



## Petfood Cleaning

A major UK petfood producer has awarded Quirepace Limited a contract for the design and supply of a third BVC central vacuum cleaning system after two installations completed a few years ago.

The first extensive central vacuum cleaning system serves IBC storage/conveying building and the adjacent kitchen multi-floor building. Due to the extensive area the system is to serve the two areas are isolated from one another prior to the filter separator located on a floor level high up in the kitchen building.

The two pipework systems were each designed for 3 people using 51 mm hoses and tools for general cleaning of production equipment, floors and building structure. The operators are distributed around the pipe work system using a 7.5 metre length of hose which can be extended by a further 7.5 metre extension hose giving a maximum hose length of 15 metres from any of the hose connection points.

Over 1.3 kilometres of correctly sized and graduated pipe work interconnects one hundred and fourteen hose connection points, connected to the filter separator and exhaustor package located on a floor level 20 metre above ground floor level.

Extracted materials are separated from the conveying airstream and immediately dispensed from the vessel via a rotary valve to the client's bin located on the ground floor via a chute. As some of the materials being handled by the system have a potential explosion hazard the filter separator is provided with a flameless explosion protection unit enabling the pressures and hot gases generated by an explosion to be safely emitted to the surrounding area but preventing expulsion of burning matter, additionally the rotary valve provides an autonomous flame path barrier preventing flame from passing in an explosion situation.

Motive conveying air for the system is generated by an exhaustor locating in a force draft ventilated acoustic enclosure, the exhaustor is powered by a 30.0 kw motor with emitted sound pressure level of below 77 dB(A) at 1 metre.

The system is provided with a sequenced control panel housing the necessary 3 phase motors and generate its own 24 vDC control



Whilst executing the first system Quirepace were engaged to design and supply a further system for their pre-extrusion facility. Not such an extensive system was required but still sized for 3 operators using 51 mm hoses and tools for general cleaning of production equipment, floors and building structure. The operators are distributed around the pipe work system using a 7.5 metre length of hose which can be extended by a further 7.5 metre extension hose giving a maximum hose length of 15 metres from any of the hose connection points.

The twenty hose connection points are interconnected with a correctly sized and graduated pipe work to the filter separator and exhaustor package, extracted materials are separated from the conveying airstream and immediately dispensed from the vessel via a rotary valve to the client's bin located on the ground floor via a chute.

The latest requirement is for another system to serve a new processing facility, again designed for 3 operators using 51 mm hoses and tools clean production equipment, building structure and floor levels using a 7.5 metre operating hose with an extension hose of another 7.5 metres giving a maximum hose length of 15 metres from any of the hose connection points.

The fifteen hose connection points are interconnected with a correctly sized and graduated pipe work to the filter separator and exhaustor package, extracted materials are separated from the conveying airstream and immediately dispensed from the vessel via a rotary valve to the client's bin located on the ground floor via a chute.

Motive conveying air for the system is generated by an exhaustor locating in a force draft ventilated acoustic enclosure, the exhaustor is powered by an 18.5 kw motor with emitted sound pressure level of below 75 dB(A) at 1 metre.

The system is provided with a sequenced control panel housing the necessary 3 phase motors and generate its own 24 vDC control voltage.