Q-PAC®

Poultry Processing Waste Scrubbers Installed Without Fan Modification

Q-PAC and NUPAC installed in 8 ft diameter scrubber treating 20,000 cfm of ammonia-laden composting exhaust — no fan modification required.

APPLICATION

Ammonia and odor control, in-vessel poultry processing waste composting

LOCATION

Leominster, Herefordshire, United Kingdom

AMMONIA REMOVAL

99%+ (50–100 ppm inlet → <1 ppm outlet)

Composting of animal solids and food waste generates odorous exhaust air requiring treatment. Bioganix Ltd., a waste recovery company based in Leominster, England, and Simdean Envirotec built an odor-control system to treat 34,000 m³/h (20,000 cfm) of air containing up to 300 ppm of ammonia and VOCs from in-vessel composting of chicken feathers and other poultry processing waste. A two-stage chemical scrubber followed by a biofilter reduces odor levels from over 450,000 odor units to below 300 odor units, resulting in less than 3 odor units at the plant boundary.

The chemical scrubber uses Q-PAC packing for gas absorption and NUPAC for mist elimination. The high capacity of these packings helps to minimize the scrubber footprint needed for efficient odor control without excessive fan power costs.

The system produces high-grade compost and ammonium sulfate, both useful as fertilizers.

The original Simdean Envirotec / Bioganix technical paper documenting this installation is available as a PDF: Odor-Control System for In-Vessel Composting of Food Processing Waste (PDF)

PRODUCT

Q-PAC

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ODOR REDUCTION

99.9%+

Inlet odor levels of 450,000–1,000,000 OUE/m³ reduced to below 300 OUE/m³ after two-stage scrubbing and biofiltration

APPLICATION CONTEXT

Odor control

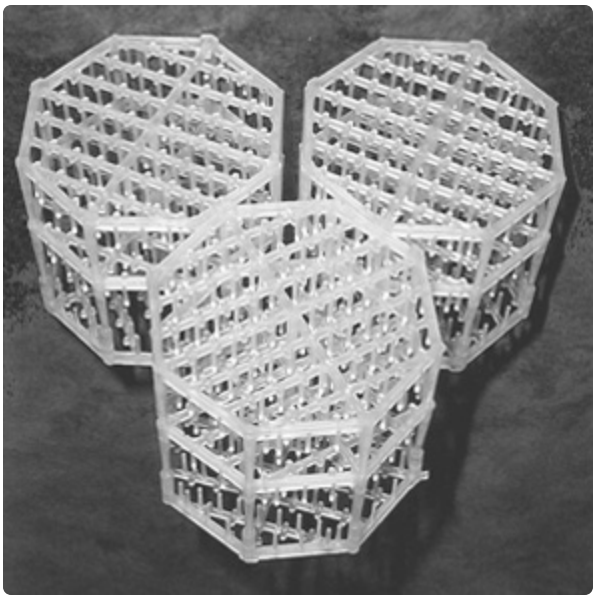
Ammonia scrubbing

Composting

Poultry processing

Q-PAC

NUPAC



Q-PAC random packing

NOTE

Q-PAC's low pressure drop allowed installation without modifying the existing exhaust fan or motor — a constraint that ruled out denser packings.