Pre-designed Steam Turbines
The comprehensive product range up to 12 megawatts
A Full Range of World-class Industrial Steam Turbines

Whatever your need for a prime mover, Siemens can provide you with versatile, reliable and proven industrial steam turbines. The world leader in steam turbine technology, with over 100 years of experience and continuous development, and a fleet of more than 20,000 installed turbines, we are a prime partner for your business.

Siemens offers a comprehensive range of pre-designed steam turbines up to 12 MW. These innovative but economical machines have a simple modular design which facilitates optimization of performance for the required application. For optimal configuration, we have different but fully compatible design series to draw upon, enabling us to match your needs as exactly as possible.

For our range of industrial steam turbines with a power output from 2 MW up to 250 MW and for large steam turbines from 250 MW to 1,200 MW, we offer separate portfolio brochures.

Our predesigned steam turbines meet customer requirements for economic installation and operation as well as providing excellent flexibility for complex industrial processes. So, whether you need a generator drive for power generation or a mechanical drive for compressors, blowers and pumps, just talk to us and together we can select the turbine or turboset which is optimally suited to your needs.

Of course we strictly adhere to the guidelines laid down in the quality standards ISO 9001 and ISO 14001. Not only the steam turbines, but also associated field-proven high-tech products are available from the Siemens range. These include generators, instrumentation and controls, as well as auxiliary and ancillary systems.

<table>
<thead>
<tr>
<th>Type</th>
<th>Steam parameters (up to)</th>
<th>Output (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST-010</td>
<td>70 bar, 5 °C (Gas)</td>
<td>1</td>
</tr>
<tr>
<td>SST-040</td>
<td>40 bar, 400 °C</td>
<td></td>
</tr>
<tr>
<td>SST-050</td>
<td>101 bar, 500 °C</td>
<td></td>
</tr>
<tr>
<td>SST-060</td>
<td>131 bar, 530 °C</td>
<td></td>
</tr>
<tr>
<td>SST-110</td>
<td>131 bar, 530 °C</td>
<td></td>
</tr>
<tr>
<td>SST-111</td>
<td>131 bar, 530 °C</td>
<td></td>
</tr>
</tbody>
</table>
Pre-designed steam turbines
The comprehensive Siemens product range up to 12 megawatts

SST-040
(formerly known as AFA 3.5)
up to 300 kW

The SST-040 is a single-stage impulse turbine. The favorably priced turbine was designed as a generator drive for the 75-300 kW power range and can be used in small combined heat and power (CHP) plants, in decentralized solar facilities as well as for waste-heat recovery, e.g. used behind gas engines and biogas engines or for the utilization of residual process steam.

Technical data
- Power output up to 300 kW
- Inlet pressure up to 40 bar(a)/580 psi
- Inlet temperature dry saturated steam up to 400 °C/750 °F
- Speed acc. to driven machine
- Exhaust pressure: from 0.1 bar (a)/1.5 psi condensation backpressure

Typical dimensions
- Length 2.5 m/8.2 ft*
- Width 1.5 m/4.9 ft*
- Height 2 m/6.5 ft*

Features
- Backpressure or condensing type
- Package unit design, oil unit integrated in base frame
- Extremely small and compact design, total weight only 4,500 kg*
- Only minimal foundation work required
- Largely maintenance-free due to stalwart, robust construction
- High availability thanks to resilient and sure technology
- Quick start without preheating of the turbine
- Favorably priced thanks to proven components
- Quick installation and commissioning

SST-010
(formerly known as EPM = Expansion Power Module)
up to 110 kW

The SST-010 is a compact turbogenerator designed to expand natural gas in pressure regulating stations as a direct driving turbine in pipe installation.

Technical data
- Power output up to 110 kW
- Gas pressure up to 70 bar(a)/1,015 psi
- Gas flow rates up to 15,000 m³/h/530,000 ft³/h
- Exhaust gas pressure up to 25 bar(a)/363 psi
- Turbine wheel diameter 400 mm/15.75 in

Typical dimensions
- Length 1.2 m/4 ft
- Width 0.8 m/2.6 ft
- Height 0.9 m/3 ft

Features
- Low-maintenance because of the simple design
- Extremely failure safe
- Quick-start compatible
- Casing flanged directly into the gas pipeline
- ATEX approved

*complete turbine-generator set
SST-050
(formerly known as AF or BF series)
up to 750 kW
The SST-050 is a single-stage, backpressure steam turbine in which the flow passes axially through the blading. It is mainly used as a power source for pumps or fans and especially as a stand-by unit with quick-start capability.

Technical data
- Power output up to 750 kW
- Inlet pressure up to 101 bar(a)/1,465 psi
- Inlet temperature dry saturated steam up to 500 °C/930 °F
- Speed acc. to driven machine
- Exhaust pressure: back pressure up to 11 bar(a)/160 psi

Typical dimensions
- Length 1 m/3.3 ft*
- Width 1 m/3.3 ft*
- Height 1.3 m/4.3 ft*

Features
- Low-maintenance because of the simple design
- Extremely failure safe
- Quick-start compatible
- Turbine with integral oil supply
- Meet requirements of API 611/612**
- ATEX version available

SST-060
(formerly known as AFA, CFA or CFR series)
up to 6 MW
The SST-060 stand out by their rugged design and renowned reliability even under the most severe operating conditions. They are ideal for saturated steam service. Their suitability for use as condensation or back-pressure turbines in combination with various integral gears modules opens up a broad application range.

Technical data
- Power output up to 6 MW
- Inlet pressure up to 131 bar(a)/1,900 psi
- Inlet temperature dry saturated steam up to 530 °C/985 °F
- Speed acc. to driven machine
- Exhaust pressure: back pressure up to 29 bar(a)/420 psi or vacuum

Typical dimensions
- Length 1.5 m/4.9 ft*
- Width 2.5 m/8.2 ft*
- Height 2.5 m/8.2 ft*

Features
- Backpressure or condensing type
- Package unit design
- Oil unit integrated in base frame
- Nozzle group control valves available
- Quick-start without pre-heating
- Tailor made
- Meet requirements of API 611/612**
- ATEX version available
- Suitable for ORC (Organic Rankine Cycle)
- Suitable for gas expansion

* turbine only
** If overhung design and integral gear is accepted
**SST-110**  
(formerly known as TWIN version)

*up to 7 MW*

The SST-110 provides highest cost efficiency and high performance. It allows to reduce high heat gradients while providing a controlled extraction capability. The SST-110 is a dual casing turbine on one gearbox which can run on different steam lines.

**Technical data**

- Power output up to 7 MW
- Inlet pressure up to 131 bar(a)/1,900 psi
- Inlet temperature dry saturated steam up to 530 °C/985 °F
- Speed acc. to driven machine
- Exhaust pressure: back pressure or vacuum

**Typical dimensions**

- Length approx. 6 m/20 ft (incl. generator)
- Width 2.8 m/9.2 ft
- Height 3.2 m/10.5 ft

**Features**

- Backpressure, extraction or condensing type
- Package unit design
- Oil unit integrated in base frame
- Nozzle group control valves available
- Quick-start without pre-heating
- Extremely compact construction
- Pressure controlled extraction
- High pressure/low pressure applications
- Meet requirements of API 611/612*
- ATEX version available
- Suitable for ORC (Organic Rankine Cycle)
- Suitable for gas expansion

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**SST-111**  

*up to 12 MW*

The SST-111 is a dual or triple casing steam turbine with an integrated gearbox, designed for flexible operation and high efficiency. The multi-casing design allows for up to two controlled extractions as well as for operation on different steam supply systems.

**Technical data**

- Power output up to 12 MW
- Inlet pressure up to 131 bar(a)/1,900 psi
- Inlet temperature up to 530 °C/985 °F
- Exhaust pressure: up to 0.06 bar(a)/8.7 psi condensation

**Typical dimensions**

- Length approx. 8 m/26.2 ft (incl. generator)
- Width 4 m/13.1 ft
- Height 4 m/13.1 ft

**Features**

- Condensing type
- Package unit design
- Oil unit integrated in base frame
- Nozzle group control valves available
- Quick-start without pre-heating
- Extremely compact construction
- Pressure controlled extraction
- High pressure/low pressure applications
- Meet requirements of API 611/612*
- ATEX version available
- Reheat possible

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*if overhung design and integral gear is accepted*
Fields of application

Siemens industrial steam turbines increase the efficiency of power generation and improve the profitability of industrial applications.

Industries
- Chemistry
- Food & Beverage
- Independent power producers
- Manufacturing industries, producers of pumps and compressors
- Petrochemistry/Refineries
- Smelters/Steel
- Sugar/Palm oil
- Utilities
- Wood-working industry/Paper mills

Applications
- Biomass power plants
- Captive power plants
- Cogeneration/CHP
- Gas expansion
- Geothermal plants
- Heat-recovery
- Mechanical drives
- Ships/Offshore
- Solar thermal plants
- Waste incineration plants

Main advantages
- High efficiency
- High reliability/availability
- Customized proven solutions
- Compact design
- Simple installation and maintenance