STIRLING® POWER BOILER
A reliable, flexible and adaptable boiler design for industrial applications
Since 1867, the Babcock & Wilcox (B&W) name has been synonymous with quality, dependability and service. Today, B&W continues to supply quality steam generation equipment to utilities and industry worldwide.

**Proven Experience**

The Stirling® boiler has provided dependable steam to industry for more than 100 years. Since 1960 B&W has sold more than 240 Stirling power boilers that are providing more than 75 million lb/h steam flow, burning a wide variety of fuels. Many more vintage Stirling boilers installed prior to 1960 are still in operation.

**Major Industries Served**

A proven and flexible design has made the Stirling power boiler adaptable for applications in a variety of industries, such as:

- Pulp and paper
- Iron, steel and other metals
- Chemicals
- Petroleum
- Food products
- Municipal solid waste
- Ethanol / sugar cane
- Power
Specifications to Fit Your Requirements

Capacity
- Pulverized coal, oil, gas, CO, BFG, COG: 80,000 to 1,200,000 lb/h (10.1 to 151.2 kg/s)
- Stoker coal: 60,000 to 400,000 lb/h (7.6 to 50.4 kg/s)
- Stoker wood, bagasse, biomass: 80,000 to 900,000 lb/h (10.1 to 113.4 kg/s)
- Bubbling fluidized bed (BFB) wood, bagasse, biomass: 80,000 to 1,000,000 lb/h (10.1 to 126.0 kg/s)
- Circulating fluidized bed (CFB) coal, wood, biomass: 80,000 to 1,000,000 lb/h (10.1 to 126.0 kg/s)
- Stoker refuse derived fuel (RDF), municipal solid waste (MSW): 80,000 to 360,000 lb/h (10.1 to 45.4 kg/s)

Steam pressure
- To 2200 psig (15.2 MPa) design for a one-drum unit
- To 1800 psig (12.4 MPa) design for a two-drum unit

Steam temperature
- To 1000F (538C).

Fuels
- Solid, liquid or gaseous fuels such as pulverized and stoker coal, oil, natural gas, wood, bark, bagasse and other biomass, RDF, MSW, carbon monoxide (CO), blast furnace gas (BFG), coke oven gas (COG), and various other byproduct fuels.
Quality Auxiliary Equipment
A dependable boiler design alone does not assure high availability for your steam generating system. Auxiliary components must be just as reliable. B&W has the experience and technical capabilities to provide the industry’s most proven boiler auxiliary equipment, including pulverizers, burners and stokers.

Control of Plant Emissions
B&W can provide the necessary environmental equipment to meet your emissions requirements, including:

► Wet and dry electrostatic precipitators
► Wet and dry SO₂ and particulate scrubbers
► Dust collection equipment
► Low NOₓ burners
► Selective catalytic and non-catalytic reduction systems

Total-scope Services
Construction and field operations are also available from B&W. Customers are served through a strategic network of field sales and service offices, agents, licensees and joint ventures located around the world.

B&W’s wide range of aftermarket product support services include:

► Project management
► Boiler construction, maintenance and repair
► Startup and commissioning
► Training programs
► Field service, inspection and diagnostic testing
► Engineered upgrades and supply of replacement parts for any make or type of boiler
► Balance of plant construction and repair
The design features of B&W’s Stirling® power boiler provide a complete package of benefits not available from other boiler suppliers.

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<tr>
<th>Stirling® Power Boiler Features</th>
<th>Benefits</th>
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<tr>
<td>Stirling power boilers are custom designed within a framework of pre-engineered components of incremental dimensions.</td>
<td>Pre-engineered components minimize engineering costs and delivery times, yet allow specific steam and fuel conditions to be met.</td>
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<td>With one- or two-drum designs available, Stirling power boilers are versatile.</td>
<td>A wide range of steam capacities, pressures and temperatures is available to meet your specific application.</td>
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<td>Various furnace configurations and combustion technologies can be utilized in the Stirling power boiler.</td>
<td>Flexible and adaptable designs are available to accommodate a wide range of specified fuels.</td>
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<td>The steam drum of a Stirling power boiler is designed with superior internal components, including the proven cyclone separators.</td>
<td>The improved steam circulation provides the best steam quality for turbine (power generation) or process applications. The drum also minimizes water level swings to accommodate rapid and wide load changes.</td>
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<td>The Stirling power boiler’s furnace is 100% water-cooled with gas-tight membrane wall construction.</td>
<td>This design provides ease of maintenance (no furnace refractory), maximum safety and faster installation.</td>
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<td>A spray attemperator is used for steam temperature control.</td>
<td>Spray attemperation allows the steam temperature and pressure to be maintained throughout a wider control range.</td>
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<td>The Stirling power boiler uses B&amp;W’s proven auxiliary equipment, such as pulverizers and burners.</td>
<td>Equipment reliability means less downtime and maintenance costs and more efficient long-term operation.</td>
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Established in 1867, Babcock & Wilcox is a global leader in advanced energy and environmental technologies and services for the power and industrial markets, with operations, subsidiaries and joint ventures worldwide.

For more information, or a complete listing of our sales and service offices, send an e-mail to info@babcock.com, or access our website at www.babcock.com.

www.babcock.com

The B&W Stirling® power boiler is a versatile and reliable steam generator with designs that can accommodate a wide range of fuels.