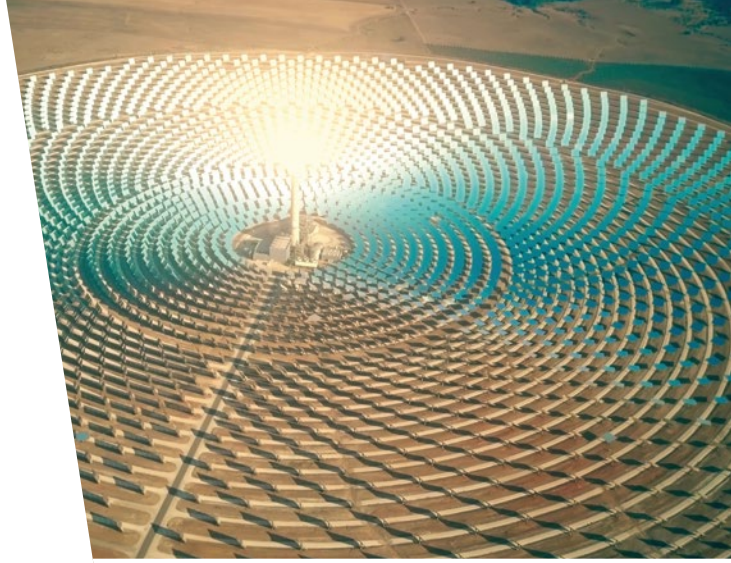
HORA





Power Generation

Products







HORA

Partner for Performance

Building power plant technology means taking responsibility for the safety and future of many people. Trust, experience, and expertise are crucial. At HORA, we support you from the very beginning, developing customised solutions tailored to your specific requirements. As your reliable partner, we ensure secure and efficient processes in your company for the long term. Benefit from our extensive experience, in-house solution-oriented engineering, and innovative technology. Our core business is the development and production of specialised control systems for the water and steam cycles of both fossil and renewable-fuelled power plants.

Customised Solutions for Your Needs

We understand your requirements and work closely with you to develop solutions that sustainably enhance the operation of your systems. Our products are designed to function at optimum performance at all times.

With well-qualified and regularly trained employees, we are always here to support you. HORA valves are renowned for their long service life and precision, used reliably across the globe. As an owner-managed and highly specialised company, we lead in technology by incorporating the latest research and scientific advancements directly into our product development.



We are the first choice for sophisticated control technology

Design & Technology

We work sustainably and cost-efficiently
Our valves are characterised by reliability and cost-effectiveness. To ensure that you benefit from durable and cost-efficient technology, we work with modern manufacturing methods. We use advanced tools to optimise the design of the valves, calculate the flows using CFD and minimise the FEM stresses in the bodies.



Engineering

We work with state-of-the-art programs
Tailored to your needs: We optimise valve design with our “Abacus” product configurator. “Abacus” serves as the interface between sales and production. This program enables us to design valves according to the latest specifications with guaranteed process reliability and short throughput times. It accesses an extensive materials database and calculates noise and actuating forces for the design of the actuators. “Abacus” features proprietary HORA algorithms for the design of multi-stage valves, special calculations for flashing liquids, and two-phase flows. Based on this data, the product configurator automatically generates parametric 3D CAD models.



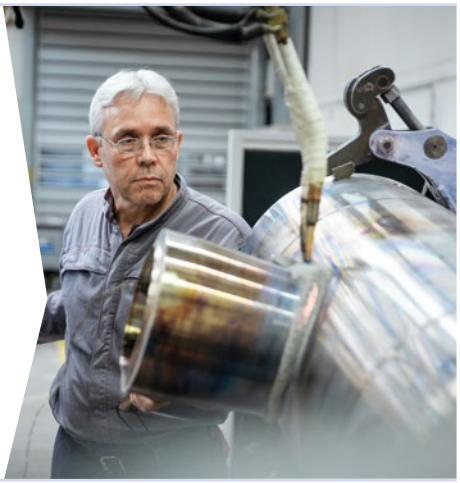
Body Manufacturing

We invest in state-of-the-art technologies
Higher productivity, shorter throughput times, lower costs, and precision manufacturing: We only use manufacturing processes that provide these benefits. Submerged arc welding, 3D welding, and CNC machining with rotary indexing chucks are just a few examples. We continuously invest in cutting-edge technologies to offer high-quality solutions for your applications. With up to 90% vertical integration and production of all key components in Germany, we ensure top-notch quality. We also support you through the entire installation process, providing intensive training for your employees during commissioning and ongoing support.



Welding & Testing

We are your reliable partner for maximum safety
Control systems in power plants must withstand extremely high loads and function reliably for decades. Our in-house non-destructive material testing ensures material reliability. Using submerged arc welding and 3D welding increases productivity, reduces throughput times, and enhances safety.
We perform all welding work, including heat treatment, in-house.



Service

We offer you an all-round service

We support you even after delivery: Service requirements are considered during product development, and we support the life cycle of our control valves. Spare parts bear the original HORA label and remain available throughout the valves' service life. Efficient logistics and warehousing ensure availability within hours, even 30 years after production. Our globally accessible service team and certified service partners are available 24/7.
We support you through all product life cycle phases – analysis, operation, repair, or modernisation. Contact us at: service@hora.de
For repairs, we integrate all technical improvements, ensuring you always benefit from an optimised product. Our expertise and technological innovations are always at your disposal.



Employees

We are HORA

At HORA, every employee – whether engineer, clerk, trainee, or manager – has the opportunity to develop their individual skills and talents. We value and encourage creative thinking and action because progress starts with good ideas. In our flat hierarchies, innovative suggestions are immediately heard and implemented. Our corporate culture fosters a relaxed and friendly atmosphere characterised by openness and respect. Together, we shape the future – creatively, innovatively, and successfully.




HORA

We are your Partner for Performance

We provide reliable solutions for demanding environments

Power plant technology must meet increasingly stringent legal requirements and overcome complex technical challenges. Our expert support ensures HORA control valves safely manage the control of water and steam in power generation worldwide. Our modular and versatile valves control gas, vapour, and liquid flows across various industrial applications, designed to handle high pressures and temperatures.
We supply perfect solutions for every application, backed by an extensive product and service portfolio that meets any job requirement.
Our control valves stand out due to careful material selection and precise construction, operating reliably even under extreme conditions.



Power technology valves

Valves

- 2-way | Shut-off valves
  - Open-close | Single-stage | Cast
  - Open-close | Single-stage | Forged
  - Open-close | Multi-stage
- 2-way | Control valves
  - ≤ 3 regulated stages | Cast
  - ≤ 3 regulated stages | Forged
  - Low flow | Cast
  - Low flow | forged
- 3-way | Valves
  - Three-way valves
- Speciality control valves
  - Combined control valves
  - Cascade valves
  - > 3 regulated stages
  - Open-close and control valves
- Special constructions

Desuperheater

- Desuperheater with integrated control
  - Desuperheater
- Desuperheater with separate control
  - Steam supported desuperheater
  - Injection lance (>1 nozzle)
  - Injection lance (1 nozzle)
  - Venturi desuperheater with lance
  - Venturi desuperheater with ring nozzle
  - Injection orifice
- Special constructions

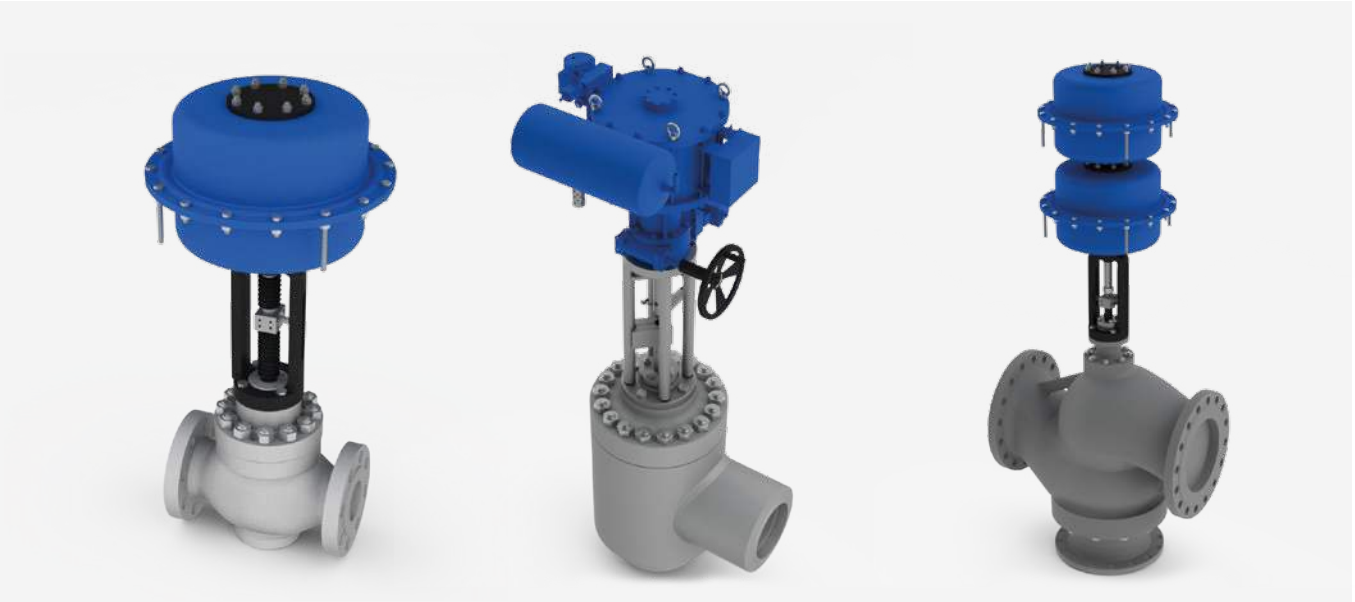
Steam conditioning valves

- Water injection into pressure control
  - Regulated orifice tube | Cast
  - Regulated orifice tube | Forged
  - Single nozzle injection | Cast
  - Single nozzle injection | Forged
- Water injection after pressure control
  - Steam conditioning head | Cast
  - Steam conditioning head | Forged
  - Single nozzle injection
- Special constructions

Special application

- Pump protection
  - Without lever
  - With lever
- Back pressure regulators
  - Throttle
  - Back pressure regulator valves
- Special constructions

Our Products



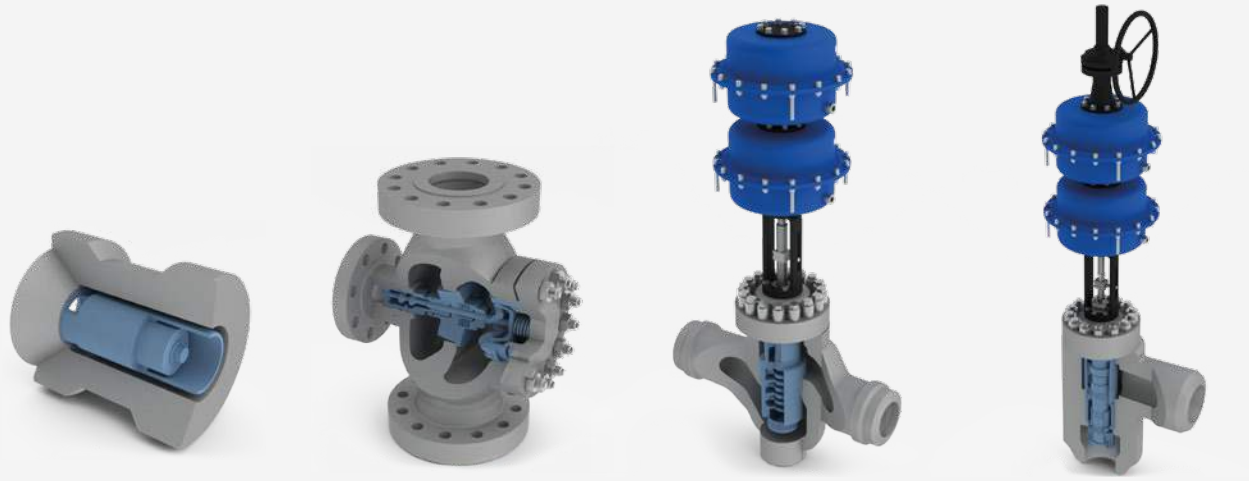
Control valves

We offer modular high and low-pressure control valves in both standard and customised designs for power stations and industrial plants. They effectively manage pressure and flow reduction, with a wide range of body, trim, valve seat, and seal options. Connections are available with weld-on ends or flanges according to DIN or ANSI standards.



Feed water Control valves

Our feedwater control valves, including start-up and main feedwater control valves, are designed for controlling steam generation at low differential pressures.
The start-up valve handles low flow rates and high pressures. For cost-efficiency, our combined feedwater control valve integrates both functions in one valve.
Available in various designs and materials, these valves meet your specific needs perfectly.



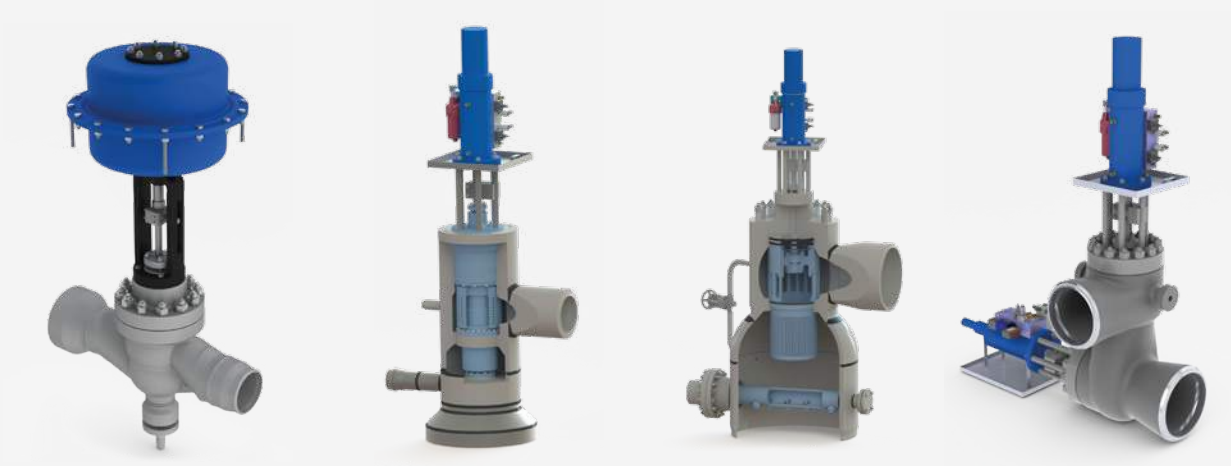
Pump Protection

We offer comprehensive pump protection. Our pump return valves enable automatic return without an actuator. You can choose from regulated or unregulated automatic return valves. Depending on your requirements, we use parabolic plugs or combinations of perforated plugs and perforated cages. We also develop and supply customised back pressure regulators (BPR) and throttles, optimally tailored to your needs.



Steam Cooling

Our extensive product range for steam cooling includes solutions such as injection lances with fixed or spring-loaded control nozzles, venturi injection coolers, vapour-assisted injection coolers, and injection coolers with integrated valves. Using CFD analysis (Computational Fluid Dynamics), we determine the most effective solution for your application, enhancing operational reliability and preventing thermal shocks. Share your design data – operating conditions, pressures, temperatures, and water/vapour ratios – with us to find the ideal solution together.



Steam Conditioning Technology

In many steam circuits, controlling the supplied steam pressures and temperatures is essential. We offer ideal steam conditioning solutions for every system, including high, medium, and low-pressure turbine bypass stations.
Our designs consider factors such as steam temperature, steam flow, required cooling water flow, cooling water pressure, steam velocity, temperature sensor distance, and pipe diameter.

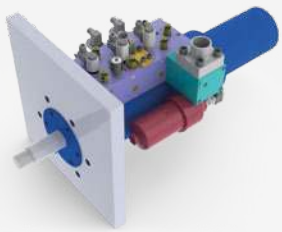


Special Valves

Our customised special valves are designed to meet your specific requirements. From the planning phase, we support you by developing valves perfectly tailored to your application. With modern engineering techniques like FEM (Finite Element Method) and CFD (Computational Fluid Dynamics), we achieve optimal functionality for technically demanding applications.







Actuators and Control

We offer a wide range of actuators in various designs, including pneumatic (membrane or piston), electric, and hydraulic systems. Our custom designs allow us to mount third-party actuators on our valves, with any positioner mountable for control. Accessories such as quick close/open mechanisms, manifolds, cabinets, and air tanks are also available.
Our actuators are characterised by long service life and maximum reliability.



Our References

HOOTON PARK

United Kingdom (Waste to energy)

Capacity:	24 MW
Commissioned:	2023
Scope of delivery:	Turbine bypass valves Desuperheaters Control valves



KRISHNAPATNAM POWER PLANT

India (Coal)

Capacity:	2 × 800 MW
Steam parameters:	573 °C / 266 bar
Commissioned:	2012
Scope of delivery:	High-pressure turbine bypass valve Low-pressure turbine bypass valve Ancillary steam conditioning stations Feedwater control valves Pump protection valves



NEURATH POWER PLANT

Germany (Brown Coal – Lignite)

Capacity:	2 × 1100 MW
Steam parameters:	600 °C / 272 bar
Commissioned:	2012
Scope of delivery:	Control valves Drain valves Desuperheaters Steam reduction valves



WAIGAOQIAO, PHASE I, II, III POWER PLANT

Shanghai, China (Coal)

Capacity:	5000 MW
Steam parameters:	542/568 °C / 279 bar
Commissioned:	2012
Scope of delivery:	Control valves Drain valves Boiler valves Ancillary steam conditioning valves



REDSTONE CSP

South Africa (Solar)

Capacity:	100 MW
Steam parameters:	408 °C / 143 bar
Commissioned:	2023
Scope of delivery:	Turbine bypass valves Control valves



ANDASOL III

Spain (Solar)

Capacity:	1 × 50 MW
Steam parameters:	408 °C / 143 bar
Commissioned:	2012
Scope of delivery:	Control valves Drain valves Steam reduction valves



ZOLLING / LANDESBERGEN POWER PLANT

Germany (Biomass)

Capacity:	2 × 20 MW
Steam parameters:	475 °C / 82 bar
Commissioned:	2004
Scope of delivery:	High-pressure turbine bypass valve Control valves Drain valves



SOHAR 3 IPP

Oman (Gas combined cycle)

Capacity:	2 × 850 MW
Steam parameters:	575 °C / 119 bar
Commissioned:	2019
Scope of delivery:	OTC valves Control valves



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