Dust extraction and separating for ceramics industry

Environmentally responsible dust extraction and separation of very fine particulate in ceramics manufacturing.

Plaster booth
Ceramic-based products are utilized in many industries, e.g. industrial ceramics (electro-coating technology, medical devices, universal mechanical engineering / machine tool manufacturing, daily consumer commodities such as sanitary ware, ceramic dinnerware) or heavy ceramics (tiles, ducts...) – wherever the basic manufacturing ingredient is ceramic material.

Fine dust emissions are unavoidable during the manufacture of all these products despite the use of modern machinery and technologies. Capturing, exhausting and separating this dust is essential to the production process or the product’s specifications, and may be required by some labor laws that are tied to environmental regulations.

Managing fine dust emissions is further complicated by the fact that the dust may pose a health hazard, presenting a significant concern.

The multitude of industrial processes and methods during manufacturing of ceramic products leads to different airborne substances. Type and quantity of the dusts to be separated, their physical features and aggregate state specify the selection of the suitable separating proceeding.

Applications for ceramics industry

- Industrial ceramics
  - high-performance ceramics
  - structural ceramics
  - industrial ceramics
  - ceramics in building construction
  - functional ceramics
  - engineering ceramics
  - electrical ceramics
  - cutting ceramics
- dinnerware
- decorative ceramics
- sanitary ceramics
- tiles
- ceramic based abrasives

Dust extraction in tile manufacturing

Dust extraction in enamel coating booths
Keller Lufttechnik has long-term experience and extensive knowledge in air filtration system solutions, especially in the separation of fine dust emissions.

Keller Lufttechnik ensures all the benefits of ideal separation processes, maximum occupational safety, clean breathable air, optimal operating safety and environmental protection with systematic project management. Keller Lufttechnik has developed and implemented the modular design of its filtration units and their performance features, providing perfect solutions for typical ceramic applications.

The solution

**KELLER PLUS**

Effective results over a period of years indicate that Keller Lufttechnik's solutions will ensure efficient, failure-free and environmentally sound operation.

- product recycling
- high degree of availability
- clean air recirculation
- continuous air flow
- compact design
- system solutions

Numerous references

Your benefit: Sophisticated systems that are continuously updated to the most recent state of the art technology.

Advantage - separated product recycling

When separating airborne substances, the KLR-bran filter elements (P. 4) ensure contaminant-free product recycling as a result of perfect PTFE membrane surface filtration.

Your benefit: quality guaranteed when recycling the separated matter, with no residual pollutants.

Advantage - high degree of availability

Extended life with KLR-bran filter technology, Keller Lufttechnik’s warranted 20,000 operating hours and high availability ensure economical operation.

Your benefits: cost reductions in spare parts and waste disposal, fewer production downtimes, and reduced maintenance expenditures.

Advantage - clean air recirculation

Air recirculation into the workplace is possible because of minimal residual dust concentrations over the entire lifetime of the KLR-bran filter elements.

Your benefit: Savings in energy costs, and protective measures regarding the make-up air from the exhausted air flow.

Advantage - continuous air flow

Constant air flow with ideal surface filtration in combination with compressed air pulse cleaning during operation.

Your benefit: uninterrupted operation despite the handling of large dust volumes.

Advantage - compact design

Compact modular design for maximized suction output.

Your benefit: an optimized investment and minimal space requirement.

Advantage - system solutions

Designing comprehensive solutions (individual capturing elements, ductwork, exhaust technology, noise insulation, services).

Your benefit: ONE qualified contact – no warranty-related issues.
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KLR-Filter®
powerful and energy-efficient

The original Keller KLR-Filter® set a new service life record in this filter design, with up to 120,000 cleaning intervals.

This superior quality was achieved with the choice of materials, and with our high-quality, state-of-the-art in-house manufacturing process in particular.

The surface of the self-supporting filter is big using a large number of pleats. The pressure loss and resulting energy demand decreases accordingly.

Reference installations