

A large industrial steam turbine, model SST-300, is shown in a factory setting. The turbine is painted a light green color and is mounted on a complex metal frame. It features a large, circular, dark-colored flange on the left side. The background shows the interior of a large industrial building with blue structural beams and a high ceiling with skylights. A worker in a white hard hat and grey uniform is visible in the lower-left background. The overall scene is brightly lit, suggesting a well-lit industrial environment.

SIEMENS

Ingenuity for life

Siemens Steam Turbine SST-300

This PDF offers an advanced interactive experience.
For the best viewing experience, please use Acrobat Reader X or higher.

Version 3

Siemens SST-300: Reliable and proven worldwide

The SST-300 combines best technology with over 25 years of experience. In the last decade alone, this turbine has been installed in over 500 industrial and power applications by customers all over the world.

Continuous design enhancements make this turbine one of the most efficient steam turbines in the market.

The SST-300 is a pre-designed steam turbine based on the enhanced platform design. All Siemens industrial steam turbines in the range of up to 250 MW are following this global design standard which allows highest flexibility in manufacturing and ensures reliability and availability of our products.



Steam turbine features

- Condensing and back pressure applications
- Extractions possible, e.g. controlled or uncontrolled extractions, single or multiple extractions
- Operational flexibility features, e.g. daily starts and stops
- Various valve configurations possible to achieve an optimal performance in different operation regimes
- Symmetrical casing design, either inner casing or nozzle casing, for fast start up time
- Remote monitoring system (RMS) for predictive maintenance possible
- Advanced technology features, e.g. brush seals, newest blading technology, e.g. 3D blades

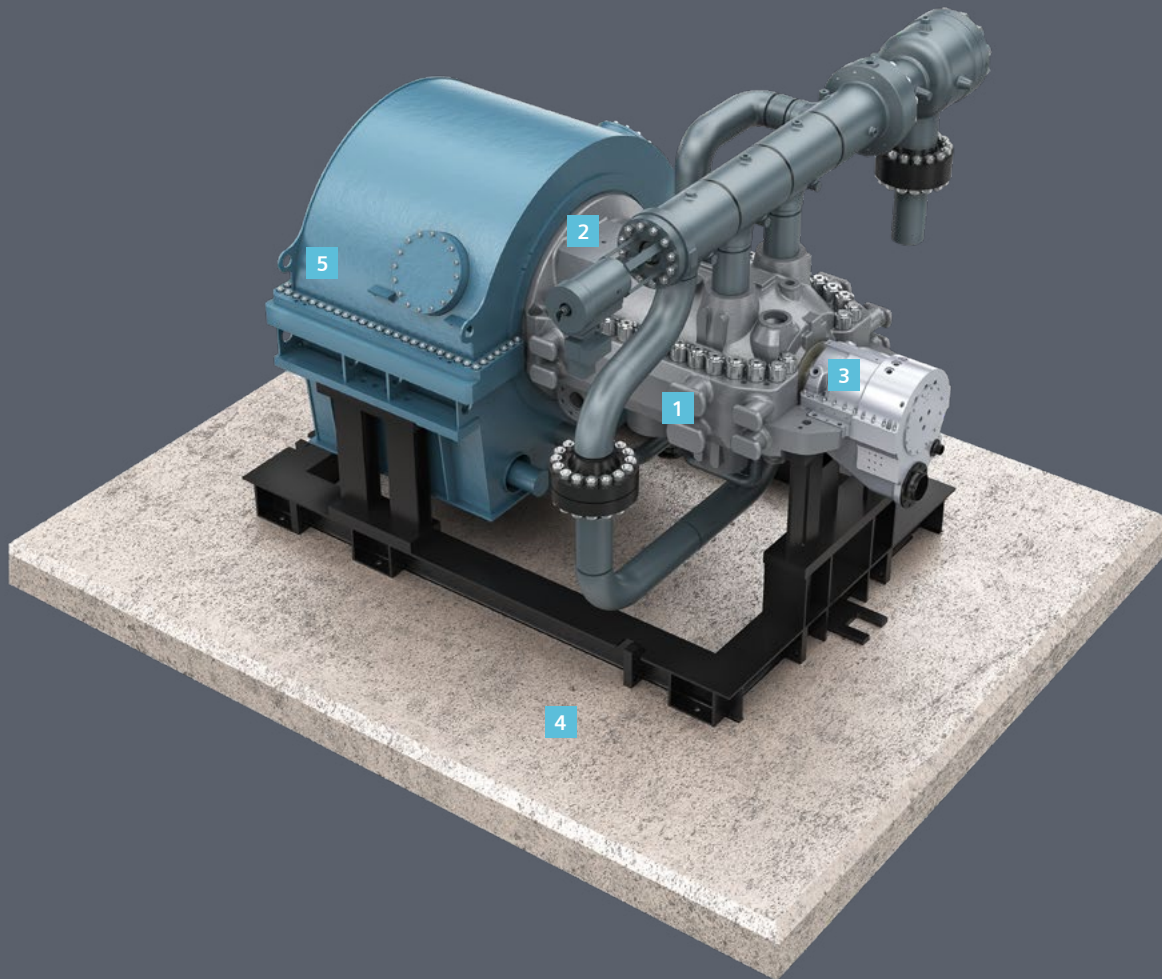
Your benefits

- All components and auxiliaries can be mounted on a common base frame or skid
- Short erection time due to a 'plug and play' system
- Fast, early and flexible layout planning
- High reliability and availability: SST-300 in operation for more than 25 years with several hundred units worldwide
- Easy access to mechanical components facilitates maintenance

Service and maintenance

Our proven installation and maintenance concept lowers maintenance costs by enabling easy access to the installed components – the turbine, gearbox, generator and auxiliaries.

The maintenance concept suggests to open the turbine casing after 50,000 EOH or six years of operation. The long-term maintenance contract involves opening after 100,000 EOH or 12 years of operation.



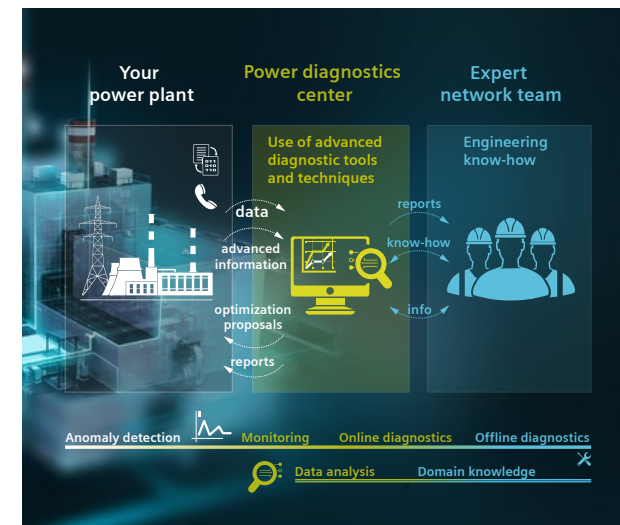
Example for arrangements:
SST-300 with downward radial
exhaust

Option of remote monitoring

As all SST-300 are provided with remote monitoring, Siemens offers service contracts for condition-based maintenance, customized for the specific operating status of each machine to reduce outage and overhaul costs.

Using the remote monitoring technology, customers are able to get fast telephone assistance and secure remote support, online help, advanced troubleshooting and intervention, provided by specialists personnel who are familiar with the plant's design and understand its operation.

Additionally, we offer comprehensive spare-part service, repairs and maintenance solutions designed to increase the reliability and availability of the plant. Our retrofit solutions return turbines to the state of the art even after a normal operating life. Long-term maintenance contracts assure prolonged plant operation at predefined costs.



Technical data

Live steam conditions (ESV inlet):

- Pressure up to 140 bar(a) / 2031 psi
- Temperature 540°C / 1004 °F

Exhaust steam pressure:

- Back pressure up to 16 bar(a) / 232 psi
- District heating up to 3 bar(a) / 43 psi
- Condensing up to 0.5 bar(a) / 7 psi

SST-300 size 40

- Power output: **up to 25 MW**
- Speed: up to **10,950 rpm**
- Controlled extractions possible (single or double, adaptive stage, nozzle control, throttle control)

Uncontrolled extractions (up to 5):

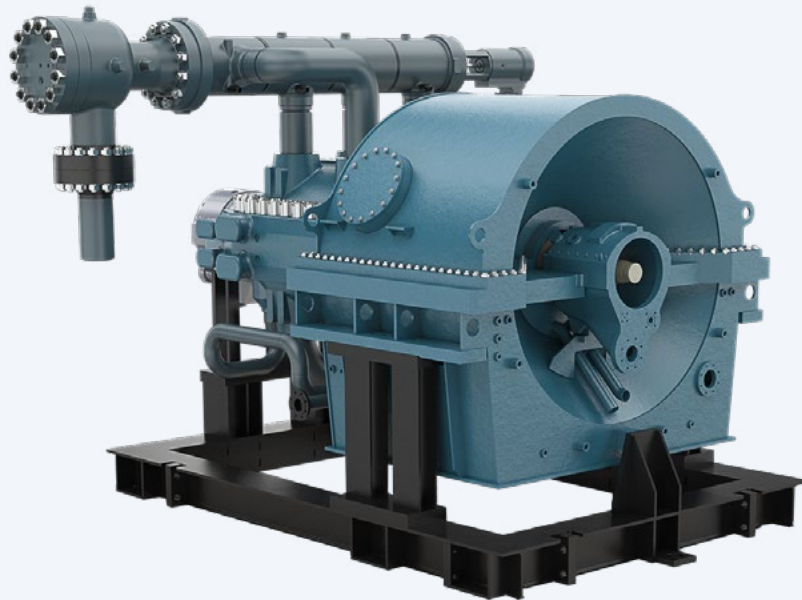
- Pressure up to 70 bar(a) / 1016 psi
- Temperature 450°C / 842 °F

Controlled extractions (up to 2)

- Pressure up to 25 bar(a) / 363 psi
- Temperature 390°C / 734 °F

SST-300 size 50

- Power output: **up to 45 MW**
- Speed: up to **9,004 rpm**
- Controlled extractions possible (single or double, adaptive stage, nozzle control, throttle control)



*all data are approximate and project-related

Steam turbine arrangements

Unit solution

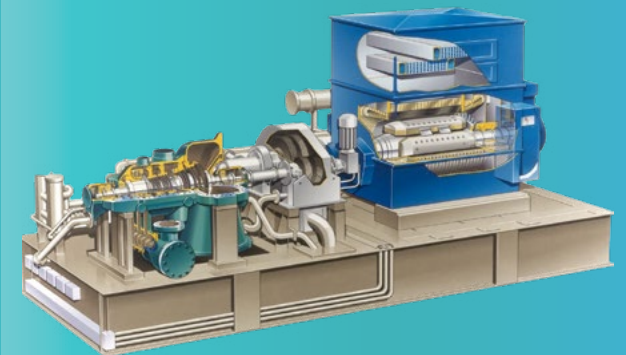
The unit solution consists of the simple base frame for steam turbine (only core turbine is placed on it), oil-type base frame for gearbox, and generator which is placed directly a concrete foundation.

Semi package solution

The semi package solution consists of only one base frame with integrated oil unit, carrying turbine and gearbox; but the generator is directly placed on concrete.

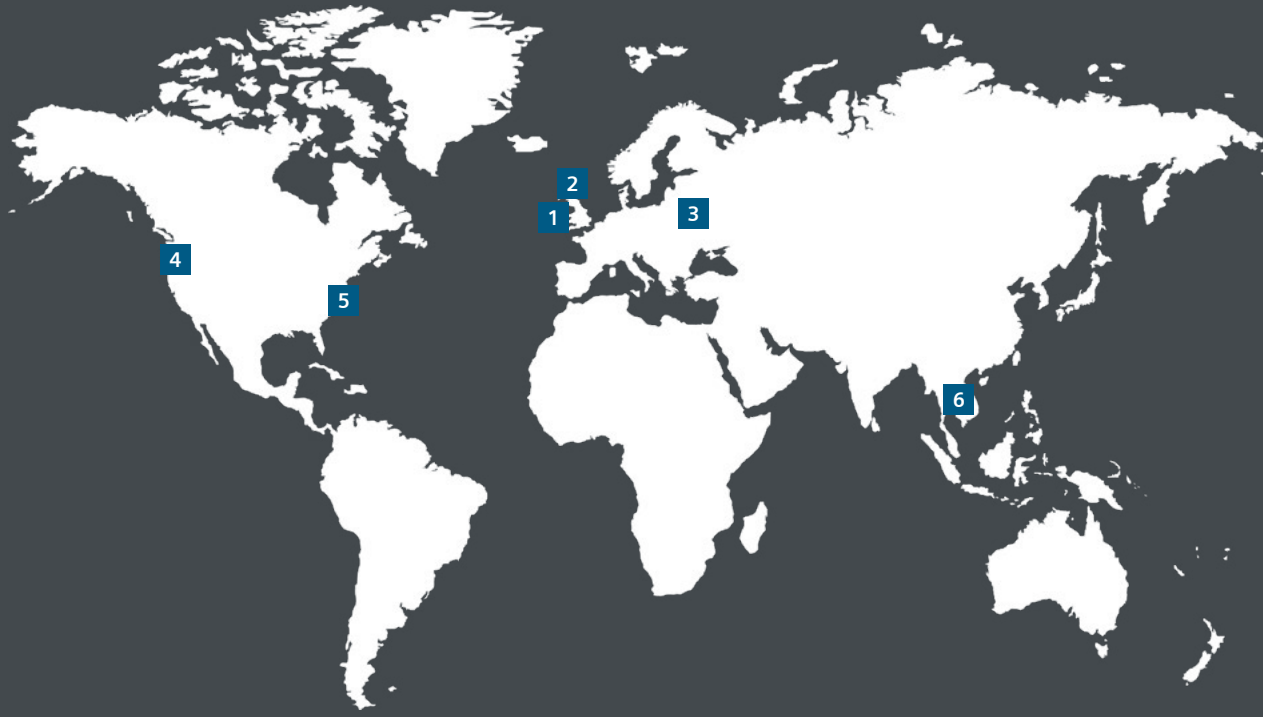
Full package solution

The full package solution consists of only one base frame with integrated oil unit, carrying the turbine, gear box, and generator.



Siemens SST-300: Reference examples

Delivered to the market for more than 20 years, more than 500 units all over the world make the SST-300 a well proven steam turbine.



2

1

3

4

5

6

Published by
Siemens AG 2018

Power and Gas Division
Freyeslebenstrasse 1
91058 Erlangen, Germany

www.siemens.com/steamturbines

For more information, please contact
our Customer Support Center.
Phone: +49 180 524 70 00
Fax: +49 180 524 24 71
(Charges depending on provider)
E-mail: support.energy@siemens.com

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.