



FAN FAMILY · AEROFOIL

Jitmitra Aerofoil Fans

The Aerofoil family uses hollow, wing-profile backward blades — the cleanest-running blade form in the range. Air flows over them with the least turbulence, so the fan moves a given volume on the least motor power: the highest static efficiency in our range, a non-overloading power curve, and the quiet running that occupied buildings need.

Capability envelope

Aerofoil clean-air service

PARAMETER	STANDARD RANGE	ON APPLICATION
Volume flow	800–2,25,000 CMH	higher on enquiry
Static pressure	10–650 mmWC	per-wheel max ~537 mmWC; higher on enquiry
Peak static efficiency	highest in our range — shared on enquiry	near-best-efficiency selection per duty
Inlet dust loading (gate)	clean, filtered air only	above gate → step to the Backward-Curved, Backward-Curved Plate, Radial-Tip or Radial family
Continuous air temperature	up to 400 °C with high-temperature construction	higher on enquiry (high-temperature aerofoil build)
Drive power	up to 425 HP	our largest drive delivered to date
Balance quality	ISO 21940 G6.3 standard	G2.5 on request (occupied-building / pharma)
Bearing life (design target)	L10h ≥ 40,000 h continuous	longer L10 on application

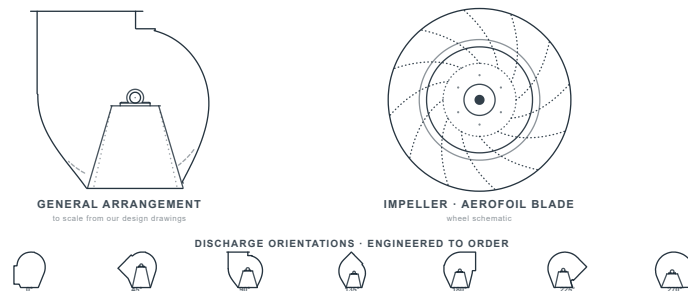


FIG. 1 General arrangement, impeller face and the discharge orientations we build — drawn to scale from our in-house design drawings. Every fan is engineered to your duty.

Construction & materials

documented on your GA

- **Blade form & wheels** — Hollow, wing-profile backward (aerofoil) blade — the lowest tip speed in the range at 100 m/s. Wheel sizes from 310–3,050 mm diameter, so the wheel is matched to the duty rather than over-sized.
- **Width, drive & mounting** — SWSI for higher pressure or DWDI for high volume in a compact height; belt or direct drive; plug / plenum (unhoused) configuration that drops into AHUs and fan-wall / fan-array (N+1) builds.
- **Materials of construction** — MS standard; SS304 / 316 full or airstream for clean corrosive duty; FRP-lined carbon steel; Corten / duplex per duty. Wear-plating is not an Aerofoil option by design — if dust calls for it, the family is wrong.
- **Construction options** — high-temperature construction (to 400 °C, on enquiry above) and spark-resistant construction (AMCA 99 Type A/B/C, ATEX) where the area classification calls for it; single or double width to suit the duty.

How a Jitmitra Aerofoil fan is specified

AMCA conventions

SPECIFICATION FIELD	OPTIONS
Arrangement (AMCA 99)	Arr. 1 (overhung, fan bearings) / Arr. 4 (direct, motor on base) / Arr. 8 (overhung on common base) / Arr. 9 (overhung, motor side) / plug-plenum (unhoused) for AHU and fan-array — selected by drive, access and mounting.
Width / inlet	SWSI (single width, single inlet, -S) for higher pressure; DWDI (double width, double inlet, -D) for high volume in a compact height. Peak efficiency in the family is reached on the largest DWDI wheel.
Wheel type	Aerofoil — hollow, wing-profile backward blade. Wheel sizes from 310–3,050 mm diameter, tip speed 100 m/s (the lowest in the range — the aerofoil limit).
Class (by pressure / outlet velocity)	Class I / II selected from the duty point on the pressure-vs-outlet-velocity limits; the aerofoil sits at the low-tip, high-efficiency, clean-air end of the class table.

SPECIFICATION FIELD	OPTIONS
Materials of construction	MS (standard) / SS304 or 316 (full or airstream) for clean corrosive duty / FRP-lined carbon steel / Corten or duplex per duty. No wear-plating by design — anything beyond clean, filtered air moves the duty to another family.
Drive	Direct-coupled / V-belt / VFD (with shaft-earthing ring). Drive up to 425 HP across the envelope; the non-overloading curve lets the motor be sized without a large overload margin.
Discharge & rotation (AMCA orientation)	Rotation CW or CCW (viewed from drive side) with discharge angle per AMCA — e.g. TH/BH/UB/DB — set to match your duct take-off and installed footprint; plug/plenum builds discharge into the plenum.
Construction & accessory scope	High-temperature construction (to 400 °C) / spark-resistant construction (AMCA 99 Type A/B/C, ATEX) per area classification; inlet guide vanes (IGV / in-cone IVC) and dampers for trim control; inlet/outlet silencers for occupied-building noise; flexible connectors and anti-vibration mounts; plug/plenum mounting kit for AHU and fan-array (N+1) builds.

Where the Aerofoil runs

HVAC & BUILDINGS AHU supply and return, fan-wall / fan-array (N+1) plenum builds, central-plant ventilation.	PHARMACEUTICALS Cleanroom and pharma AHU supply and return — efficiency and low noise on filtered air.
FOOD & BEVERAGE Clean-process supply air and general clean ventilation.	DATA CENTERS Clean cooling-air supply where running cost and acoustics dominate.
SEMICONDUCTOR & ELECTRONICS Cleanroom AHU and filtered-air handling for controlled environments.	BOILER & COMBUSTION Filtered forced-draft (FD) air where the air is genuinely clean.
COMMERCIAL & INFRASTRUCTURE Large building ventilation and supply air with sound-limit constraints.	YOUR DUTY POINT Send us flow, static pressure and the air / gas condition — we size the wheel to it and quote in 3 to 5 working days — 5 to 7 working days for ATEX and special projects.

Standards & conformity

PERFORMANCE Tested to the IS 4894 / ISO 5801 / AMCA 210 method, in-house on our 200 HP VFD rig. Tested-to-method — not AMCA-certified.	QUALITY SYSTEM ISO 9001:2015 — third-party certified (our only third-party certification).
CE CONFORMITY Self-declared per 2006/42/EC + 2014/35/EU . Not a notified-body certificate.	ATEX CONFORMITY Self-declared, spark-resistant (SR), Zone 2/22 Cat 3 per 2014/34/EU , where area classification requires.
BALANCE & VIBRATION Balance ISO 21940 (G6.3 std, G2.5 on request); fan vibration acceptance ISO 14694 , measurement ISO 14695 .	WELDING & HEAVY DUTY ASME Sec IX welders + WPS; API 673 available as project-specific scope for oil & gas.

Jitamitra Electro Engineering Private Limited

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Part of the Zen Group of Industries (est. 1993) · CIN U31908PN2009PTC134884

Figures indicate family capability; every fan is engineered to the customer's duty point and confirmed on the approved GA drawing.

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