

# Focus on Food Processing & Food Packaging



GS16 on Pastry Dust

## THE GOLD SERIES X-FLO DUST AND FUME COLLECTOR COMBINES ENHANCED PERFORMANCE WITH EASE OF SERVICE WHILE CLEANING THE WORK ENVIRONMENT OF HARMFUL DUST AND FUMES.

### THE CHALLENGE

Companies in the food processing industry take raw agricultural products (such as grains) and turn them into the food products that we eat every day (like bread and cereal). Dust collection applications can include dried food ingredients from coarse grains to fine spices and additives. For sugars and other sticky dusts, we fit the Gold Series X-Flo (GSX) with spunbond DuraPleat™ cartridges, which have high release efficiency. The GSX is perfect for high efficiency filtration where recovery of the product is not required.

### SAFETY CONSIDERATIONS

The production and handling of solid food ingredients and food products creates airborne dust in the workplace. The dust particles produced will vary in size, some being so fine they are not visible to the naked eye. These dusts create a number of significant challenges to food and beverage manufacturers who are legally bound to protect their employees by

providing a safe working environment. Slips and falls are a constant concern for anyone running a food processing business. Keeping fugitive dust contained minimizes slippery floors.

### OCCUPATIONAL EXPOSURE

Regular exposure to dust, particularly fine dust particles can produce allergic reactions which manifest themselves as skin conditions such as dermatitis. Such conditions are uncomfortable for the workers and require treatment and protective work wear which can affect an employee's performance and well-being. Respiratory conditions however, are of a far more serious nature, producing life threatening conditions such as occupational asthma as well as chronic, long-term health issues which, in the most extreme cases, include lung cancer. The finest dust particles readily become airborne and are easily inhaled, penetrating deep within the lungs.

### DUST EXPLOSIONS

Dust explosions are a serious safety risk which is often not given the required consideration it demands. In food and beverage manufacturing, it is common for a dust collector to be extracting air mixed with potentially explosive dusts and/or gases. It is therefore critical for the manufacturer to know the explosive potential of the dusts, gases and dust/gas mixtures they are handling.

Camfil APC has a dust testing laboratory to identify properties of your dust that are potentially explosive. There are several equipment options for dealing with explosive dust including anti-static filter cartridges, explosion venting, safety monitoring filters, flameless venting, suppression and safety valves/dampers.

### DUST EMISSIONS

Dust emissions to atmosphere must be controlled either to comply with legal limits set for a particular material, or if

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no legal limits are applicable, then the limits will be set by the company for hygiene purposes, pest prevention and environmental management standards such as ISO14001. Each food or beverage manufacturing application will have its own unique set of process conditions.

The effective control of dusts being generated in food and beverage manufacturing facilities is an essential, legal requirement. Dust can cause serious harm to human health, have an impact on the environment and cause devastating explosions with a huge potential to cause

harm to workers, damage machinery and destroy buildings and reputations. Therefore, there are a number of critical steps that need to be employed when selecting the most appropriate dust collection system for each and every application. That includes understanding the dust characteristics through testing, i.e., dust hazard analysis, employing experts to ensure that the dust collection system is properly designed, and considering the total cost of ownership – ensuring minimal operating costs beyond the capital cost. Camfil APC can help you in all these areas.



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

Power up your dust collector with HemiPleat. With lower pressure drop HemiPleat filters, you can pull more air with less energy, thus capturing pollutants better. Filtration efficiencies up to MERV 16 per ASHRAE 52.2.



The patented Gold Cone X-Flo 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, reducing the required number of filters by at least a third. The design also promotes long filter life with low pressure drop.



GS24 and SS Side Draft Hoods on spice weighing dust collection



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