

# Pharmaceutical and Toxic Powders Safely Extracted and Contained

Dust control specialist Donaldson Australasia has developed a complete dust containment system to specifically maintain OH&S standards for employees in the pharmaceutical and tablet making industry.

The company's DCS Pharmaceutical (Downflo Containment System Pharmaceutical) extracts and safely collects potentially toxic dusts that occur during production of pharmaceutical and nutraceutical tablets. It is particularly applicable in work centres where employees have low operator exposure limits (OELs) during manufacture.

The system is highly suitable for use in manufacture of products such as Viagra and blood pressure tablets which could be toxic if any fugitive dust emissions were inhaled in reasonable quantity. Donaldson produced this specific pharmaceutical solution due to the growth of Australia's ageing population and the relative, perpetual human tolerance to the effectiveness of such drugs, hence these products are being made stronger each year.

The DCS Pharmaceutical system operates using an innovative two-stage filtration system with patented Ultra-Web nanofibre technology and Torit-built HEPA filters (Donaldson nowadays embodies the long-standing Torit-DCE brand).

Using the company's Downflo Oval technology, the DCS Pharmaceutical reduces employee exposure to harmful contaminants using triple-sealed bag-in/bag-out (BIBO) components and an integrated HEPA BIBO chamber under negative pressure. Three clean/change dust discharge options round out the new technology; via a containment transfer chamber, or industry standard Buck Valve or Dover Pac.

The filtration unit on the DCS Pharmaceutical is oval-shaped and has wide pleat cartridge filters in conjunction with the patented Ultra-Web filter media technology. This nanofibre filter media lasts much longer than standard filter media, it requires fewer change outs, and is scientifically proven to have advantages in efficiency, pressure drop and surface loading.

Oval filters feature shorter, wider, stiffer pleats, which help minimise dust entrapment and coupled with nanofibre technology, simplify filter cleaning compared to conventional filter design. Ultra-Web media captures dust particles down to sub micron levels (rates MERV 13). Dust particles are captured on the surface of the nanofibre web, surface loading promotes more efficient filter cleaning. Better pulse cleaning of the filters lowers the pressure drop, which in turn increases the service life of the filter cartridges.

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