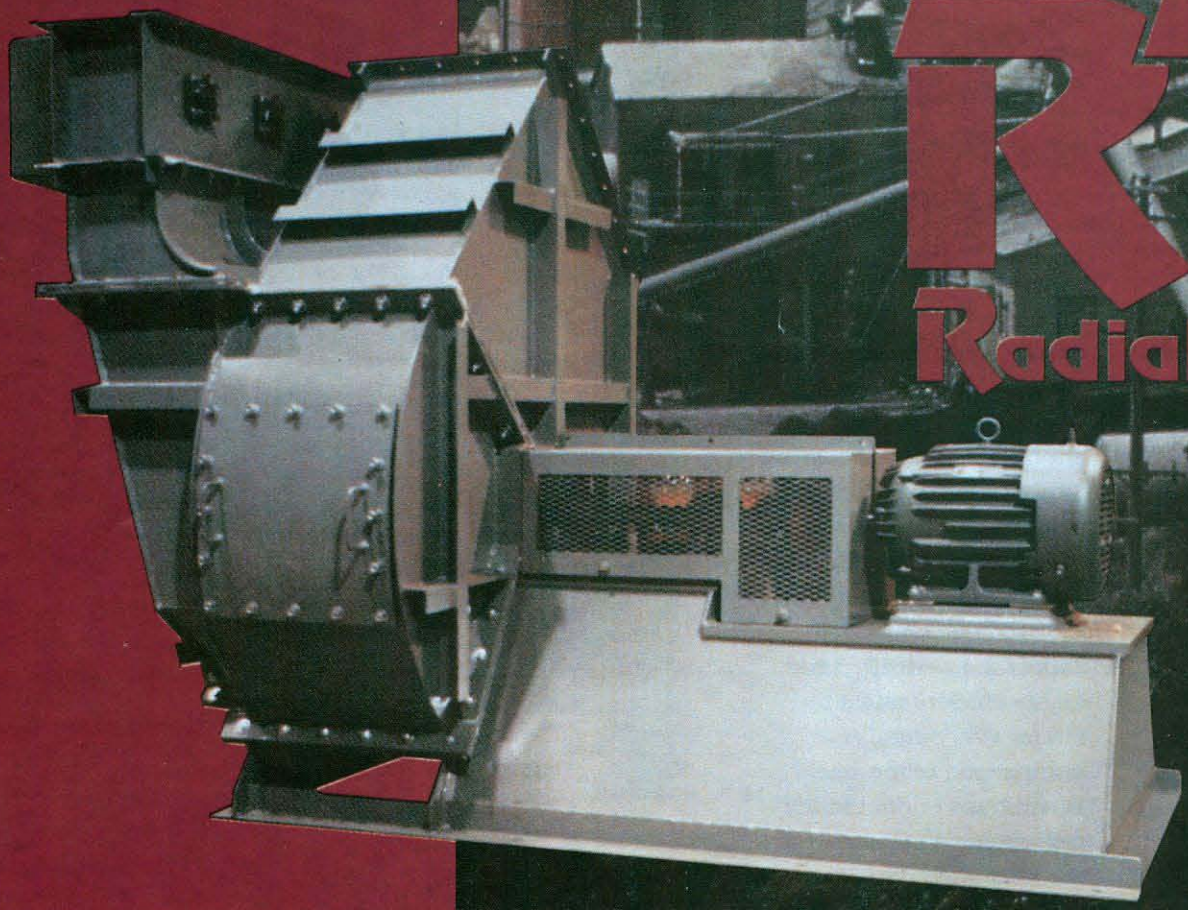
CHICAGO

BULLETIN RT-106



RT

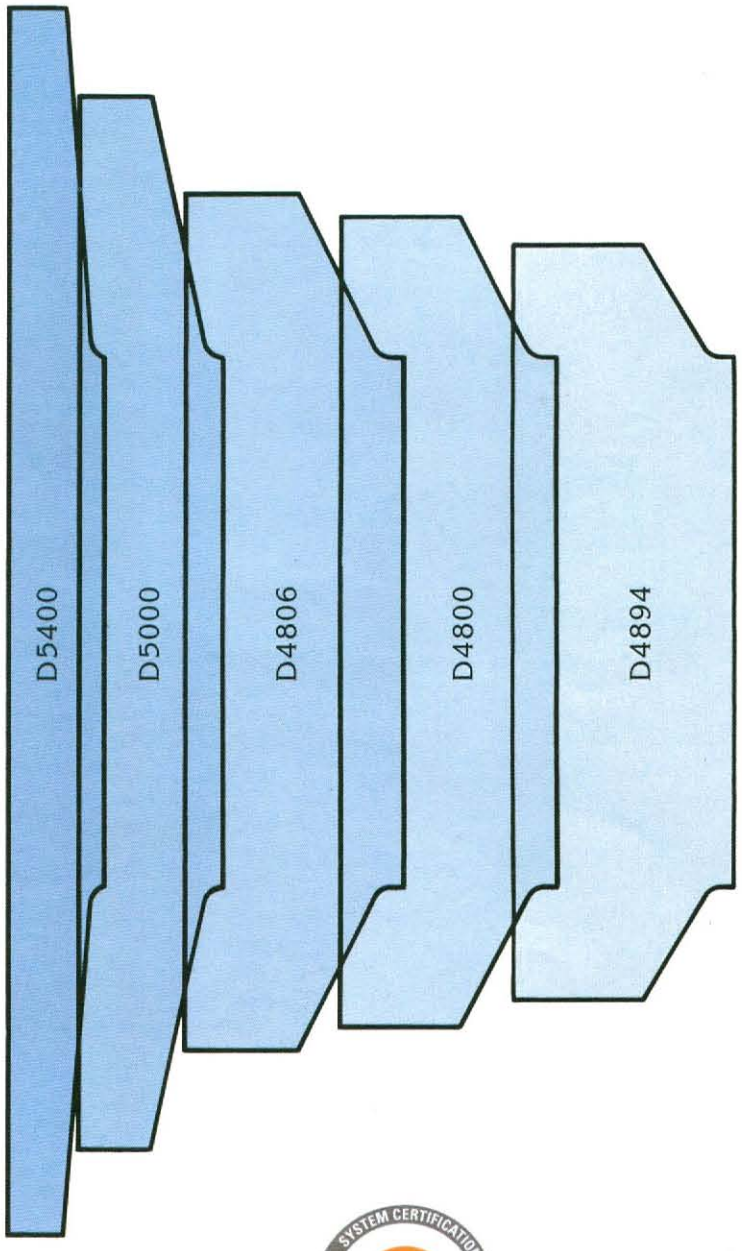
Radial Tip FANS

STRENUOUS DUTY FANS FOR EVERY PERFORMANCE REQUIREMENT

Industrial Fans with radial tip wheels are designed for handling dusty, dirty airstreams while providing excellent operating efficiencies. To maintain optimum performance over a wide range of volume and pressure, different wheel designs are needed. To fulfill this need, Chicago RT Radial Tip fans are offered in a family of five wheel designs with overlapping performance envelopes.

Five Standard Wheel Designs to Match Specific Volume and Pressure Demands

In general, the width of the wheel dictates the volume of air while the diameter controls the pressure. With wheel designs progressing from small diameters with wide blades to large diameters with narrow blades, Chicago can confidently supply the perfectly sized, highly efficient radial tip fan for every duty. A comparison of the wheel illustrations at right to the performance envelopes on the next page demonstrates the relationship of the entire family of RT Fans.



RT SELECTION

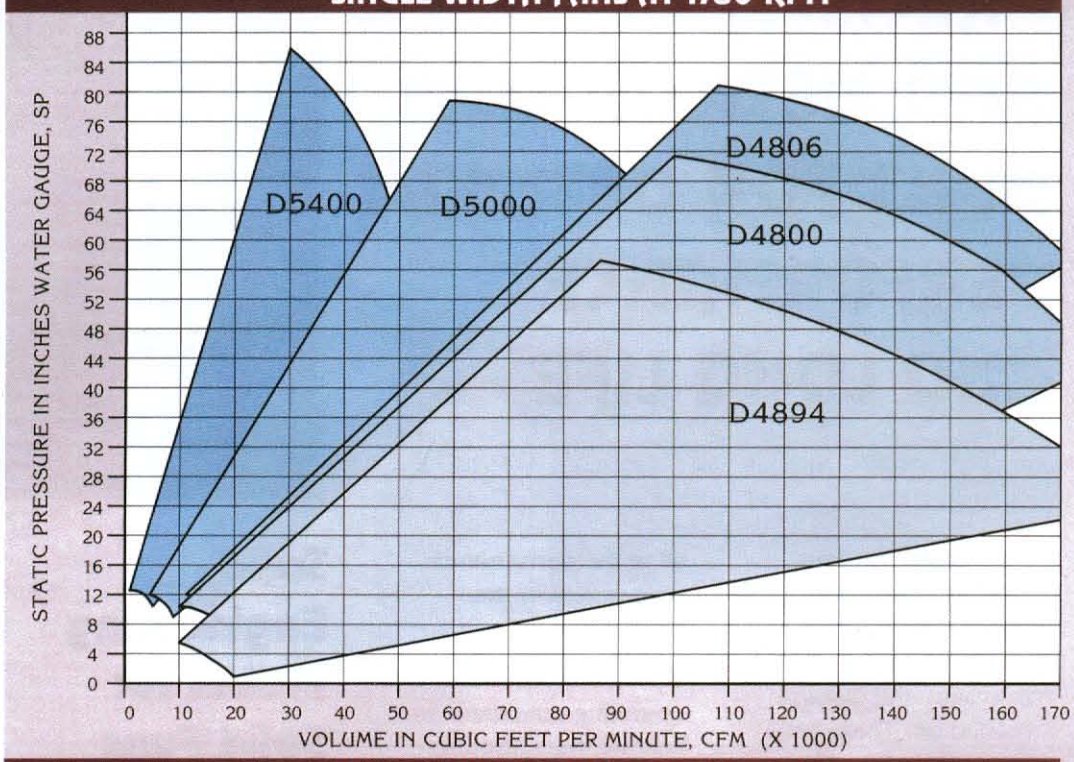
Single Width Fans

To determine the correct RT Fan design for your application, locate the volume you require along the bottom of the chart. Then move up until you intersect with the desired static pressure. The charts are for single width fans at different motor speeds. If your required duty falls on either one of these charts Chicago has a Radial Tip Fan for you.

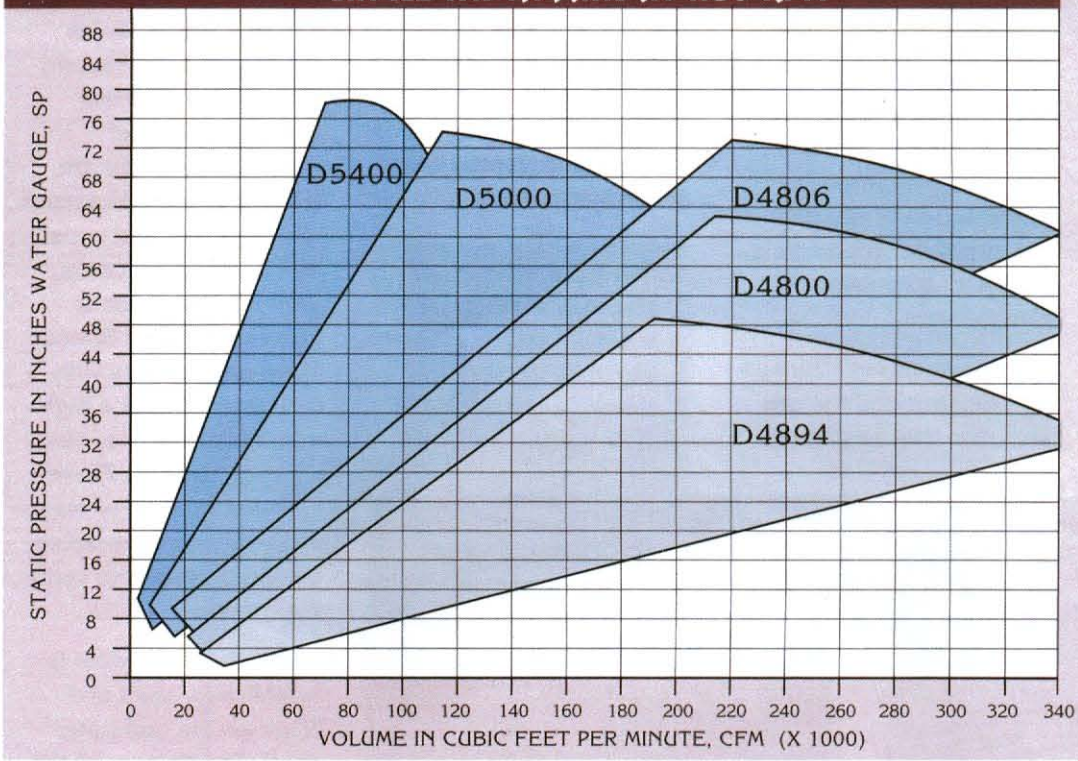
When your demands are for higher volumes

A double width fan can be custom built to meet your requirements. Simply contact your local Chicago Blower Sales Office for exact sizing and horsepower needed.

SINGLE WIDTH FANS AT 1780 RPM

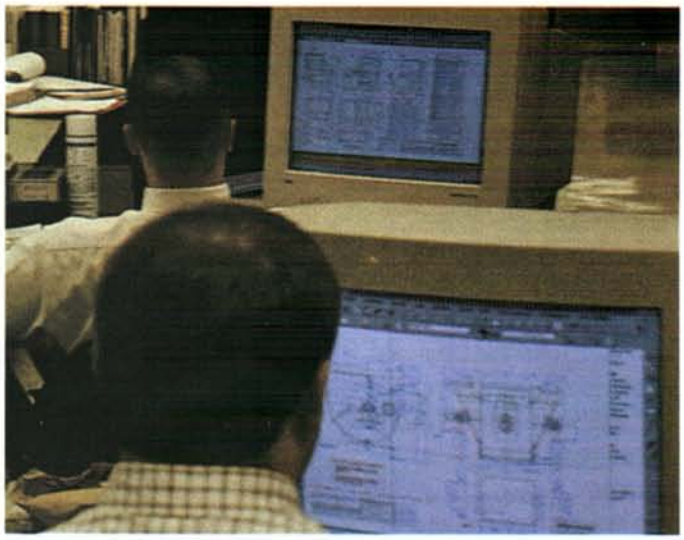


SINGLE WIDTH FANS AT 1180 RPM



Chicago has been building RT Fans for over fifty years. With a proven record of performance, quality manufacturing, multiple design selections and knowledgeable Sales Engineers located throughout North America, the Chicago RT is the radial tip fan of choice.

PRECISELY DESIGNED AND METICULOUSLY BUILT FOR OPTIMUM PERFORMANCE AND LONG LIFE

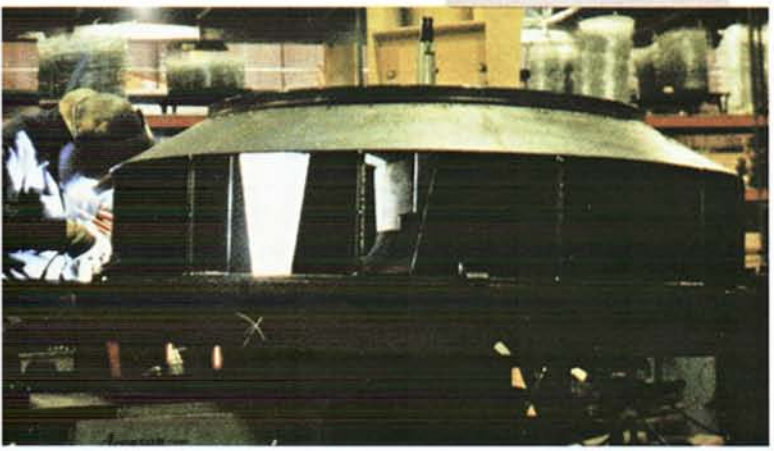


Every Radial Tip Fan Design Chicago builds was tested according to the rigid standards of the Air Movement and Control Association. These tests were performed with and without inlet boxes to assure accurate ratings. The resulting test data was added to Chicago's own sophisticated computer selection program. For any given duty required, the computer produces a survey of all possible RT Fans.

From that survey Chicago can recommend the one selection that best meets all of the performance parameters for the application.

When reduced loads or operating conditions are needed, the computer program can precisely determine either the damper settings or alternate speeds. Performance curves are then printed directly from the program data.

Experienced welders use fixtures to insure accuracy and quality.



Solid Engineering Makes for Solid Fans

Chicago Blower Sales Engineers use a second program to establish wheel gauges and materials based on the running speeds, airstream temperatures and expected operating practices. Particular attention is given to Variable Speed Drive applications with their potential for a high number of stress cycles. Chicago uses the Finite Element method of stress analysis plus destructive testing of wheels to verify the models.

Once the wheel data is established, shaft and bearings are computer sized. The balance of the construction specifications are determined by guidelines proven in over fifty years of industrial fan experience.

All drafting is developed on an AUTO-CAD™ system. Stations are used to create customer drawings as well as production prints and tapes. The tapes are transferred directly to NC plasma burn tables that duplicate perfectly the parts displayed on the screen.

Quality In Quality Out

Certified welding by Chicago's many experienced and AWS certified welders enables Chicago to build RT Fans to the most demanding specifications. After welding and precision wheel balance, every fan is fully assembled. Even fans with independent pedestals destined for concrete piers in the field are fully assembled to the last detail. All fits are checked and pieces match-marked for easier, faster field assembly. Whenever possible,

assembled fans receive a final run test and mechanical check.

A strict ISO 9001 Quality system monitors every step in the process. Chicago's Quality system is a model for the fan industry and assures high quality, high performance Radial Tip Fans.

Special Fans for Special Needs

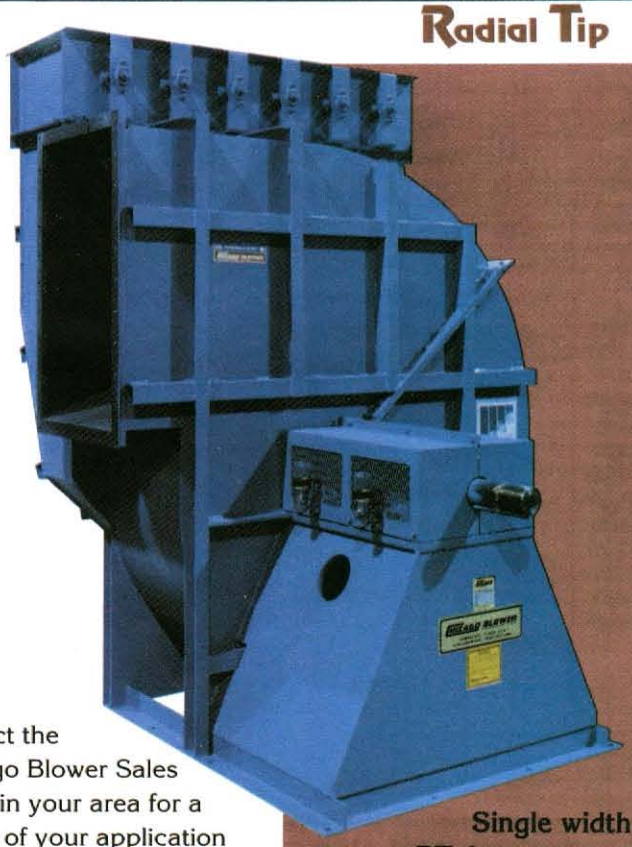
Chicago RT Fans can be built to any special requirement. Blade and housing liners can be included for really tough applications. With over two dozen alloys in the program data base, matching metals to specifications is fast and easy. Shaft criticals can be set anywhere from 25% over running speed up to twice running speed. Roller or sleeve bearings can be used.

Chicago can also provide virtually every fan accessory imaginable. From actuators to insulation studs to thermocouples, Chicago is prepared to build the custom fan you need.

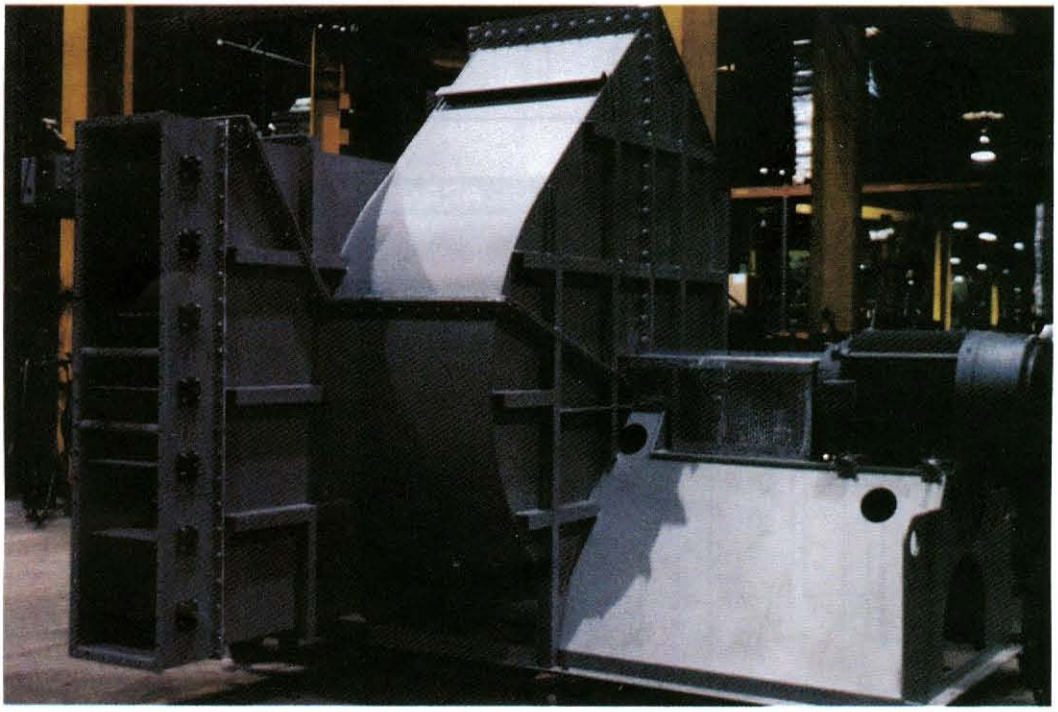
Specify Chicago RT Fans With Confidence

Performance based on sound laboratory testing, design and construction based on computer analysis and proven technologies, tight quality control and dedicated teamwork combine to provide the finest Radial Tip fans available today.

Contact the Chicago Blower Sales Office in your area for a review of your application and specifications. You can relax in the confidence that you are dealing with a knowledgeable, experienced fan company that stands behind every product it builds.



Single width RT Arrangement One with pre-spin inlet box damper, split housing, oil sight glasses for the bearings plus a shaft guard.



Single width RT Arrangement 7 with pre-spin inlet box damper, split housing plus a shaft, bearing and coupling guard.

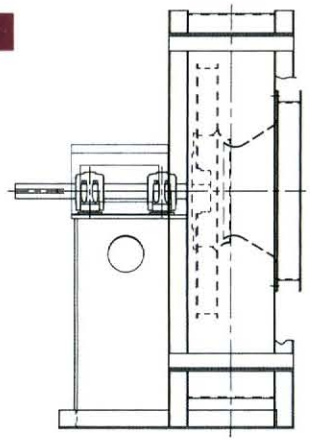
ARRANGEMENTS

The choice of RT Fan arrangements is determined by installation requirements and the size of the motor or turbine. Because there is an extensive range of needs, Chicago offers all the arrangements shown here.

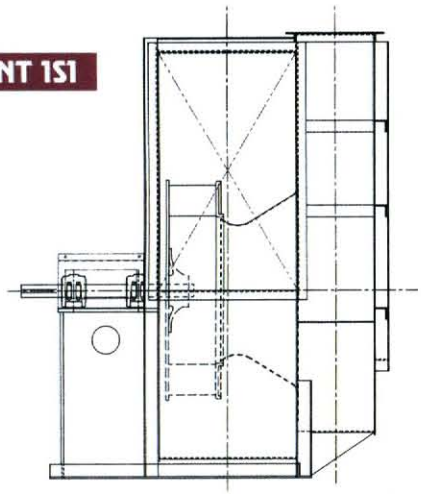
Discharge orientation varies with the individual installation. The angle of the discharge, rotation of the wheel and the angle of the inlet box must all be established prior to construction. Chicago RT Fans can be built with any combination of rotation, discharge and inlet boxes.

Application and installation assistance is available from experienced heavy duty fan engineers. For all your industrial fans, make Chicago your source.

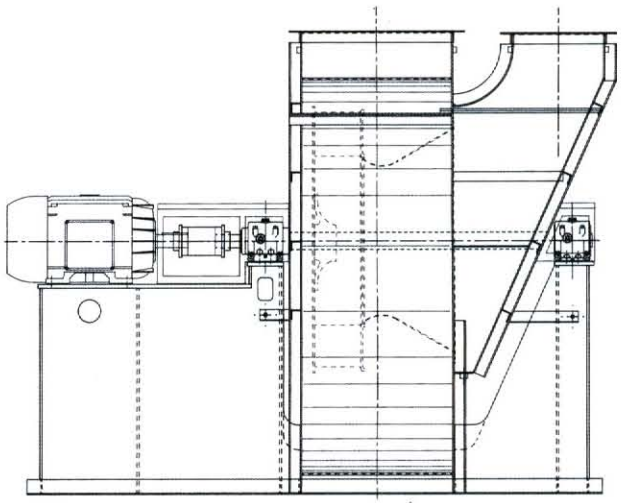
ARRANGEMENT 1



ARRANGEMENT 1SI

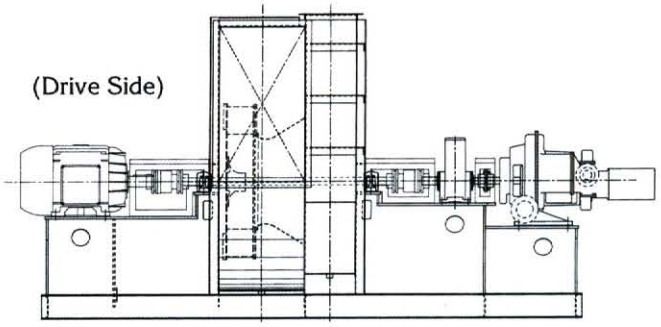


ARRANGEMENT 7SI

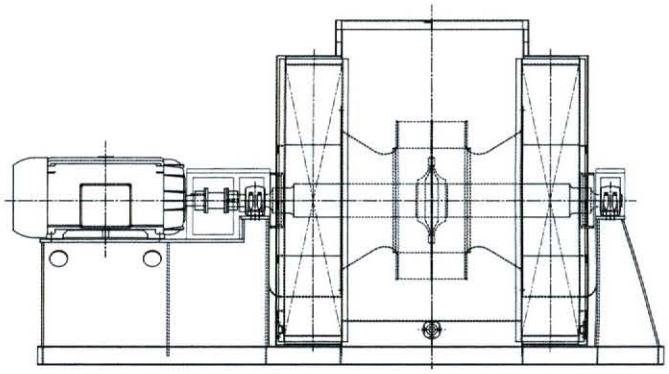


ARRANGEMENT 7SI - DUAL DRIVE WITH TURBINE AND GEAR

(Drive Side)

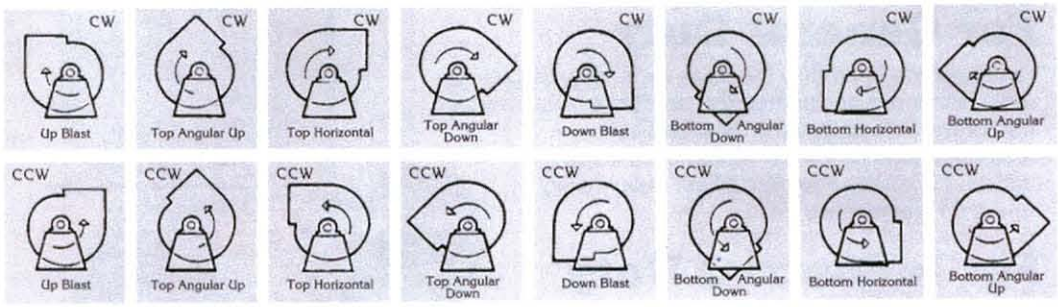


ARRANGEMENT 7D2



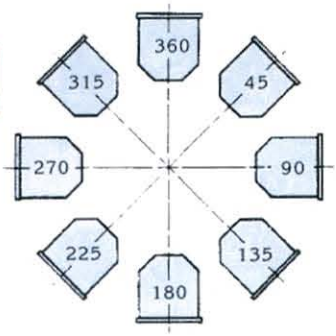
ROTATION/DISCHARGE DESIGNATIONS

Direction of rotation and discharge are viewed from the drive side of the fan. On dual driven units, the drive side is always opposite the inlet (SISW) or on the side with the main driver (DIDW).

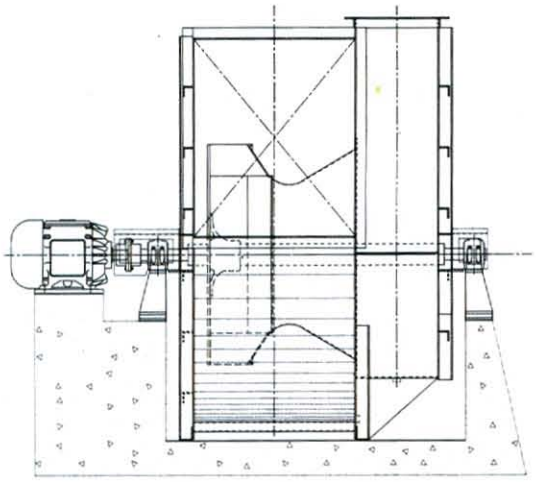


INLET BOX POSITIONS

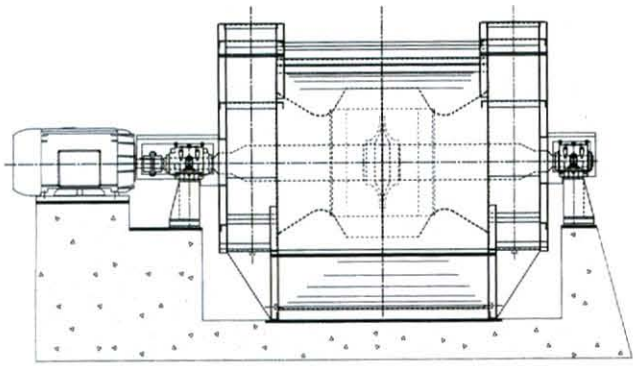
Positions are always determined from the drive side of the fan.



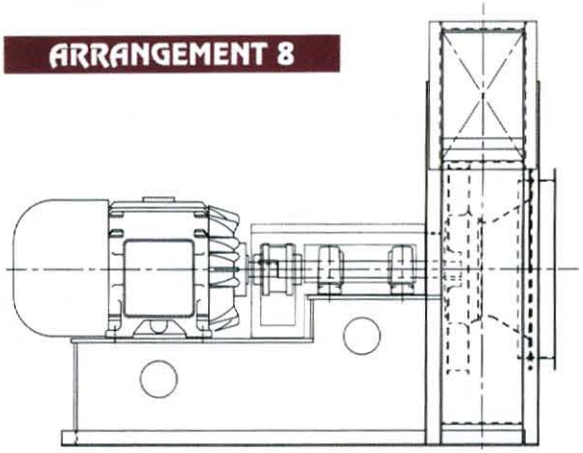
ARRANGEMENT 3S1



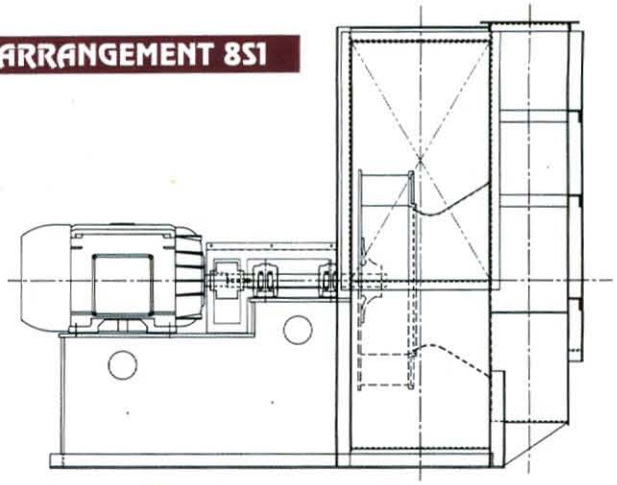
ARRANGEMENT 3D2



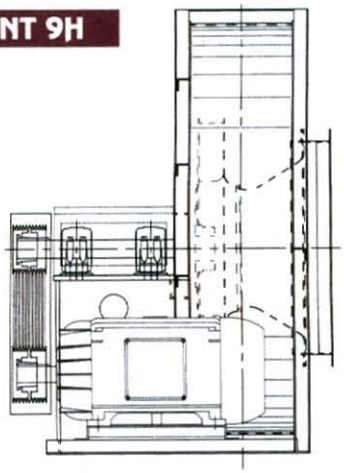
ARRANGEMENT 8



ARRANGEMENT 8S1



ARRANGEMENT 9H



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

CHICAGO BLOWER CORPORATION

1675 Glen Ellyn Road, Glendale Heights, Illinois 60139
Phone: 630-858-2600 • Fax: 630-858-7172
www.chicagoblower.com e-mail: fans@chicagoblower.com