-CON Manufacturing



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

CHALLENGE

Flexible. Scalable. Mobile. Revolutionary. G-CON and Camfil team up to provide a turnkey solution. G-CON Manufacturing, a mobile cleanroom provider, and Camfil recently partnered to provide their leading-edge technologies together to meet the needs of a well-known pharmaceutical 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.

SOLUTION

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 high quality dust collector manufacturer.

SOLUTION

G-CON provides turnkey solutions to its customers, which often requires working with other equipment and system manufacturers. G-CON designs their PODs around the process, which often includes process equipment and mechanical support equipment.

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

G-CON looked at a few different solutions, but in the end, the Camtain provided the best option in regards to the equipment design, integration, and technical support from the Camfil team. In this application, as is the case in other pharmaceutical applications, there are two areas of concern when handling pharmaceutical dust – the potent, toxic, or allergenic properties of the compound related to personnel exposure and the explosion properties of the compound. The first issue involves understanding the material's toxicological properties, reviewing the Occupational Exposure Limit (OEL), and performing a risk-based exposure evaluation to determine proper control methods. 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 collector's location.

The design of the processing equipment for this particular POD needed a dust collection system. Camfil met with G-CON to see if we were a good fit with height limitations and floor space. In the end, Camfil was the best choice.



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. Instead of building 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 repurposable.

G-CON customers want turnkey solutions. This project is an excellent example of how working with Camfil helped integrate multiple leading-edge technologies into one offering.

For more information for this application contact Camfil at 800-479-6801.

