CASE STUDY

KONGSKILDE
www.kongskilde-industries.com

DUST / FUMES / ANGEL HAIR / PLASTIC BOTTLES

Reduction of Dust and Fumes in Blow-Moulded Plastic Bottle Production

A leading global manufacturer of blow-moulded plastic bottles in the Netherlands was experiencing ongoing challenges with dust, angel hair, and peroxide fumes contaminating its waste-handling area. To protect both employees and production quality, the company required a reliable solution to capture and filter airborne contaminants at the source.

THE CHALLENGE

This global manufacturer in the Netherlands produces custom and standard blow-moulded plastic bottles and containers. Located next to its largest customer, with only a wall between them, the company's rejected material pickup points were placed on the customer's side of the wall.

Peroxide fumes from the customer's cleaning process, along with dust and angel hair from both facilities, were drawn into the conveying system and into the cyclones.

With no filtration on the cyclone outlets, contaminated air was released directly into the waste-handling room, creating health and safety concerns and a need for a space-efficient filtration solution.

Key issues:

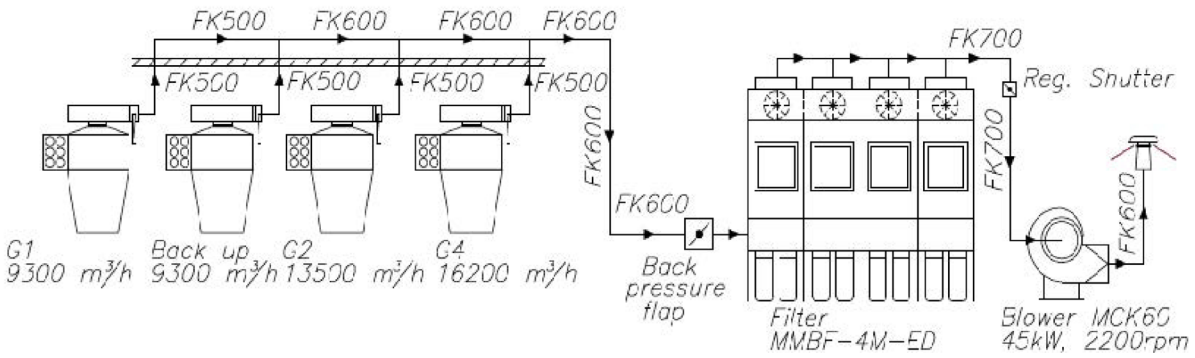
- Peroxide fumes entering cyclones
- Dust and angel hair released indoors
- No filtration on cyclone outlets
- Limited installation space

THE FACTS

Material specifications:

- Material: HDPE, PP and PET
- Bulk density: Dust and fumes
- Airflow requirement: 24,000 m^3/h (across 4 cyclones)
- Suction points: from 4 cyclones to the filter
- Conveying distance: Up to 90 meters horizontal and 7 meters vertical

Blow moulding productions often require enhanced safety measures to control dust, fumes, and other airborne contaminants.



THE SOLUTION

To solve this, Kongskilde installed a pneumatic conveying system using cyclones, pipelines, and custom top-outlet boxes to extract dust and peroxide fumes despite tight space constraints.

How it works:

At the core of the solution, an MMBF-4M filter with rotary valve removes dust and airborne particles from the extracted air. An MCK 60 blower, equipped with an external frequency controller and installed in a sound-insulated booth, delivers stable and energy-efficient airflow across all four cyclones.

High-pressure FK 500 and FK 600 piping enables reliable transport over long distances while maintaining system performance.

Key system components:

- MMBF-4M filter with rotary valve
- MCK 60 blower with frequency control, installed in a sound-insulated booth
- FK 500 / FK 600 high-pressure pipeline system

THE ADVANTAGES AND BENEFITS

With the new system in place, the customer achieved a significantly cleaner and safer production environment:

- **Improved air quality:** Effective removal of dust, angel hair, and peroxide fumes
- **Enhanced safety:** Healthier working environment in the waste-handling area
- **Reduced maintenance:** Less dust buildup on equipment and surfaces
- **Space optimization:** Ceiling-mounted system frees up valuable floor space
- **Tailored performance:** Flexible solution adapted to the facility layout and requirements

Ready to improve your production?

Start the conversation today and discover how a pneumatic solution can improve your operations.

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