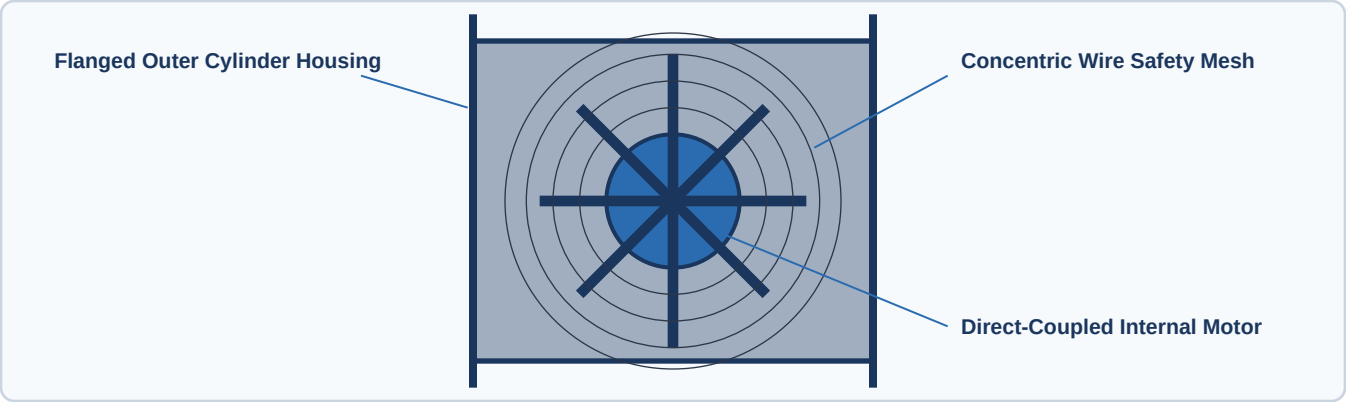
HEAVY-DUTY INDUSTRIAL AXIAL FLOW FANS

High-Performance Ventilation & Exhaust Engineering Datasheet

1. EQUIPMENT VISUAL SCHEMATIC & CONFIGURATION

Below is a vector schematic representing the industrial direct-driven short-casing axial fan with an integrated wire mesh protection guard, matching the unit provided in your documentation image.



2. GENERAL OVERVIEW & DESIGN MATRIX

Industrial Axial Flow Fans are engineered specifically to tackle high-volume air displacement demands under low to medium static pressure environments. Constructed utilizing high-tensile carbon steel or premium alloy grades, these fans deliver unmatched structural rigidity, aerodynamic efficiency, and operational endurance across taxing factory shop floors, manufacturing complexes, and processing units.

- **Aerodynamic Blade Geometry:** Features precision-balanced aerofoil impellers, allowing optimal lift-to-drag optimization and minimizing noise generation spikes during heavy continuous cycles.
- **Direct-Driven Architecture:** Eliminates mechanical transmission losses via an impeller keyed directly to the motor driveshaft, maximizing mechanical power yields and lowering preventive maintenance overheads.
- **Integrated Safety Armor:** Outfitted with a heavy-gauge, concentric steel wire mesh protection guard on the intake/exhaust side to prevent particulate contamination and guarantee complete technician workplace safety.
- **Rugged Core Housing:** Features a short rolled-steel duct ring drum with precision machine-punched mounting flanges on both ends, allowing immediate, rigid inline bolting onto structural duct networks.

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3. TECHNICAL SPECIFICATIONS & PERFORMANCE VALUES

The matrix below outlines standard structural and performance dimensions. Specific configurations can be tailored to meet hyper-custom air engineering requirements.

Model SKU	Fan Dia. (mm)	Airflow Vol. (m^3/hr)	Static Press. (Pa)	Motor Power (kW)	Speed (RPM)
IAF-315	315	2,100 - 3,800	50 - 120	0.37	1440
IAF-400	400	4,200 - 6,900	60 - 160	0.55	1440
IAF-500	500	6,500 - 11,500	80 - 220	1.10	1440
IAF-630	630	12,000 - 22,000	90 - 310	2.20	1440
IAF-800	800	22,500 - 41,000	110 - 450	5.50	960
IAF-1000	1000	38,000 - 75,000	120 - 580	11.0	960
IAF-1200	1200	65,000 - 135,000	150 - 750	22.0	960

4. PRIMARY INDUSTRIAL APPLICATION FIELDS

Deployment Sector	Operational Focus & Application Environment
Manufacturing & Warehouses	General ambient factory floor ventilation, heat dissipation, thermal exhaust mitigation, and high-volume fresh air turnover schemes.
Commercial Parking Garages	Basement exhaust integration, vehicle carbon monoxide gas purging, and emergency smoke control venting systems.
Cold Storage & HVAC Loops	Air recirculation across large freezer bays, evaporative condenser units, and generalized supply handling modules.
Tunnels & Mining Utilities	Fresh secondary air delivery pipelines, draft creation, and accumulation clearance of ambient airborne particles.

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