



APPLICATION

Gas-turbine inlet / aux

The fans around a gas turbine or genset package are not the main event — but they sit on the critical path. Inlet-air boost, enclosure and generator ventilation, and auxiliary cooling all serve a machine that costs orders of magnitude more than the fan itself, and when the fan trips the turbine trips with it.

Capability envelope

gas-turbine inlet / aux service

PARAMETER	STANDARD RANGE	ON APPLICATION
Volume flow	up to 2,25,000 CMH	higher on enquiry
Static pressure	up to 2,000 mmWC	typically low-to-moderate on inlet / ventilation duty
Air temperature	ambient to 80 °C (enclosure ventilation)	higher on hot-air auxiliary duty with special metallurgy
Inlet air cleanliness	clean, filtered — very low residual loading	clean-air flow path, no shedding by design
Static efficiency	high on standard builds	higher on airfoil high-efficiency builds
Construction (ignition)	standard, or AMCA 99 spark-resistant on fuel-gas duty	ATEX Zone 2 (Cat 3G) self-declared on application
Drive power	up to 425 HP	our largest drive delivered to date
Balance quality	ISO 21940 G6.3	G2.5 / G1.0 on reliability-critical duty

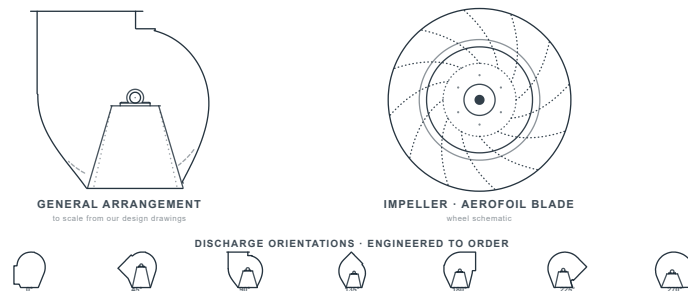


FIG. 1 Representative arrangement — a Jitmitra Aerofoil fan, the family most often applied to this duty. The exact family and wheel are engineered to your operating point.

Construction & materials

documented on your GA

- **Clean-air construction** — Airfoil-bladed or backward-curved impeller for high efficiency on clean air; smooth deburred fully-welded flow path, controlled internal coating, and no wear liners or exposed hardware in the airstream that could shed toward the machine.
- **Reliability & monitoring** — Bearings sized for $L_{10h} \geq 40,000$ h continuous; duplex or N+1 sets on critical enclosure ventilation; provision for vibration and bearing-RTD monitoring so the package can trend the fan and act before it trips.
- **Enclosure gas & fire safety** — Spark-resistant construction per AMCA 99 and ATEX Zone 2 self-declaration per 2014/34/EU (Cat 3G) on fuel-gas machines; aluminium impeller on Zone 2, bonded earthing, coordinated with the package pre-purge and fire-and-gas trip logic.
- **Control & efficiency** — VFD default — enclosure ventilation demand tracks ambient and machine load, and speed control holds air-change rate without throttling loss; efficient wheel selection matters on a fan that runs 8,000+ h/yr beside a base-load machine.

How a Jitmitra Gas-turbine inlet / aux 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) / Arr. 10 (overhung, motor inside base) — selected by drive, access and the package footprint.
Width / inlet	SWSI (single width, single inlet) default; DWDI (double width, double inlet) for high inlet-air flow at low static within a tight enclosure footprint.
Wheel type	Airfoil-bladed (highest efficiency on clean high-flow air) / backward-curved (efficient, robust default) — both non-shedding clean-air constructions; forward-curved avoided on this reliability-critical duty.

SPECIFICATION FIELD	OPTIONS
Class (by pressure / outlet velocity)	Class I / II / III selected from the duty point on the pressure-vs-outlet-velocity limits; higher class = heavier construction for higher pressure and tip speed.
Spark-resistant construction (AMCA 99)	Type A (all non-ferrous parts in the airstream) / Type B (non-ferrous rub ring) / Type C (aligned construction preventing ferrous contact) — specified where the enclosure ventilation path is a classified fuel-gas area; standard construction on clean inlet-air duty away from classification.
Materials of construction	Mild steel + epoxy coating (standard) / stainless steel for humid coastal or offshore air / aluminium impeller for ATEX Zone 2 service; smooth deburred fully-welded flow path throughout for cleanliness.
Drive & reliability	Direct-coupled / V-belt / VFD (default for ventilation-demand control). Drive up to 425 HP ; bearings sized for L10h ≥ 40,000 h ; duplex or N+1 sets, and provision for vibration and bearing-temperature monitoring on critical duty.
ATEX scope	Zone 2 self-declared (Cat 3G) per 2014/34/EU for fuel-gas enclosure ventilation — non-sparking impeller, bonded earthing, T-class bearing control — coordinated with the package pre-purge and fire-and-gas logic.
Accessories & acoustic scope	Isolation / shut-off damper and flexible connection at the enclosure interface; inlet and outlet silencers with acoustic-lagged casing where the package sits near occupied space; VFD control; drain and inspection doors; vibration / bearing-RTD monitoring provision.

Where the Gas-turbine inlet / aux runs

OIL & GAS Mechanical-drive and compression-package turbine enclosure ventilation, inlet-air boost, offshore genset-hood purge fans.	POWER GENERATION Simple- and combined-cycle turbine auxiliary ventilation, generator and lube-oil cooling air, inlet-house auxiliary fans.
DATA CENTRES Standby and prime-power genset enclosure ventilation and radiator-support air on the resilience train.	RENEWABLES & HYDROGEN Hydrogen- and syngas-fired turbine and engine packages — classified enclosure ventilation, gas-safe construction.
PROCESS PLANTS Captive-power turbine and reciprocating-genset enclosure and auxiliary cooling fans.	MARINE & OFFSHORE Turbine and genset machinery-space and enclosure ventilation with corrosion-resistant marine construction.
PACKAGE OEMS Auxiliary and ventilation fans supplied as a sub-package to turbine and genset packagers — interface documented up front.	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

Works Units N-7 & B-20/2, MIDC Ahilyanagar (Ahmednagar) 414111 · Sales: Karvenagar, Pune 411052

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

+91 83291 72325

sales@jitamitrablowsers.com

jitamitrablowsers.com

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