



JetStream Axial Mine Fans (AMF Series)

The *JetStream* adjustable vane axial fan line was designed specifically to blend aerodynamic performance and ease of application. Based on over 65 years of experience with axial fan installations, the design of these fans has been refined in order to offer the most reliable and maintainable equipment at an economical price.

Product Range

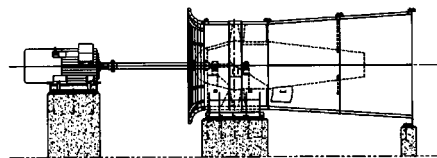
ALPHAIR offers a range of heavy duty axial fans designed specifically for main mine ventilation or other heavy duty axial fan applications. These robust, adjustable pitch fans deliver volumes up to 1,000,000 cfm (470 m³/s) and total pressures up to 28" (7 kPa). Ranging in sizes from 76½" to 148" (1900 to 3800 mm), this fan line has been designed to offer high efficiency and reliable service.

Housing & Structural

- ASTM A36 steel all welded construction.
- Structural steel bracing, stitch welded to housing.
- Bolted and gasketed splits for removal of wheel and shaft assembly on horizontally installed units and splits for field welding, as required for shipment.
- Designed to meet strict vibration requirements.
- Vertical and horizontal installations.



Pedestals

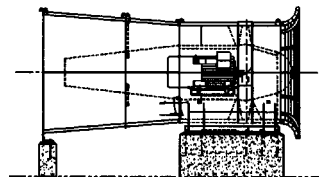


Arrangement 3

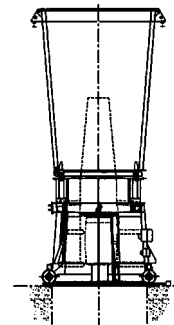
Rotor mounted between bearings. Bearings supported by fabricated steel pedestals mounted in fan centre body. Pedestals are boltable to permit bearing changes with rotor and shaft in place.

Arrangement 4

Rotor mounted directly on motor shaft. Motor flange mounted in fan centre body, downstream of rotor.



Horizontal and vertical views.



Shaft

- C 1045 alloy steel shaft.
- Shaft designed for a minimum first critical speed ratio of 1.25.



Rotor

- 16 blades, at-rest adjustable pitch, with parallel bore. Materials of construction:

Blades	ASTM A701.1 age hardening aluminum alloy
Centre Hub	C 1030 mild steel, epoxy painted
Hub Structural Plates	ASTM A242 steel, epoxy painted
Hub Rim	Steel alloy plate or forging, epoxy painted
- The hub rim is formed with a spherical profile to be aerodynamically smooth. Ensures minimal gap between the base of the blade and the rim at all blade positions.
- The blade pitch is individually adjustable, with easy access from outside of housing through an access door in the wheel track. Releasing a series of socket-head screws permits varying the blade angle. This feature allows for fast and easy blade pitch changes without having to access the interior of the fan.
- Rotor retained to shaft with “Ringfeder” taper locking devices.

Shaft Seals

- Cast aluminum flinger seal shaft at fan stationary nose cap.

Painting

- A variety of surface preparations are available, including SSPC-SP 3, machine tool preparation; SSPC-SP 6, uniform commercial sand blast; and SSPC-SP 10, near white sand blast.
- A variety of coatings are available to meet customer specification.

Coupling

- Floating shaft coupling with stainless steel disc pack sized for minimum 2.5 service factor.

Bearings

- SKF grease or oil lubricated spherical roller and/or self-aligning ball bearings.
- Optional constant level oilers on bearings are mounted exterior to fan.
- Minimum bearing life (L_{10} life) of 100,000 hours.

Motor Base (Optional)

- 4-Way adjustable base with jacking bolts. Heavy plate construction sized to suit selected motor.



Fan Monitoring Equipment (Optional)

- 100 OHM, 3 wire platinum bearing RTDs.
- Flow and pressure sensors.
- Thermocouples.
- Vibration transducers.

ALPHAIR

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