



Industrial Steam Turbines

The comprehensive product range from 2 to 250 megawatts

Answers for energy.

SIEMENS

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. A 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 steam turbines from 45 kW to 1,200 MW, with the flexibility to address the specific requirements for your application. For our range of predesigned steam turbines with a power output from 45 kW up to 10 MW and for large steam turbines from 250 MW to 1,200 MW, we offer separate portfolio brochures.

Our industrial 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 19001 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.

Type	Steam parameters	Output (MW)										
		20	40	60	80	100	120	140	160	180	250+	
SST-100	65 bar, 480° C											
SST-150	103 bar, 505° C											
SST-200	110 bar, 520° C											
SST-300	120 bar, 520° C											
SST-400	140 bar, 540° C											
SST-500	30 bar, 400° C	Double flow										
SST-600	140 bar, 540° C											
SST-700	165 bar, 585° C	Dual casing/reheat or non-reheat										
SST-800	140 bar, 540° C	Center admission										
SST-900	165 bar, 585° C	Single casing/non-reheatDual casing/reheat										

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

Fields of application

Industries:

- Oil and gas industry
- Chemical /petrochemical industry
- Pulp and paper mills
- Sugar and ethanol plants
- Mines, metal and cement plants

Power Generation

Combined cycle, cogeneration and district heating plants

Industries:

- Biomass power plants
- Waste incineration plants
- Solarthermal power plants

Main advantages

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



SST-100 (up to 8.5 MW)



SST-150 (up to 20 MW)



SST-200 (up to 10 MW)



SST-300 (up to 50 MW)



SST-400 (up to 65 MW)



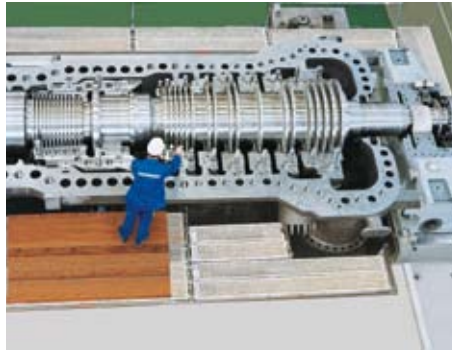
SST-500 (up to 100 MW)



SST-600 (up to 100 MW)



SST-700 (up to 175 MW)



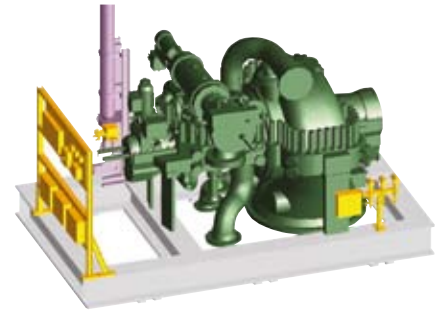
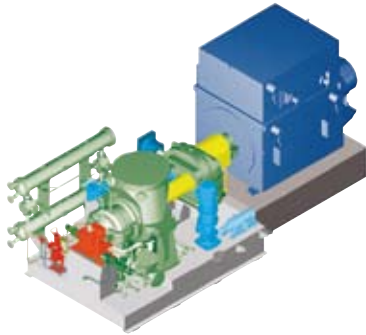
SST-800 (up to 150 MW)



SST-900 (up to 250 MW and more)

Industrial steam turbines

The comprehensive Siemens product range from 2 to 250 megawatts



SST-100

up to 8.5 MW

The SST-100 is a single-casing turbine, geared for generator drive; pre-engineered including blading as a cost-effective solution. Mainly used for industrial applications.

Technical data

- Power output up to 8.5 MW
- Inlet pressure up to 65 bar/945 psi
- Inlet temperature up to 480°C/895°F
- Rotational speed up to 7,500 rpm
- Exhaust pressure (back pressure) up to 10 bar/145 psi
- Exhaust pressure (condensing) up to 1 bar/14.5 psi
- Exhaust area 0.22 m²/2.4 sq. ft.

Typical dimensions

Length 8 m/26 ft.
Width 3.7 m/12.1 ft.
Height 3.4 m/11.2 ft.

Features

- Back pressure/condensing type
- Package unit design
- Radial exhaust
- Simple design, rigid rotor
- Oil system integrated in base frame
- Separate oil and steam piping

SST-150

up to 20 MW

The SST-150 is a single-casing turbine, providing geared drive to a 1,500 or 1,800 rpm generator and packaged in a skid-mounted design. For power generation, it provides high efficiency together with a very compact arrangement.

Technical data

- Power output up to 20 MW
- Inlet pressure up to 103 bar/1,495 psi
- Inlet steam temperature up to 505°C/940°F
- Rotational speed up to 13,300 rpm
- Bleed up to 25 bar/365 psi
- Controlled extraction up to 16 bar/230 psi
- Exhaust pressure (back pressure) up to 10 bar/145 psi
- Exhaust pressure (condensing) up to 0.25 bar/3.6 psi
- Exhaust area 0.28 – 1.6 m²/3.0 – 17.2 sq. ft.

Typical dimensions

Length 12 m/39 ft.
Width 4 m/13.1 ft.
Height 5 m/16.4 ft.

Features

- Back pressure/condensing type
- Package unit design
- Pre-engineered turbine modules, modular peripherals
- Single controlled extraction
- Radial exhaust
- Separated oil and steam piping

SST-200

up to 10 MW

The SST-200 is a single-casing turbine, geared or with direct drive suited to both generator and mechanical drives. Used for industry and power generation applications.

Technical data

- Power output up to 10 MW
- Inlet pressure up to 110 bar/1595 psi
- Inlet temperature up to 520°C/970°F
- Controlled extraction up to 16 bar/230 psi and up to 350°C/560°F
- Bleed up to 60 bar/870 psi
- Exhaust pressure (back pressure) up to 16 bar/230 psi
- Exhaust pressure (condensing) up to 0.25 bar/3.6 psi
- Exhaust area 0.17 – 0.34 m²/1.8 – 3.7 sq. ft.

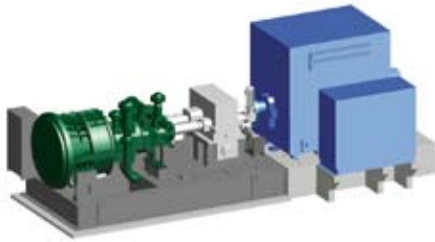
Typical dimensions

Length 4 m/13.1 ft.*
Width 2 m/6.5 ft.*
Height 2.5 m/8.2 ft.*

*turbine skid only

Features

- Back pressure/condensing type
- Package unit design
- Extensive pre-design
- High-speed, downward/upward exhaust
- Customized steam path
- Short delivery time



SST-300

up to 50 MW

The SST-300 is a single-casing turbine, geared for generator drive. It has a compact and flexible design with a high degree of standardization. Used for power generation applications.

Technical data

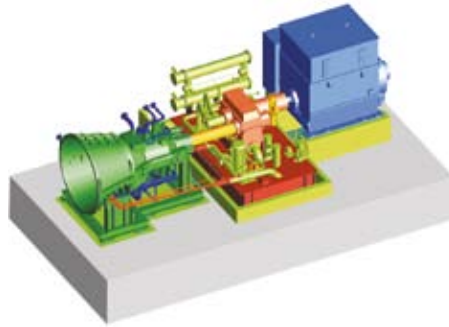
- Power output up to 50 MW
- Inlet pressure 120 bar / 1,740 psi
- Inlet temperature 520°C / 970°F
- Rotational speed up to 12,000 rpm
- Controlled extraction up to 45 bar / 655 psi and up to 400°C / 750°F
- Bleed up to 60 bar / 870 psi
- Exhaust pressure (back pressure) up to 16 bar / 230 psi
- Exhaust pressure (condensing) up to 0.3 bar / 4.4 psi
- Exhaust area 0.28 – 1.6 m² / 3.0 – 17.2 sq. ft.

Typical dimensions

Length 12 m / 39 ft.
Width 4 m / 13.1 ft.
Height 5 m / 16.4 ft.

Features

- Back pressure / condensing type
- Pre-engineered turbine modules, modular peripherals
- Two controlled extractions
- Radial / axial exhaust
- Adaptive stage up to 16 bar
- Package unit design
- Customized steam path



SST-400

up to 65 MW

The SST-400 is a single-casing turbine, geared for generator drive. It has a compact and flexible design with a high degree of standardization. Used for industry and power generation applications.

Technical data

- Power output up to 65 MW
- Inlet pressure up to 140 bar / 2,030 psi
- Inlet temperature up to 540°C / 1,005°F
- Rotational speed 3,000 – 8,000 rpm
- Controlled extraction up to 45 bar / 655 psi and up to 450°C / 840°F
- Bleed up to 60 bar / 870 psi
- Exhaust pressure (back pressure) up to 25 bar / 365 psi
- Exhaust pressure (condensing) up to 0.3 bar / 4.4 psi
- Exhaust area 1.3 – 3.0 m² / 14.0 – 32.5 sq. ft.

Typical dimensions

Length 18 m / 59 ft.
Width 8.5 m / 28 ft.
Height 5.5 m / 18 ft.

Features

- Back pressure / condensing type
- Pre-engineered turbine modules, modular peripherals
- Two controlled extractions, radial / axial exhaust
- Adaptive stage up to 16 bar
- Semi-package unit design
- Customized steam path
- Short delivery time



SST-500

up to 100 MW

The SST-500 is a single-casing turbine, geared or with direct drive. It is suited to both generator and mechanical drives to accommodate large volume flows. Typically used as low-pressure casing in two-cylinder applications.

Technical data

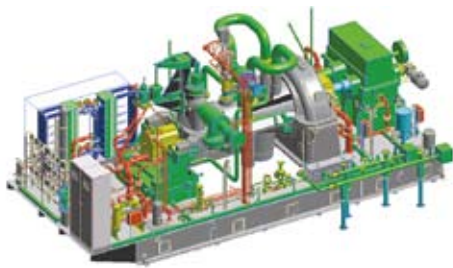
- Power output up to 100 MW
- Inlet pressure up to 30 bar / 435 psi
- Inlet temperature up to 400°C / 750°F
- Rotational speed up to 15,000 rpm
- Bleed up to 2, at various pressure levels
- Exhaust area 2 x 0.175 – 3.5 m² / 2 x 1.9 – 24.8 sq. ft.

Typical dimensions

Length 19 m / 62 ft.
Width 6 m / 20 ft.
Height 5 m / 16.4 ft.

Features

- Double-flow condensing turbine
- Standard turbine modules, modular peripherals
- Throttle-controlled
- Highly customized
- Customized steam path



SST-600

up to 100 MW

The SST-600 is a single-casing turbine, geared or with direct drive; suited to both generator and mechanical drives. Used for tailor-made applications for most complex processes in industry and power generation.

Technical data

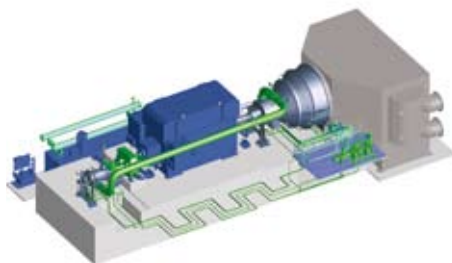
- Power output up to 100 MW
- Inlet pressure up to 140 bar / 2,030 psi
- Inlet temperature up to 540°C / 1,005°F
- Rotational speed 3,000 – 15,000 rpm
- Double controlled extraction up to 65 bar / 945 psi
- Bleed up to 5, at various pressure levels
- Exhaust pressure (back pressure) up to 55 bar / 800 psi
- Exhaust area 0.175 m² – 3.5 m² / 1.9 – 38 sq. ft.

Typical dimensions

Length 19 m / 62 ft.
Width 6 m / 20 ft.
Height 5 m / 16.4 ft.

Features

- Back pressure/condensing type
- Standard turbine modules, modular peripherals
- Inner casing for high steam parameters
- Second steam injection possible
- Package unit design
- Radial/axial exhaust
- Highly customized
- Customized steam path



SST-700

up to 175 MW

The SST-700 is a dual-casing turbine consisting of a geared HP module and LP module. Used for power generation applications, especially in combined cycle and solar thermal power plants. Each module can be used independently or can be combined for the optimal configuration.

Technical data

- Power output up to 175 MW
- Inlet pressure (with reheat) up to 165 bar / 2,395 psi
- Inlet temperature (with reheat) up to 585°C / 1,085°F
- Reheat temperature up to 415°C / 780°F
- Rotational speed 3,000 – 13,200 rpm
- Controlled extraction up to 40 bar / 580 psi and up to 415°C / 780°F
- Bleed up to 7; up to 120 bar / 1,740 psi
- Exhaust pressure (back pressure) up to 40 bar / 580 psi
- Exhaust pressure (condensing) up to 0.6 bar / 8.5 psi
- Exhaust pressure (district heating) up to 3 bar / 45 psi
- Exhaust area 1.7 – 11 m² / 18.3 – 118 sq. ft.

Typical dimensions

Length 22 m / 73 ft.*
Width 15 m / 59 ft.*
Height 6 m / 20 ft.*

* including condenser

Features

- Back pressure/condensing type
- Pre-engineered turbine modules
- Parallel arrangement possible
- Proven solution for solar thermal power plants
- Simple extraction in crossover pipe
- Axial / radial exhaust
- Reheat applications
- Customized steam path



SST-800

up to 150 MW

The SST-800 is a single-casing direct-drive turbine with reverse flow design for generator applications. Used for tailor-made applications for most complex processes in industry and power generation.

Technical data

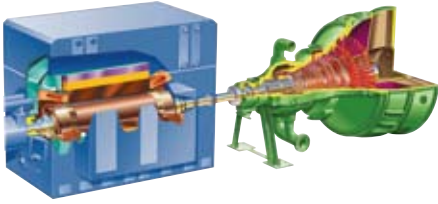
- Power output up to 150 MW
- Inlet pressure up to 140 bar / 2,030 psi
- Inlet temperature up to 540°C / 1,005°F
- Rotational speed 3,000 – 3,600 rpm
- Double-controlled extraction up to 45 bar / 655 psi
- Bleed up to 6, at various pressure levels
- Exhaust pressure vacuum up to 14 bar / 205 psi
- Exhaust area 1.1 – 5.6 m² / 11.8 – 60.3 sq. ft.

Typical dimensions

Length 20 m / 66 ft.
Width 8.5 m / 28 ft.
Height 6 m / 20 ft.

Features

- Back pressure/condensing type
- Standard turbine modules, modular peripherals
- Inner casing for high steam parameters
- Axial / radial exhaust
- Package unit design
- Highly customized
- Customized steam path



SST-900

up to more than 250 MW

The SST-900 is a single-casing turbine for 2-pole generators for power generation and industry. SST-900 RH is a dual-casing turbine for reheat applications.

Technical data

- Power output up to 250 MW and more
- Inlet pressure (with reheat) up to 165 bar/2,395 psi
- Inlet temperature (with reheat) up to 585°C/1,085°F
- Reheat temperature up to 580°C/1,075°F
- Rotational speed 3,000 – 3,600 rpm; HP up to 13,200 rpm (for reheat)
- Bleed up to 7; up to 60 bar/870 psi
- Controlled extraction up to 55 bar/800 psi and up to 480°C/895°F
- Exhaust pressure (back pressure) up to 16 bar/230 psi
- Exhaust pressure (condensing) up to 0.6 bar/8.5 psi
- Exhaust pressure (district heating) up to 3 bar/45 psi
- Exhaust area 1.7 – 11 m²/18.3 – 118 sq. ft.

Typical dimensions

Length 20.5 m/67 ft.*

Width 11 m/36 ft.*

Height 10 m/33 ft.*

*including condenser

Features

- Back pressure/condensing type
- Pre-engineered turbine modules
- Two controlled extractions
- Adaptive stage up to 16 bar
- Butterfly valve up to 55 bar
- Axial/radial exhaust
- Reheat applications
- Customized steam path



Published by and copyright © 2008:

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Oil & Gas Division

Order No. A96001-S90-A168-V2-4A00

Printed in Germany

Dispo 05400 cbs No. 1387 J WS 04086.

Printed on elementary chlorine-free
bleached paper.

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