CHICAGO

Bulletin ICF 105

Rugged radial wheels handle a wider range of harsh materials

ICF Industrial Centrifugal Fans

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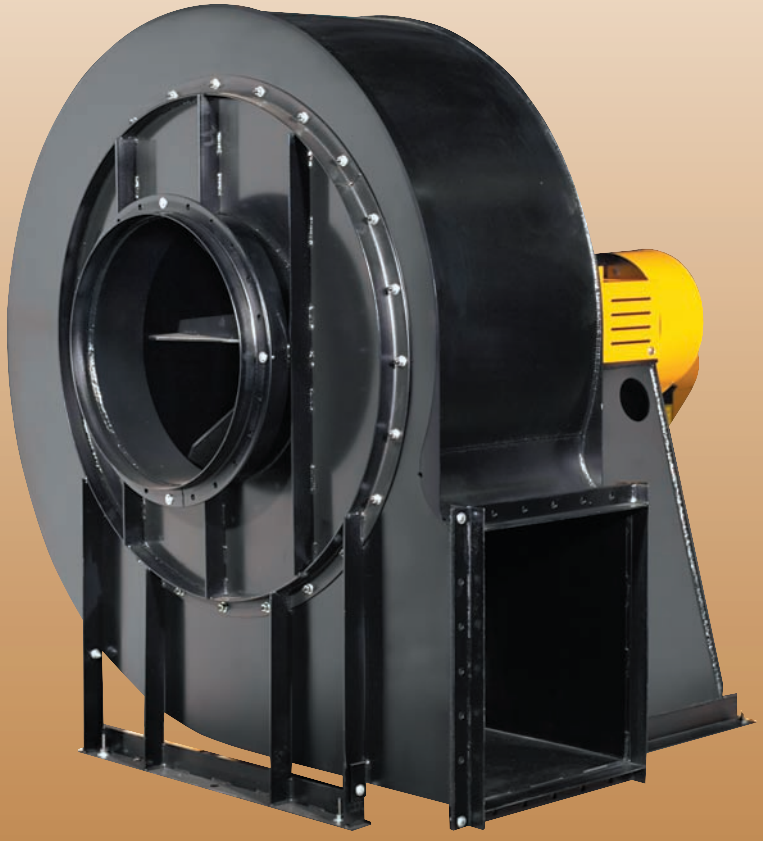
Thousands of industrial fan requirements worldwide have been resolved with Chicago's Industrial Centrifugal Fans. With the availability of two types of rugged radial wheels, the fans handle a wider spectrum of harsh airstreams and materials. The two housing designs further assure compatibility with specific applications and installations.

Select from 14 sizes with volumes to 70,000 CFM, pressures to 40", and temperatures to 800F. Performance ratings are included in Chicago's fan.net selection program, also providing dimensions and sound data.

Chicago Blower's efficient and cost effective Industrial Centrifugal Fans are one of a long line of air moving products that has earned Chicago Blower the reputation as a premier industrial fan builder. For application assistance, Chicago Blower representatives are located throughout North America and around the world.

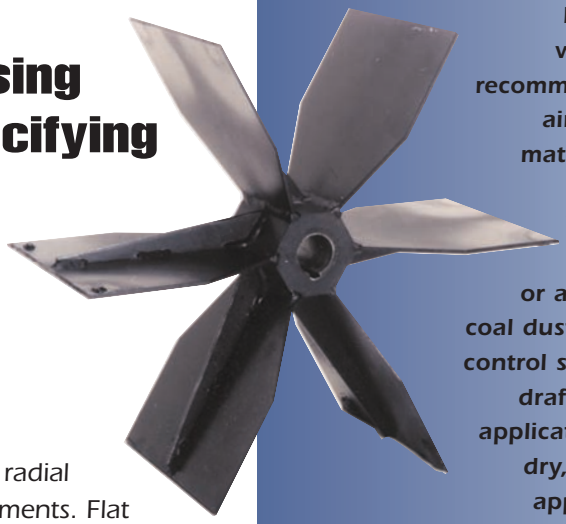


Refer to Chicago's **fan.net** for performance, fan curves and sound data. For software and assistance, contact your local Chicago Blower sales engineer.

With the many wheel/housing combinations, it's like specifying a custom fan without the premium cost and long delivery time

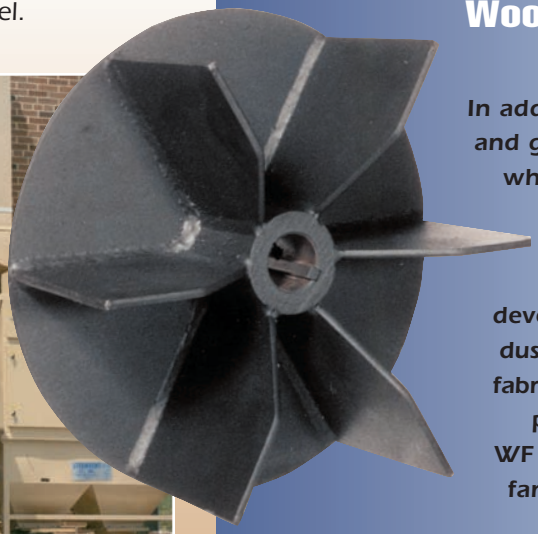
Wheel Selection

Chicago's ICF fans are equipped with 6-bladed steel radial wheels designed for the toughest industrial environments. Flat blade surfaces prevent material build-up or deposits and are easy to clean. Wheels are statically and dynamically balanced for smooth long-lasting operation, keyed to the shaft and secured with multiple set screws. Most fan sizes can be ordered with either the Wool-Fiber Wheel or the Long-Shavings Wheel.



Long Shavings Wheel (LS)

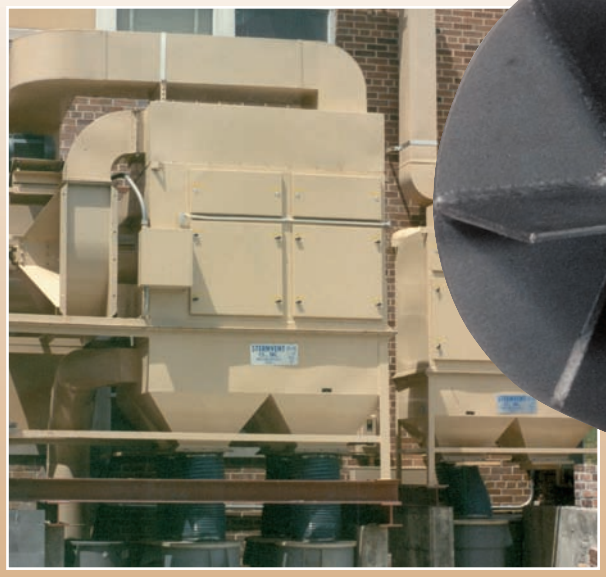
Long Shaving wheels without backplate are recommended for conveying air or gases containing material that could build up on other wheels. The LS wheel is ideal for sticky, heavy or abrasive dust, such as coal dust and gritty pollution control systems, plus induced draft and industrial oven applications. First choice for dry, granular conveying, applications range from wood chips to plastics. Fan sizes 7 through 41.



Wool-Fiber Wheel (WF)

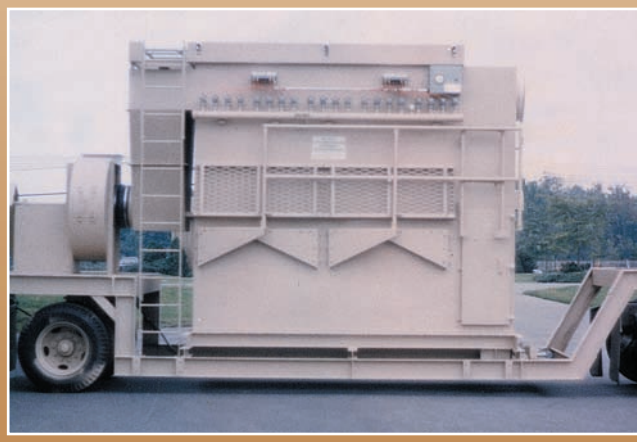
In addition to handling air and gases, the Wool-Fiber wheel with backplate is designed for long fibers and stringy material. It was developed to handle the dusty, fibrous airstreams, fabric manufacturing and paper processing. The WF wheel is available in fan sizes 5 through 21.

Compact square fans are first choice for many installations such as this four-stage fabric filter at a major pharmaceutical lab.



Right - The ideal solution for on-going road building projects is this mobile dust collector, used here for a temporary asphalt plant.

Left - Applications involving corrosive by-products or high humidity environments require rust free stainless steel fans.



Chicago's Industrial Centrifugal Fans are constructed of rugged components to provide longer life

Shafts

Selected medium carbon steel SAE 1040 to SAE 1045 is turned, ground and polished to provide secure wheel and bearing contact. Shafts are sized to run well below the first critical speed.

Bearings

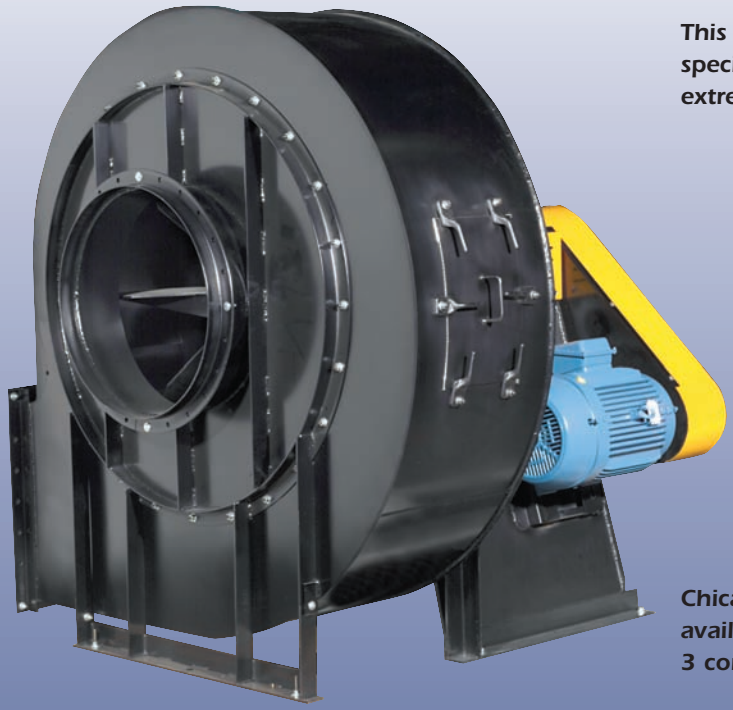
American made ball or roller bearings provide a minimum average life of 75,000 hours at maximum speeds, equal to eight hours a day, 365 days a year, for 25 years.

Housings

Most fan sizes are available with either Chicago Blower's own versatile square housing SQI, or fixed scroll design, D/16A. Both fan types are constructed of steel plate continuously welded to form a rugged stable housing. Heavy gauge mounting flanges and stiffeners add additional rigidity. Flanged outlet is standard except for bottom discharge on some sizes. Removable inlet coverplates provide wheel access.

Housing/Wheel Availability

Fan Size	Wheels		Housings	
	WF	LS	SQI	D/16A
5	X		X	
6	X		X	
7	X	X	X	
9	X	X	X	
11	X	X	X	X
13	X	X	X	X
15	X	X	X	X
17	X	X	X	X
19	X	X		X
21	X	X		X
23		X		X
26		X		X
29		X		X
33		X		X



This Size 13 fan features special insulation for extreme temperatures

Chicago's rugged D/16 fans are available in heavier-duty Class 3 construction

Packaged SQI fans are built with specified accessories, factory tested, shipped ready to run

SQI Features

The versatile Chicago Square Fan design allows the housing to be positioned on any of four sides and the fan to be run in any of eight discharge positions. Motor base has mounting holes for all discharges.

The basic SQI fan with rugged continuously welded construction

Flanged side sheets provide extra strength to an already rigid configuration. SQI fans come standard with unpunched flanged outlet and slip fit inlet.

Maximum temperature with either wheel is 650°F. Shafts run in two individual grease lubricated ball bearings mounted on a bolted removable bracket for easier service.

Chicago's SQI square design fans are available in Arrangements 1 and 9. They are also available as "packaged" fans with motor, drive and accessories installed, shipped ready to run.

Many critical processing installations require stainless steel and alternate construction

D/16A Features

Chicago's traditional fixed housing Industrial Centrifugal Fans are available as a basic Arrangement 1 in sizes 11 thru 41 or self-contained Arrangement 9 in sizes 11 thru 37. The fans are built in constructions classes 2 thru 4 to meet any duty.

With the Arrangement 1 fan, two heavy-duty ball or roller bearing pillow blocks are mounted on a pedestal attached to the housing. The fan shaft extends over the base and is keyed for mounting the drive sheave. Maximum temperature for the Arrangement 1 is 400°F, or 800°F with optional shaft cooling wheel.

The Arrangement 9 is a compact, space-saving unit with adjustable motor slide base welded to the bearing pedestal. Maximum temperature for the Arrangement 9 is 400°F or 650°F with shaft cooling wheel.

Performance Options

Punched Flanged Inlet/Outlet

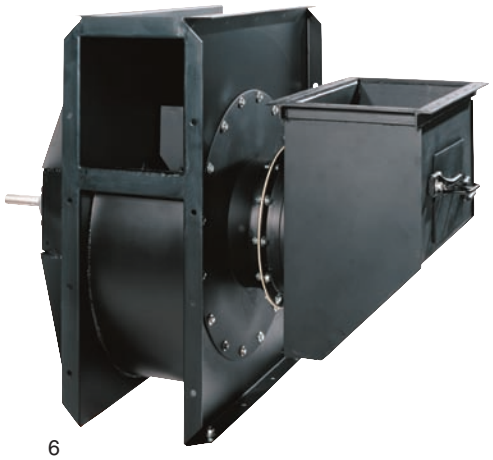
Design SQI is standard with unpunched flanged outlet and slip fit inlet, both available with punched flanges. Fixed housing D/16 fans are standard with punched flanged outlet and slip fit inlet, available with unpunched flanged outlet and punched flanged inlet.

Outlet Dampers

Dampers for all fan classes are suitable for manual or automatic operation with blades perpendicular to the shaft. Dampers are furnished in standard duty to 600°F, with alternate construction available for high temperature applications to 800°F.

Access Doors

Three types – flush mounted with quick opening tension clamps; bolted for positive sealing; plug type for insulated applications. Neoprene gasket to 300°F and asbestos-free gasket to 800°F.



Shaft Cooler and Guard

Cooling wheel raises the allowable temperature limit for arrangement 1 or 9 fans from 300°F to 650°F. Adding a shaft seal on arrangement 1 fans extends the limit to 800°F. Includes expanded metal guard.

Split Housings

Fixed housing fans sizes 23-37 can be furnished with flanged horizontal split housings. Split housings are standard on size 41.

Spark Resistant Construction

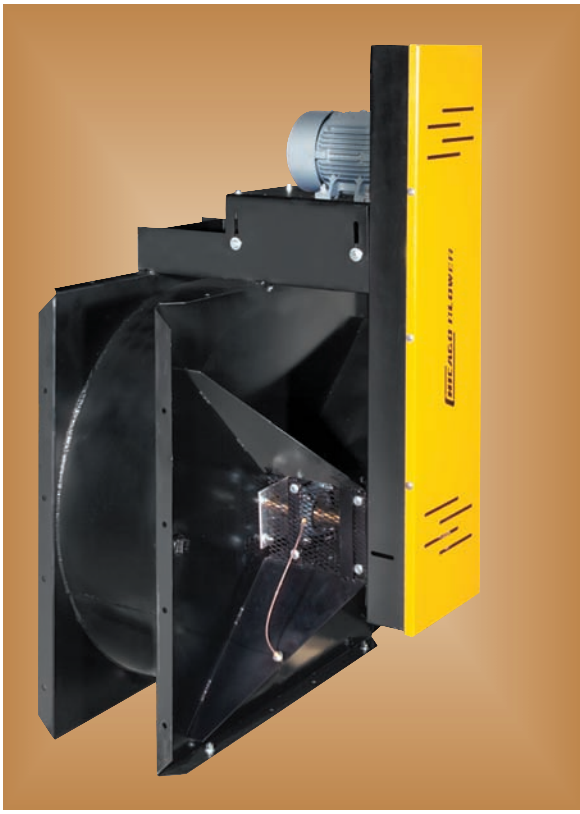
AMCA Type C spark resistant construction substitutes an aluminum inlet cone and adds a drive side aluminum buffing tube between the wheel, shaft and housing. Available with all classes and sizes, arrangement 1 and 9. Maximum temperature is 600°F. Requires electrical grounding.

Unitary Base

Fan and adjustable motor base are welded onto a common base of continuously welded structural steel channel.

Inlet Box

The bolt-on inlet box simplifies ductwork connection when a straight horizontal connection is not feasible. Assures dependable fan performance when a sharp turn is required at the fan inlet. Accommodates inlet box damper.



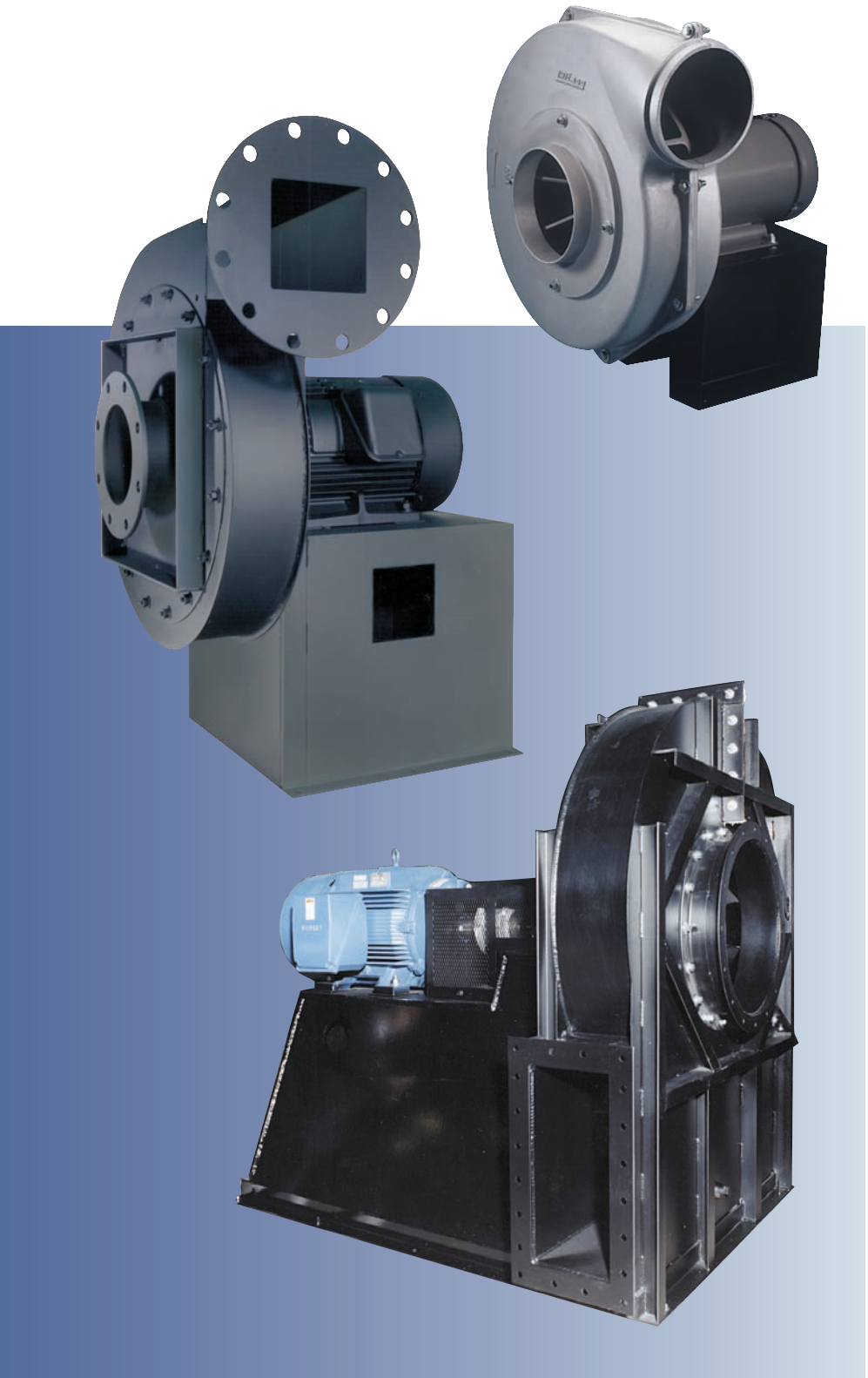
Shaft Seal Bearing/Shaft Guard

Extended Grease Fittings

Belt Guard

Inlet Screen

Housing Drain



Chicago Radial Bladed Pressure Blowers

Cast Aluminum Pressure Blowers

Chicago's economical Design 38 Pressure Blowers are especially suited for combustion air, fume and dust control, forced air drying and cooling, and conveying. Nine housing sizes, 8" to 18.5", can each be fitted with multiple wheel/inlet configurations to match required performance. Volumes from 50 to 5,000 CFM and pressures to 24"wg. Ask for Bulletin CAPB.

Single Stage Pressure Blowers

Chicago's Design 53 Pressure Blowers are suited for higher pressure, heavier duty burners and furnaces in addition to a wider range of process applications and conveying systems. The blowers are available in four arrangements and eight discharge positions. Volumes from 250 to 5,200 CFM and pressures to 59"wg. Ask for Bulletin CPB.

Pressure Air Fans

Chicago's custom design Pressure Air Fan is recommended for high pressure primary air on burners, pulverizes, fluidizers and scrubbers, plus pneumatic conveying systems handling harsh materials. Variable widths and alternate corrosion resistant construction is available to meet individual performance and application requirements. Wheel diameters from 20" to 120" deliver volumes to 50,000 CFM and pressures to 70"wg. Ask for Bulletin PA.

Setting the Standard For Quality

CHICAGO

Innovative Engineering Through Application Analysis

Quality Fans Shaped With Skill and Pride

Global Service Only a Click Away

Sales Offices Throughout North America

Chicago Blower Fans are also manufactured worldwide:

Argentina, Australia, Brazil, Chile, China, Colombia, Denmark, Germany, Greece, Holland, Hong Kong, India, Indonesia, Israel, Italy, Japan, Korea, Malaysia, New Zealand, Norway, Philippines, Portugal, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Thailand, Taiwan, Turkey, Venezuela.

Your Primary Source For Every Fan Requirement

General Duty -

Airfoil and vane axial fans for clean exhaust or supply air

Industrial Duty -

Fans to handle dirty and corrosive environments

Heavy Duty -

Custom engineered fans for specific applications

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