



APPLICATION

Induced Draft (ID)

ID fans handle the most punishing duty in any gas-handling system: hot flue gas, fly ash, abrasive particulate, acid condensate. They run continuously — and when they fail, the boiler or kiln upstream stops.

Capability envelope

ID service

PARAMETER	STANDARD RANGE	ON APPLICATION
Volume flow	up to 2,25,000 CMH	higher on enquiry
Static pressure	up to 2,000 mmWC	higher on enquiry
Continuous gas temperature	up to 500 °C	wheel and casing metallurgy chosen for the duty
Inlet particulate loading	heavy inlet loading	higher with enhanced wear protection
Drive power	up to 425 HP	our largest drive delivered to date
Speed	600–1,800 RPM typical	per duty + sound limits
Balance quality	ISO 21940 G6.3	G2.5 / G1.0 on application
Bearing life (design target)	L10h ≥ 40,000 h continuous	longer L10 on application

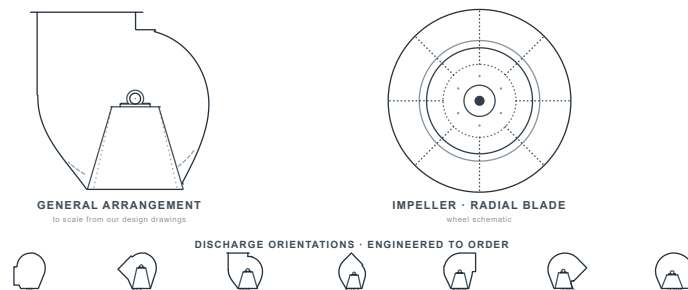


FIG. 1 Representative arrangement — a Jitmitra Radial fan, the family most often applied to this duty. The exact family and wheel are engineered to your operating point.

Construction & materials

documented on your GA

- **Materials & wear protection** — MS hard-faced; 4140 alloy + chrome carbide; IS 2062 casing with AR400 wear plates; 316L / Corten / Duplex 2205 for corrosive duty.
- **Wheel geometry** — radial-tipped backward-curved by default; straight-radial when fly-ash buildup is the primary failure mode.
- **Draft control** — inlet vane damper or VFD. VFD is our default for variable-draft duty — speed control avoids the throttling loss of a damper at part load.
- **Thermal management** — fabric/metal expansion joints for growth of order ~25 mm on a long run at 400 °C; shaft cooling disc standard above 400 °C; casing insulation + tracing for acid dew-point service.

How a Jitmitra Induced Draft 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 temperature.
Width / inlet	SWSI (single width, single inlet) default for ID duty; DWDI (double width, double inlet) for high flow at moderate pressure.
Wheel type	Radial-tipped backward-curved (default, best efficiency) / straight-radial (when fly-ash buildup dominates) / backward-curved (clean-gas, high-efficiency duty).
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.
Materials of construction	MS (standard) / IS 2062 casing with AR400 bolted wear plates / hard-faced (chrome carbide) or 4140 wheel for abrasion / 316L, Corten or Duplex 2205 for acid dew-point and corrosive gas.
Drive	Direct-coupled / V-belt / VFD (default for variable-draft control). Drive up to 425 HP across the envelope; speed typically 600–1,800 RPM.

SPECIFICATION FIELD	OPTIONS
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.
Accessories & high-temp scope	Inlet vane damper or VFD control; fabric or metal expansion joints (thermal growth to ~25 mm at 400 °C); bolted-in AR wear plates and access doors; shaft cooling disc (standard above 400 °C); casing insulation and heat tracing for acid dew-point service; drain and inspection doors.

Where the Induced Draft runs

IRON & STEEL Sinter-plant ID, blast-furnace gas cleaning, reheating-furnace flue gas.	CEMENT Kiln ID, pre-heater fans, raw-mill ID.
POWER GENERATION Boiler ID (utility + cogen), ESP-downstream fans.	CHEMICALS & PETROCHEM Process-boiler ID, RTO / RCO downstream fans.
FOUNDRY & FORGING Cupola ID, induction-furnace fume, heat-treatment ID.	FOOD PROCESSING Drying-furnace ID for spray driers and roasting lines.
PHARMACEUTICALS Solvent-recovery and drying-furnace ID fans.	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.

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