

Food processor stays ahead of dust concerns

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Bathurst Speciality Blending (BSB), a specialist in bulk preparation of dry pet food that is transported to Masterfoods for packaging, recently completed an evaluation of air quality at its factory and installed a dust collection system from filtration specialist Donaldson Australasia.

With around 40 tonnes of dry food being produced each day at the plant in Bathurst, NSW, the company is staying ahead of potential health and safety implications for staff and ensuring there is no long term exposure to fine dust particles created during the blending process.

While no instances of respiratory problems had been reported by employees, the company wanted to eliminate future problems by eradicating excess dust from its operations, confirms BSB director and maintenance manager Paul McLachlan.

“We tend to use forklift vehicles to tip powdered mineral-based ingredients including dicalcium phosphate and potassium chloride into open topped hoppers for blending,” said Mr McLachlan. “In recent years, these powders have become increasingly fine grained and therefore harder to eliminate without the assistance of specialised technology. The installation of a Dalamatic system was carried out primarily for health and safety purposes as well as the general cleanliness of the factory. We also wanted to eliminate any possible fire risk from excess dust,” he said.

Donaldson Australasia installed a Dalamatic 1/5/15 dust extraction unit with a 7000m³ p/h extraction

capacity. Fitted with a weather-proof explosion relief, the unit has been designed to treat dust with a rate of pressure rise between 200 and 300 bar.mtr/sec.

It also has a sensor mounted on top of the cover bin to warn if the collection bin is nearing full capacity, while a high-hopper level detector has been included as a double safeguard.

The entire unit is fully insulated and clad to keep dust from reaching dew point, while the hopper also is permanently heated. For safety control, a fire sprinkler is fitted at the top of the unit and connected to a control system. The entire system is rated as DIP (Dust Ignition Proof). Access platforms and ladders are hot dipped galvanised, while the extraction hoods are designed for regular cleaning.

The modular system comprises four vacuum heads, each of which attaches to the four corners of the hoppers in BSB’s processing sheds. Excess dust from each hopper is sucked along ducting into the main unit and subsequently deposited into holding bins, to be emptied into the company’s waste management area and safely disposed of.

“Since installing the Dalamatic system Bathurst Speciality Blending has reduced excess dust in the relevant areas of its operations by 99%,” said Mr McLachlan.

“We’ve installed the system in two of our six sheds, and we will undoubtedly be installing it in all six over time.”

