

Pneumatic Conveying

Fan Applications



PNEUMATIC CONVEYING FAN APPLICATIONS

Chicago Blower offers an extensive line of industrial fans and blowers for powder and bulk solid pneumatic conveying, as well as for providing air to convey material for reuse, waste, or further production. The bulk density of the materials, such as food or metal materials, must be determined in order to convey materials by air. Our air handling equipment is designed to produce the high velocity air needed to carry materials from the processing stage to the collection stage. While utilized for conveying purposes, our fans also provide additional cooling and aeration to the materials, if needed. Our fans are available in a wide range of arrangements, allowing them to fit in the tightest of spaces and provide as little maintenance as possible. Whether you are conveying aluminum scrap to gun powder, or plastic bottles to soybeans, and so on, Chicago Blower has the fan to meet your specific requirements.

PROJECT EXAMPLES



SQAD Direct Drive Fan used in a conveying system application.



Cast Aluminum Pressure Blower installed on a vacuum conveyor.



Two SQAD Fans being used in a conveyor vacuum rinser application.

Capabilities & Options

- Reach pressures over 115" wg with our Single Stage Pressure Blower while staying with a single fan wheel.
- Our Evase and transition pieces allow our fans to meet all the velocity requirements of a conveying application from 1,000 FPM to over 10,000 FPM.
- Utilizing flow control types such as VFD, dampers and valves, our fans adjust to your system and turndown requirements.
- Available with wheel and housing liners for conveying abrasive materials, or with stainless steel construction for corrosive materials.

Conveying Velocity

VELOCITIES REQUIRED to Convey Selected Materials			
MATERIAL	WEIGHT ¹	VELOCITY ²	SUCTION ³
Ashes, coal	30	5500	3
Beans	28	6000	4
Buffing		3700	2.5
Cement	100	7000	5
Cork	14	3000	1.5
Corn, cobs	25	5500	2.5
Corn, ears	56	6000	4.5
Corn, shelled	45	5500	3.5
Cotton, dry	5	3500	2
Grinding Dust	30	4500	2
Lime, hydrated	30	5500	3
Malt	35	4800	3
Mineral Wool	12	3500	2
Paper Cuttings	20	5000	3
Rags, dry	30	4000	2.5
Sawdust, dry	12	3500	2.5
Shavings, light	9	3500	2.5
Shavings, heavy	24	4000	3
Wheat	46	6000	4
Wool, dry	5	3500	2

Notes:

1. Approximate weight in lbs. per cubic feet

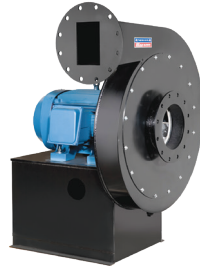
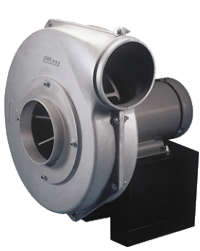
2. Average velocity (feet per minute) to convey material

3. Suction (inches of water) to pick up material

CBC FANS FOR CONVEYING

PRESSURE BLOWERS

Develops high velocity for material conveying, typically set up on the clean side before the material feeder



Cast Aluminum

For fume/dust control, forced air drying/cooling. Non-sparking properties of the aluminum qualify the blower for AMCA Type B rating. Match multiple wheels/ inlets to eight housing sizes to meet required performance. Temperatures to 200°F.

- Sizes: 800 to 1829
- Volumes to 5,000 CFM
- Pressures to 20" wg

Request Bulletin CAPB

Single Stage

Design 53 blowers are suited for pneumatic conveying, combustion, and various other high pressure applications. Available in aluminum and steel wheel styles up to 650°F.

- Sizes: A to R
- Volumes to 18,000 CFM
- Pressures to 91" wg

Request Bulletin CPB

RADIAL BLADED FANS

Provides high velocity and pressure for material conveying



SQI Industrial Fans

Heavy Duty "LS" wheel exhausts harsh corrosive airstreams. Compact industrial fan with gusset mounted bearings to provide a compact arrangement. Temperatures to 650°F.

- Sizes: 5 to 17
- Volumes to 17,000 CFM
- Pressures to 19" wg

Request Bulletin SQI

ICF Industrial Fans

Industrial Centrifugal Fans with flat bladed wheel resists material buildup while maintaining balance. Heavy duty shaft and bearings. Temperatures 800°F.

- Sizes: 7 to 41
- Volumes to 120,000 CFM
- Pressures to 40" wg

Request Bulletin ICF

AIRFOIL OR BACKWARD INCLINED FANS

Typically used for air conveying applications



PBI Packaged Fans

Designed initially for dust collection applications, the Design 64 provides a choice of 12 fan sizes and comes with a 3-year warranty (an industry first). Temperatures to 200°F.

- Sizes: 122 to 365
- Volumes to 46,100 CFM
- Pressures to 23" wg

Request Bulletin PBI

BI Industrial Fans

Design 10A fans are for high volume clean air and most light industrial applications. Single or double width, construction classes I-III. Temperatures to 800°F.

- Sizes: 135 to 807
- Volumes to 263,000 CFM
- Pressures to 30" wg

Request Bulletin BCF or DFOB

SQA/SQB Square Fans

Versatile square fan housings flanged on all sides for mounting in any of four discharge positions. Fans with a "B" wheel are capable of exhausting dirty air. Adjustable motor base mounts to all sides. Temperatures to 650°F.

- Sizes: 12-1/4 to 44-1/2
- Volumes to 70,000 CFM
- Pressures to 18" wg

Request Bulletin SQA or SQB

SQAD Direct Drive Fans

Compact direct drive connected fans are ideal for conveying, packaged supply, exhaust, combustion air. Options for partial width construction. Temperatures to 200°F.

- Sizes: 8-3/4 to 30
- Volumes to 27,386 CFM
- Pressures to 22" wg

Request Bulletin SQAD

RESOURCES

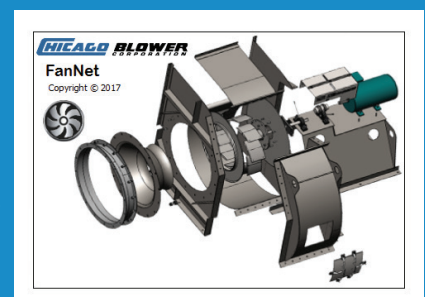
CBC Fan App

Engineering calculations at your fingertips. Get it on Google Play or download on the App Store



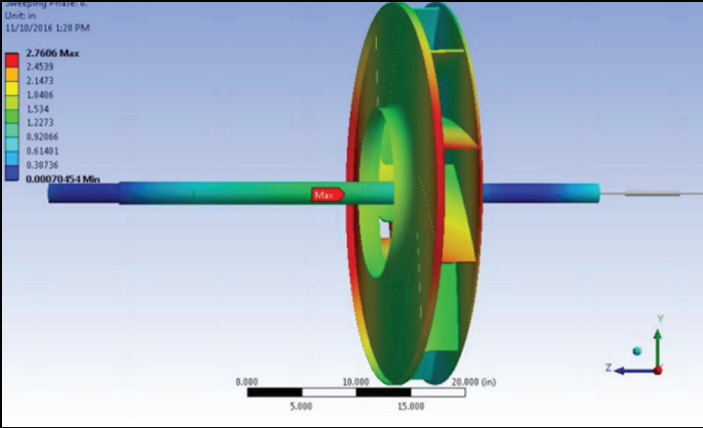
FanNet

Refer to Chicago Blower's FanNet software for performance, fan curves and sound data. For further assistance, contact your local Chicago Blower sales engineer.



SETTING THE STANDARD FOR QUALITY

Innovative Engineering through Application Analysis



Chicago Blower Fans are also available worldwide:

- Argentina
- Australia
- Azerbaijan
- Belarus
- Belgium
- Brazil
- China
- Estonia
- Georgia
- India
- Indonesia
- Israel
- Kazakhstan
- Korea
- Kyrgyzstan
- Latvia
- Lithuania
- Luxembourg
- Mexico
- Mozambique
- Netherlands
- New Zealand
- Norway
- Russia
- Saudi Arabia
- Singapore
- South Africa
- Spain
- Sweden
- Taiwan
- Tajikistan
- Thailand
- Ukraine
- Uzbekistan
- Venezuela
- Zambia
- Zimbabwe

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