

Ratings and Applications

Airflow Range	300~52,000 m³/h (176~30,588 CFM)
Static Pressure Range	100~700 Pa (0.4~2.81 in.WG.)
Drive Types	Direct or Belt drive
Mounting Types	Rooftop – Side wall for small sizes
Applications	<ol style="list-style-type: none"> 1. General ventilation 2. Explosion proof 3. Smoke removal



Wheel Technology

1. Unique and Innovative Design

- ❖ The centrifugal wheel specially made for rooftop fans in all-aluminum construction
- ❖ Innovative design based on the advanced foreign concept of full control over flow passages
- ❖ Leading-edge products in efficiency and sound
- ❖ Wide performance range of high efficiency and non-overload

2. Internationally Advanced Process Adopted for Better Alignment with Flow Field Characteristics

- ❖ Flow passage components formed by spinning not by traditional process
- ❖ Blades formed by punching to ensure quality
- ❖ Dedicated fixtures and tools to ensure the precise mounting position of blades

3. Carefully Selected Materials, Suitable for Smoke Removal and for Use in Coastal Regions

- ❖ The strength made for a minimum of 200% of the highest running speed to perform the smoke removal duty
- ❖ Resistance to neutral salt spray for wide use in coastal regions
- ❖ Rigorous tests for trust worthy performance

4. 4th Generation of Wind-Surfer Wheel

- ❖ Continuous improvement for better performance
- ❖ Higher energy efficiency
- ❖ Lower sound for quieter operation

5. Light Weight and All-aluminum Construction with Explosion Proof Properties

- ❖ Metallic feeling and top-notch appearance
- ❖ Light weight, weighing only 1/3 of traditional products
- ❖ Spark A spark resistance construction, aluminum housing and aluminum wheel and aluminum inlet cone (AMCA99-10)

General Features

1. Independent Motor Chamber: Super Long Service Life

- ❖ Drive mechanism located in an independent chamber to have zero contact with the airstream
- ❖ Use for exhaust of air containing volatile engine oil, cooking fumes, dust and organic solvent
- ❖ Great reliability and expected service life of over ten years
- ❖ Fresh air shall be taken into the motor chamber to cool down the motor. The air shall be directed through the clearance under the motor cover.

2. Patented Appearance Design for Practical Beauty

- ❖ Smooth and elegant appearance design with fine manufacturing process
- ❖ Silver housing of metallic feeling that easily matches different colors of buildings
- ❖ Buildings added a streak of modernity and nobility

3. Light Weight: Especially Suitable for Rooftop of Light Gauge Steel Construction

- ❖ Housing and wheel constructed of aluminum alloy
- ❖ Load on the rooftop reduced with less investment in steel

4. Wide Applications to Meet Users' Needs

- ❖ All-aluminum construction for explosion proof application: Type A spark resistant construction
- ❖ Smoke removal application
- ❖ For salt spray environment in coastal regions and on islands

Technical Information

1. Quality Standards

The fan shall be tested and certified in accordance with AMCA Standard 210 & 300, UL 705, TUV EN 12101-3 for smoke application. AMCA Seal for (Efficiency Sound and Air Performance) shall be tagged on each fan before leaving the factory as a standard seal, for other seals shall be tagged on the fan according to application and customer needs.

The manufacturer shall obtain Production License for National Industrial Products and be certified by ISO 9001, ISO 14001, ISO 45001.

2. Fan Type

The fan shall be rooftop centrifugal exhaust fan with an aluminum backward inclined centrifugal wheel. The inlet Cone shall have a curved section to ensure smooth air movement. Each wheel shall be statically and dynamically Balanced up to grade G 2.5 as per ISO 1940.

3. Fan Material

The housing, wheel and curb cap shall be constructed of aluminum alloy. The fan shall be of silver color to match well with buildings.

4. Drive Mechanism (For belt drive type only)

Fan Part	Description
Shaft	The shaft shall be heat treated through homogenizing furnace to the hardness level of HB250, and hard film shall be applied on the surface to avoid corrosion. It shall also be dynamically tested together with the wheel. The design speed of the shaft shall be at least 25% more than the maximum running speed of the fan.
Pulleys	Fan pulleys shall be sized for a minimum of 150% of the driving power. Pulleys shall be cast iron and also be adjustable on the jobsite. Conical type bushings shall be equipped for easy removal of the pulleys.
Bearings	Metal bearings shall be used to support the fan shaft to avoid vibrations directly coming onto the motor. The bearing life shall be (80, 000 to 150,000) hours at the maximum operating speed specified in the catalog as per the design. The bearing shall be of permanently sealed type and metal pillow block ball bearing that can be lubricated.
Drive Support	Drive mechanism shall be supported by heavy gauge steel sheet finished with powder coatings to avoid corrosion. The belt tension can be adjusted through the adjusting bolt at the motor base. The design shall make sure the fan shaft and motor shaft is always parallel.
Motor	The motor shall be carefully matched to the fan load. It shall be (IP55,IP56, ...etc) rated with Class F,H Insulation according to project specification . The motor bearing shall be of ball type and lubrication- free. Out of the air stream shall the motor and drive mechanism be located to avoid grease or dirt accumulation.
Structure Fan shroud	It shall be rigid enough to withstand wind load. Its structure shall prevent water leakages in rainstorms or in snow melting.
Support panels of motor and drive mechanism	The steel panels treated through anti-corrosive measures shall be used. The material of the housing shall not be used on the panels to ensure strong rigidity. The support column shall be constructed of aluminum alloy for stability.
Internal conduit	There shall be a conduit inside the fan to lead the power supply line to the motor through the curb (For the general type).
Curb cap with mounting holes	The curb cap shall have mounting holes on the sides so that the fan can be fastened.
Galvanized bird screen	Firm galvanized grille shall be used. When the fan stops running, the bird screen helps prevent birds entering through the outlet.