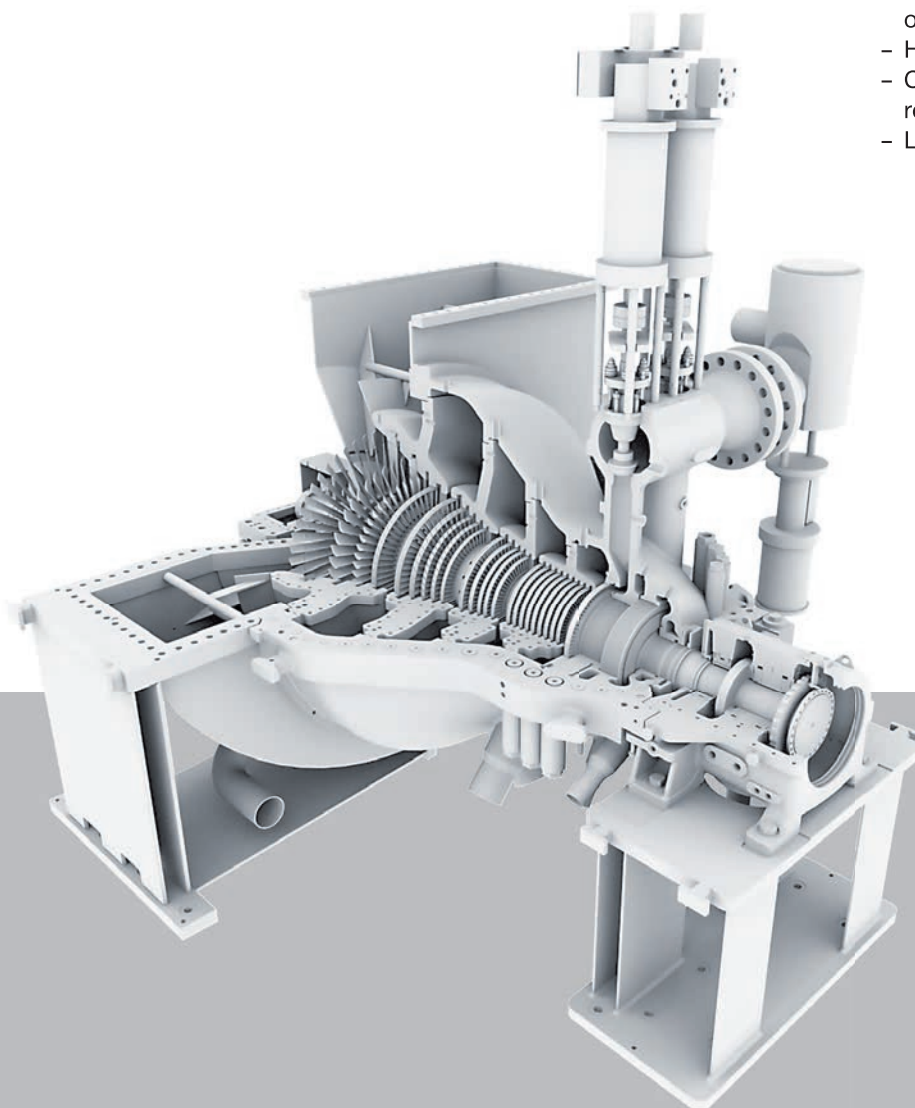


# Steam turbines

**Your direct benefits**

- Highest efficiency based on optimized turbine design
- Highest availability
- Customized for specific customer requirements
- Long overhaul intervals



# Steam turbines

## A broad range of industrial steam turbines

### Typical Performance Data:

Type	Power Range	Max. steam inlet
MST010	0.5-1.5 MW	45 bar (652 psi)   450 °C (842 °F)
MST020	1-5 MW	130 bar (1,885 psi)   530 °C (986 °F)
MST040	3-15 MW	140 bar (2,031 psi)   540 °C (1004 °F)
MST050	5-30 MW	140 bar (2,031 psi)   540 °C (1004 °F)
MST060	15-55 MW	140 bar (2,031 psi)   540 °C (1004 °F)
MST080	25-75 MW	140 bar (2,031 psi)   540 °C (1004 °F)
MST100	40-140 MW	140 bar (2,031 psi)   540 °C (1004 °F)
MST120	70-180 MW	140 bar (2,031 psi)   540 °C (1004 °F)

MAN Energy Solutions is one of the leading manufacturers of industrial steam turbines with a comprehensive range of products and services. The first industrial steam turbine was manufactured in 1904. Our MST platform (MAN Steam Turbines) can be used for both power generation and mechanical drive applications and cover a 1-180 MW range. Some of the possible applications include:

### Power Generation

- Waste-to-Energy (WtE)
- Biomass / Pulp & Paper
- Concentrated Solar Power (CSP)
- Geothermal Energy
- Combined Cycle Power Plants (CCPP)
- Waste Heat Recovery (WHR)
- Refineries and others

### Mechanical Drive

- Refinery
- Iron & Steel
- Fertilizer
- Ethylene
- Gasification / Air Separation Units (ASU)
- Purified Terephthalic Acid (PTA) and others

### Design features

- Various turbine models and sizes are available, including condensing type turbines, backpressure turbines, admission/extraction turbines and saturated steam turbines
- Adaptable, space-saving arrangement
- International design and manufacturing standards (e.g. API 612)
- Modular arrangement for fast installation and service

### Comprehensive OEM service

- Online services
- Long term service agreements (LTSA)
- Consulting on operation and maintenance
- Proven OEM competency
- Full life cycle support
- Condition based maintenance
- Service for other brands available as well

### Solution Package

- Steam condenser plants: air and water cooled
- Steam cycle components
- Electrical housing with control panels and protection systems
- Middle voltage solutions including transformers and interconnection devices and breakers
- Erection on site services

### MAN Energy Solutions

86224 Augsburg, Germany  
P + 49 821 322-0  
F + 49 821 322-3382  
info@man-es.com  
www.man-es.com

### MAN Energy Solutions

Steinbrinkstr. 1  
46145 Oberhausen,  
Germany  
P + 49 208 692-01  
F + 49 208 692-021  
info@man-es.com  
www.man-es.com