

A large, abstract graphic composed of overlapping, semi-transparent circles and teardrop shapes in various colors including blue, green, purple, and red. Several thin, curved lines in white and blue extend from the left side of the graphic towards the center.

tec artec

High Performance Valves

Engineering competences in well-defined structures.

The management of TEC artec GmbH has accumulated knowledge and experience in the development and manufacture of industrial valves for more than two decades. These are used in gas and power plant systems, where they provide shut-off, control, regulation and protection. Thereby, the physical and chemical characteristics of the conveyed media play an important role. Flow behaviour, surge loads, high pressures, extreme temperatures and aggressive media are just a few of the terms which are a symbol for us as manufacturer for the high product requirements and enormous responsibility.

Our constant customer focus and keen insight for national and international markets ensure constant new developments. Innovative products and patents ready for the market have been realised. We guarantee consistent high quality due to the continuous expansion of the added value chain in our production and the in-house quality assurance. The expansion of a worldwide sales and dealer network supplements our global presence.

With the membership of the AVK Group, the company has a strategic partner with which we market our high quality and innovative products worldwide and use the synergies of the group in the sales and purchasing areas.

TEC artec GmbH

Cornerstones of our success story

1. Foundation

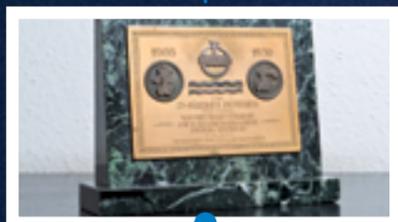
The development of equipment for steam applications started in 1901 with the founding of "Pat. E. Hannemann G.m.b.H." in Berlin. Mr. Emil Hannemann was the inventor of water level regulation for steam boilers.



Milestones in our company history

1984

Mr. Seewald acquired Reglerbau Hannemann GmbH which he renamed as SMR Steuer- Mess- und Regelarmaturen GmbH and developed further valves for applications in the steam area: for example, the desuperheater with 90° rotary movement.



1985

Production of metallic control and shut-off ball valves.



1989

1989
Merger of SMR Steuer- Mess- und Regelarmaturen GmbH with the ball valve division of Babcock Borsig Berlin GmbH.



1992

1992
Foundation of artec Armaturen- und Anlagentechnik GmbH in Leegebruch.



2005

2005
Division of the company and relocation of the new valves production to Oranienburg.



2006

2006
The design of soft sealing and metallic sealing ball valves for a wide range of applications in the high pressure area, high temperature area and/or in abrasive fluids. The design of ceramic shut-off and control ball valves was further developed.



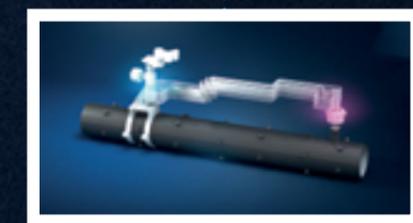
2007

2007
The design of the TECgate – the metallic sealing gas shut-off valve without oil filling for pressures up to PN100.



2011

2011
The recently patented design of the TECtemp HT desuperheater for modern combined cycle power plants for applications up to 720 °C. This is a leading technology in the global market in the area of energy generation.



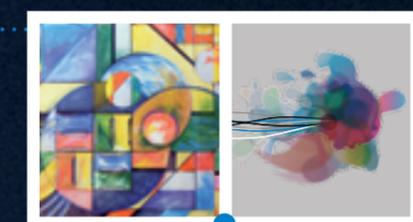
2013

2013
"The force of bundled competence" Three leading companies are cooperating in the area of boiler and process temperature control. TEC artec, Meeraner Dampfkesselbau and MH Power Systems Europe Service have entered a strategic collaboration in the desuperheater area.



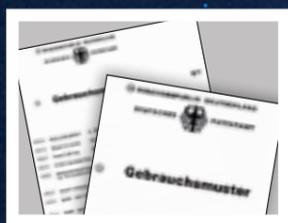
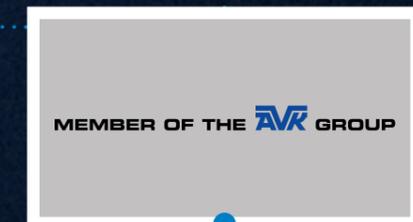
2013

2013
New look for TEC artec. Renovation of the corporate design. Fresh and modern, we are looking into the future with proven many years of experience.



2012

2012
Participation of AVK Holding A.S. and renaming to TEC artec GmbH.

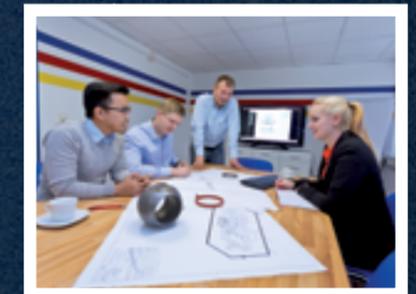


1986

1986
Patent desuperheater TECtemp with 90° rotary movement.

_Location Oranienburg

North of Berlin



Location

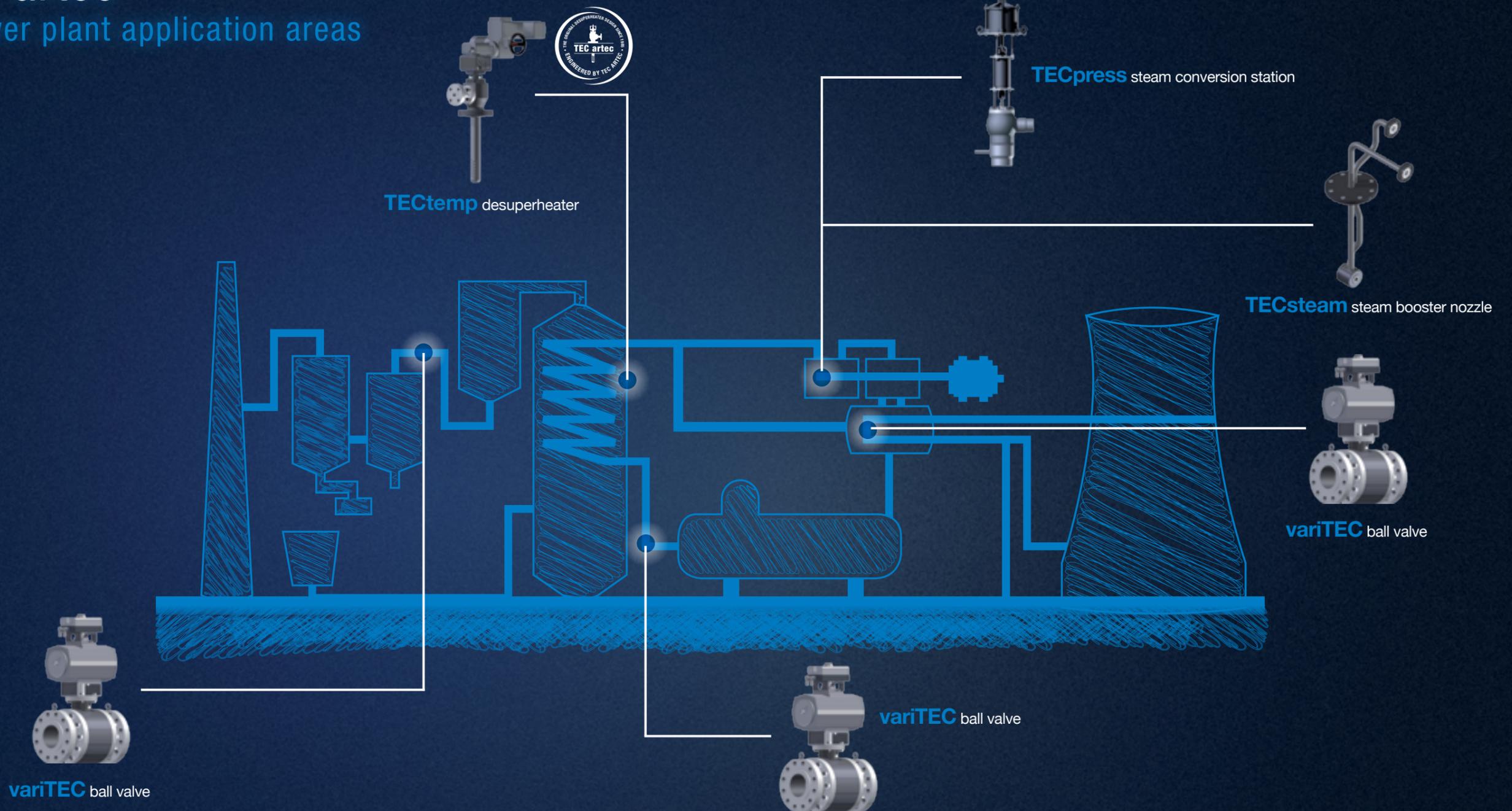
At the company headquarters in Oranienburg, North of Berlin, TEC artec GmbH develops, sells and manufactures proven products for the gas and power plant industry. Engineering and services for valves and systems round off our range of products and services. Increasing market requirements and specific customer requirements are realised due to constant new and further developments.

TEC artec stands for:

- More than twenty years of experience
- Service at the highest level
- Customer proximity, process knowledge and sector knowledge
- Guarantee of high product quality and quality assurance
- Skilled personnel, master craftsmen and engineers for quality products – MADE IN GERMANY
- Ideas for optimisation and energy saving for plant operators
- Innovative solutions for planners and engineers

_TEC artec

Power plant application areas



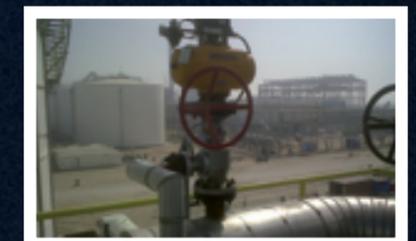
Application areas

Conventional power plants are used for electricity generation. For example, these include lignite, hard coal or gas power plants. Very different types of primary energy are converted to electric current in a power plant.

Basic functionality: Water is heated by combustion in the steam generator in the core of the power plant. Turbines are driven at very high pressure and temperature with the steam produced from this.

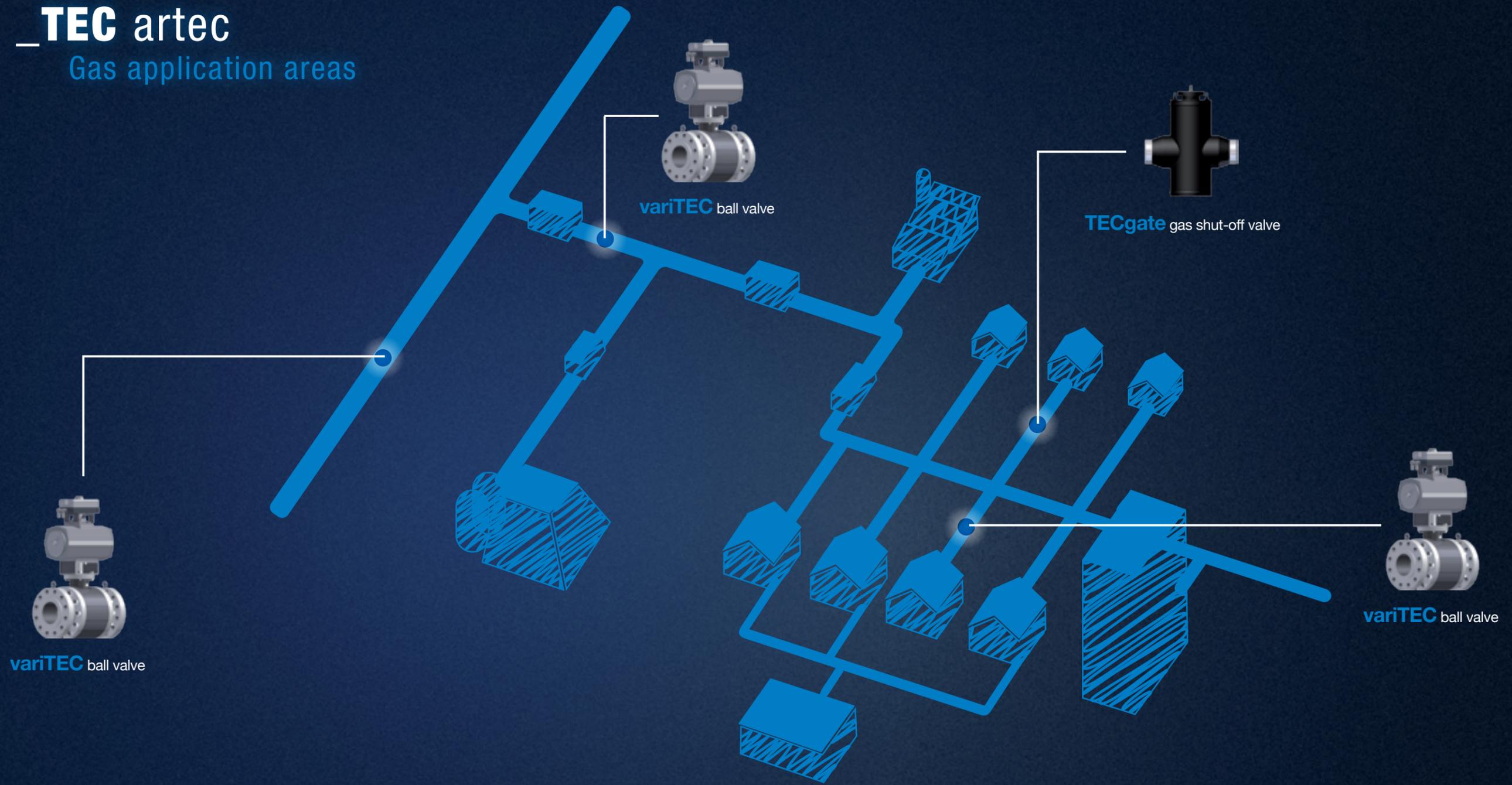
These are coupled to electricity generators. Afterwards, the steam is condensed to water and returns to the steam generator.

Valves from TEC artec have been used successfully for many years in many national and also international industrial and large power plants.



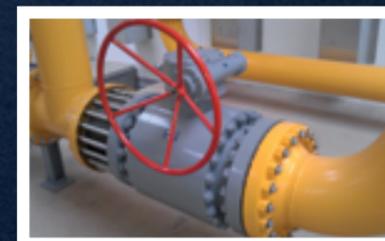
_TEC artec

Gas application areas



Gas application areas

Valves in gas networks are important shut-off or control valves with high requirements for operational safety and reliability. For example, our valves are used in compressor stations.



_TECtemp HT L
Lance cooler



_TECtemp HT R
Ring cooler



_TECtemp HT V
Venturi cooler



_variTEC
Ball valve



_TECgate
Gas shut-off valve



_TECslide
Flat plate gate valve



_TECtemp HT L

Our patented desuperheater TECtemp HT L lance cooler is suitable for applications at temperatures up to 750 °C due to non-moving parts in the steam flow. The three-part design makes it possible to bring the control unit with drive out of the high temperature range. The reduced weight of the steam lance has a positive effect on the support load of the steam line. The functional principle is based on the design of the proven TECtemp desuperheater. During maintenance, the compact control unit can be easily removed and serviced individually.

_TECtemp HT R

Our patented desuperheater TECtemp HT R ring cooler is designed with a three-part structure without moving parts and without weld seams in the steam lances. These are arranged in a ring shape depending on the steam pipe nominal diameter. For example 40 individually controlled nozzles can be used in this way. Homogeneous distribution of the injection water makes short evaporation sections and minimal load of the steam pipe possible. The geometry of the steam lances acts like a venturi nozzle in the steam pipe which results in clearly reduced loss of pressure.

_TECtemp HT V

Our patented desuperheater TECtemp HT V venturi cooler is suitable for applications at temperatures up to 750 °C due to non-moving parts in the steam flow. The three-part design makes it possible to bring the control unit with drive out of the high temperature range. The functional principle is based on the design of the proven TECtemp desuperheater. The compact control unit is easy to remove for servicing work and can be serviced individually. This desuperheater is used as a compact solution for small pipelines with a high number of nozzles and small pressure loss requirements.

_variTEC

Our variTEC ball valve is used for shut-off, control and safety functions (HIPPS). The ball valve provides universal possible applications for shut-off and/or regulation of the medium. This valve is suitable for almost every application due to the wide temperature range and the design with trunnion mounted ball, Double Piston Effect and Double-Block-and-Bleed function.

_TECgate

Our TECgate gas shut-off valve does not need any oil filling for a continuously reliable shut-off function using a purely metallic sealing system. The advantages of the absolutely gap-free metallic seal reach their full effect without having to take account of the drawbacks of an oil filling. As a result, this rules out the unavoidable creeping soiling of the pipeline and the encrusting of the sealing surfaces which can result in failure of the valve. This valve can also be used as a wear valve due to the metallic high performance sealing system.

_TECslide

The TECslide shut-off is performed via a patented sealing system with auxiliary medium. The primary seal is a purely metallic seal. Depending on the application case, the secondary seal is soft or metallic. Deposits caused by the process are removed during travel of the plate. The valve case can be flushed or filled with inert gases in the open or closed position. Slide plate and seat rings can also have a high wear-resistant tungsten carbide/cobalt coating. A special seal makes it possible to use the valve for vacuum applications.

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
Cooling water from 25	25–400
Temperature: up to 750 °C Control ratio: up to 50:1	
Use from: DN 150 steam line	

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
Cooling water from 25	25–400
Temperature: up to 750 °C Control ratio: up to 2500:1	
Use from: DN 150 steam line	

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
Cooling water from 25	25–400
Temperature: up to 750 °C Control ratio: up to 50:1	
Use up to: DN 150 steam line	

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
25–1400	up to 420
Permissible operating temperature: 196 °C to +550 °C	

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
80–400	16–100
Temperature: max. 10 to +70 °C	

TECHNICAL DATA

Nominal diameter	Pressure level
(DN)	(PN)
50–1200	10–40
Temperature: max. 550 °C	

TECserv

customer-oriented service

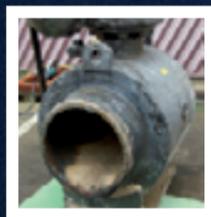
TECserv stands for services from maintenance to reconditioning of all makes of valves and for the supply of spare parts for valves supplied by us. Whether in the oil industry, chemicals, petrochemicals, gas technology or power plant technology, the reconditioning of valves by reusing most components is an economic alternative to purchasing new ones in view of drastically increased raw material prices.



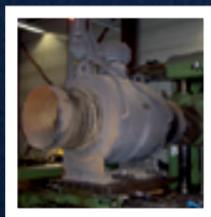
Using the many years of experience of our service personnel, we carry out high quality repairs, maintenance work and emergency repairs on all common industrial and control valves. The constant further training of our service personnel contributes to further improving the service for the customer.



The following shows an example of reconditioning ball valves DN500 make PSA:



Ball valve delivery condition



Preparation for pressure and function test before starting removal



Ball recoated



Final inspection and pressure test



Recoated ball valves for overhead use

TECengineering

looking into the future

TECengineering stands for new and further developments of industrial valves, industrial systems, strength and thermodynamic calculations.



Planning and design

Thanks to constant training measures, our qualified personnel are at the newest level of pressure vessel calculation, material designs and standards and guidelines.

Drive systems

In addition to the manufacture of high quality industrial valves, we also provide our customers with fully automated valves.

FEM & CFD analyses

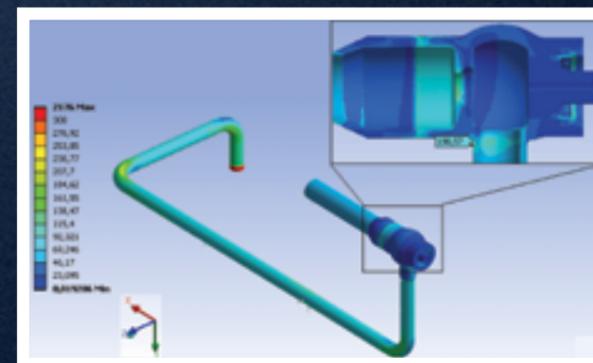
The FEM and CFD analyses are useful for achieving a shorter development time. A further customer benefit is the analytical comparison of different systems, adapted to the customer process.

Valve assemblies

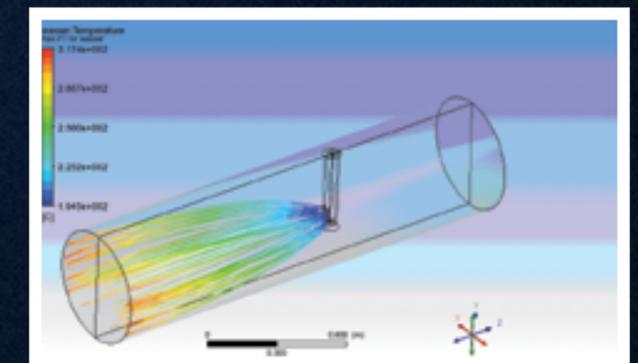
We support the planning, manufacture and delivery of various valve assemblies and industrial systems over the complete project duration until commissioning.

Valve manufacture and modification

We use our experience in the manufacture of ball valves and power plant valves here for modification and optimisation of our own and third party valves.



Equivalent stress according to von Mises [R = 20 mm]



Water injection with lance system

_TECcontact

Worldwide service

Contact us:

We are always available if you are interested in our products and services.
The personal contact with you is important for us.

_SALES

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Engineering competences
in well-defined structures.



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