



Spencer

Power Mizer®

**High Efficiency Cast
Centrifugal Blowers For
Industrial Process Applications**

Spencer high-efficiency blowers reduce operating

Spencer Power Mizer multistage centrifugal blowers provide high efficiency air delivery in heavy-duty industrial process applications such as:

- Sulfur recovery.
- Air knives.
- Hazardous vapor control.
- Soil remediation.
- Fluidized beds.
- Central vacuum systems.
- Debris removal.
- Felt dewatering.
- Air separation.
- Landfill gas boosting.
- Combustion air delivery.
- Wastewater aeration.

Cast components with low operating sound levels

The inlet section, return channels and discharge section of Power Mizer blowers are gray cast iron with excellent strength, chemical resistance and sound attenuation.

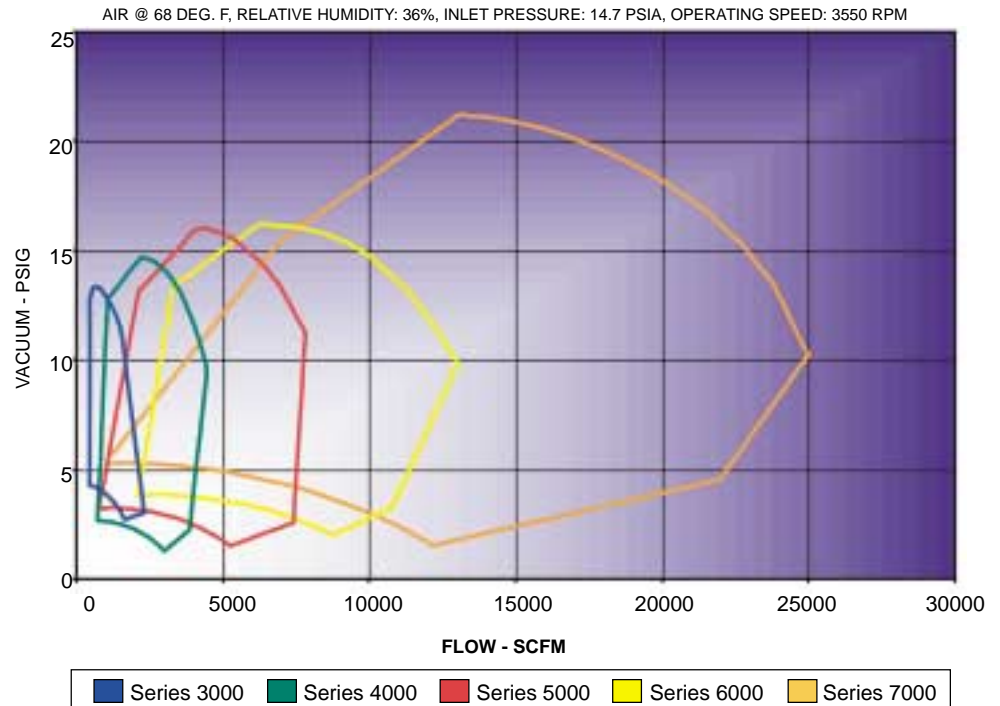
The rotor assembly contains cast aluminum impellers with three-dimensional blades that transfer energy to the airstream with very high efficiency. Blade configurations include radial, backswept and combinations of both, selected by Spencer engineers using specialized computer software.



Superior aerodynamics

The air handling components of these blowers were designed in the Spencer Development Laboratory. By avoiding abrupt velocity changes that create turbulence and waste energy, Spencer engineers achieved smoother, more energy-efficient airflow from blower inlet to discharge.

BLOWER PERFORMANCE



Uniquely shaped impellers, return channels with airfoil-shaped vanes, redesigned inlet and discharge passages and vaneless diffusers all contribute to a peak adiabatic efficiency that is above 80%.

This efficiency is achieved *without baffle rings at each stage*. The result is a much simpler design with fewer parts.

Precisely balanced rotors

Spencer's exacting balancing procedures produce an overall vibration level of 1.0 mil or less the—best in the industry. This decreases bearing stress, which improves bearing life and blower reliability.

Year-in, year-out savings

Power Mizer blowers offer long-term power savings of tens of thousands of dollars per blower per year. And you can often downsize the motor to save even more!

Example: (assuming savings of 38 HP for one blower).

$38 \times .746 = 28.348 \text{ kW saved.}$

$28.348 \times 24 \times 365 \text{ (continuous annual operation)} = 248,328 \text{ kWh.}$

$248,328 \times \$10/\text{kWh (local utility cost)} = \$24,832.$

Motor efficiency of 95% yields an actual savings of \$26,139 on an annual basis.

Product range

- Five Power Mizer series with two to eight stages per blower.
- Pressure to 20 PSIG; volume to 25,000 ICFM; power to 2000 HP.
- Choice of oil or grease lubrication in Series 3000 and 4000 blowers, all others oil-lubricated.

Remember, you can save only once on the purchase price, but you'll save continuously with a more efficient blower!

costs and provide quick payback on your investment.



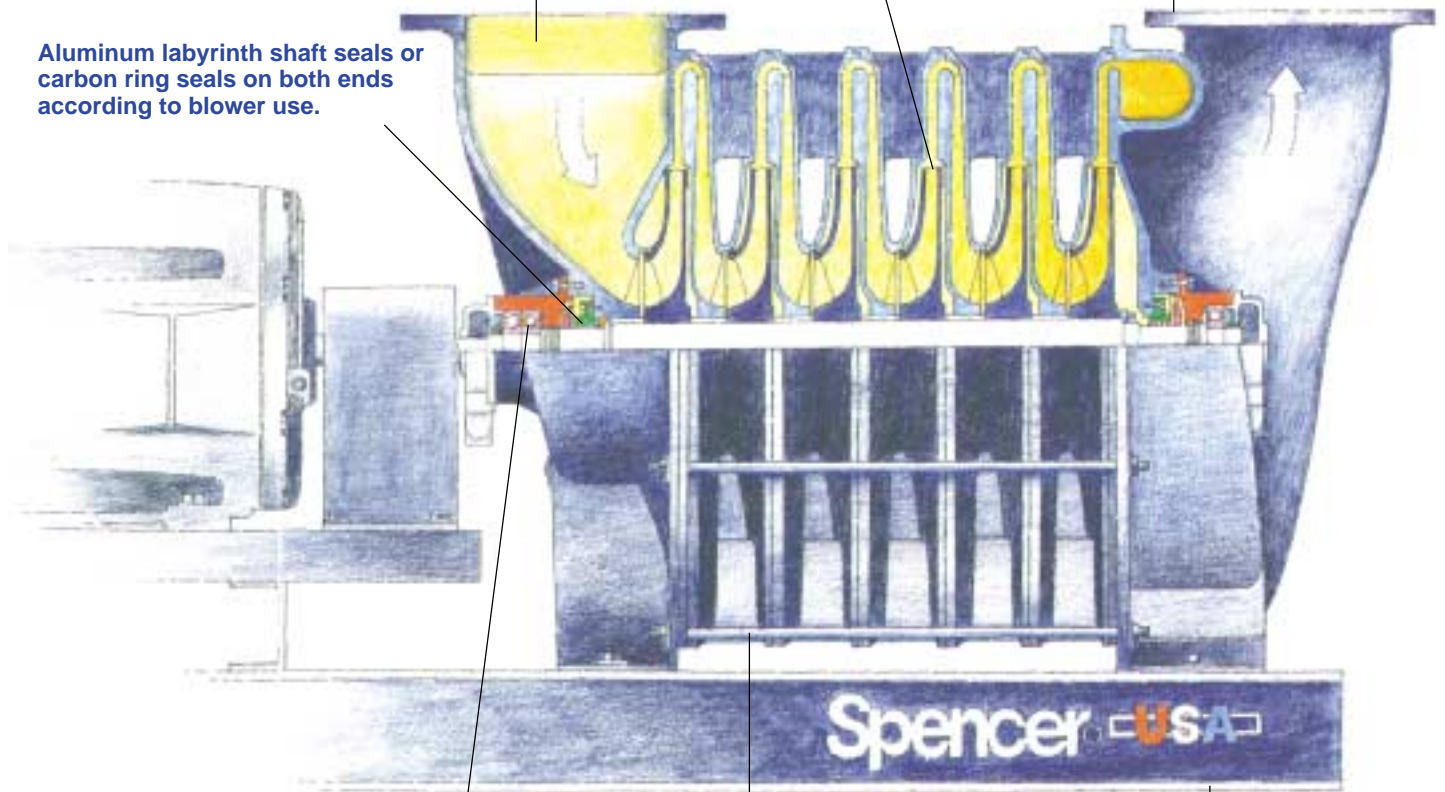
Unique setup of two Power Mizer blowers in series, driven by a single motor, delivers air for a high altitude test rig for automotive engines. Heat exchanger between blowers removes the heat of compression generated in the first blower.

Inlet section, return channels and discharge section of ASTM A-48 CL 30 gray cast iron.

Rotor assembly has one-piece machined shaft supporting cast aluminum, dynamically balanced impellers.

Inlet and discharge flanges are drilled and tapped to ANSI B16.5 125#/150# standards; positioning can be vertical or horizontal (left or right).

Aluminum labyrinth shaft seals or carbon ring seals on both ends according to blower use.



Rotor assembly supported at both ends by outboard bearings designed for minimum L-10 life of 100,000 hours.

External steel tie rods hold return sections securely between inlet and discharge.

Structural steel base.

Over a century of experience

After devoting more than 100 years to air and gas handling equipment, The Spencer Turbine Company is respected worldwide for its quality products and value-added services.

Sales and technical support

Besides direct sales offices, Spencer has manufacturers' representatives covering all of North America and other agents around the globe. Altogether, Spencer has the industry's largest sales organization for on-site assistance with system design and product selection.



Assembly operation showing stack-up of one-piece castings including integral impellers and airfoil-vaned return channels.

Advanced development and testing laboratory at 200,000 sq.ft. Spencer headquarters facility.



Integrated system approach

Spencer offers full system supply capability from blowers and their controls to tubing, valves and other required components. You can count on Spencer to provide air and gas handling systems that are process-optimized, energy-efficient and totally integrated. In addition to Power Mizer cast blowers, other blower selections include:

- Fabricated centrifugal blowers.
- Gas boosters.
- Positive displacement blowers and packages.
- Regenerative blowers.
- Single-stage pressure blowers.

Accessories

- UL/CUL-listed electrical controls.
- Blower and motor protective devices.
- Valves and silencers.
- Gauges and instruments.
- Tubing and fittings of steel, stainless steel, galvanized steel and aluminum.

For selection assistance, contact your local representative or The Spencer Turbine Company.

Since 1892 moving air and gas for a cleaner environment.

The Spencer Turbine Company

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Services

- Custom designs.
- Testing and applications laboratory.
- Spare parts supply.
- In-house and field service for all Spencer products.



Power Mizer vacuum producer with pulse-type separator providing a continuous duty, high velocity dust collection system at a printed circuit board manufacturer.

