



BACKWARD INCLINED (BI) FANS

Daltec Backward Inclined (BI) fans are the efficient solution for all clean air applications. Each single thickness blade has been designed with maximum performance and efficiency in mind.

Daltec BI fans are available in both direct drive and belt drive configurations. Performance ranges from 600 CFM to 300,000 CFM and up to 15" static pressure.

If our catalogued fan will not meet your requirements, Daltec has the solution. We offer complete customization packages covering everything from special bearings and paint to special arrangements and complete redesigns.

Daltec ... working with you to build better fans.

Standard Design Features

- Standard design suitable to 250° F
- Available in 8 discharge positions
- Wheel diameters from 10" – 80"
- Capacities to 300,000 CFM
- Heavy gauge construction
- Pressure to 15" SP

Optional Items

- Custom designs
- Aluminum construction
- AMCA spark resistant construction
- High temperature construction to 800° F
- Dampers, flanges, shaft seals and guards
- Inlet boxes, drains, and the whole nine yards
- Single phase, three phase, 50 Hz & 60 Hz motors
- TEFC, explosion proof, mill & chem, ATEX motors



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STANDARD DESIGN FEATURES

Heavy Duty Impellers:

Constructed of single thickness, steel blades, welded firmly to the finely spun shroud and backplate. Reinforcement is added depending on size and class of construction. Narrow, wide, double wide and custom widths and diameters available. Every impeller is dynamically and statically balanced to ANSI standard G2.5 prior to fan assembly.

Housing:

Continuously welded heavy gauge carbon steel housing structure, with intermittently welded support stiffeners and bracing of heavy gauge structural steel. Intermittent welds are caulked to prevent corrosion. Housings are rotatable on sizes 122 – 330. Fixed housings on sizes 365 and up.

Arrangements:

Single wide and double wide arrangements 1, 2, 3, 4, 7, 8, 9 & 10. Special arrangements are possible.

Bearings:

Standard bearings are heavy-duty pillow block type. L10 bearing life of 40,000 hours. Where necessary, bearings are accessible for lubrication.

Lifting Lugs:

Standard features on all units. Lifting lugs aid in the installation and handling of the unit.

Inlet & Outlet Connections:

Slip-fit (straight) inlet and outlet connections come standard. Flanged & drilled are optional.

V-Belt Drive Sets:

Drive sets are selected based on fan speed and horsepower. All drive belts are oil, heat and static resistant. Two types of v-belt drives are available:

- **Adjustable pitch drives** allow motor sheave to be adjusted about 10% from original fan speed. Adjustment is done when fan is stopped. Typically used in lower horsepower (under 10HP) applications.
- **Fixed pitch drives** do not allow for speed adjustment without changing at least one sheave. Typically offer less expense and lower vibration levels over adjustable pitch drives.

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Motors:

Motors are application specific. Daltec can provide one to meet your particular specifications. Motors are factory mounted depending on size, application and customer requirements.



Maintenance Features:

Daltec make servicing your fan quick and easy. Bearings, v-belt drive sets and motors are accessible for ease of lubrication, adjustment and wiring.

Inlet Cone:

Provides a smooth efficient entry of airflow into the fan impeller.

Balancing:

Every impeller is precision balanced prior to fan assembly.

Shafts:

Ground and polished with keys at both ends.

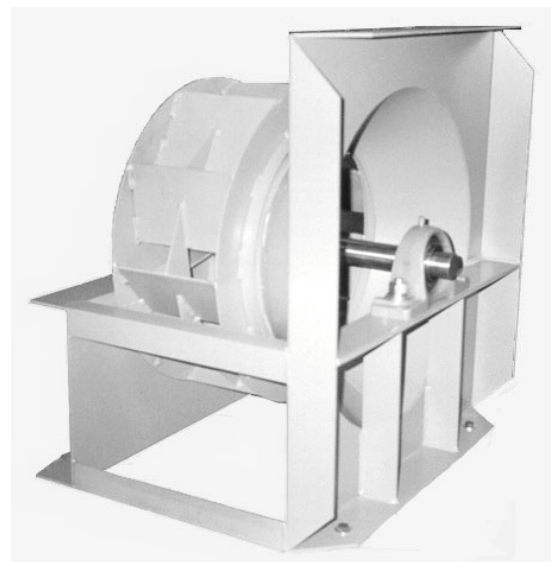
Finish:

Industrial grade air dry enamel-alkyd with a semi-gloss finish. For outdoor applications and temperatures of 250°F. Other coatings and colours are available on request.

Rotation & Discharge:

Clockwise and counterclockwise rotations are available in the eight standard discharge positions.

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Plenum Fan



OPTIONAL CONSTRUCTIONAL ITEMS

Exotic Material Impellers:

Impellers constructed from aluminum, stainless steel, fiberglass, titanium or hasteloy are available on request.

Exotic Material Housings:

Housing constructed from aluminum, stainless steel, fiberglass, titanium or hasteloy are available on request. Please contact the factory for other metal requests.

Arrangements:

Single wide, double wide and modified arrangements are available to suit your specific need and application.

Bearings:

Anti-friction ball or roller bearings for grease or oil lubrication and water-cooled journal type bearings are available. Specific L10 life as requested. Temperature and vibration sensing devices can also be installed for you. Daltec can meet or exceed all of your bearing specifications.

Finish:

Non-standard paint finishes; epoxy, heresite Teflon, rubber and special colors are available on request.

Inlet & Outlet Connections:

Flanged & drilled inlet and/or outlet are available upon request. Safety guards are available.

Shafts:

Monel, stainless steel and other materials are all available. Larger shafts are stress relieved prior to machining.

Drains:

Standard NPT fitting welded to lowest point in housing.

Guards:

Belt and shaft guards protect personnel from moving parts while permitting circulation of air around drive components. Inlet and outlet guards are available for non-ducted applications. All guards meet OSHA standards.

Unitary Bases:

Rigid welded structural steel base used to provide a common support for fan and motor. Typically used on larger fan/motor combinations.

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High Temperature Applications:

Fans over 300°F require special protection. Heat slingers are used to dissipate heat along the motor shaft. Motor heat shields help deflect heat away from motors. High temperature shaft seals and special grease work to prolong bearing life.



Access Doors:

Three styles of access for maintenance and inspection are available. Bolted, hinged and quick release.

Shaft Seals:

Helps reduce airstream leakage and prevents air stream contaminants from escaping along the drive shaft damaging bearings. Our standard is a plate or lip seal. Daltec can provide many different types of seals, such as stuffing box, labyrinth or mechanical carbon ring. Each comes with varying degrees of protection.

Split Casing/Housings:

Split housings in a variety of fashions are available dependant on shipping and/or maintenance requirements.

Inlet Boxes:

Ensures efficient airflow entry with a minimum pressure loss. Inlet boxes are designed to meet fan specific performance requirement.

Liners / Wear Plates:

Removable, replaceable and wear resistant liners for impellers and housings. Usually fabricated from wear resistant steel, chromium carbide overlay or tungsten carbide overlay.

Control Dampers:

Parallel blade, opposed blade or variable inlet vane dampers can be installed directly on fan outlet or directly on an inlet box. Electric or pneumatic damper actuators can be provided as well.

Couplings:

Many different couplings are available including flexible grid, flexible disk and gear types. Spacers can also be provided.

Vibration Isolators:

Aids in reducing fan vibration. Rubber in shear and a number of spring type isolators are available.

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Daltec Fans ... maximum efficiency, maximum performance

BI	Maximum Safe Speed		
	Class I	Class II	Class III
122	3410	4481	5620
135	3221	4202	5294
150	2777	3622	4564
165	2400	3131	3544
182	2155	2811	3542
200	1946	2539	3199
222	1710	2241	2624
245	1513	2104	2650
270	1408	1836	2314
300	1334	1741	2193
330	1161	1514	1908
365	1043	1360	1714
402	945	1233	1554
445	856	1116	1406
490	777	1013	1277
542	702	915	1153
600	635	827	1043
660	577	752	948
730	522	880	857

BI	Housing Material Gauges		
	Class I/II	Class III	Class IV
122	14	12	CF
135	14	10	CF
150	12	10	CF
165	12	10	CF
182	12	10	CF
200	12	10	CF
222	12	10	CF
245	12	10	CF
270	10	10	CF
300	10	10	CF
330	10	7	CF
365	10	7	CF
402	10	7	CF
445	10	7	CF
490	10	7	CF
542	7	7	CF
600	7	7	CF
660	7	CF	CF
730	7	CF	CF

CF - Consult Factory

Also Available From Daltec

Plug Fans



Radial Blowers



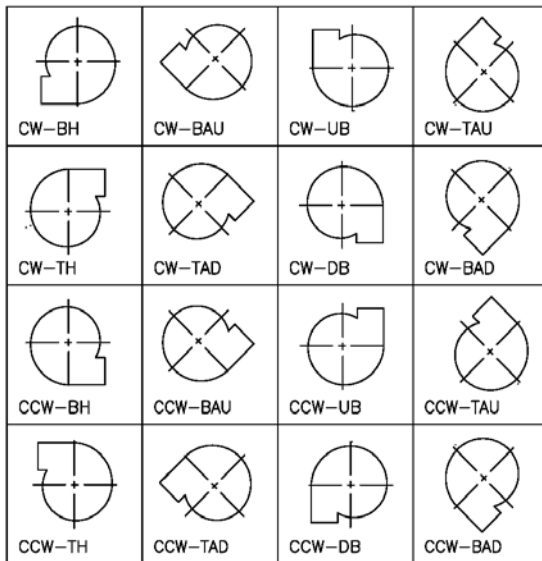
Speciality Fans



Axial Fans



For complete performance ratings and/or quotation, please contact your local Daltec sales representative or call (888) 5DALTEC (532-5832) for assistance



ROTATION AND DISCHARGE AS VIEWED FROM THE DRIVE END

Computer Selection Program

The Daltec computerized fan selection program is now available on line at www.daltecfans.com.

For access to the computerized fan selection program and/or other performance details, please contact your local Daltec sales representative or call (888) 5Daltec (532-5832) for assistance.



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