

PHARMACEUTICAL SOLID DOSAGE MANUFACTURING

APPLICATION FOCUS



The Farr Gold Series® Camtain™ dust collector combines enhanced performance, safe-change capability and ease of maintenance while protecting the workplace and environment from fugitive manufacturing particles.

BENEFITS OF THE FARR GOLD SERIES® CAMTAIN™

- Re-entrainment of dust into the filters is reduced by a high entry, cross flow inlet, which eliminates upward velocities that can hold fine particulate in the filter cartridges.
- Vertically arranged filters release nearly all dust particles versus horizontal filters, which allow particles to build up on top of the filter.
- High efficiency filters stop 99.99% of the dust at 0.5 microns and MERV 15/16 rating.
- Specially treated filter media available for repelling fine particulates and moisture for a lower pressure drop and long filter life.

PHARMACEUTICAL APPLICATIONS

- The Farr Gold Series® Camtain™ (GSC) units can be used in a variety of pharmaceutical dust collection applications including tablet presses, coating, fluid bed drying, spray drying, blending, granulation, general room ventilation and central vacuum systems.
- Safe-change containment systems are available for both the filter cartridges and discharge system underneath the collector. The cartridge change utilizes the bag-in/bag-out (BIBO) method while the discharge uses continuous liner technology.
- The Farr GSC can also support traditional dust collection for nuisance dusts and fumes that do not require full isolation and containment.
- Camfil APC has containment dust collectors in pharmaceutical applications in North, South and Central America, Asia and Europe.





Farr Gold Series Camtain bag in/ bag out (BIBO)

ADDITIONAL INFORMATION

1. Safety in terms of ATEX compliance (dust Kst, Pmax and MIE figures required as well as gas/solvent %LEL) and containment for toxic dusts. As well as being toxic, many of the pharma dusts being generated by production processes are also highly explosive, especially when combined with gases or solvents to produce hybrid mixtures. It is therefore essential to follow the NFPA (U.S) and ATEX (European) legislation for existing and planned new installations. Each dust must be evaluated to determine the Kst, Pmax and MIE value and the %LEL for gases/ solvents. Only then can the appropriate safety solutions be applied to the dust collector and ducting.

2. Compact dust collectors to fit within plant rooms often with space constraints. The Farr Gold Series has a compact modular design which is essential for plant rooms where space constraints are often encountered. In these instances, the large filter surface area of the Camfil APC filter cartridges provides a

significant operational benefit compared with the competition.

3. Energy efficiency – energy cost savings from Hemipleat benefits and energy saving components such as VSD's and high efficiency motors. With energy costs rising, Camfil APC understand the importance of providing air filtration solutions that deliver cost savings wherever possible. The excellent dust release capabilities of the Hemipleat and Durapleat filters helps to reduce the compressed air cleaning demand. Combine this with the latest energy saving devices such as variable speed drives, then you have the most energy efficient dust collector on the market.

4. Speed and ease of maintenance. With an increasing emphasis on production efficiency, pharmaceutical production plants attempt to keep 'down-time' to a minimum. The speed and ease of a dust collector filter change is therefore a critical cost saving factor. To see

just how quick, safe and easy it is to change out Camfil APC filters please visit [this link](#).

5. The ability to supply the complete filter package, with filter products for a wide range of applications (many of our prospective APC customers already use Camfil APC HVAC / HEPA filters). Camfil APC is in a unique position, having the ability to supply market leading air filtration products for a wide range of applications in the pharmaceutical manufacturing environment. Our filter products are renowned for their quality and filtration performance.

6. Dealing with a reliable, customer focused supplier. Camfil APC is a strong and stable business that develops long-lasting working relationships with customers. These relationships are built on trust and reliability in terms of our people and our products. We value our customer's investment in us and our customers know their investment is safe.



Farr Gold Series Camtain skid package



Cross Contamination is one of the highest risks for patients using pharmaceutical products. Not

only the presence of small amounts of antibiotics or other highly potent compounds in medicines can cause severe damage but also carryover of products into another pharmaceutical product is of high risk to the patient. Cross contamination due to improper design and maintenance of equipment is one of the key focus areas of the Food and Drug Administration (FDA). The use of closed or contained equipment, with fully documented procedures, is a primary method for reducing the risk of cross contamination and keeping your facility compliant to the FDA's current Good Manufacturing Practices (cGMP). Camfil APC provides contained dust collection systems that provide a physical barrier between the product and the environment which significantly reduces the risk for cross contamination when used in conjunction with proper operating procedures.

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Two Gold Series Camtain CGC6 models on a pharmaceutical application in Guayama, P.R

SAFETY AND HEALTH CONSIDERATIONS

Two key concerns are the focus 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. In most cases, Camfil APC recommends a HEPA secondary safety system. With HEPA systems after the dust collector, recirculation of the filtered air back into

the HVAC system is an option. This can significantly reduce energy costs while providing the necessary level of filtration for discharge air required by OSHA/EPA.

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. When explosion vents are required, they must be vented to the outside by either placing the collector outdoors or ducting the vent exhaust to a safe location at a specified distance through the building structure. Camfil APC recommends an independent PE specify what explosion protection is required for a given material as it relates to standards in NFPA, ATEX and the insurance carriers.



HEMI PLEAT® FILTERS WILL IMPROVE THE PERFORMANCE OF ANY CARTRIDGE DUST COLLECTOR. GUARANTEED.

Power up your dust collector with HemiPleat. This statement comes from the fact that with lower pressure drop HemiPleat filters, you can pull more air with less energy, thus capturing pollutants better. Filtration efficiencies exceed 99.99% at 0.5 micron size particles. The air coming out of a Farr Gold Series dust collector with HemiPleat filters has been tested to exceed the air quality required in most hospital operating rooms! We have a filter to fit most dust collection units.



GOLD CONE TECHNOLOGY

The patented Gold Cone filter has allowed many facilities to reduce the number of filters they have to use and change. The innovative cone of filter media expands the usable area of the filter allowing a reduction in the number of filters by at least a third. The design has also led to long filter life with low pressure drop.

PHARMACEUTICAL COMPOUND GS USERS AND SPECIFIERS

Abbott
Bio Vail
BMS
Boehringer-Ingelheim
Eli Lilly

Fette Compacting
Freund-Vector
GSK
J&J Janssen
J&J Ortho-McNeil

Merck
Novartis
O'Hara Technologies
Perrigo
Pfizer

Sandoz-Eon Labs
Thomas Engineering
Tyco Mallinckrodt
Upsher Smith
Warner Chilcotte

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