Multistage Centrifugal
Blowers/Exhausters
For more than 100 years, two names were synonymous with multistage centrifugal blowers: Lamson and Hoffman. Today, those legacies are joined under the Gardner Denver name, creating the most comprehensive multistage centrifugal blower offering in the world – the Gardner Denver Multistage Centrifugal brand.

Anchored in tradition, this new Gardner Denver Multistage Centrifugal line-up continues a century long commitment to providing customers with innovative blower design, a comprehensive product line, quality manufacturing and unparalleled responsiveness to customer requirements and service.

Today, as the largest manufacturer of blowers/exhausters in the world, our number one priority continues to be developing long-term relationships with our customers. We are continually improving delivery and response times, while setting the highest performance standards in the industry.

Never in the history of multistage centrifugals has there been a company as capable of delivering great value, exceptional quality and quick turnaround on orders. So the next time you're evaluating options for multistage centrifugal blowers, call a Gardner Denver professional sales representative to assist you with your application challenges and requirements. Our factory trained representatives are conveniently located throughout the United States and around the world.

Blowers and Exhausters That Serve A Wide Range Of Applications

The range of applications for Gardner Denver® Lamson® and Hoffman® Centrifugal products is ever-expanding and is firmly illustrated with over 200,000 machines in operation. In the water treatment market, air is provided to water and wastewater aeration systems and air scouring/filter backwashing. Lamson and Hoffman blowers can be specified for coarse/fine bubble diffuser systems, reactor batch supplemental air, digester gas boosters, grit channels and sludge digestion applications. In the industrial market, our blowers provide air or gas for sulfur recovery, combustion air, process gas boosting, coal mine venting, fluidized bed combustion systems, vapor and gas extraction, composting, sludge incineration and printing systems, to name a few. Gardner Denver Engineered Vacuum Systems are used to pick up, convey and capture a myriad of materials ranging from aluminum granules to corn flakes. The experienced Gardner Denver team, backed by years of research and development, provides effective, affordable solutions for a variety of application needs.
Blowers and Exhausters
That Serve a Wide Range of Applications

**Industrial Processing**
- Aeration Basins
- Air Drying
- Air Flotation and Sliding
- Air Knife Stripping
- Blow-off Systems
- Carbon Black
- Coal Gasification
- Combustion Air Blowers
- FGD – Forced Oxidation
- Fluidized Bed
- Gas Boosting
  - O2, CO2, N2, etc.
- Gas Recovery
- Landfill Gas
- LNG Vaporizers
- Printing Operations
  - Turning Bars
  - Dryers
  - Binding Applications
- Pulp Dewatering
- Steel Plating Baths
- Sulfur Recovery
- Vapor Recompression

**Engineered Vacuum Systems**
- Clean Rooms
- Electronics
- Explosive Dust Collection
- Flux Recovery
- Housekeeping
- Nuisance Dust Collection
- Oral Evacuation
- OSHA Standard Required
- Pneumatic Conveying
- Powder Paint
- Product Reclamation
- Sanitary/Product Quality
  - Bakeries
  - Flour/Grain Mills
  - Food Products
  - Pharmaceuticals
- Source Capture

**Your Application**
Contact us for design assistance for your unique application.
Durable, reliable and efficient, Gardner Denver® Lamson® and Hoffman® centrifugal blowers/exhausters represent the highest quality workmanship in the industry using the finest materials and state-of-the-art machining tools available today. Our dedication to design and quality assures you that the Gardner Denver blower you select is the best in the industry.
Multiple Baffle Rings
Many models feature our patented Multiple Baffle Rings (MBR™) which help turn airflow smoothly into the eye of the impeller, dramatically reducing inlet passage losses. MBR combined with the two-dimensional impeller design increases blower efficiency and pressure/vacuum capability.

Flexible Coupling
Blowers/exhausters connect directly to the power source with a precision aligned flexible coupling. This optimizes power transfer and minimizes bearing loads for longer life.

Balance Piston
A balance piston is located at the outlet end of the rotating impeller assembly to compensate for the axial force of the impellers on the inlet bearing. This greatly increases bearing life for longer, trouble-free operation.

Cast Housing
Blower housings are precision machined from high-grade cast iron. Smaller models are cast aluminum. The intermediate blower sections are assembled together using high strength steel tie rods. The blower and its driver are mounted together on a single steel baseplate. This assures long lasting performance and durability.

Multistage Shrouded Impellers
Two-dimensional shrouded cast aluminum impellers are balanced individually and keyed onto the shaft. On most blowers, the complete assembly is then balanced to achieve smooth operation with lowest vibration levels in the industry. Rotor assemblies are designed to operate well below first critical speeds for added reliability.

Labyrinth Seal
Non-contact, non-wearing labyrinth air seals are standard. This no-maintenance seal is used in most air and some gas applications (purge option available).

Carbon Ring Seal
For special air and gas applications requiring superior sealing, optional carbon ring seals are available with purge option.
Gardner Denver offers the most complete range of Lamson and Hoffman multistage centrifugal blower/exhauster models to meet your needs. Each base model presents its own unique performance characteristics and design features that are illustrated in the chart below and the air maps on the following pages.

**CF Select™ Precision Sizing Service**

To help customers select the optimal blower or exhauster for their operation, Lamson and Hoffman engineers use Gardner Denver CF Select, a computerized sizing service. CF Select software can create an infinite number of performance curves for pressure, efficiency, temperature and power consumption. Based on the specific gas mixture, inlet conditions, flow and pressure/vacuum requirements, CF Select selects the most appropriate model, impeller design, operating speeds or throttling options.

### Gardner Denver Performance Specifications

<table>
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<tr>
<th>Blower/Exhauster Capacity</th>
<th>260</th>
<th>310</th>
<th>400</th>
<th>510</th>
<th>725</th>
<th>550</th>
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<td>Carbon Ring Seal</td>
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<td>6”</td>
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<td>6”</td>
<td>6”</td>
<td>8”</td>
<td>8”</td>
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</tbody>
</table>
Size and Performance To Fit Your Application

With 22 models to choose from and the ability to specify a variety of manufacturing options, you can be assured that the blower or exhauster you order will deliver the performance you expect. In addition to the base models available, customers can choose from a variety of design options such as special coatings, alternative component materials, oil or grease lubrication, special seals, drive couplings and power sources. The Gardner Denver Lamson and Hoffman blower/exhauster you specify is then manufactured according to your unique application and requirements.

Gardner Denver Performance Testing Lab

Lamson and Hoffman blowers and exhausters are tested in our state-of-the-art test facility in Peachtree City, Georgia. Using the most sophisticated testing equipment available in the industry, we test units up to 3,000 horsepower in accordance with the latest edition of the ASME test code PTC-10, ISO and all other applicable international standards. Units are brought into this two-story laboratory and connected to a specialized power unit and precision monitoring equipment. The blower/exhauster is then tested and evaluated for performance characteristics, noise level and vibration. Overall performance data is captured in real time for performance curve evaluation and documentation. We frequently host performance testing for customers and inspectors from all over the world.

### Blower/Exhauster Capacity

<table>
<thead>
<tr>
<th>Blower/Exhauster Capacity</th>
<th>742</th>
<th>751</th>
<th>1260</th>
<th>752</th>
<th>1270</th>
<th>761</th>
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<th>1600</th>
<th>1875</th>
<th>2000</th>
<th>2400</th>
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<tr>
<td>Minimum Flow (cfm)</td>
<td>700</td>
<td>950</td>
<td>1,250</td>
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<td>1,175</td>
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<td>12,000</td>
<td>15,000</td>
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<td>40,000</td>
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<tr>
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<td>350</td>
<td>351</td>
<td>406</td>
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### Maximum Number of Stages

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<tbody>
<tr>
<td>Single Baffle Ring</td>
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<tr>
<td>Multiple Baffle Rings (MBR)</td>
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<tr>
<td>Balance Piston</td>
</tr>
<tr>
<td>Lubrication</td>
</tr>
<tr>
<td>Labyrinth Seal</td>
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<tr>
<td>Carbon Ring Seal</td>
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### Connections

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<tr>
<td>8&quot; 12&quot; 12&quot; 10&quot; 12&quot; 14&quot; 14&quot; 14&quot; 18&quot; 18&quot; 20&quot;</td>
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</table>

Air map data is representative of maximum RPM design for each model with standard conditions at 60 Hz.

*Maximum stages at 50 Hz. ** 2 7/8" as cast O.D. (standard), 2 1/2" male N.P.T. or 2 1/2" threaded ANSI flange.

Contact your Gardner Denver Representative for job specific blower sizing.
Choose From Multiple Drive Options
Lamson and Hoffman blowers and exhausters may be direct driven, V-belt driven or gearbox driven with an electric motor. Alternative drivers include steam turbines, diesel engines, gasoline engines and liquid petroleum or methane gas engines. Also available is the Gardner Denver ESP™ (Energy Saving Performance) variable frequency drive system. The ESP system automatically adjusts airflow output to match the actual airflow demand. The blower/exhauster power requirement adjusts automatically resulting in energy savings. Your Gardner Denver representative can work with you to determine the best drive option and configuration to match your application.
Air Maps
Gardner Denver Models 42-732

[Diagram showing discharge pressure, volume rate flow, and vacuum for Gardner Denver Models 42-732]
Air Maps
Gardner Denver Models 741-1270
Gardner Denver Models 761–2400
**Gardner Denver® Monitoring and Control Systems**

Whether you're responsible for a wastewater treatment plant, the smelting operation at a foundry or the precise material handling needs of a manufacturing facility, Gardner Denver offers control systems to properly operate your Lamson and Hoffman blowers and exhausters and protect them from conditions that may lead to catastrophic mechanical failure, costly downtime or voiding your manufacturer’s warranty. At Gardner Denver we engineer a variety of control systems and monitors capable of providing you with the protection and information you need to keep your operation running at peak efficiency.

Our control systems can monitor a variety of conditions that include motor current, motor temperature, blower vibration, bearing temperature, blower oil level, discharge air temperature, inlet vacuum and outlet pressure.

**Genuine Gardner Denver Factory Service and Parts**

- Factory Trained Service Professionals
- On-site, On-Demand Service
- System Optimization
- Blower Remanufacturing
- Training, Troubleshooting and Consulting
- Warranty Renewal Programs
- Genuine GD Quality Replacement Parts
- Highest Quality Lubricants
  - AEON® Centrifugal Lubricating Grease
  - AEON CF-46 Centrifugal Blower Oil

**Accessories**

- Engines
- Motors
- Turbines
- Variable Frequency Drives
- Butterfly Valves
- Check Valves
- Filters
- Silencers
- Expansion Joints
- Gauges
- SmartMeter
- Blower Control Panels

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Please recycle after use.

www.GardnerDenverProducts.com  cf.blowers@gardnerdenver.com

Gardner Denver, Inc.  100 Gardner Park, Peachtree City, GA 30269

New Equipment Sales: (800) 543-7736  Phone: (770) 632-5000  Fax: (700) 486-5628

Aftermarket Parts Sales: (800) 982-3009  Phone: (770) 632-5000  Fax: (700) 486-5530

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