AEROTECH EQUIPMENTS AND PROJECTS PVT. LTD.

TECHNICAL SPECIFICATION SHEET: COUPLING DRIVEN CENTRIFUGAL BLOWER

Product Overview: The Coupling Driven Centrifugal Blower (Arrangement 4 / Arrangement 8 direct coupling configuration) is engineered for heavy-duty industrial ventilation, high-pressure material conveying, air pollution control setups, and exhaust systems. By utilizing a direct shafts connection via a flexible coupling, this configuration completely eliminates transmission slippage, side-load stress on motor bearings, and standard operational wear associated with belt drives. This yields optimized mechanical efficiency, reduced breakdown overhead, and precise airflow transmission.

1. Technical Parameter Boundaries

Parameter	Standard Industrial Range / Value
Power Rating Range	3 HP to 200 HP+
Airflow Rate / Volumetric Capacity	1,000 CMH to 1,50,000+ CMH
Static Pressure Window	50 mmWC up to 1500 mmWC (High Pressure)
Standard Motor Rotational Speed	960 RPM / 1440 RPM / 2880 RPM
Standard Material of Construction (MOC)	Heavy Structural Steel, IS 2062 Mild Steel, SS 304 / SS 316
Drive Type Setup	Direct Inline Flexible Coupling Driven
Impeller Wheel Configurations	Backward Curved, Backward Inclined, Radial Tip, Aerofoil
Operating Temperature Threshold	Standard: Up to 150°C | Custom Thermal Shaft: Up to 350°C
Surface Treatment Finishing	Industrial Epoxy Primer Coating / Heavy Powder Coated Surface

2. Design & Engineering Advantages

- **Zero Slippage Mechanics:** Inline flexible coupling ensures precise mechanical power transfer from motor shaft to impeller, maintaining rigid airflow metrics.
- **Extended Operational Lifespan:** Eliminates overhung side-loads typical of belt tensions, drastically increasing the service life of internal bearings.
- **Low Maintenance Duty:** Avoids repeated re-tensioning, wear inspections, and replacements common to standard industrial belt drives.
- **Vibration Attenuation:** Heavy-duty integrated mono-block structural steel chassis foundation limits harmonic vibration waves.
- **ATEX Compliance Capability:** Readily configured with non-sparking inlet liners and explosion-proof motors for hazard-classified environments.

3. Core Industrial Applications

- **Boiler Draft Systems:** Forced Draft (FD) and Induced Draft (ID) thermal air management across processing plants.
- **Pollution Abatement:** Raw high-flow pressure feed for Venturi Scrubbers, Cyclonic Separators, and Pulse-Jet Bag Filters.
- **Material Conveying:** Pneumatic high-velocity transport of fine particulate matter, wood shavings, and industrial dust fractions.
- **Thermal Plants:** Exhaust ventilation across high-heat foundry spaces, paint-booths, and heavy engine rooms.