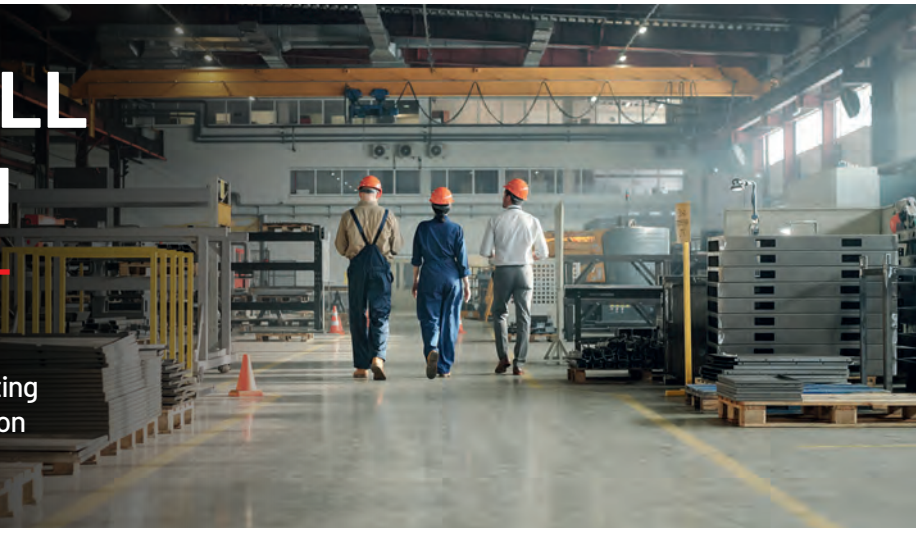
GENERAL HALL VENTILATION



Hall ventilation systems contribute to enhancing the indoor environment by maintaining a continuous airflow, resulting in potential savings of up to 70 percent on heating expenses.

GENERAL HALL VENT. (GHV)

In the context of dust extraction systems, General Hall Ventilation (GHV) refers to the overall air circulation and air quality control within a grinding and polishing facility. Automatic surface finishing processes can release large amounts of fine dust, which must be properly managed to ensure a safe and healthy working environment.

Integrating GHV as part of a dust control strategy involves designing the facility's HVAC system to maintain a constant flow of fresh air. This helps to dilute and disperse airborne dust particles produced during automatic grinding and polishing, effectively lowering the concentration of contaminants throughout the workspace.

WHEN TO APPLY GHV SYSTEMS

- Used to supplement LEV systems in challenging applications.
- Suitable for grinding or polishing large workpieces.
- Ideal when the operator needs to shift positions frequently.
- Applied in shops with automated grinding and surface finishing.
- Effective when grinding/polishing locations vary within the facility.
- Used alongside PPE to reduce operator exposure to fine dust.

INDOOR AIR QUALITY | **LAYERED VENTILATION** | **ENERGY SAVINGS** | **SAFE WORKPLACE** | **LESS DOWNTIME**

SAVE ENERGY COSTS WITH GHV Systems

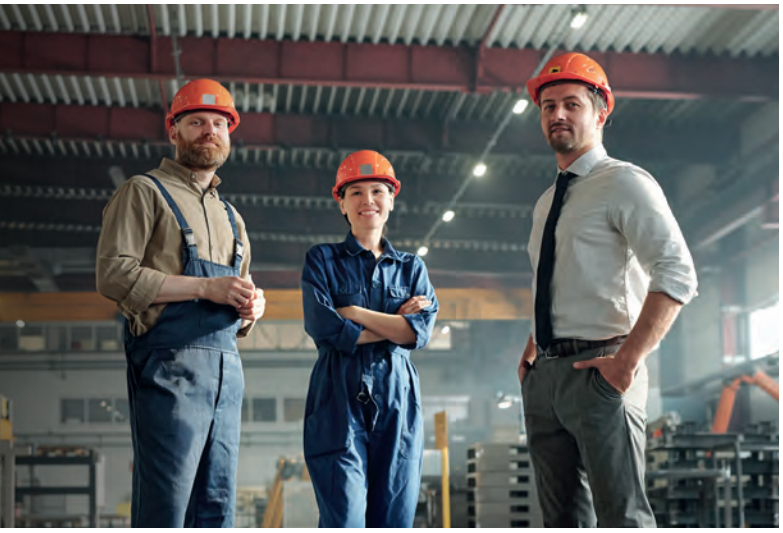
Bomaksan-designed General Hall Ventilation Systems operate on the widely recommended principle of layered ventilation, as advised by industry experts. In these systems, dust-laden air rising during automatic grinding and polishing is collected via inlet ducts (or Air Tower inlets) positioned at 4 to 6 meters high. After filtration, clean air is gently reintroduced near floor level through outlet ducts (or clean air outlets in Air Towers), helping to displace airborne dust and support natural airflow.

This duct network is connected to a central extraction and filtration unit. The continuous recirculation of filtered air can reduce heating costs by up to 70% during colder months, making it highly efficient for industrial polishing and grinding environments.

70%

Heating Cost REDUCTION

PUSH-PULL SYSTEM



The push-pull ventilation system works by having ducts placed across from each other about four to six meters high. These ducts are used for both pushing the clean air and pulling the dirty air. They are connected to a central filter unit.

PUSH-PULL SYSTEMS

Bomaksan has developed two effective hall ventilation methods for grinding and polishing operations: mixed ventilation and upward layered ventilation. In both setups, a central extraction unit—such as Bomaksan's ECOG or LINE—is used. These units can be installed indoors or outdoors and are connected via intake and exhaust ductwork.

Push-pull mixed ventilation is recommended when the hall height is below 7.5 meters and/or grinding and polishing activity is moderate. If the hall height exceeds 7.5 meters and/or dust generation is intensive, upward layered ventilation offers better efficiency.

In both solutions, Bomaksan's engineers and partners deliver highly energy-efficient, customized designs. With high-performance Bomaksan filtration units, dust exposure for employees is significantly reduced, and local air quality regulations are met. Thanks to modular construction, Bomaksan systems also allow easy future expansion without needing a full system replacement.

PRODUCT OFFERINGS

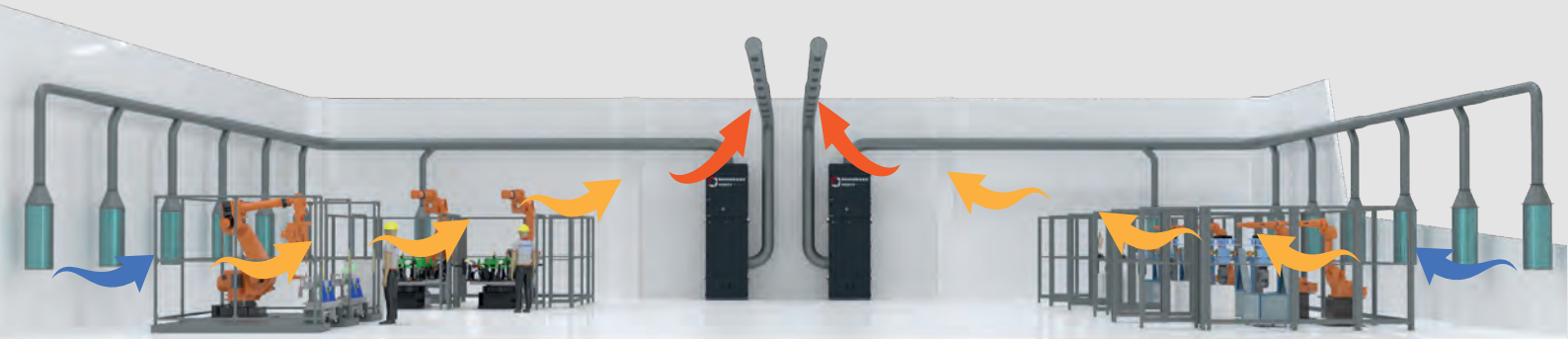
LINE Series filter units are great solutions up to 15.000 m^3/h applications. LINE series filter units are equipped with extraction fan, high efficient filters and control panels in one body.

ECOG Series filter units are economical solutions up to 12.000 m^3/h applications. ECOG series filter units are equipped with extraction fan, high efficient filters and control panels in one body.

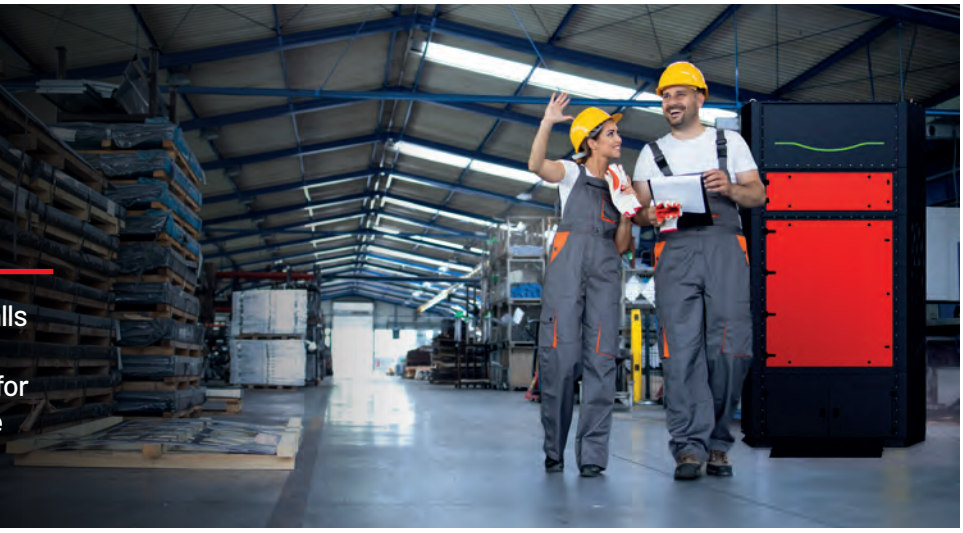
VERTY Series filter units can be configured either compact or modular systems. VERTY series can be upgradable thanks to it's modular structure. The air flow capacity can go up to 100.000 m^3/h.

UPSTREAM LAYERED VENTILATION

In the context of layered- or displacement ventilation, fresh air is introduced into the designated area through vents located near the floor. This helps facilitate the upward movement of grindign dust and fume by assisting in the thermal updraft.



AIR TOWER SYSTEMS



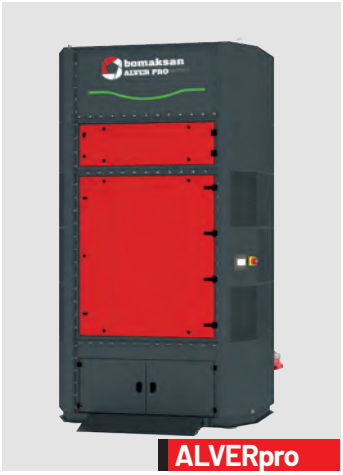
Ventilation system for rooms and halls that offers great flexibility in the workspace by eliminating the need for pipelines. Plug & Play Air Towers are easy to install and re-locate.

AIR TOWER SYSTEMS

The plug & play Air Tower setups are ideal when local dust extraction during automatic grinding and polishing is insufficient or impractical—especially with large or complex parts. These systems are simple to install and can be relocated when needed.

ALVERpro Air Towers operate based on the layered ventilation method, which is also supported by industry associations for its energy-saving benefits. This method uses the natural upward movement of heated air to help efficiently capture and remove dust particles from the workspace.

PRODUCT OFFERINGS



ALVERpro Series air tower units are specially designed air towers which apply layered ventilation system by sucking the dirty air from the top and releasing the clean air with low velocity from the bottom. ALVERpro smart cleaning technology ensures superb filter cleaning efficiency and extend the filter life time. VFD driven fans allows users to regulate the air speed upon their need.

- SMART JET-PULSE CLEANING
- ENERGY EFFICIENT
- SUITABLE FOR STAINLESS STEEL WELD
- EASY TO MAINTAIN
- HIGH EXTRACTION PERFORMANCE
- HIGH FILTER AREA
- EASY CONTROL LCD TOUCH PANEL
- DURABLE STEEL BODY