

KK&K[®] steam turbines

The comprehensive product range up to 24 megawatts



Whatever your need for a prime mover, Howden can provide you with versatile, reliable and proven industrial steam turbines.

One of the leading turbo machinery manufacturers (formerly AG Kuehnle, Kopp & Kausch/Siemens Turbomachinery Equipment GmbH), 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.

A full range of world-class industrial steam turbines

Howden offers a comprehensive range of steam turbines up to 24 MW. These innovative and economical machines have a simple modular design enabling performance optimisation in a variety of applications. Offering a series of fully compatible models, we are able to achieve optimal configuration and match your needs as accurately as possible.

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

We strictly adhere to the guidelines laid down in the quality standards ISO 9001 and ISO 14001.

Fields of application

Howden steam turbines increase the efficiency of power generation and improve the profitability of industrial, as well as mechanical drives, e.g. pumps and compressors.

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



CORE

Up to 6 MW

The CORE is perfectly suitable for packaging companies and EPCs who complete the unit for their customers.

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 according to driven machine

Exhaust pressure: back-pressure up to 29 bar(a)/420 psi or vacuum

Typical dimensions

Depends on scope of complete package

Features

Back-pressure or condensing type

Nozzle group control valves available

Quick-start without pre-heating

Meet requirements of API 611/612*

*If overhung design and integral gear is accepted



MONO

Up to 6 MW

The MONO stands out by their rugged design and renowned reliability even under the most severe operating conditions. They are ideal for saturated steam service and suitable for use in condensation and back-pressure turbines. With various integral geared modules the MONO can operate in a broad range of applications.

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 according to driven machine

Exhaust pressure: back-pressure up to 29 bar(a)/420 psi or vacuum

Typical dimensions (approx.)

Length 1.5 m/4.9 ft* (turbine only, 6 m/20 ft incl. generator)

Width 2.5 m/8.2 ft*

Height 2.5 m/8.2 ft*

Features

Back-pressure or condensing type

Package unit design

Oil unit integrated in base frame

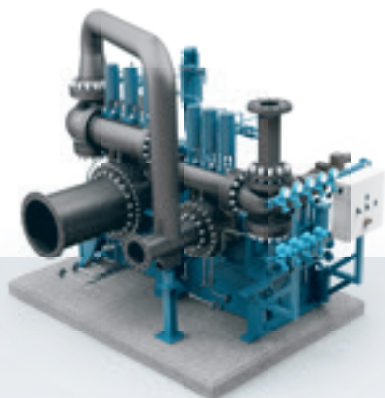
Nozzle group control valves available

Quick-start without pre-heating

Tailor made

*Turbine only.





TWIN

Up to 12 MW

The TWIN provides highest cost efficiency and high performance. It reduces high heat gradients and is capable of providing a controlled extraction. The TWIN is a dual casing turbine on one gearbox which can run on different steam lines.

Technical data

Power output up to 12 MW

Inlet pressure up to 131 bar(a)/1,900 psi

Inlet temperature dry saturated steam up to 530°C/985°F

Speed according to driven machine

Exhaust pressure: back-pressure or vacuum

Typical dimensions (approx.)

Length 6 m/20 ft (incl. generator)

Width 2.8 m/9.2 ft

Height 3.2 m/10.5 ft

Features

Back-pressure, 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 and/or admission

High pressure/low pressure applications

Reheat possible



TRI

Up to 12 MW

The TRI is a 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 (approx.)

Length 8 m/26.2 ft (incl. generator)

Width 4 m/13.1 ft

Height 4 m/13.1 ft

Features

Back-pressure, 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 and/or admission

High pressure/low pressure applications

Reheat possible

The MONO, TWIN and TRI Steam Turbines are also available as part of a special engineered and tailor made solution with a power output up to 24 MW.

We are able to customise our steam turbines to suit your needs. Any requirements or specifications like ATEX or API 611/612 (with comments) are possible with no limited conditions.

This option includes COMBI trains with multiple extractions or EXP (expanders) for gas expansion and tailor made solutions for ORC processes (Organic Rankine Cycle).



At the heart of your operations

Howden people live to improve our products and services and for over 160 years our world has revolved around our customers. This dedication means our air and gas handling equipment adds maximum value to your operations. We have innovation in our hearts and every day we focus on providing you with the best solutions for your vital operations.



Howden

Hessheimer Strasse 2
67227 Frankenthal
Germany

Tel: +49 6233 85 2291

Fax: +49 6233 85 2660

Email: steam-turbines@howden.com

Web: www.howden.com/steamturbines



Revolving Around You™