



MANUFACTURER OF  
**AIR POLLUTION  
CONTROL EQUIPMENT**



# UNIVERSAL Air Technologies

Universal Air Technologies was established by a young entrepreneur with ambitious plans and assisted by a team of top technocrats in the line.

Setting new benchmarks of performance, we are one of the leading names, engaged in the manufacturing and exporting of world-class industrial air pollution control equipment, ventilation systems, HVAC Equipments such as: Centrifugal Blowers, Axial Flow Fans, Industrial Air Handling Unit (AHU), Dust Collectors, Air Curtains, Industrial Scrubbers, Clean Room Equipments and many more.

## Why Choose Us?

- Quality Product
- Low Power Consumption
- Long Life

Ever since our establishment in the year 1994, we are committed to offer the best designed products from best and premium quality raw components and material. Because of the robust construction, our wide range of products can aptly serve the requirements of diverse industries such as - Thermal Power Plants, Coal, Cement, Engineering Industries, Pharmaceuticals, Textiles, Sugar and Steel Plants.

Our modernized technology and streamlined production process along with our capability to delivery with in time have helped us in creating a benchmark in this industry. Having years of experience in this area of operation, we also export our products through the globe.



Request Free Quote

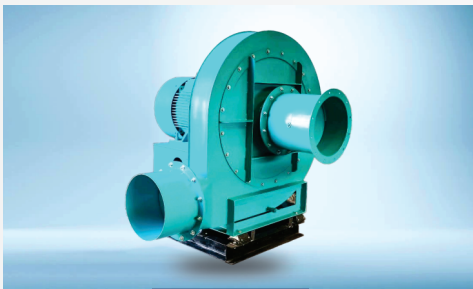
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Since 1994



# CENTRIFUGAL BLOWER

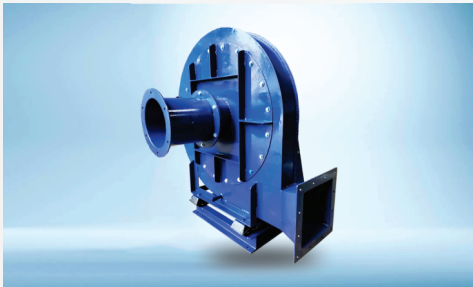
A centrifugal blower is a mechanical device designed to efficiently remove air or gases from an enclosed space, such as industrial facilities, ventilation systems, or HVAC setups. Unlike axial fans, centrifugal blowers operate by drawing air into the center of the impeller and then expelling it radially, creating a more focused and directed airflow. This design allows for higher pressure and increased efficiency in moving air against resistance, making centrifugal exhaust blowers particularly suitable for applications where overcoming static pressure is essential. These blowers find widespread use in various industries, contributing to effective ventilation, air circulation, and temperature control in diverse environments. They are valued for their reliability, versatility, and ability to handle demanding air movement requirements in both commercial and industrial settings.



FD FAN



DIDW FAN



HIGH PRESSURE BLOWER



HIGH PRESSURE BLOWER



EXHAUST BLOWER



EXHAUST BLOWER



ID FAN

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# TUBE AXIAL FAN



DIRECT DRIVE AXIAL FAN



V-BELT DRIVE AXIAL FAN

Axial fans are typically used for exhausting dirty air or fumes from processes (such as paint spray booths), supplying fresh air, and general spot cooling of people, rooms or machinery.

They are typically designed to handle large volumes of air at low pressure (SP) and are generally available in both direct driven models with the propeller mounted on the motor shaft, and belt driven models.

The materials used in the construction of industrial axial fans are typically mild steel. However, certain applications may require aluminum propellers or all aluminum for spark resistance, and stainless steel or coatings for chemical resistance. Certain applications may also require that the fan be belt driven with the motor outside the air stream and not subject to air stream conditions such as high temperatures, excessive dirt or caustic contaminants.



V-BELT DRIVE AXIAL FAN



DIRECT DRIVE AXIAL FAN

# PLUG FAN



PLUG FAN



PLUG FAN

Backward-inclined centrifugal wheels are designed to provide efficient and reliable operation for commercial and industrial applications. They are suitable for supply, exhaust, or recirculation systems.

In most instances, plug fans are unoused and rely on the plenum space around the wheel to direct airflow as required in the system. This style of fan is designed with the motor, bearings, and drives out of the airstream, which allows for use in clean, contaminated, or high temperature systems.

## OPERATING RANGE

- Volumetric flow capacity up to 150000 m<sup>3</sup> /hr
- Maximum pressures of 150 mm wc
- Maximum operating temperature of 800°C
- Belt or direct drive
- Horizontal or vertical mounting

## APPLICATIONS

- Heating and air conditioning systems
- High temperature processes such as ovens, dryers and kilns
- Spray booth evaporators and textile dust collectors
- Air curtains • Custom air handlers • Wash systems
- Screw Conveyor Manufacturers, Cyclone Separator manufacturers, Bag
- Filters manufacturers



# PULSE JET BAG FILTER

Pulse Jet Bag Filter / Pulse Jet Hose Bag Type Filters are known as conventional dedusting filters. Universal Air Technologies has developed new-age de-dusting designs for these filters which gives better life for filter bags, Lower emission levels, Lower Pressure drops, lower power consumption, Higher air to Cloth Ratios with better performance levels, and Lower Floor Space Requirement. Universal Air Technologies supplies customized bag filters on the bases of application requirements. These Pulse Jet Bag Filters are used where air-flows are in large quantity, temperatures are higher than ambient or the material to be handled is difficult.

The original concept of fabric filtration started over a century ago & is still valid & very practical, for the separation of solids from Air/ gas streams. Tubular Filter fabric (WOVEN & NON-WOVEN) hose bags are widely employed the world over, vertically placed within a housing.



PULSE JET BAG FILTER

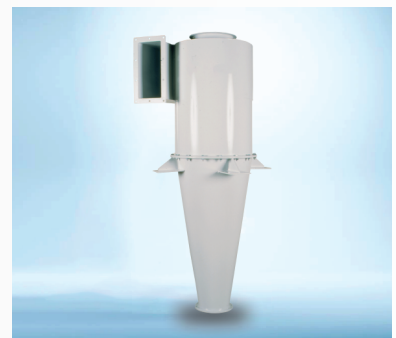


PULSE JET BAG FILTER

# CYCLONE SEPARATOR

Cyclone Separator is designed and constructed to reduced the abrasive action it receives as it collects and separates system particulate. The cyclone separator reduces the load for the final filter, and when paired with the final filter, it performs at maximum efficiency.

Cyclone separators are constructed of hot rolled plate or Stainless Steel & are cleaned, primed and painted with customer's choice of standard colors of paint.



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# DUST COLLECTOR (DRY SCRUBBER)



**BIBO DUST COLLECTOR**

## BIBO DUST COLLECTOR

Our BIBO dust collectors are used for potent products viz: anti-cancer/hormones etc.

Our BIBO dust collectors are specially designed for potent drugs which mandate a safe change method. BIBO dust collectors are designed to restrict contact between operators and potent dust with the help of polybags. BIBO Dust Collector incorporates a collection bag where the captured dust particles are collected. The bag is designed to be easily removable and replaceable, allowing for convenient disposal of the collected dust in a contained manner.

## HORIZONTAL DUST COLLECTOR

Pulse jet dust collectors are another kind of baghouse system that comes in a variety of designs to meet the application needs of the industry. The bag cleaning system operates via a rapid, high-pressure air jet cleaning which sends a blast or shock of air through the bag that shatters and discharges the dust cake for disposal.

The rapid pulse of air allows for continuous operation with the fan running, and because of it the system is not generally compartmentalized. Pulse jet models are the most common type of industrial dust collectors, due to their ability to be easily customized, capability to handle a wide range of temperatures and pressures, and their high collection efficiency.

They can be found in most manufacturing environments wherein bulk solids are processed, including chemical and mineral production, food processing plants and metal fabrication. We fabricate Pulse Jet Dust collectors from a wide range of materials such as carbon steel, stainless steel and carbon steel FRP lined.



**HORIZONTAL DUST COLLECTOR**



**GMP PORTABLE DUST COLLECTOR**

## GMP PORTABLE DUST COLLECTOR

In the pharmaceutical industry, maintaining cleanliness and controlling airborne particulate matter is crucial to ensure compliance with Good Manufacturing Practices (GMP) regulations. Mobile dust collectors designed specifically for pharmaceutical applications are available to meet these requirements. These dust collectors incorporate features that ensure efficient dust capture, containment, and compliance with pharmaceutical industry standards.

Our GMP mobile dust collectors are custom designed to collect dust laden air from sifters/ multi-mills/tablet compression/capsule/packing etc.

The dust collector may include accessories such as flexible hoses, capture hoods, pendants and adjustable arms to capture dust at the source, ensuring efficient containment.



# WET SCRUBBER

## VENTURI SCRUBBER

A Venturi scrubber is an air pollution control device used to remove particulate matter and other pollutants from industrial exhaust gasses. The scrubber operates based on the principle of creating a pressure drop by forcing the gas stream through a constricted section known as a Venturi throat.

### Here's how a Venturi scrubber typically works:

- Gas and particulate-laden exhaust enters the scrubber through an inlet.
- Inside the scrubber, the gas stream is directed through a Venturi throat, which is a narrow section of the scrubber where the gas velocity increases.
- As the gas velocity increases, a pressure drop occurs, causing the particulate matter to be dispersed and collide with liquid droplets present in the scrubber.
- The scrubber uses a liquid, usually water or a water-based solution, to create a spray of fine droplets that are introduced into the Venturi throat.
- The liquid droplets capture and absorb the particulate matter through impaction, interception, and diffusion mechanisms. The pollutants become entrained or absorbed by the liquid.
- The cleaned gas stream exits the scrubber through an outlet, while the captured particulate matter and liquid form a slurry at the bottom of the scrubber.
- The slurry is then separated, and the liquid can be recycled or treated, while the captured particulate matter is disposed of or further processed if necessary.



VENTURI SCRUBBER

Venturi scrubbers are commonly used in various industries, including power plants, metal refining, chemical production, and incineration facilities, where emissions need to be controlled.

## PACKED BED SCRUBBER

A packed bed scrubber utilizes a packed bed or tower filled with a packing material. The key features of a packed bed scrubber include:

### Packed bed:

The tower contains a bed of random or structured packing material such as plastic or ceramic.

### Scrubbing liquid distribution:

The liquid, often water or a chemical solution, is evenly distributed over the packing material using spray nozzles or distribution systems.

### Clean gas outlet:

The cleaned gas exits the top of the packed bed, while the liquid collects at the bottom and is recirculated or treated further.

### Gas-liquid contact:

The polluted gas stream passes through the packed bed in a counter-current or cross-flow arrangement. The packing material increases the surface area for contact between the gas and liquid phases.

### Absorption and mass transfer:

Pollutants in the gas stream are absorbed into the liquid phase through mass transfer processes, where the liquid acts as a solvent for the pollutants.



PACKED BED SCRUBBER

Packed bed scrubbers are effective for removing gases, such as acid gases (e.g., sulphur dioxide) and ammonia, as well as for controlling odours and certain volatile organic compounds (VOCs). They are commonly used when gas-liquid contact and mass transfer are required for effective pollutant removal.



**UNIVERSAL AIR TECHNOLOGIES**  
**CLEANING AIR SAVING LIVES**



**UNIVERSAL AIR TECHNOLOGIES**

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