



**Spencer®**

**Power Mizer®**

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

# Spencer high-efficiency blowers reduce operating costs.

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 of Power Mizer blowers in Series 4000 through Series 7000 contain cast aluminum impellers (shown below). Their three-dimensional blades 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.

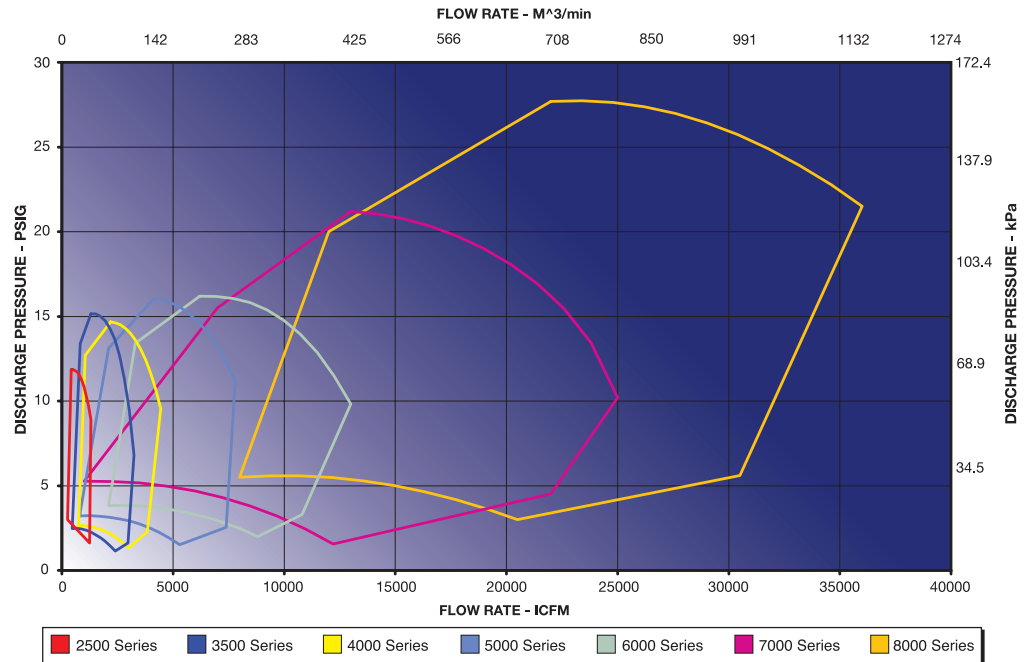


## Superior aerodynamics

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 air-flow from blower inlet to discharge.

## BLOWER PERFORMANCE

AIR @ 68 DEG. F, RELATIVE HUMIDITY: 36%, INLET PRESSURE: 14.7 PSIA, OPERATING SPEED: 3550 RPM



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%.

## Precisely balanced rotors

Spencer's exacting balancing procedures produce an overall vibration level of .19 in/sec or less for Series 2500 – 7000; and .23 in/sec or less for Series 8000 – 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

- Seven Power Mizer series with two to ten stages per blower.
- Pressure to 28 psig; volume to 35,000 icfm; power to 3700 bhp.
- Oil lubrication is available on all series while grease lubrication is also available for Series 2500 and 3500.

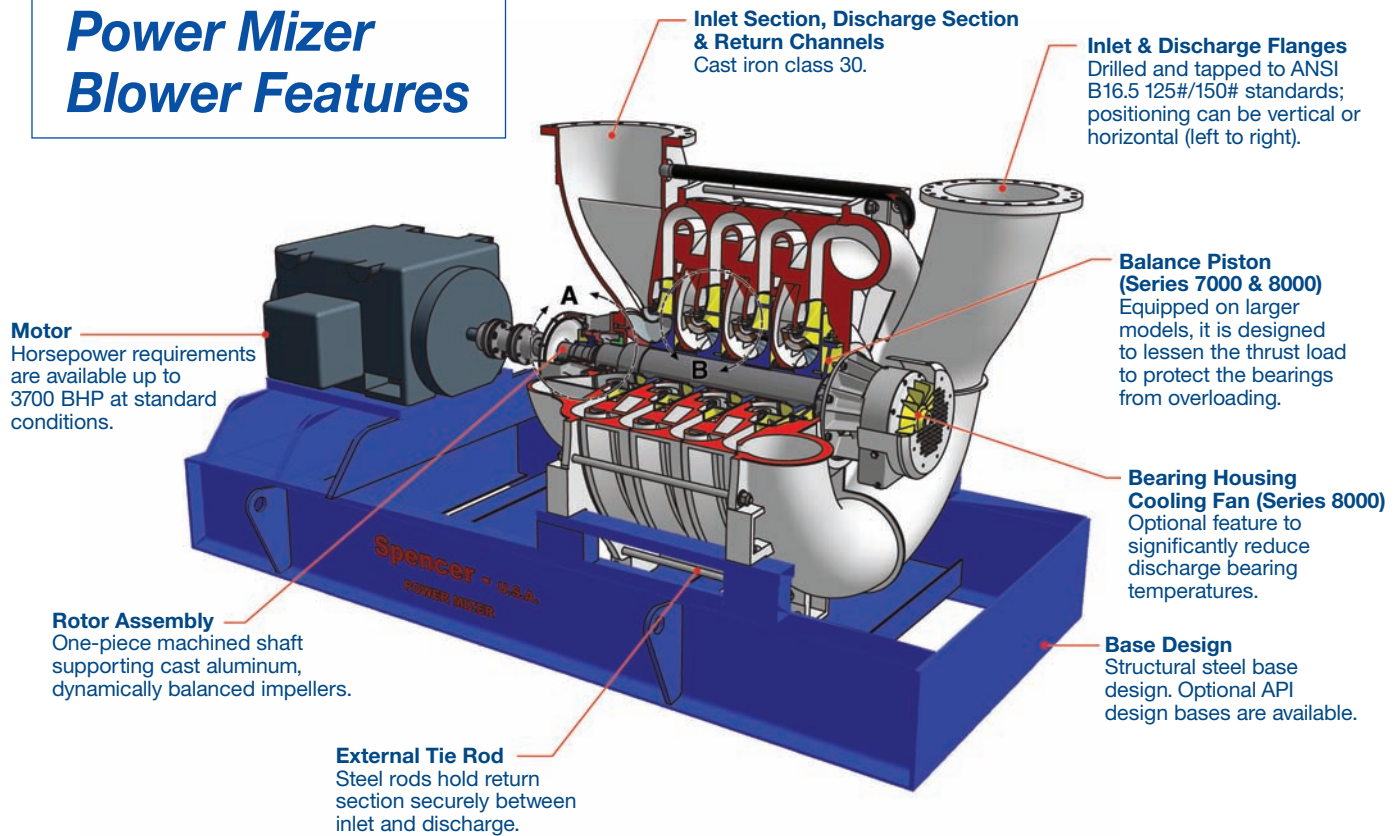
**Remember, you can save only once on the purchase price, but you'll save continuously with a more efficient blower!**

# Spencer high-efficiency blowers provide quick payback on your investment.



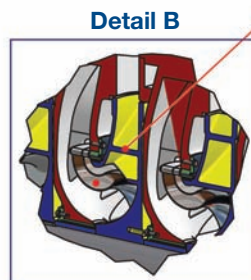
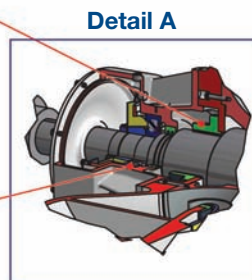
Unique setup of two Power Mizer blowers in series, driven by a single motor, delivers air for a high altitude test rig for automotive engines. Heat exchanger between blowers removes the heat of compression generated in the first blower.

## Power Mizer Blower Features



**Shaft Seals**  
Depending upon intended blower use, either aluminum labyrinth seals or carbon ring seals are provided.

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



**Impellers**  
Cast aluminum alloy impellers with varying combinations of radial and backward curved blades available to attain desired performance ratings.

## Over a century of experience

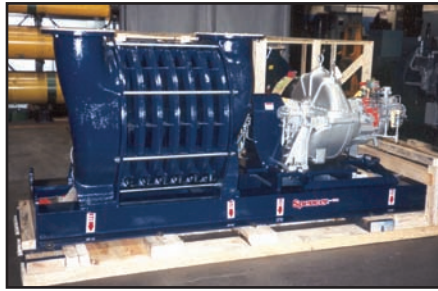
After devoting more than 100 years to air and gas handling equipment, The Spencer Turbine Company is respected worldwide for its quality products and value-added services.

## Sales and technical support

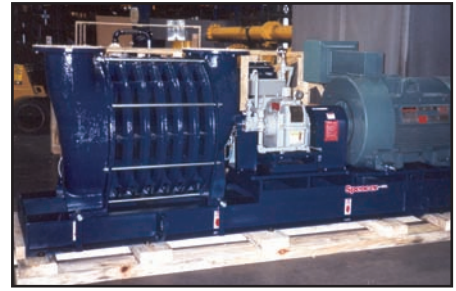
Besides direct sales offices, Spencer has manufacturers' representatives covering all of North America and other agents around the globe. Altogether, Spencer has the industry's largest sales organization for on-site assistance with system design and product selection.



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



Power Mizer blowers for installation at an Indonesian refinery feature two special drive configurations; one has a steam turbine power source; the other has a motor and gear increaser for use with 50 Hz electricity.



## 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.
- Regenerative blowers.
- Single-stage pressure blowers.

## Accessories

- Standard and custom electrical control panels, UL and CUL Listed controls.
- Blower and motor protective devices.
- Valves and silencers.
- Gauges and instruments.
- Tubing and fittings of steel, stainless steel, galvanized steel and aluminum.


## Services

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



Power Mizer blower with Acoustical Belly Wrap™, an effective noise reduction device.

For selection assistance, contact your local representative or email [marketing@spencer-air.com](mailto:marketing@spencer-air.com).

The  **Spencer** Turbine Company, 600 Day Hill Road, Windsor, CT 06095-4706

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