

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 welding fume extraction systems, General Hall Ventilation (GHV) refers to the overall air movement and air quality management within a welding workshop or facility. Welding processes can produce hazardous fumes and particulates that need to be effectively controlled to ensure the safety and health of workers in the vicinity.

Incorporating general hall ventilation as part of a welding fume extraction system involves designing the facility's HVAC (Heating, Ventilation, and Air Conditioning) system to ensure a continuous flow of fresh air circulates throughout the workspace. This helps dilute and disperse any potentially harmful welding fumes that might be generated, thereby reducing the concentration of airborne contaminants in the area.



INDOOR AIR
QUALITY



LAYERED
VENTILATION



ENERGY
SAVINGS



SAFE
WORKPLACE



LESS
DOWNTIME

WHEN TO APPLY GHV SYSTEMS

- Supplement LEV systems for difficult applications.
- Fabricating large weldments or welding on large work pieces.
- The welder needs to shift positions frequently.
- Shops utilizing robotic welding and hard automation.
- Welding locations within a facility are variable.
- Personal protective equipment is used to control the welder's potential exposure.

SAVE ENERGY COSTS WITH GHV Systems

Bomaksan designed General Hall Ventilation Systems operate based on the endorsed principle of layered ventilation, as advised by industry associations. In this systems contaminated air that rises is collected through inlet pipes (or filter unit inlet in Air Towers) positioned at heights ranging from four to six meters. Filtered air is then reintroduced into the room through source outlet pipes (or filter unit clean air outlets in Air Towers) located closer to the floor, moving at a low speed. This filtered air displaces the welding smoke and aids in its thermal movement. The network of ducting systems is linked to the central extraction and filtering system. The comprehensive recirculation of the cleaned air results in substantial savings of up to 70% on heating expenses during colder seasons for businesses.



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 distinct methods for extracting air from halls – mixed ventilation and upstream layered ventilation. In both scenarios, a central extraction unit is utilized, such as the Bomaksan ECOG or LINE setup. This unit can be installed indoors or outdoors and is connected through extraction and intake air pipelines.

The push-pull mixing ventilation is preferable when the hall height is lower than 7,5 mt and/or the welding wire consumption is lower than 10 tons per year. If the hall height is higher than 7,5 mt and/or welding wire consumption is higher than 10 tons per year, upstream layered ventilation should be applied.

In both systems, Bomaksan engineers, project designers and solution partners ready to implement highly energy-efficient tailor made design. With high quality Bomaksan filter units, minimise the pollutant loads for employees and comply with the local exposure regulations. Bomaksan's modular units also allows for future expansion without re-investing on total filtration systems.

PRODUCT OFFERINGS



LINE seri

LINE Series filter units are great solutions up to 15.000 m³/h applications. LINE series filter units are equipped with extraction fan, high efficient filters and control panels in one body.



ECOG seri

ECOG Series filter units are economical solutions up to 12.000 m³/h applications. ECOG series filter units are equipped with extraction fan, high efficient filters and control panels in one body.

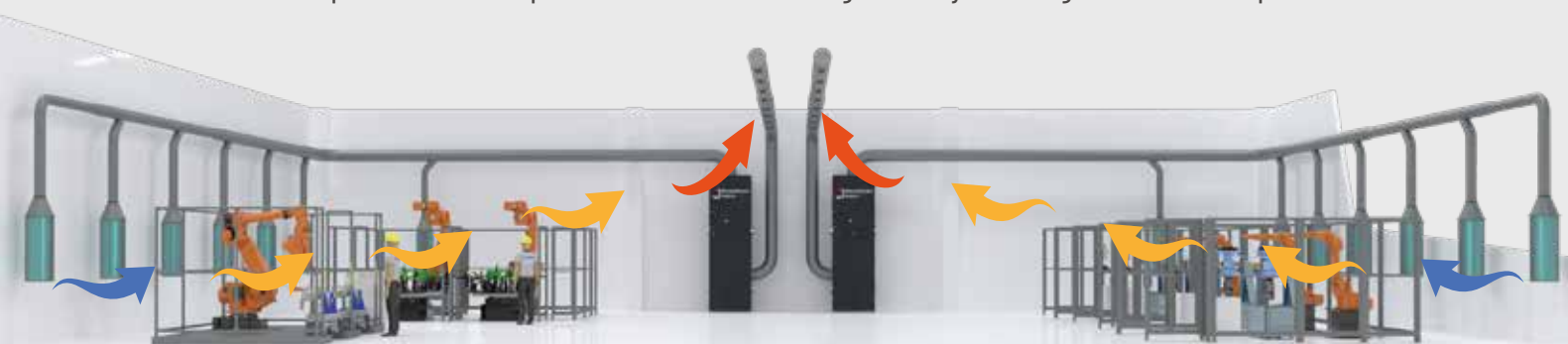


VERTY seri

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 m³/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 welding fumes 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 setups designed for the Air Towers come into play when local extraction of fumes and dust is not enough, or when directly capturing these elements becomes impractical due to the size or complexity of the workpieces. They are easy to install and re-locate if required.

In ALVERpro Air Towers, layered ventilation approach is applied. This approach is also **recommended by the trade association** in order to decrease the energy consumption. Layered ventilation system uses the natural movement of the heated air (which is upward) and make capturing the pollutant more easy and effectively.

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

