



PRESSURE AIR FANS



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Chicago Pressure Air Fans are at work in as many diverse applications as they are in locations throughout the world. Clean air applications include combustion air, air drying, primary air ejectors, and product cooling. This fan can handle numerous materials in pneumatic conveying systems. The PA fan is ideal for corrosive exhaust, air pollution systems and chemical processing.

By adding ceramic tile or chromium carbide wheel and housing liners, Chicago's PA fans easily handle abrasive materials. In particular, fans with ceramic

tile liners are extremely effective in pulverized coal applications, handling up to 250 grains per cubic feet of air. For corrosive gases, a stainless steel wheel and housing is available, or a lower cost rubber-lined, mild steel housing will often fulfill the requirements.

Tell us your needs. Chicago air moving professionals will review your individual application and specifications, and provide recommendations. Chicago Blower offices are located throughout America and around the world.

Wheel Designs to Meet Specific Volumes and Pressures

Chicago Blower's Design 2300 radial bladed wheel is available in single and double width designs in sizes from 20" to 100". Diameters are variable to 115% of nominal with wheel widths available from 40% to 115%. As a rule, wheel width dictates air volume while the diameter controls the pressure. By varying the width and diameter, overlapping performance envelopes are created and optimum efficiencies are realized.

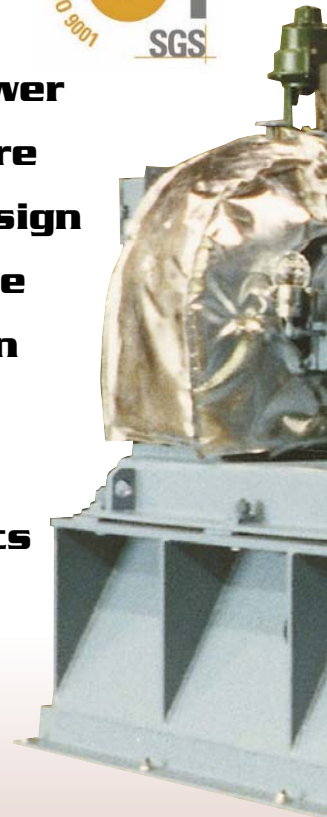
Chicago's Design 4900 radial bladed wheel is available in single

width sizes from 34" to 100". The wheel's narrow width blades and slightly conical sideplate make it our lowest specific speed custom fan.

Standard wheels are constructed from ASTM A606, A242 and A588 alloy steel capable of 800°F. Optional stainless steel wheels are rated to 1000°F. All PA fan wheels are dynamically balanced. The pressure range extends to 108" wg and volumes to 440,000 CFM.

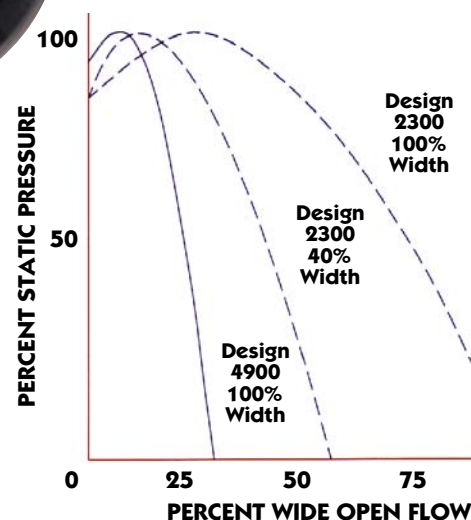


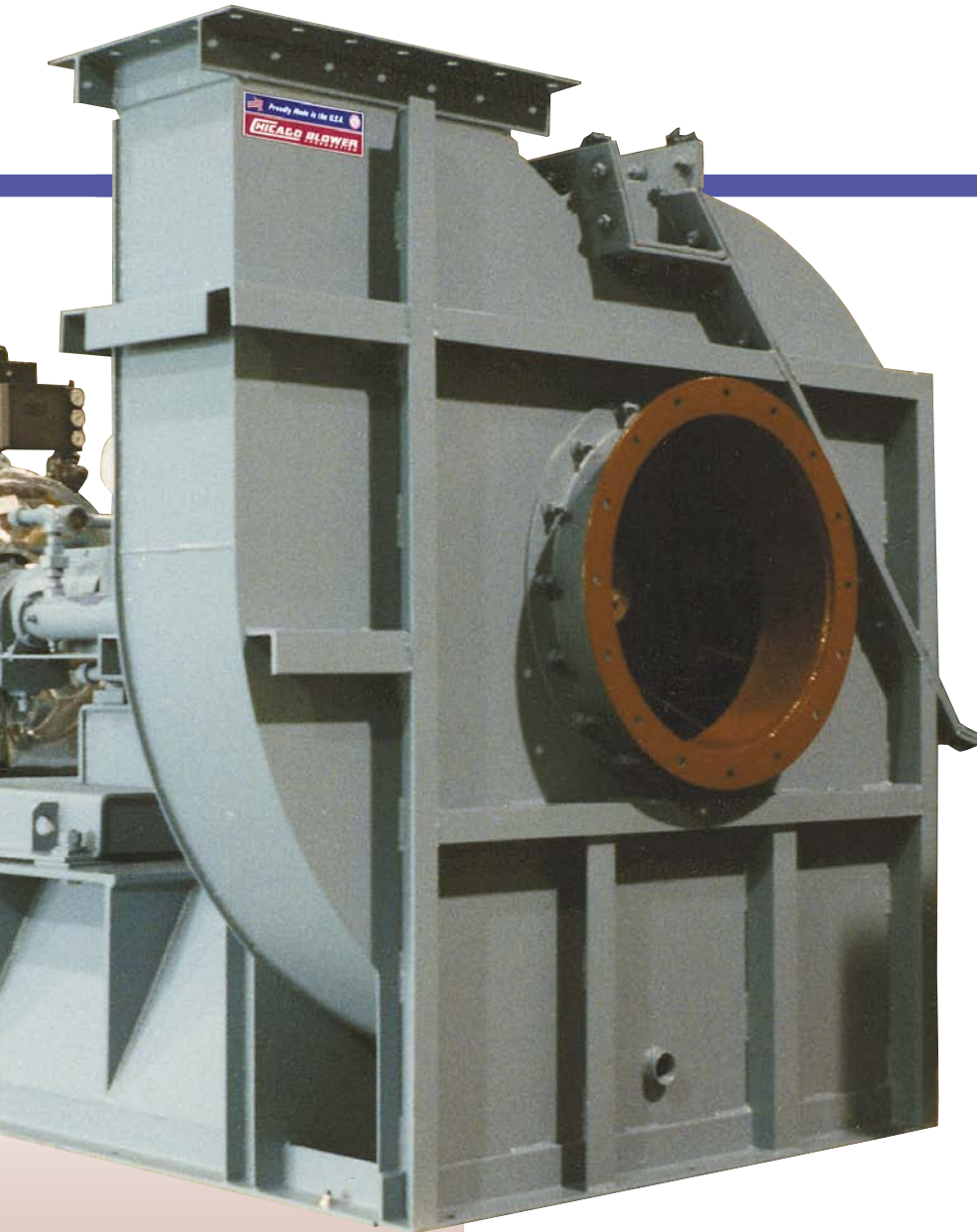
Chicago Blower Engineers are eager to design and build the pressure fan that meets your exact requirements



Design 2300 Wheel

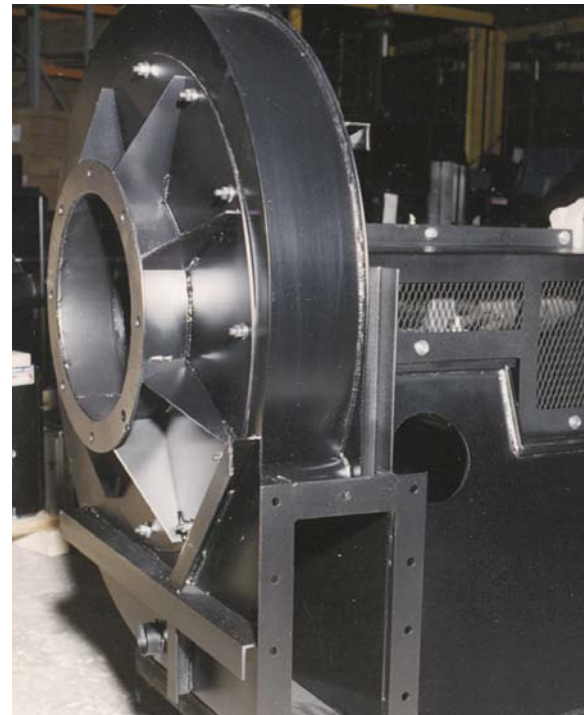
Performance Comparison of D/2300 (100% and 4 widths) with D/4900





Arrangement 8 PA fan with split housing, raised access door, cooling wheel and roller bearings

Arrangement 8 PA fan with inlet cover plate to facilitate rotor removal, and multiple guard covering shaft, bearings and coupling



An unpainted fan showing continuous housing welds, stiffener stitch welds and plug welds for scroll and side liners



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10%
D

100

Design 4900 Wheel

Features

Each Chicago Blower Pressure Air fan is designed to meet specific customer performance and mechanical requirements. The versatile PA fan is available in AMCA arrangements 1, 3, 4, 7, 8 and 9.

All housings are standard with welded construction throughout and are rigidly braced for extended service. All fans are fully equipped with flanged inlet and outlet, access door, drain, shaft seal, guards for shaft, bearing and couplings, and extended lube lines.





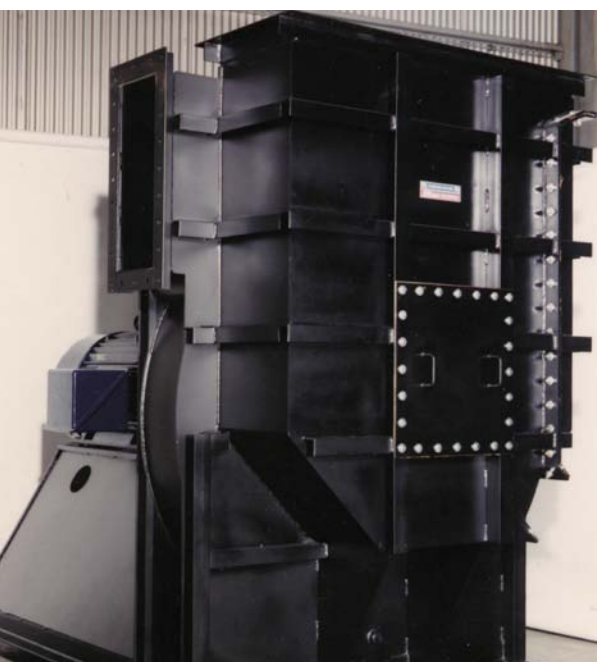
Design Options

To meet specific applications, PA fans can be built with stainless steel or alloy construction. Split housings facilitate wheel removal without disturbing connecting ductwork. Integral inlet boxes, pre-spin inlet dampers and opposed-blade outlet dampers all control air flow. Belt guards and shaft coolers are also common options, in addition to the various housing and wheel liners.

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Partial List of Available Accessories

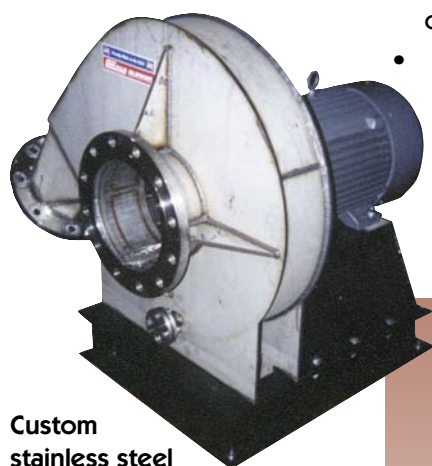
- Integral Inlet Box
- Unitary Base
- Multiple Arrangements (including dual drive)
- Split Housings
- Leak resistant construction
- Rubber lined housings
- Various blade liner materials
- Scroll and side liners
- Heat treated wheels
- Motor jack bolts
- Fan jacking bolts
- Stainless steel shaft sleeves
- Spark resistant Type "C" construction
- Continuous welding
 - AWS welding
 - API 560 and 673 features
 - Wheel Balance to G2.5 and lower
- Companion inlet or outlet flanges
- Inlet or outlet dampers
- Quick-clamp or raised bolted access doors
- Belt guard
- Shaft cooler
- Multi-guards
- Evasé
- Isolation springs
- Vibration detectors
- Cooling wheels
- Low leakage seals
- Flanged and valved drains
- Spacer couplings
- Spray nozzles
- Sleeveoil bearings
- Trico oilers with oil level sight glasses
- Thermocouples or RTDs
- Speed sensors



Arrangement 8 fan with 0° integral inlet box



Ceramic lined blades extend wheel life in abrasive applications



Custom stainless steel leak-resistant fan tested at Chicago Blower to 6 psig with soap bubble test



Refer to Chicago Blower's Selection Program, fan.net, for performance, fan curves and sound data.

Locate your local Chicago Blower sales engineer for software and assistance on the web at www.chicagoblower.com or email fans@chicagoblower.com

Pulverized Coal Processing

This extremely abrasive application is recognized for its rapid deterioration of process equipment. The fan is lined with ceramic tile to extend wheel life. The fan also has added structural support for NFPA 85 requirements. This 150 HP pressure fan is capable of exhausting 28,000 pounds of coal per hour.



Dilution Air Fans

Suitable for use in high pressure, variable volume systems, this fan includes these custom features:

- Arrangement 4S design
- Narrow Width, Over Diameter Wheel
- Expansion joints with custom transition
- Custom inlet filter/silencer combination
- Integral lifting eyes
- Certified factory mechanical and performance tests



Typical Custom Engineered Product Applications



Selective Catalytic Reduction (S.C.R.) Units

Fans are engineered to stringent customer specifications, with highlighted features including:

- Arrangement 8S with Thomas 71 Spacer Coupling
- Flanged Drain
- Special Coating
- ISO 1940 G2.5 Balance
- Inertia Block Base
- ASTM 4140 Shaft
- Heat Treated Wheel
- Continuously Welded
- Interference Fit Rotor with split housing for rotor removal
- Efficient Evasé Design and Fabrication
- Custom inlet filter/silencer package

*Setting the
Standard
For Quality*

CHICAGO

*Innovative Engineering
Through Application Analysis*



*Quality Fans
Shaped With
Skill and Pride*



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*Chicago Blower Fans
are also manufactured
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Indonesia, Israel, Italy,
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New Zealand, Norway,
Philippines, Portugal,
Saudi Arabia, Singapore,
South Africa, Spain, Sweden,
Thailand, Taiwan, Turkey,
Venezuela.



Your Primary Source For Every Fan Requirement

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fans for clean exhaust
or supply air*

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*Fans to handle
dirty and corrosive
environments*

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*Custom engineered
fans for specific
applications*

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