

fan solutions

for residential, commercial and industrial applications









From Past to Present

Responding with solutions to the world's demand for comfortable, quiet, and energy efficient spaces.



No other North American manufacturer offers a more diverse product line of air moving devices. Lau products guarantee that the right air moving product is fit to the application and not vice versa.

Eighty Years and Growing.



Lau's history began in 1931 when Edgar B. Lau began the Lau Blower Company in Dayton, Ohio, building high efficiency, forward-curved blower wheels. In 1941, Lau was granted a patent for

a blower conversion unit which converted gravity heated homes to forced air. This early innovation launched Lau on its path towards efficiently **moving air to improve comfort**. As homes made the switch, Lau stood at the forefront of developing forced air solutions to improve comfort.

Innovation: The Engine of Growth.

It was innovation that brought Lau to life and it is innovation that keeps our company moving forward. One of the reasons for our success is a core belief that business can only grow through **innovation**. With over 50 patents related to heating and ventilation comfort, Lau continues to innovate solutions to meet the world's changing energy and noise requirements while delivering the **highest quality product** as economically as possible. Lau innovated the first full production welded blower wheels with welded blades, the Preslok[™] blower wheel center disc with unique design, the world's first external rotor motorized blower package, and much more.

Our Expertise. Your Solution.

With **decades of experience** comes air moving knowledge, the foundation of what Lau brings to each application. Lau offers both standard and customer focused solutions, tailoring each product to a specific application to maximize performance.



- 1931 Founded by Edgar B. Lau as Lau Blower Company. Produced large volume, high-guality blower wheels.
- **1941** Lau patents the blower conversion unit to convert homes from gravity to forced air heating.
- **1947** Lau patents the window-mounted fan with an integral venturi for compact room ventilation.

1950 Lau patents the world's first spun blower wheel, eliminating the need to weld blades on residential furnace blowers.



efficient direct drive blower available.

1954 Lau patents the first external rotor motorized blower called the "Electro-Wheel Blower," the most

- **1955** Lau becomes one of the first advertisers on **Tonight** with Steve Allen.
- **1955** Lau patents the Preslok[™] blower wheel, the precursor to the modern A Wheel.

1960 Lau patents the Dynacone, a mixed-flow fan suitable for residential applications.



1950 Window Far



1968 Lau Blower Company purchases all assets of the Propellair Division of Robbins and Myers, Inc., Springfield, Ohio. This purchase complemented Lau's then current product line of air-moving equipment.

1964 Lau develops the industry's first tight housing allowing for larger blower wheels in smaller spaces.

1968 Lau designs a fixed-flow blower for clean rooms where static pressures change but require constant flow.

- 1971 Lau patents a hub design for blowers which does not require a set-screw.
- 1971 Lau launches a line of modern appliance-styled humidifiers, the Lau Vapor-Air Humidifiers.
- **1973** Lau announces a line of portable electronic air cleaners called Sea-Air appliances.



- 1980 Lau patents the Weldlok center disc design, the precursor to the modern H Wheel.
- 1990 Lau is purchased by Tomkins PLC, an international company focused on manufacturing, headquartered in London, England, further ensuring Lau's success.



- 1996 Lau purchases the assets of Brookside Group, a residential and commercial air moving manufacturer.
- **2001** Lau releases Whirlwind, a computer-assisted fan selection software.



- **2005** Lau opens its Monterrey, Mexico blower production facility.
- **2008** Lau expands propeller production into Olive Branch, Missouri.
- 2009 Lau develops the Corus direct drive plenum fan with reduced tonal annoyance and limited vibration for full range VFD control.

1964 Ad for Tight

2010 Lau expands its manufacturing capacity to eight locations serving thousands of customers worldwide.



Vapor Wheel Dyna Drive Powered Humidifier



Fixed Flow 1968



magazine





World Class Engineering



"Our engineering department is the backbone of our business."

For over 80 years, Lau's engineering department has had no rivals in business. Our team of experienced design engineers and technicians utilize state-ofthe-art engineering tools and laboratory facilities to provide solutions for the most demanding customer applications. Areas of technical expertise include:

- Airflow Performance
- Acoustics
- Structural Dynamics



Airflow performance testing is conducted in one of two large airflow chambers.

Capacity up to 50,000 cfm (25 m³/s) and 9 in-wg (2,250 Pa) in accordance with AMCA (Air Movement and Control Association) Standard 210.

Dual reverberant rooms are available to measure sound power levels in accordance with AMCA Standard 300.

ENERGY STAR



Lau's engineering laboratory provides a full range of product and application testing. Airflow performance testing is conducted in one of two large airflow chambers. Dual reverberant rooms are available to measure sound power levels in accordance with AMCA Standard 300. The Lau Engineering laboratory is accredited by AMCA for test standards 210 and 300.

Other laboratory capabilities include balance and vibration measurements, dynamic strain-gauge testing, life cycle testing, and ASTM B-117 Salt Fog.



From basic air-moving components to motorized air-moving packages, Lau engineering is uniquely positioned to tackle the most demanding customer application challenges.

The laboratory contains a 12,000 ft² prototype and sample shop supporting product development and customer sample requests.



Innovation Next Door



Marketing and R&D Headquarters Dayton, OH

Wholesale Distribution Warehouses Rochester, IN • Mira Loma, CA • Dallas, TX

Manufacturing Locations

Lexington, KY Commercial Centrifugal

Rochester, IN Residential & Commercial Centrifugal

Galesburg, KS Residential Centrifugal

Olive Branch, MS Residential Axial

Geneva, AL Residential & Commercial Centrifugal

Carrollton, TX Residential & Commercial Axial

Juarez, Mexico Residential & Commercial Axial, Commercial Centrifugal

Monterrey, Mexico Residential & Commercial Axial, Residential & Commercial Centrifugal

element Advanced Fan Selection

More than just fan selection software, element is a comprehensive tool to design an air-moving solution for your application. element incorporates an easy-to-use interface with everything the design engineer needs to identify, compare, and select fan technologies in a simple, single software package.

In addition to the great features shown on the next page, **element** allows users to quickly and easily print submittals, catalog pages, and drawings all to a printer or PDF with **one-touch access**.



element Advanced Fan Selection Software



Make selections based on fan technology and operating points or simply by energy efficiency at a specified operating point.



Evaluate fan energy efficiency using several common metrics.

Energy Cost 20.080 \$/kg	
--------------------------	--

54197 kW 4336 s commercial and industrial buildings. A number of regulatory standards (e.g. ASHRAE 0.1) empose limits on fan energy consumption as part or to guantify fan energy consumption. Several metrics for this fan selecto issed below. You should consult the appropriate standard to determine energy rating is required for your specific application.

1.27 Hp/1000cfm = 0.95 W/cfm = 2004.09 W-s/m*

FEG (Fan Efficiency Grade) FEG 75

> ergy Star Efficiency (includes motor efficiency at left) tar 0.69 cfm/W

Lau's Axial Fans

Lau offers the most versatile range of propellers on the market, manufactured at numerous locations throughout North America.

The proper selection and application of propellers in unitary systems is a complex engineering subject because of the large variety of propeller designs and systems in which they are used. The proper selection and application of the propeller requires evaluation of all the variables to arrive at the most efficient, economical propeller for your application.

Lau's HVAC axial fans are designed for numerous pressure applications including condenser units and heat pumps, cooling towers, engine cooling, and agricultural ventilation.

variety of condenser, free air, and other application of the second seco





HS Series The best s

M Series

The best solution for low noise, high efficiency in residential and commercial air condenser units and heat pumps.

A high-efficiency product series designed for a

E Series

Lau's most versatile propeller series designed for the widest range of utilization, including commercial, industrial, and heavy-duty applications.

Y Series

A robust, universal product typically used in low and medium pressure applications.

R Series

Designed for free air, low pressure applications, such as air circulators, with minimum noise levels in mind.

D Series

36″ - 60′

Specifically designed for poultry, swine, greenhouse, and warehouse ventilation applications.







Lau's Centrifugal Fans

Lau offers the broadest range of centrifugal products available anywhere in the world. A variety of innovation from a single source.

The most common types of centrifugal fans are forward-curved (FC) and backward-curved (BC) airfoil. FC are by far the most common type of centrifugal fan. A housing is necessary to develop rated pressures. FC fans are used in high flow, low pressure applications including residential furnaces and packaged air handling equipment. When used in its designed range, FC fans operate quietly and efficiently. FC fans offer the most compact air moving solution.

BC airfoil wheels perform well with or without a housing and are used in medium flow, high pressure applications such as air handling units. The BC airfoil wheel is the most efficient centrifugal fan design.





C Series Dovlok Wheels

A light weight, light duty wheel specifically designed for residential furnace and air handler applications (FC blades). Available in both direct drive (9[~] - 12[~]) and belt drive (9[~] - 15[~]).

C Series Wheels & Housings

An excellent solution for residential furnace and light commercial air handler units. Available in both direct drive (9" - 12") and belt drive (9" - 15").

A Series Preslok Wheels



A stronger, robust product with blades that lock into place, designed for small to mid-size commercial, residential and industrial applications (FC blades). Available in both direct drive (9" - 12") and belt drive (9" - 20").

A Series Wheels & Housings, Blowers

Commonly used in commercial air handlers and filtration equipment. Available in both direct drive (9^{~-} 12[°]) and belt drive (9^{~-} 20[°]).



A Series Framed Blowers

Designed for commercial and industrial applications requiring Class I and Class II performance.

H Series Weldlok Wheels A heavy-duty belt drive wheels



A heavy-duty belt drive wheel specifically designed for commercial and industrial applications requiring a high volume of air for Class I and Class II performance (FC blades).



H Series Framed Blowers

Designed for commercial and industrial applications through Class II. Also available in a wheel and housing configuration.



Corus

An environmentally superior alternative to conventional fans that can be used in *any* design or *any* application (BC airfoil blades).

9

Residential Axial Fans

Outdoor Condensing Units & Heat Pumps



CF Series

- 18″ 26″ diameter
- Available in multiple blade widths and thicknesses
- 2, 3 and 4-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel, galvalume or aluminum
- 1,200 RPM maximum speed

M Series

- 10″ 18″ diameter
- Available in multiple blade thicknesses
- 2, 3, 4 and 5-blade configurations
- CW & CCW rotations
- Blades available in galvalume or aluminum

S09001

• 1,800 RPM maximum speed



S Series

- 18″ 28″ diameter
- Available in multiple blade widths and thicknesses
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel, galvalume or aluminum
- 1,200 RPM maximum speed

HS Series

- 18″ 30″ diameter
- Available in multiple blade forms, widths and thicknesses
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations available in most diameters
- Blades available in aluminum
- 1,200 RPM maximum speed





Residential Centrifugal Fans

Indoor Furnaces & Air Handlers





C Series Dovlok Direct Drive Wheels and Blowers

- Dovlok center disc construction for positive alignment
- 9" 12" wheel diameters
- 4" 12" wheel widths
- Galvanized steel construction
- Available with a spot-welded housing or seamed housing
- Bolt-on housing supports accommodate four discharge positions
- Available as a motorized package for plug-and-play utilization



Direct Drive Blower Assembly



A Series Preslok Direct Drive Wheels and Blowers

- Preslok center disc construction for positive blade retention, providing higher RPM capability
- 9" 12" wheel diameters
- 4"-12" wheel widths
- Galvanized steel construction
- Housings available in galvanized steel or painted gray steel
- Bolt-on housing supports accommodate four discharge positions
- Available as a motorized package



Direct Drive Blower Assembly

Commercial Axial Fans

Air-Cooled Condensing Units & **Commercial Grade Applications**



S Series

- 18″ 28″ diameter
- Available in multiple blade widths and thicknesses
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel, galvalume or aluminum
- 1,200 RPM maximum speed

HS Series

- 18″ 30″ diameter
- Available in multiple blade forms, widths and thicknesses
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations available in most diameters
- Blades available in aluminum
- 1,200 RPM maximum speed



E Series

- 14″ 50″ diameter
- Available in multiple blade widths
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel, galvalume or aluminum
- 1,800 RPM maximum speed up to 24"
- 1,200 RPM maximum speed up to 30"
- 900 RPM maximum speed up to 50"







Commercial Centrifugal Fans

Packaged Air Conditioners & Air Handlers



A Series Preslok Direct Drive Wheels & Blowers

- Preslok center disc construction for positive blade retention, provides higher pressure capability
- 9" 12" wheel diameters
- 4" 12" wheel widths
- Also available as a wheel and housing combination





 20" – 36" wheel diameters 15" - 36" wheel widths

Framed Blowers

Pillow block ball bearings

H Series Belt Drive Wheels &

- AMCA Class I and Class II performance available
- Wheels and housings available in painted steel



Corus Direct Drive Plenum Fan

- Complete motorized solution
 - Aluminum, welded airfoil wheels available in 9-blade, 12-blade and the exclusive Qualitone (minimizes tonal annovance) configurations
 - 10["] 40["] wheel diameters
- Available in multiple wheel widths to meet a wide variety of operating conditions
- Galvanized steel base with optional isolators
- No resonant conditions in the operating range
- Proprietary balance system for industry's tightest vibration performance
- Available with shaft grounding kit, piezometer, inlet dampers, guarding, and special coatings

A Series Preslok Belt Drive Wheels & Blowers



- Preslok center disc construction for positive blade retention, provides higher RPM capability
- 9'' 20'' wheel diameters
- 4" 18" wheel widths
- Blowers come standard with pillow block ball bearings and AMCA Class I or Class II options
- Available with cartridge bearing or frame-style complete blower assemblies



Industrial/General Purpose Axial Fans

Cooling & Ventilation



Y Series

- 10″ 20″ diameter
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations
- Blades available in steel, galvalume or aluminum
- 1,200 RPM maximum speed



R Series

- 10″ 24″ diameter
- 2, 3, and 4-blade configurations
- CW and CCW rotations
- Blades available in steel or aluminum
- 1,800 RPM maximum speed up to 20"
- 900 RPM maximum speed up to 24"





E Series

- 14″ 50″ diameter
- Available in multiple blade widths
- 2, 3, 4 and 5-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel, galvalume or aluminum
- 1,800 RPM maximum speed up to 24"
- 1,200 RPM maximum speed up to 30"
- 900 RPM maximum speed up to 50"

D Series

- 36″ 60″ diameter
- Available in multiple blade widths
- 2, 3, 4, 5 and 6-blade configurations
- CW and CCW rotations
- Blades available in galvanized steel or stainless steel
- 850 RPM maximum speed up to 40"
- 708 RPM maximum speed up to 48"
- 600 RPM maximum speed up to 60"

Innovation





what we **deliver.**



Lau – a long tradition of Innovation + Expertise



4509 Springfield St. Dayton, OH 45431 Phone: 937-476-6500 Fax: 937-254-9519 www.laufan.com