

Reaction Steam Turbines



A complete range of equipment to meet the challenges of the Oil and Gas and Power Generation industries.

Tailor-made offering in terms of power and size

GE Oil & Gas' Reaction Steam Turbines are a modular design that ensures reliability and high performance. The machines are customized using pre-engineered, field-proven stator and rotor components that are optimized for the specific thermal cycle requirements to provide high efficiency over the entire operating range. Inlet sections are selected from a large array of modules with a single or multi-valve configuration to satisfy the needs from the smallest to the largest capacities. The turbine exhaust is available with either a radial or axial configuration. The low pressure stages are selected from a large family of three-dimensional stages that have variable or fixed speed capabilities as required by the specific application.

Industries Served

Industrial Power Generation

- Combined Cycle
- Cogeneration
- Waste to Energy
- Biomass

Geothermal Power Generation

Solar Power Generation

Oil and Gas

- Fertilizers - Urea / Ammonia
- Ethylene
- Methanol
- Refinery
- Syn-fuels
- Process Air
- GTL
- LNG / FLNG
- Power Generation

Testing Capabilities

All GE Oil & Gas steam turbines are thoroughly tested at our facilities before being delivered to our customers.

The Florence, Italy test site is equipped with test benches and a complete steam plant with live steam at 50 bar/450°C.

The Le Creusot, France test site features an anechoic chamber for vibration and noise measurements.

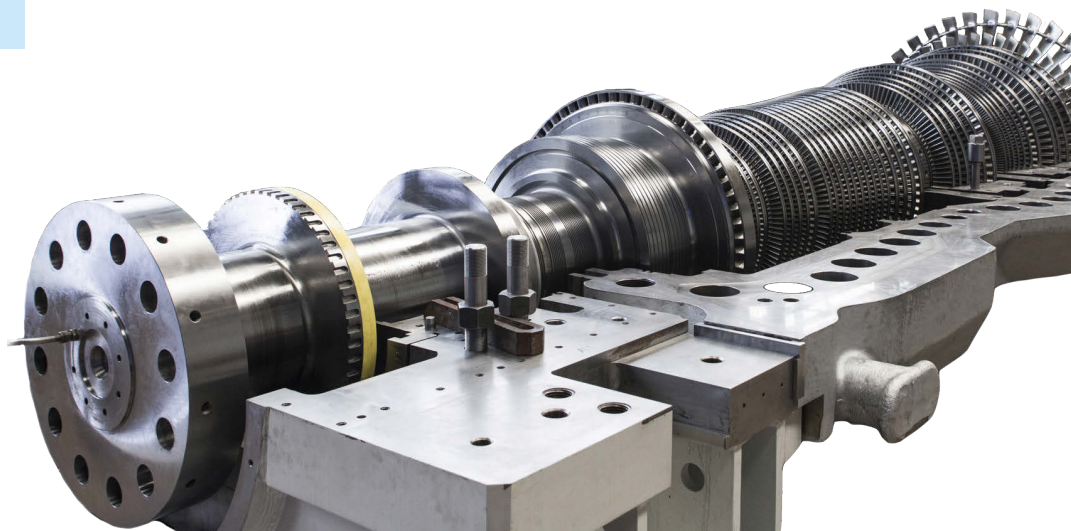
The Schenectady, US test site is equipped for low pressure stage testing and is a fundamental tool for full validation of all new low pressure stage designs for fixed or variable speed applications.

Full Service Capabilities

In order to keep machines operating at peak efficiency and performance, GE provides a broad range of value-added services, such as Conversions, Modifications and Upgrades (CM&Us), repairs, and uprated parts (OEM design and production).

We also provide field service support for installation, start-up, commissioning, on-site inspections, overhauls, emergency repairs and remote M&D capability.

Beyond improved output efficiency, performance, and reliability, our service solutions enable our customers to reduce maintenance costs and comply with environmental regulations.



SC/SAC SERIES - Modular Design for a Variety of Applications

Overview

SC/SAC series Steam Turbines have both impulse and reaction blades for top efficiency over a broad range of operating conditions.

Used in condensing configurations, their modular structured design permits a high degree of customization to meet the specific steam cycle needs.

Key Features

- Single Flow
- Impulse/Reaction blades
- Condensing
- Sliding and/or fixed pressure control
- Up to two controlled extractions
- Axial or Radial (up/down) exhaust
- Base or Foundation mounting
- Design meets API 612 requirements

Product Characteristics

- **Power Rating:** 2 to 100 MW
- **Speed Range:** 3,000 to 15,000 rpm
- **Rated Steam Conditions:** 140 bar (2,030 psi); 565 °C (1,050 °F)
- **Arrangement:** Single casing
- **Condensing LP Stages:** up to 26" (50Hz); up to 25" (60Hz)

SNC/SANC SERIES - Modular Design for a Variety of Applications

Overview

SNC/SANC series Steam Turbines have both impulse and reaction blades for top efficiency over a broad range of operating conditions.

Used in backpressure configurations, their modular structured design permits a high degree of customization to meet the specific steam cycle needs.

Key Features

- Single Flow
- Impulse/Reaction blades
- Backpressure
- Sliding and/or fixed pressure control
- Up to two controlled extractions
- Axial or Radial (up/down) exhaust
- Base or Foundation mounting
- Design meets API 612 requirements

Product Characteristics

- **Power Rating:** 2 to 100 MW
- **Speed Range:** 3,000 to 15,000 rpm
- **Rated Steam Conditions:** 140 bar (2,030 psi); 565 °C (1,050 °F)
- **Arrangement:** Single casing
- **Max Backpressure:** 60 bar (870 psi)

A5/A9 SERIES - Single Casing Reheat Turbines

Overview

Single casing Reheat Steam Turbines provide the most effective solution for small reheat applications.

These turbines are configured with a central admission and back-to-back flow path to reduce temperature gradients and keep thermal stress to a minimum.

Key Features

- Back-to-Back configuration
- Central admission
- Impulse/Reaction blades Condensing
- Sliding and/or fixed pressure control
- Radial (up/down) exhaust
- Foundation mounting
- Design meets API 612 requirements

Product Characteristics

- **Power Rating:** 20 to 100 MW
- **Speed Range:** 3,000 to 3,600 rpm
- **Rated Steam Conditions:** 140 bar (2,030 psi); 565 °C (1,050 °F)
- **Arrangement:** Single casing
- **Condensing LP Stages:** up to 26" (50 Hz); up to 25" (60 Hz)

SG SERIES - Geothermal Steam Turbines

Overview

SG series Steam Turbines have a unique design to withstand direct geothermal steam conditions such as saturated or slightly superheated steam, presence of corrosive contaminants, and low pressure.

Key Features

- Single Flow/Double Flow
- Impulse/Reaction blades
- Sliding and/or fixed pressure control
- Axial or Radial (up/down) exhaust
- Foundation mounting

Product Characteristics

- **Power Rating:** 5 to 100 MW
- **Speed Range:** 3,000 and 3,600 rpm
- **Rated Steam Conditions:** 30 bar (435 psi); 300 °C (572 °F)
- **Arrangement:** Single casing
- **Condensing LP Stages:** up to 26" (50 Hz); up to 23" (60 Hz)

SDF SERIES - Double Flow Steam Turbines

Overview

SDF Steam Turbines are of the double flow type to accommodate low pressure steam.

They can be used as a low pressure body of a two casing turbine or a stand-alone turbine for low pressure steam conditions.

Key Features

- Double Flow
- Impulse/Reaction blades
- Condensing configuration
- Sliding and/or fixed pressure control
- Radial (up/down) exhaust
- Base or Foundation mounting
- Design meets API 612 requirements

Product Characteristics

- **Power Rating:** 5 to 100 MW
- **Speed Range:** 3,000 to 15,000 rpm
- **Rated Steam Conditions:** 30 bar (435 psi); 300 °C (572 °F)
- **Arrangement:** Single casing
- **Condensing LP Stages:** up to 26" (50 Hz); up to 25" (60 Hz)