PRODUCT GUIDE
History

In 1889, two brothers—J.W. Mathis and August Mathis—opened a sheet-metal shop on the South Side of Chicago and formed Mathis Brothers Company. They designed and installed heating and ventilating systems.

In 1904, the brothers bought The New York Blower Company, a fan manufacturer founded in 1893. The plant was moved from Bucyrus, Ohio, to La Porte, Indiana, in 1919. The New York Blower Company was one of 12 founding companies of the National Association of Fan Manufacturers, the earliest predecessor to the Air Movement and Control Association International.

Spanning the decades since 1889, The New York Blower Company has been designing and building fans and blowers to move air in all types of commercial and industrial applications. Today, New York Blower has one of the most comprehensive lines of fans and blowers in the world, with literally thousands of designs and models available.

International Operations

In the 1950s and 1960s, the company expanded its presence from regional to national through the development of an extensive network of sales representatives. Throughout the rest of the century and into the 2000s, acquisitions and licensees have allowed for expansion in both product lines and the industrial marketplace.

Today, that presence is worldwide with over 200 representatives, partners, and licensees established around the globe.

Commitment To Excellence

The dedication to product research and innovation is a key ingredient of our business philosophy. Consistent capital investment has resulted in the most modern production equipment and research facilities in the industry. This has allowed New York Blower to provide an unmatched combination of technology and manufacturing expertise in its products.
Axial Clean Air Fans

New York Blower axial fans are available in both belt-drive and direct-drive arrangements. Models can be constructed of either mild steel or aluminum.

**APPLICATIONS**
- Building ventilation
- Oven exhaust
- Drying systems
- Moisture blow-off
- Fume removal
- Glass tempering
- Spray-booth exhaust
- Air curtains
- Cooling
- Grain Drying
- Flares

For state-of-the-art air management systems designed and manufactured based on your application requirements  

(800) 208-7918 • nyb.com
Centrifugal Clean Air Fans

New York Blower centrifugal fans are available in both belt-drive and direct-drive arrangements. Models can be constructed of either mild steel, aluminum, stainless steel or special alloys.

APPLICATIONS
- Dust collection
- Pneumatic conveying
- Incineration
- Combustion air
- Pollution control
- Fume-hood/Scrubber exhaust
- Chemical process
- Dryer applications

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>DESCRIPTION</th>
<th>CFM</th>
<th>SP</th>
<th>Temp. (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Fans</td>
<td>Centrifugal housed “FC” wheel</td>
<td>4,600</td>
<td>2-1/2</td>
<td>450</td>
</tr>
<tr>
<td>General Purpose Fans</td>
<td>Centrifugal housed “AcF/PLR” wheel</td>
<td>26,500</td>
<td>8</td>
<td>650</td>
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<tr>
<td>Square Fans</td>
<td>Centrifugal square housed “AcF/PLR” wheel</td>
<td>29,000</td>
<td>22</td>
<td>180</td>
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<tr>
<td>Forward Curved DWDI Fans</td>
<td>Centrifugal DWDI “FC” wheel</td>
<td>32,000</td>
<td>3-1/4</td>
<td>120</td>
</tr>
<tr>
<td>Tubular AcoustaFoil Fans</td>
<td>Centrifugal inline “AcF/PLR” wheel</td>
<td>140,000</td>
<td>14</td>
<td>200</td>
</tr>
<tr>
<td>Single Width Fans</td>
<td>Centrifugal housed “AcF/BC/PLR” wheel</td>
<td>200,000</td>
<td>14</td>
<td>1000</td>
</tr>
<tr>
<td>Double Width Fans</td>
<td>Centrifugal housed “AcF/PLR” wheel</td>
<td>350,000</td>
<td>14</td>
<td>120</td>
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<tr>
<td>Class IV Fans</td>
<td>Centrifugal housed “AcF/PLR” wheel</td>
<td>250,000</td>
<td>20</td>
<td>1000</td>
</tr>
<tr>
<td>BC Pressure Blower</td>
<td>Centrifugal housed “BC” wheel</td>
<td>80,000</td>
<td>110</td>
<td>800</td>
</tr>
<tr>
<td>High Pressure Backward Curved</td>
<td>Centrifugal housed “BC” wheel</td>
<td>170,000</td>
<td>40</td>
<td>750</td>
</tr>
<tr>
<td>AF-30 Fans</td>
<td>Centrifugal housed “AF/BC” wheel</td>
<td>123,000</td>
<td>30</td>
<td>750</td>
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<tr>
<td>AF-40 Fans</td>
<td>Centrifugal housed “AF/BC” wheel</td>
<td>240,000</td>
<td>46</td>
<td>750</td>
</tr>
<tr>
<td>AF-50 Fans</td>
<td>Centrifugal housed “AF/BC” wheel</td>
<td>130,000</td>
<td>50</td>
<td>750</td>
</tr>
<tr>
<td>BC-20 Fans</td>
<td>Centrifugal housed “BC” wheel</td>
<td>260,000</td>
<td>21</td>
<td>750</td>
</tr>
<tr>
<td>BC-40 Fans</td>
<td>Centrifugal housed “BC” wheel</td>
<td>300,000</td>
<td>40</td>
<td>750</td>
</tr>
<tr>
<td>Compact GI Fans</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>2,200</td>
<td>14</td>
<td>600</td>
</tr>
<tr>
<td>Compact Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>4,000</td>
<td>23</td>
<td>600</td>
</tr>
<tr>
<td>Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>5,200</td>
<td>58</td>
<td>600</td>
</tr>
<tr>
<td>Type HP Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>20,000</td>
<td>128</td>
<td>600</td>
</tr>
<tr>
<td>Surge Limiting Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>30,000</td>
<td>180</td>
<td>1200</td>
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<tr>
<td>Plenum Fans</td>
<td>Centrifugal un-housed “AcF/BC/PLR” wheel</td>
<td>180,000</td>
<td>13</td>
<td>120</td>
</tr>
<tr>
<td>Plug Fans</td>
<td>Centrifugal un-housed “AcF/PLR” wheel</td>
<td>74,000</td>
<td>20</td>
<td>1300</td>
</tr>
<tr>
<td>Air Kits</td>
<td>Centrifugal housed “FC” wheel</td>
<td>100,000</td>
<td>6</td>
<td>1000</td>
</tr>
</tbody>
</table>

*FC=Forward Curved, AcF/AF=Backward Inclined Airfoil, BC=Backward Inclined Backward Curved, PLR=Backward Inclined Single Thickness
All of our products are designed and manufactured to exact specifications.
Centrifugal Dust/Material Handling Fans

Centrifugal fans in belt-drive and direct-drive arrangements, constructed of mild steel, aluminum, stainless steel or special alloys.

APPLICATIONS
- Dust collection
- Pneumatic conveying
- Scrubber exhaust
- Incineration
- Combustion air
- Pollution control
- Fume-hood exhaust
- Chemical process
- Dryer applications
- Bulk material handling
- Paper converting

Engineering Letters
Visit nyb.com/eng_letters.asp to review twenty-eight “letters” that cover a wide range of technical fan subjects.

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
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<tbody>
<tr>
<td></td>
<td>CFM</td>
<td>SP</td>
</tr>
<tr>
<td>Compact GI Fans</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>2,200</td>
</tr>
<tr>
<td>Compact Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>4,000</td>
</tr>
<tr>
<td>Series 20 Fans</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>77,000</td>
</tr>
<tr>
<td>Series 30 Fans</td>
<td>Centrifugal housed &quot;Radial&quot; wheel</td>
<td>95,000</td>
</tr>
<tr>
<td>Series 45 Fans</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>100,000</td>
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<tr>
<td>Series 60 Fans</td>
<td>Centrifugal housed “Radial Tip” wheel</td>
<td>66,000</td>
</tr>
<tr>
<td>RTS</td>
<td>Centrifugal housed “Radial Tip” wheel</td>
<td>250,000</td>
</tr>
</tbody>
</table>
The New York Blower Company has been providing air-handling equipment to the construction and process industries for over 125 years. To ensure the highest quality, OEM components use the same designs as our standard products.

**Fiberglass-Reinforced-Plastic**

Fiberglass-reinforced-plastic (FRP) fans with alternative corrosion-resistant materials, stainless steel, aluminum, hot-dip galvanizing and other special coatings.

**Process Components**

<table>
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<tr>
<th>PRODUCT LINE</th>
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<th>MAXIMUM CFM</th>
<th>MAXIMUM SP</th>
<th>MAXIMUM Temp. (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRP Radial Fume Exhausters</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>7,500</td>
<td>14</td>
<td>250</td>
</tr>
<tr>
<td>FRP Pressure Blowers</td>
<td>Centrifugal housed “Radial” wheel</td>
<td>5,000</td>
<td>36</td>
<td>250</td>
</tr>
<tr>
<td>FRP General Purpose Fume Exhausters</td>
<td>Centrifugal housed “ST” wheel</td>
<td>73,000</td>
<td>17</td>
<td>250</td>
</tr>
<tr>
<td>FRP Fume Exhausters</td>
<td>Centrifugal housed “BC” wheel</td>
<td>84,000</td>
<td>25</td>
<td>250</td>
</tr>
</tbody>
</table>

* BC=Backward Inclined Backward curved, ST=Backward Inclined Single Thickness

**APPLICATIONS**

- Air handlers
- Ovens and dryers
- Clean rooms
- Air curtains
- HVAC ventilation
- Air recirculation
- Spray booths

**Fan Components**

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<tr>
<th>PRODUCT LINE</th>
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<th>MAXIMUM CFM</th>
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<tbody>
<tr>
<td>Forward Curved DWDI Fans</td>
<td>Centrifugal housed “FC” wheel</td>
<td>32,000</td>
<td>3-1/4</td>
<td>120</td>
</tr>
<tr>
<td>Plenum Fans</td>
<td>Centrifugal un-housed “AcF/BC/PLR” wheel</td>
<td>180,000</td>
<td>13</td>
<td>120</td>
</tr>
<tr>
<td>Plug Fans</td>
<td>Centrifugal un-housed “AcF/PLR” wheel</td>
<td>125,000</td>
<td>20</td>
<td>1300</td>
</tr>
<tr>
<td>Air Kits</td>
<td>Centrifugal housed “FC” wheel</td>
<td>100,000</td>
<td>6</td>
<td>1000</td>
</tr>
</tbody>
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* FC=Forward Curved, AcF=Backward Inclined Airfoil, BC=Backward Inclined Backward Curved, PLR=Backward Inclined Single Thickness

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<tr>
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<th>MAXIMUM CFM</th>
<th>MAXIMUM SP</th>
<th>MAXIMUM Temp. (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheels</td>
<td>Centrifugal “AcF/BC/PLR” wheel (10”-89” dia)</td>
<td>250,000</td>
<td>20</td>
<td>1300</td>
</tr>
<tr>
<td>Cones</td>
<td>Spun inlet cones for wheel (10”-89” dia)</td>
<td>250,000</td>
<td>-</td>
<td>1300</td>
</tr>
<tr>
<td>Housings</td>
<td>Housing for “AcF/BC/PLR” wheel (10”-89”)</td>
<td>250,000</td>
<td>40</td>
<td>1300</td>
</tr>
</tbody>
</table>

* FC=Forward Curved, AcF=Backward Inclined Airfoil, BC=Backward Inclined Backward Curve, PLR=Backward Inclined Single Thickness
New York Blower Roof Ventilators are available in both belt-drive and direct-drive arrangements. Models can be constructed of either mild steel or aluminum.

### Roof Ventilators
- **Hooded Roof Ventilators**: Housed “Propeller” fan w/mushroom cap, 106,000 CFM, 3/4 SP, 105 Temp.
- **Upblast Roof Ventilators**: Housed “Propeller” fan w/rainhood, 118,000 CFM, 3/4 SP, 105 Temp.
- **Centrifugal Roof Ventilators**: Housed “Centrifugal” fan w/rainhood, 35,000 CFM, 3-1/4 SP, 105 Temp.
- **Duct Fans**: Housed axial “Propeller” fan, 60,000 CFM, 2 SP, 350 Temp.
- **Tubeaxial Fans**: Housed axial “Propeller” fan, 86,000 CFM, 3 SP, 200 Temp.
- **Vaneaxial Fans**: Housed axial “Propeller” fan w/vanes, 100,000 CFM, 5 SP, 200 Temp.
- **Tubular AcoustaFoil Fans**: Centrifugal inline “AcF/PLR” wheel, 140,000 CFM, 14 SP, 200 Temp.

* AcF=Backward Inclined Airfoil, PLR=Backward Inclined Single Thickness

### Heating Products
The New York Blower Company manufactures complete lines of steam Unit Heaters and steam heating coils. Because there are numerous coil sizes and two different fin styles available, we suggest you contact your New York Blower representative to assist you in making the final selection.

### Heating Products
- **Unit Heaters**: Steel heating coil w/propeller fan, 5,800 CFM, 600 Max. Steam Temp, 200 psi Max. Steam Pressure.
- **STEELfin Coils**: Steel heating coil, 17,500 CFM, 600 Max. Steam Temp, 200 psi Max. Steam Pressure.
Heavy Industrial Fans

INDUSTRIES
- Cement & Lime
- Iron & Steel
- Foundries
- Metals & Minerals
- Paper & Pulp
- Petrochemical
- Power Generation
- Water Treatment

Custom Engineered

Our fans are available in standard catalog sizes or as custom designed units. Each application is analyzed on its own performance and unique requirements. Units can be built in accordance with the customers’ specifications.

DESIGN FEATURES
- Fan Designs: Centrifugal, Axial, Radial
- Volume: to over 1,000,000 CFM
- Pressures: beyond 150” WG
- Temperatures: to 1800°F
- Sizes: beyond 150” in diameter
- Arrangements: 1, 2, 3, 4, 7, 8, 9 and 10
- Available Materials of Construction:
  - Carbon Steel, Stainless Steel, Abrasion Resistant Materials, Corrosion Resistant Materials, Inconel®, Carpenter 20, Hastelloy and more.

Testing Services:
- ASTM B117 Salt Fog Chamber Testing for Corrosion
- Balance and Vibration Tests
- Computational Fluid Dynamics (CFD)
- Finite Element Analysis (FEA)
- Impact (Bump) Testing
- Material Identification/Certification
- Modal Analysis
- Stress Analysis
- Prototype/Product Evaluation
- Wheel Deconstruction/Deformation Testing

Repair & Rebuild

New York Blower uses their experienced engineers, technicians and Field Service Department to assess and analyze any field issues associated with fan equipment. Fan assemblies can be quickly tested in the field or at the the AMCA accredited laboratory for a quick diagnosis of air, sound and vibration problems. Engineered solutions include modified liners, stiffeners, blade tips, metallurgical changes and fabricated inlets to accommodate changes in application requirements or improve longevity of the equipment. Regardless of the original manufacturer, NYB can accommodate all repair, rebuild and retrofit needs.

Pictured is a wheel from an induced draft fan located on the dirty side of a baghouse exhausting blast furnace. 82” diameter wheel with chromium carbide blade liners.

In addition to wheels, NYB has the ability to field measure difficult to replace components including cones, shafts, wheels and more.
Custom Products

New York Blower’s custom-engineered products are designed to exacting specifications. Designs meet specific flow, pressure, temperature, leak integrity, and configuration requirements.

Specialty areas include:

- Configurations—choices range from having fan wheels mounted directly on motor shafts to independent pedestal configurations . . . to match mounting, space limitations, and application requirements.
- High temperatures—employing alloys for strength and insulation, and cladding for heat retention and protection.
- Corrosion/abrasion-resistance—alternatives include a wide variety of alloys such as Hastelloy®, Ferallium, Inconel®, Chrome Carbide, and Corten. *Hastelloy® is a registered trademark of Haynes International, Inc. Inconel® is a registered trademark of Special Metals Corporation.*
- Low leakage—options include purgeable mechanical seals, full-face gasketing, double welding of housing seams, and factory pressure testing.
- Volatile gases—spark-resistant construction incorporating special materials, buffers, and design elements.
- Petrochem (API), Nuclear (NQA-1), Coal (NFPA), Etc.

Contact your New York Blower representative with your specific application requirements.

Quality & Experience

Our fan designs provide the highest aerodynamic efficiencies compatible with specific systems and gas stream requirements. Durable fan structures are designed for long life in the harshest and most demanding industrial applications. All NYB products undergo extensive air performance, sound and quality assurance testing prior to release to the market.

On-time Delivery

In today’s dynamic market, where the formula “Time is money” is more applicable than ever, the New York Blower Company remains unmatched in delivery reliability. The dependable, timely shipments have become synonymous with NYB, as we never fail to meet our customers’ deadlines. This outstanding integrity and reliability is highly appreciated by our customers and clearly set us apart from the competition.

Expansive Manufacturing Facilities

NYB has over 460,000 ft² of manufacturing floor space that is fully equipped to fulfill fabricating and machining requirements. The AMCA accredited laboratory has six test chambers of various flows (up to 130,000 CFM) and pressure capabilities (up to 100” WC) and two reverberant sound rooms.
NYB Options

We can customize your fan with a wide variety of accessories and modifications to meet your unique requirements.

1. FLANGES - Flanged inlet and outlet connections standard on all sizes.
2. EVASE - Provides static-pressure regain and reduced discharge velocities.
3. INLET BOX - Minimizes entry losses also available with parallel-blade damper for efficient volume control.
4. SPLOTHOUSING CONSTRUCTION - Section can be removed without disturbing inlet or outlet duct connections.
5. CLEANOUT DOOR - Gasketed door for secure seal.
6. DRAIN - 1-½” tank flange located at lowest point in housing scroll.
7. UNITARY BASE - Structural-steel base provides common support for fan, motor, and drive components. Available with spring or rubber-in-shear isolators.

Special Alloys
Most fans and models available with various grades of stainless steel, exotic alloys or aluminum for corrosive, non-abrasive airstream applications.

Shaft Seals
A variety of shaft seals including mechanical type, lip type and ceramic-felt type available.

Outlet Damper
Outlet dampers available with parallel or opposed blades to suit dampering requirements.

Motors and Drives
A wide array of motors, belt-drives, and coupling components available factory mounted by New York Blower.

Heat-Fan
Construction
Fans handling gas streams above 301°F furnished with shaft coolers and guards . . . surfaces are coated with high-temperature paint . . . refer to each fan line for specific limitations.

Inlet-Vane
Damper
Inlet vane dampers pre-spins the air entering the fan inlet providing a very efficient method of controlling the fan.

Coatings
Cost-effective protective coatings under a variety of trade names available to increase the fan’s resistance to adverse, corrosive environments.
Go to nyb.com to download more information. Complete NYB Catalog, Product Bulletins, Fan-Selection Program, Guide Specifications, Engineering Letters, Installation and Maintenance Literature, Listing of New York Blower Representatives and other resources.

All charts in this catalog have been designed to assist you in locating the fan that best meets your system requirements. Generally, there is more than one product line that will meet a particular flow and pressure requirement so we suggest you contact your New York Blower representative to assist you in making the final selection.