IMPACT GROUP
Green Engineers to the Planet

Leading Manufacturer of Energy Efficient Axial Flow FRP Fans

Since 1987

IMPACT COOLING SOLUTIONS

ENERGY EFFICIENT AXIAL FLOW FRP FANS

The Impact Group designs and manufactures energy efficient axial flow FRP fans. Since 1987, we have supplied fans to 35 countries. All of our installed fans all over the world are cumulatively saving energy at a rate of more than 250 MW.

Our fans have a thoroughly engineered aerodynamic profile with a low-drag airfoil shape, high blade twist, wide chord width and smooth surface finish. These design features make our fans highly efficient and quiet. We have replaced fans of all major makes in the world. In most cases, the cost of replacement was recovered within a year thanks to reduced power consumption. For OEMs, the efficiency of our fans also allows for the duty conditions to be met by using a lower horsepower motor.

Impact fans are extremely durable. The blades are hollow and seamless. The light weight of our fans ensures a low moment of inertia which results in lower wear and stress on the motor, bearings and drive system. Moreover, FRP is more corrosion resistant than alternate construction materials.

The blade pitch of Impact fans can be manually adjusted. This allows for our fans to have a wide operating envelope. During warmer months of the year, the pitch of the blades can be increased to generate more airflow. This wide operating envelope is possible because of the efficiency of our fans.

APPLICATIONS

- Cooling Towers
- Mine Ventilation
- Withering Troughs in Tea Industries
- Air Cooled Heat Exchangers / Condensers
- Industrial Ventilation & Exhaust
- Humidifiers
- Radiators

INDUSTRIES SERVED

- Power Plants
- Fertilizer Plants
- Pharmaceutical
- Steel Plants
- Oil / Gas Production, Processing and Transportation
- Chemical & Process
- Cement
- Textile
- Mining
- Petrochemical / Refineries
- HVAC
- Food Processing
- Tea Withering

WHY IMPACT AXIAL FLOW FRP FANS?

Aerodynamic Design

Our fans have aerodynamic profiles with high blade twist angles, tapers and large chord widths. Energy efficiency improvements of 20-40% over earlier fans are common. Blade twist angles up to 44 degrees ensure airflow is uniform thereby preventing turbulence.

Hollow and Lightweight

Our fans are hollow and lightweight which results in having a lesser moment of inertia that increases the life of the gearbox and bearings. Our 33 ft. fan's blades weigh in at just 140 lbs. in spite of having a large volume that comes with having a large camber and chord width.

Seamless and UV Protected

Our fans, in their entire construction, are seamless (joint less). This gives our fans an advantage when it comes to durability. Our fans have an excellent surface finish with a UV protected gel coat layer.

Low Noise

Our airfoil design reduces noise levels considerably. Our fans are known for being quiet besides being efficient. We keep the tip speed within 12000 fpm to keep fan noise in check.

Vibration Free

All the blades are statically moment balanced with each other besides the hub being dynamically balanced per ISO standards. This ensures that the centre of mass of the assembly is at the centre of the shaft. Moreover, this allows for single blades to be replaced instead of replacing them in pairs.

Durability

Our fans are extremely durable and have proven to be cyclone proof in the past. Numerous facilities have been running our fans for 15 + years.

Corrosion Resistance

FRP is more immune to corrosion than alternate materials often used in fan manufacturing.

Multiple Profiles

We have a large selection of blade profiles for all diameters that are optimized for either power saving, cost or noise levels.

FAN SELECTION

Please provide the following information when requesting a fan model recommendation :

- Application / Equipment
- Fan Static Pressure
- Operating Temperature
- Shaft Details
- Fan Diameter
- Fan RPM
- Elevation Above Sea Level
- Fan Stack / Casing Details
- Required Airflow
- Motor kW/HP
- Gear Box / Pulley Type & Ratio
- Inlet Shape

PERFORMANCE & OPERATING RANGES

PROPERTY	RANGE (METRIC UNITS)	RANGE (ENGLISH UNITS)
Fan Diameter	610 mm to 18,288 mm	2 ft. to 60 ft.
No. of Blades	3 to 12	3 to 12
Airflow	4 to 1510 m^3/s	10,000 to 3,200,000 cfm
Fan Total Pressure	40 to 1600 Pa	.16 to 6.42 inches of water
Speed	65 to 2500 RPM	65 to 2500 RPM
Power Rating	1 to 1000 kW	1.34 to 1340 HP
Operating Temperature*	-20°C to 120°C	-4°F to 248°F

*Standard MOC are used for subset of temperature range. Special MOC are used for either extremes of temperature range.

STANDARD FEATURES

- Built-in leading edge protection
- Ultraviolet protection
- FRP seal disk
- Standard taper lock bushings of center bush as per user's requirement

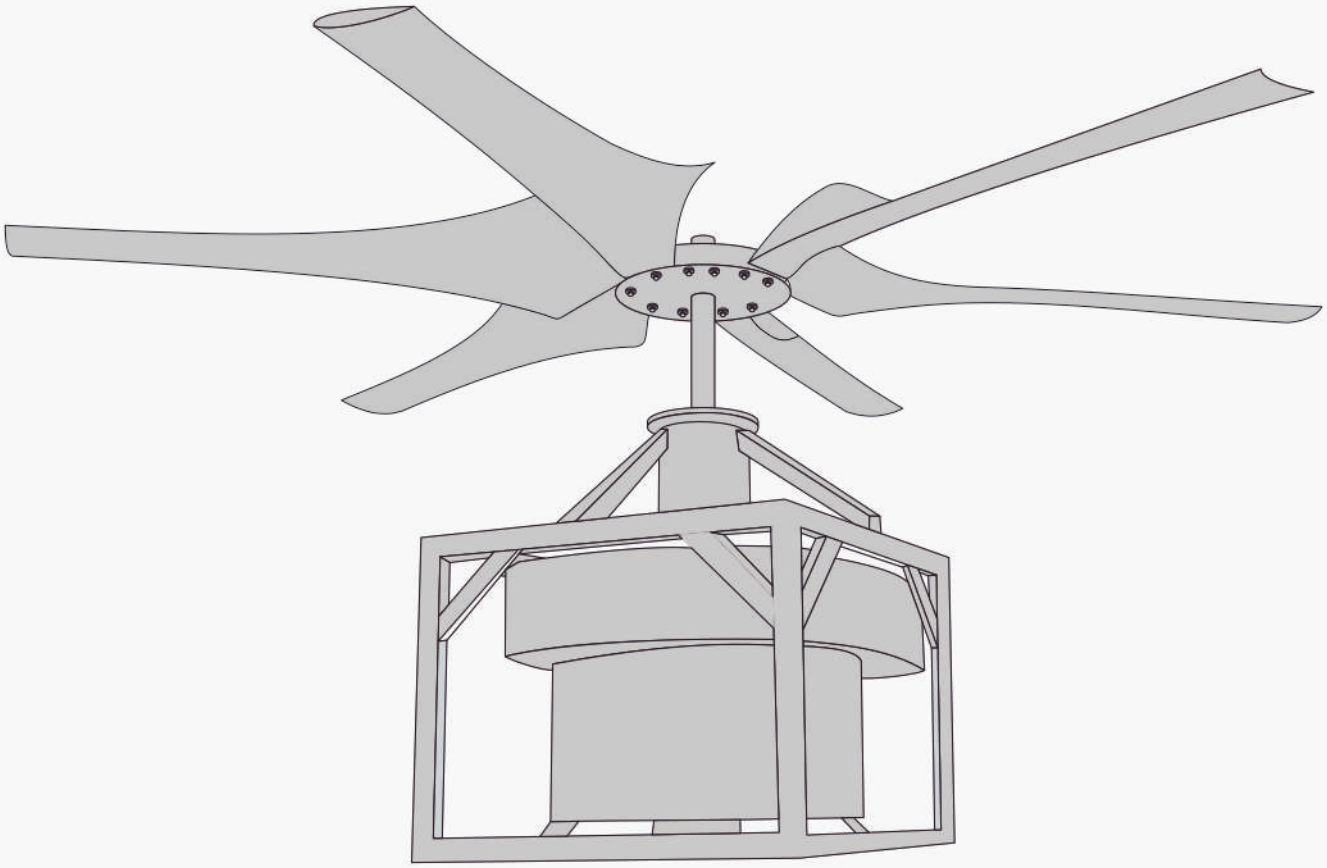
MATERIALS OF CONSTRUCTION

MOC of various components are governed by application and can be customized to suit end use.

Standard MOC are as follows:

Blades : Fiberglass Reinforced Plastic using polyester or epoxy resins. High temperature construction of fan blades on request.
Hub Plates : Hot Dipped Galvanized Mild Steel
Blade Holding Blocks : Cast Aluminium Alloy Grade LM-6 or Cast Iron Grade FG200
Seal Disk : Fiberglass Reinforced Plastic
Fasteners : SS-304
Center Bush : Cast Iron Grade FG200

- Fan selection software is available on request.
- For duties, applications, sizes or special materials of construction that are not covered in above range, please contact us.
- Specifications are subject to change without prior notice.



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