



Nihot Industrial Dust Suppression for the Environmental and Recycling Industry

In waste processing, controlled air is a perfect separation medium, both in terms of process technology and business solutions. Controlled air is one of the core technologies of Nihot. It is versatile, offers greater flexibility than mechanical separation technologies and it guarantees high separation efficiency. By using air, materials can be separated based on both material density and shape. Nihot, has optimized air technology for waste separation. The company is a recognized key player in its field.

Nihot realizes Industrial Dust Suppression Systems for the Environmental and Recycling Industry. More specific Waste sorting and Recycling Facilities.

This is done on a Turn-key basis including the design, Engineering, Manufacturing, Supply and the Mechanical and Electrical Construction on-site of all the necessary Dust hoods, Air ducting, Ventilators and Filter Units. Supervision during Construction on-site, Testing, Commissioning and Training of client's personal are also included. Under the same arrangement Nihot realizes Sorting/Handpicking Stations including the necessary Air-conditioning, Electrical installation, Testing and Commissioning.

- Windshifters
- Drum Separators
- Industrial Dust Suppression

Industrial Dust Suppression Systems.

Based on the applicable European and National laws, regulations regarding Health and Safety, and Labour conditions, and based on specific Environmental regulations with regards to the emission of Dust, like the Dutch NER and the German TA Luft, there is a necessity to Minimize, Control and Monitor the dust emissions generated by existing and new Waste Sorting and Recycling facilities.

Our designs are also taking into account the European legislation 94/9/EG, better known as ATEX 95, with regards to vapour and dust explosions. In the European legislation this arrangement is directly connected to the applicable National Health and Safety regulations in accordance with law 1999/92/EG, better known as ATEX 137.



We are offering the following applications and solutions.

Primary Dust Suppression Systems.

In this system identified positions in a Waste Sorting and/or Recycling facility will be enclosed and connected to the Dust Suppression System, i.e Shredders, Trommelscreen' s, Sorting screens, Transfer positioned of conveyor belts, Windshifters, Eddy Current separators, Optical Separators, Ballistic Separators etc.

Secondary Dust Suppression Systems.

In this system the volume of the whole building in which the Waste Sorting and/or Recycling facility is positioned, and the relevant Waste input fraction is tipped is extracted. In practice this means that 2 times, up to 4 times the building volume may be extracted, cleaned in a Filter-Unit and partly returned to the building and/or emitted in the outside open air.

Sorting/ Handpicking Stations.

In this system (outside) air is pre-conditioned prior to feeding it, in a regulated manner, into the Picking Station. In this manner the volume of the picking station may be changed up to 6 or 10 times per hour, thus creating a mild overpressure, which is guaranteeing that no dust may develop and/or enter the picking station.

This system guarantees that the interior air quality and conditions complies with the applicable Health and Safety regulations, and generates a pleasant work environment for the people working in the Picking station.



Nihot Recycling Technology B.V.



Nihot Multi Filter Units.

Both for the Primary and the Secondary Dust Suppression systems, depending of quality and quantity of the dust load in the Airflow, may utilize the following types of Filter-Units.

- MFK Multi Filter with chain rattler dust discharge system.
- MFS, Multi Filter with rotary valve dust discharge system.
- MFC, Multi Filter with container dust collection system.

These systems can be supplied from 3.000 Nm³/h up to 120.000 Nm³/h.

Filter Cleaning.

The Filter-Units may, depending on there application, be equipped with the following Filter cleaning Systems.

- Compressed air (pulse), for process conditions with a cycle of more than 4h continuously.
- Mechanical Vibration, for process conditions with a cycle of less than 4h continuously.

Dust Discharge.

The dust discharge may be continuously by means of a chain rattler or a Rotary Valve, or may be discontinuously into containers.

Benefits USP.

The design of the Nihot Filter-Unit features the following advantages:

- Integrated HR Fans, controlled in cascade depending on the Airflow demand.
- Internal electrical cabling is installed and connections are centralized in an external Junction box.
- Pre assembled parts of the Filter Unit secure the shortest possible construction time on site.
- Air ducting design is securing reduced time for installation on-site.
- Maintenance, Wear and Tear parts are minimized
- The overall system secures a high availability of the System, with minimum downtime.

Application.

The Dust Suppression Systems are typically utilized in the Waste Sorting and/or Recycling Industry, more specifically for:

- Municipal Solid Waste. (MSW).
- Commercial and Industrial Waste (C&I).
- Construction and Demolition Waste (C&D).
- Compost Refinement section.
- Waste from Electric and Electronic Equipment (WEEE).
- Biomass/Wood recycling.
- Refuse Derived Fuel (RDF).
- Bottom Ash Upgrading.
- Single Stream (DSD/PMD).
- Glass.