CENTRIFUGAL BLOWERS & FANS

MITTAL BLOWERS INDIA PVT. LTD.
Mittal Blowers India Pvt. Ltd. is one of the leading manufacturers quality engineering equipment is RSMS ISO IMS IEC certified ISO 9001:2015 company. MITTAL is an independent designer and manufacturer of industrial fans & blowers over the last twelve years and has thousands of fans and blower in operation in India and other countries (through our clients). Today our annual turnover is INR 3 crore.

The company was established in 2005 by a group of experienced technocrat on a small scale under the able guidance of Mr. Mahesh Panchal, & Suresh Panchal Since then our endeavour is to strive continually to offer product innovation and quality. Today we offer cost effective products which are not only efficient but required minimum maintenance. Mittal maintains strict quality procedure in design, manufacturing and testing.

The centrifugal fan is the heart of any thermal system. If the Fan does not deliver required pressure and volume then the System will not work efficiently & Operating cost of the plant will increase. Mittal designs and manufactures fans for wide range of pressure, Volume & Power to suit customer requirement. Many of the blowers in varying capacities are available in various specifications. However, Mittal specializes in offering tailor made designs as well to suit customer specifications. The various raw materials used by us are Mild Steel, Stainless Steel, Aluminium etc.
INDUSTRIES SERVED

- Foundry
- Pharma
- Iron/steel
- Textile
- Ceramics
- Plastics

- Furnaces
- Cotton/Ginning
- Paper Mill
- Plywood mfg.
- Coal
- Cement
- Chemical

ISO 9001: 2015 Certificate
CENTRIFUGAL BLOWERS

MITTAL has developed a series of Blowers for almost all the industrial requirements. Centrifugal Blowers designed and supplied by MITTAL are proven, efficient, reliable & sturdy. These are categorized by their pressure generation capacities & Drive types.

Centrifugal Blower / Industrial Blowers can be considered as the heart of any processing industry. It is known as many types like ID Fan, FD Fan, Industrial Blower, High Pressure Fan, Hot Air Circulation fan according to application.

MITTAL Supplies following types of impellers bases on application requirement.

- Radial Blade
- Backward Curved / Backward Inclined
- Forward Curved
- Airfoil Blades

LOW PRESSURE BLOWER

*Generally used as ventilation fans/ gas exhaust fans*

Single or double inlet styled fans is very efficient & useful for fresh air supply, ventilation. Impellers are Backward Curved or Backward or forward curved type. Fans are generally used for clean air duty.

Operating Range:
- Air flow (capacity) up to 200000 m³/hr
- Motor Kw up to 150
- Static Pressure Range up to 150 mm WC
- Material of Construction Casing : Mild Steel, Stainless
- RPM generally use Max. up to 1450
- Low Noise Level
- Material of Construction Impeller: Mild Steel, Stainless Steel, Aluminium

Applications: A low pressure blower is used if the focus is on high air flows and very low pressure. Low pressure blower for industrial applications generates pressures up to 150 mm WC.

MEDIUM PRESSURE BLOWERS

*Generally used as exhausters.*

These are employed for air containing dust or particles, fiber, flakes & having higher temperatures than ambient. Usually offered in single inlet styled fans are moderately efficient & useful for Creating Draft in Systems. Impellers are Radial Blade or backward inclined or curved blade type having flat or Airfoil designs, with Shrouded or open constructions. Split housings facilitate wheel removal without disturbing connecting ductwork.

Operating Range:
- Air flow up to 40000 CMH
- Motor up to 150 Kw
- Static Pressure Range : 100 mm WC to 1000 mm WC
- Material Of Construction : Mild Steel, Stainless Steel
- RPM variation up to 2500 Rpm
- Material of Construction Impeller: Mild Steel, Stainless Steel, Aluminium
HIGH PRESSURE AIR FANS

Generally used for combustion and very high Resistance

Operating Range
- Air flow (capacity) range: 100 CMH to 30000 CMH,
- Static Pressure Range: 600 mm WC to 1800 mm WC,
- RPM generally 3000 Rpm.
- Motor up to 150 KW
- Material Of Construction: Mild Steel, Stainless Steel

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 unhoused 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 safe in clean, contaminated, or high temperature systems.

Operating Range
- Volumetric flow capacity up to 150000 m³/hr
- Maximum pressures of 150 mm wc.
- Maximum operating temperature of 300°C
- Belt or direct drive

Typical Applications
- Heating and air conditioning systems
- High temperature processes such as ovens, dryers and kilns
- Spray booth evaporators and textile dust collectors
- Air curtains

SQUI| CENTRIFUGAL BLOWERS

Typical applications include conveying, induced draft, industrial ovens, and similar high temperature installations 300°C. For greater safety in explosive environments, spark resistant construction is offered. Lint-free construction which housing hardware is reversed to limit obstructions in the airstream, minimizes lint build-up.

OPERATING RANGE
- Air flow (capacity) range: 100 CMH to 15000 CMH,
- Static Pressure Range: 150 mm WC to 500 mm WC,
- RPM variation: 1450 - 3000,
- Motor KW: up to 25,
- Material Of Construction: Mild Steel, Stainless Steel

TYPICAL APPLICATIONS
- Material conveying
- Dust collection
- Oven exhaust
- Dryer exhaust
- Paper trim transport

DWDI – DOUBLE WIDTH, DOUBLE INLET

DWDI fans are generally supplied for V-belt drive & Coupling Drive. The wheel is mounted between the bearings and supported by the fan housing. Since both bearings are located in the airstream, standard DWDI fans should be used for clean air applications with air temperatures limited to 130°F. The motor can be mounted in any of the four standard motor positions: W, X, Y or Z.
**PP-FRP or MS-FRP BLOWERS**

PP-FRP Blowers are mostly resistant to weathering, corrosive fumes and gases etc. They are specially designed to handle laboratory ventilation, laboratories to handle highly corrosive gases & fumes. They have been proven suitable for pickling plants and other refining processes, electroplating and pharmaceutical Chemical Industries etc. The fans are also available as per the client requirement. They are available in Direct or "V" belt driven Types. MS-FRP Centrifugal blowers in capacity range from 500 CMH to 6000 CMH and static heads ranging from 50 mm to 750 mm water column. Our range of pollution control equipment’s are centrifugal Blowers, Wet Scrubbers, Fume extraction systems, Venturing Scrubbers, fume stacks etc. Material of Construction: PPFRP, HDPEFRP, PP Blowers.

**INLINE FAN**

Inline fans, centrifugal duct fans are the ideal air movers for residential, commercial and industrial applications. The quiet and efficient airfoil impeller is capable of developing significant pressure, and the in-line configuration simplifies installation. The unique motor design, combined with high quality materials and workmanship, results in a truly versatile fan. The in-line configuration of these fans simplifies installation. We also offer these fans as per the customized designs provided by the clients.

**Motor Mounting Position as Standards**

**CENTRIFUGAL FANS ARE RECOMMENDED BY DRIVE TYPE**
TYPES OF IMPELLER BLADES

(A) Forward Curved (B) Backward Curved (C) Radial Blade (D) Airfoil (E) Backward Inclined (F) Open Radial Blade (G) Open Type (Paddle Wheel) (H) DWDI Impeller

ACCESSORIES OF CENTRIFUGAL AIR BLOWERS

Expansion Joints
In air ductwork systems, dynamic stresses caused by fan vibrations, temperature fluctuations and other sources can lead to premature equipment failure. Flex duct connectors or expansion joints provide flexibility along duct when connected to rotating equipment to alleviate these stresses.

Suction Filter
In dust laden areas, inlet filters are recommended so that the fan can suck clean air and discharge at elevated pressure. This will prevent undue clogging of various devices connected in the up-stream of the fan and reduce maintenance.

Silencer
Silencers can be provided to reduce the noise level of the blower. Mittal designs and manufactures inlet filters with silencers as per discharge of the fan.
**Damper**

Multi-vane damper fitted at the inlet of the fan are used for smooth start up of the fan and pressure control during normal operation. These come with manual and automatic version in various diameters for different capacities.

**Vibration Isolator**: In order to reduce the vibration level at site the fan can be supplied with vibration isolator.

**Acoustic Cladding**

In order to reduce the noise level of the fan substantially, acoustic cladding is recommended. This is done through wrapping casing with suitable material such as glass wool etc. and finally cladding with aluminum foils.

**Pulley**

**Coupling**

**Tyre Coupling**

**Pin Brush Coupling**

**Composite Pedestal & Plummer block Pedestal**

**Shaft Cooler (Heat Slinger)**

Cast aluminum shaft cooler dissipates the heat transferred to the shaft from the airstream protecting the fan bearings.
**EXTRA FEATURES FOR BLOWERS**

**Available Drives**
Impeller directly on motor shaft & driven by motor
Impeller Overhung on shaft supported between bearing driven by v-belts/coupling
Impeller mounting on shaft center between bearings drives by v-belts/coupling.

**Accessories**
Common channel base for motor & blower, Motor & Blower Pulleys, V-belt, Damper, Expansion Bellow, Motor Slide rails, Belt guard, Induction Motor Standard/FLP.

**Optional Accessories**

**Impeller Balancing**
Dynamically balanced to ISO: 1940-1:2003(E) IS-11723 (Part-1)
1992 Grade 6.3

**Available M.O.C**
Mild Steel, Stainless Steel (In case Any Specific requirement can be entertain on specific inquiry.)

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**Dynamic Balancing Machine**

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**CNC Plasma Cutting Machine**

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**Testing of Blowers arrangement**
MITTAL BLOWERS INDIA PVT. LTD. Provides effective air supply or exhaust thro a ducted system requiring high static pressure. Can be connected to a hood & Duct system for effective remote exhaust or filtered ventilation air supply systems.

- Duct fans in series for tunnel ventilation requiring static pressure up to 7-8” WC.
- Different blades combination for low noise at higher RPM.
- Being electrically connected-Ready to start

Features

- Sweep Diameter range: 310 to 1200 mm (12” to 48”)
- Airflow range: 1000 to 40000 CFM
- Static Pressure range: 0 to 75 mm WC (0” to 3” WC)
- Motor Rating Range: 0.5 to 20 HP
- Drive: Direct / V-belt
- MOC: MS/SS
- Rpm: 720 to 1440 Rpm

Construction

- Complete with heavy casing tube, Motor base, Impellers-Fabricated MS/Al or Cast Aluminum blades (Airfoil).

Impeller Balancing

- Statically & dynamically balanced to ISO G6.3

Mounting Option

- Cooling Axial Fan, Tube Axial Fan (Standing, Wall Mounting, Roof Mounting), Bifurcated Axial Fan (Standing, Wall Mounting), Customized Axial Fan (Couple Driven, V-Belt Driven)

Ideally Suitable For Applications

Blast ventilation/exhaust, Comfort for workmen in hot working zones of foundries, Large kitchen exhaust, Furnaces, Ceramic units, Iron & Steel Plant, Power plants, Cement industries, Chemical factories, Plastics molding unit, Mines, tunnel ventilation & exhaust, Metal mfg. plants, Rolling mills, Boiler houses, Fabrication, Assembly shop etc.
ROTATION & DISCHARGE DESIGNATIONS DESIRED BY CLIENT AS VIEWED FROM DRIVE END ARRANGEMENTS

(A) Counterclockwise
Up Blast CCW 360

(E) Clockwise Up
Blast - CW 360

(I) Counterclockwise
Bottom Angular Up
CCW 315

(M) Clockwise Bottom
Angular Up XW 315

(B) Counterclockwise
Top Horizontal - CCW 90

(F) Clockwise Top
Horizontal CW 90

(J) Counterclockwise
Top Angular Down
CCW 135

(N) Clockwise
Top Angular Down
CW 135

(C) Counterclockwise
Down Blast CCW 180

(G) Clockwise
Down Blast CW 180

(K) Counterclockwise
Top Angular Up CCW 45

(O) Clockwise
Top Angular Up CW 45

(D) Counterclockwise
Bottom Horizontal
CCW 270

(H) Clockwise
Bottom Horizontal
CW 270

(L) Counterclockwise
Bottom Angular
Down CCW 225

(P) Counterclockwise
Bottom Angular
Down CCW 225
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