

July 22, 2022

Reference: Fan Equipment Capabilities and References

We are designers and builders of heavy-duty air moving equipment. We have manufactured industrial equipment since 1967. We supply industrial fans and blowers throughout the United States, Canada, and Mexico.

Fan Equipment Co., Inc. (Formally Fan Engineering Co., Inc. - a California Corporation) builds fans from 1 HP to 600 HP. Wheel Diameters from 10" to 102". Our fans are available in Carbon Steel, Stainless Steel, Special Alloys, Epoxy Coated, and in Fiberglass. The applications include Process Gas Fans, Odor Control Fans, Wastewater Treatment Fans, Air Pollution Control, Nuclear Power Plants, Steel Mills, Paper Mills, Ovens, Autoclaves, and General Ventilation.

Each application determines the selection of each fan we build. Our design engineering staff utilize tools such as: bearing load analysis, finite element analysis, AutoCAD drawings, and various custom engineering programs. Those tools along with more than seventy-five years of design experience provides quality engineering for each fan we manufacture. Performance and Sound Testing has been performed on each of our different fan lines.

We employ AWS (American Welding Society) and ASME (American Society of Mechanical Engineers) Section IX certified welders and support a Quality Assurance Program that complies with 10 CFR 50 requirements. The following describes our manufacturing capabilities.

We invite you and your customers to visit our factory. We believe upon inspection you will find a company that prides itself on quality workmanship and on-time deliveries.

If additional information is required, please contact us.

Regards,

Mike Harris President



Computerized Advantages

Order entry, purchasing, and fabrication status is efficiently accomplished with our custom Fan Equipment software.

Each engineer operates a workstation utilizing in house, internet based, and custom engineering programs to fulfill the technical requirements of each project. Detailed dimension drawings, performance curves, sound evaluations, bearing load analysis, shaft critical speeds, finite element analysis, and rotor/motor WR^2 calculations are prepared for orders as required.

Manufacturing begins with CAD based files, generated to plasma cut sub-assembly parts. Nesting programs are used to maximize materials for multiple item orders, increasing overall efficiency, and minimizing scrap costs.

Balancing

Finished rotors are statically & dynamically balanced on one of three stationary balancing machines. Fans furnished as complete units, with drive motors not exceeding 500 HP, and 460/575-volt power requirements, are mechanically run tested to meet less than 0.1m/sec. (ANSI G2.5) with the customer's drive motor on our 40,000 lb. concrete test base and given a final balance check with our IRD 880 portable vibration analyzer. A printed spectrum of frequency vs. unbalance level is taken for each order, and available for customer review upon request. A wide range of operating speeds is obtained by governing the motor with our Allen Bradley/Stromberg variable frequency motor controller.

Quality Assurance

Fan Equipment Co. supports a Quality Program and Standard Procedures Manual that allows us to effectively administrate contracts requiring commercial and 10 CFR 50 compliance.



Testing & Services

All Fan Equipment Co. products are rated and tested in accordance with AMCA guidelines. Our engineering personnel regularly test new designs and confirm performance characteristics of existing geometries at our facility with duct configurations in accordance with AMCA standards and guidelines. As a member of AMCA, we also confirm empirical test data with contract tests at the AMCA laboratory in Arlington Heights, Illinois. Calibrated instrumentation is also in place to perform mechanical run tests of complete units. Fan assemblies can be operated at full speed, for several hours, while bearing temperature, residual unbalance levels, and overall mechanical behavior is monitored and recorded

Fan Equipment Co. personnel are qualified to perform visual examinations of weldments and an outside third party can provide dye penetrant examinations of weldments. When customer specifications call for other services, we can also employ third party vendors to supply sophisticated machining, post weld heat treating & stress relieving, NDE & metallurgical examinations, and accessory items to satisfy the most stringent of requirements.

Transportation & Field Support

Based in North Las Vegas, Nevada, Fan Equipment Co. can offer the advantages of access to extensive transportation corridors. Incoming and outgoing goods are routed by major carriers on air, land, and sea. We are serviced by several international airports, The Port of Los Angeles for ocean freight, rail connections, and our extensive highway system. In addition, our climate eliminates the excuse of bad weather for poor performance.

Fan Equipment Co. supports sales representatives in over twentyfive cities, throughout the U.S. and Canada. Requests for field start-up, ongoing maintenance, or warranty service of our equipment is achieved by dispatching the appropriate sub-contracted specialized technicians from one of several independent service organizations in your region.



Production Equipment

Production area: 33,000 ft^2 building / 106, 000 ft^2 yard

Production personnel: 37

L-TEC Piecemaker: 72 Plasma cutting tables: Qty. (2)

DoALL Band Saw: high speed - 1" blade

DoALL Cutting Machine: 12" dia. bar capacity

Drill Press: Qty. (6)

Hydraulic Press: 200 ton

Steelweld Shear: 1/4" plate

Piranha / Peddinghaus Ironworkers: Qty. (2)

Buffalo Forge Angle Roller

Bridgeport End Mill: Qty. (3)

Cincinnati Press Brake: 175 Ton

Niagara Press Brake: 3/16" plate x 5 ft. capacity

Niagara Plate Roll: 1/2" plate x 5 ft. capacity

Mitts & Merrill Key Seater: Model #2

Engine Lathe: 10 ft. bed x 30" swing

LeBlond Engine Lathe: 6 ft. bed x 20" swing Qty. (2)

Poreba Engine Lathe: 14 ft. bed x 40" swing



<u>Production Equipment (continued)</u>

Wire Feed GMAW electric welding machines: Qty. (26)

Electrode SMAW electric welding machines: Qty. (26)

Cobramatic Aluminum wire feed welding machines: Qty. (3)

Thermo-Pak handheld plasma cutter

Binks water wash paint booth: 24 ft.

Blast Booth: 24' x 24' x 16': Qty. (1)

Bear Balancing Machines: Qty. (2)

Balmac Balancing Machine: 102" dia. Capacity

Hoffman Balancing Machines: Qty. (2)

IRD Model 880 Vibration Analysis & Balancing Machine: Qty. (3)

Industrial Fans (HPS, BISC, IE)

Industrial fans are designed to operate under the most demanding conditions.

High Pressure Fans - HPS

Type HPS, furnished in seven specific speed designs, and two-wheel types for low volume - high pressure performance to five (5) PSI. All options are available to meet demanding process conditions for temperature, corrosive gas, and low leakage. Materials of construction include: Fiberglass Reinforced Plastic (FRP), Rubber Lined, and alloys such as Stainless Steel, Inconel, Hastelloy, AL6XN, Monel, Titanium, and Aluminum.



Heavy Duty Mechanical Draft Fans - BISC

Type BISC with single thickness airfoil blades are quiet, efficient, and exhibit non-overloading horsepower characteristics. BISC Fans are designed for industrial service over a wide specific speed range. Computer selection and heavy gauge construction provide solutions for Foundries, Chemical Plants, Steel Mills, Paper Mills, Industrial Exhaust Systems, and other erosive and corrosive environments. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, Coatings, and Gas Tight Construction.



Industrial Exhaust Fans - I.E.

Type IE fans are furnished in three-wheel designs to handle Dirty Gases, Granular & Fibrous Materials, Paper Trim, and other Industrial Air. Materials of construction include: Heavy Duty Carbon Steel, Abrasion Resistant (AR) Steel, Hardox Material, Chromium Carbide (Triten) Overlay, and Alloys such as Stainless Steel, Inconel, Hastelloy, AL6XN, Monel, Titanium, and Aluminum.







Ventilating Fans (BC, FC, AF, VA)

Ventilating Fans are designed for applications requiring high efficiency and low noise output.

Backward Curve Fans - BC

Type BC with single thickness flat backward inclined blades are quiet, efficient, and exhibit non-overloading horsepower characteristics. BC fans are widely used for Dust Collection, Commercial HVAC, Light/Heavy Duty Industrial, and all types of Air Handling applications requiring high efficiency and low noise output. BC fans are available in both single and double inlet configurations. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, Coatings, and Gas Tight Construction. Full width BCD and BCS fans (sizes 2 thru 12) without appurtenances bear the AMCA Certified Label for Air Performance.



Forward Curve Fans - FC

Type FC fans are ideal for oven applications, with operating temperatures up to 1000° F, general ventilation, heater box fans, and replacement cabinet fans. FC fans are available in both single and double inlet configurations. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, Coatings, and Gas Tight Construction.



Airfoil Fans - AF

Type AF, fans are the combination of a designed airfoil blade section with the highly efficient non-overloading power characteristics of a backwardly inclined blower. They are used in Commercial HVAC, Light/Heavy Duty Industrial, and All Types of Air Handling Applications requiring High Efficiency and Low Noise output. Available in both single and double inlet configurations. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, Coatings, and Gas Tight.





BC Inline - BCIL

Type BC In-line fans with single thickness flat backward inclined blades are quiet, efficient, and exhibit non-overloading horsepower characteristics. BC In-line fans offer the combination of superior performance of housed centrifugal fans and the space saving configuration of axial fan types. This allows the space saving advantages of the in-line design, which eliminates transitions, and system turns. BC In-line fans are available in Vertical and Horizontal configurations. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, and Special Coatings.



Vane Axial Fans - VA

Type VA/TA Fans are suited to HVAC and light industrial applications requiring compact In-Line configurations. Available in v-belt or direct drive and vertical or horizontal orientations. Options include roof curbs, clamshell access doors, and wind band dampers. 450° F construction is available for Paint Booth, Stack Exhaust, and Surface Cooling applications. Materials of construction include: Carbon Steel, Stainless Steel, Special Alloys, and Special Coatings.



Portable Ventilator Fans

Portable Ventilators are designed for mobile applications where larger volumes of air are required.





<u>Warranty</u>

A. Fan Equipment Co., Inc. warrants that the design, construction, and materials of our products will be first-class, and free from defects in the materials and workmanship for a period not to exceed eighteen (18) months from shipment or twelve (12) months from date of installation, whichever occurs first. Our sole obligation under this Warranty is limited to the repair or replacement, without charge, at the purchase order F.O.B. point, any defective parts. Fan Equipment Co., Inc. will not be responsible for damages, contingent liabilities, or consequential damages of any nature, resulting from the above stated Warranty; or from any defect in our products, either in materials, design, or construction, or arising from the use of such products. We do not guarantee against abrasion, corrosion, erosion, or accumulation of material on the fan rotor (buildup).

The above stated Warranty is given expressly in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for particular purpose, and constitutes the only Warranty made by the seller.

- B. Warranties on equipment not of our manufacture are limited to the Warranty terms of our suppliers.
- C. All Warranty claims must be submitted to Fan Equipment Co., Inc. within ten (10) days of discovery of defect within the warranty period or shall be deemed waived. Do not attempt to make any repairs on the fan equipment during the warranty period without the prior written authorization of Fan Equipment Co., Inc. or its representatives; otherwise, the Warranty is voided.
- D. Fan Equipment Co., Inc. shall not be liable for any injury to persons or property resulting from improper installation, operation, misapplication, neglect, modification, repair, or maintenance (including lubrication) of equipment by customers or third parties.



May 25, 2022

Credit Policy

1%10 Net 30 Days:

Upon credit approval; all orders with a minimum of (4) week lead time.

Net 10 Days:

All "RUSH GUARANTEED" orders for customers with an established credit of 1%10 Net 30 Days terms with a lead time of four (4) weeks or less.

3rd Party Field Service, Refer to Field Service rates for description of services

If freight is pre-paid by Fan Equipment Co., Inc. Freight is invoiced separately

Export Fees, Brokering, & Shipping arrangements are not included as we do not provide this service.

50% Down, 50% Upon Completion:

ALL special parts without established credit. Any business outside the United States. All orders for customers whose credit is unsatisfactory.

Cancellation Charges:

All orders where engineering approval prints and shop prints are complete, a 10% cancellation fee will apply.

All orders where fabrication and material requisitions have started, a 20% minimum cancellation fee will apply, with total charges based on time and labor expended.

All orders which are 80% to 100% complete, a 100% cancellation fee will apply. All blowers and parts are custom manufactured, no re-stocking will be allowed.

Large Purchases:

Progressive payments would be required for purchases over \$100,000.00 on approved credit. Payment terms are subject to the total amount of order. Typical terms are 25% down, 25% prior shipment, and 50% due Net 30 days.

Payment:

Forms of payment that will be accepted by Fan Equipment Co., Inc. is a company check, wire transfer or an ACH transaction. We also accept credit cards for a 5% service charge. Banking information is *only* provided after receipt of a purchase order.

Discounts:

Prices are our lowest OEM discounted level offered. Discounts may be offered for multiple quantities.