

ARI® product diversity



Benefit from our one-stop-shop philosophy.

At ARI® we stand by our reliability, passion for technology and personal commitment to our customers. We manufacture our high-quality products tailored to your specific requirements. Your valve made by ARI®. Please contact us for further information, we would be happy to discuss the options you have with ARI®.



Control valves



Globe valves



Butterfly valves



Safety valves



Steam traps



Engineered systems

Edition 02/26 – Details subject to change

STEAM BOILER TECHNOLOGY – SAFETY AND EFFICIENCY FROM ONE SOURCE

A steam boiler is at the heart of many industrial processes. It converts feedwater into valuable steam, which is required in power plants, refineries and in the chemical industry. The system presented here relates to a steam boiler that can generate pressures of between 63 and 160 bar. To ensure this process operates safely, reliably and efficiently, valves are crucial as they regulate, isolate and safeguard the entire operation.

From feedwater to steam

Starting from the feedwater tank, the treated water passes through pipes and valves such as control valves, check valves, isolating valves and strainers to the boiler. Here, it is heated in the combustion chamber and turned into steam. Integrated preheaters also boost the energy efficiency.

Targeted control and safety

The steam produced is circulated via high performance butterfly valves, safety valves and automated valves to the connected systems. To ensure the pipes remain free of disruptive condensate, steam traps ensure that dry and safe steam is supplied. At the same time, the gas flow with isolating valves guarantees precise and safe fuel supply to the boiler.

Solutions from a single source – our one-stop-shop

What makes this boiler process special is that all the components described – from **control valves** to **isolating valves**, **check valves** and **steam traps** to **strainers** – come from the same place. As a manufacturer, we offer a range of valves for the medium pressure range, perfectly coordinated and from a single source.

What does this mean for you?

- One partner, one solution – reducing the supply chain and coordination involved
- Optimal compatibility – all valves are coordinated
- Maximum reliability – proven quality for safety-critical applications

With our one-stop-shop for steam applications up to 160 bar, you can obtain a complete solution from one source – one that is safe, efficient and reliable.



Your valve made by ARI®
ari-armaturen.com

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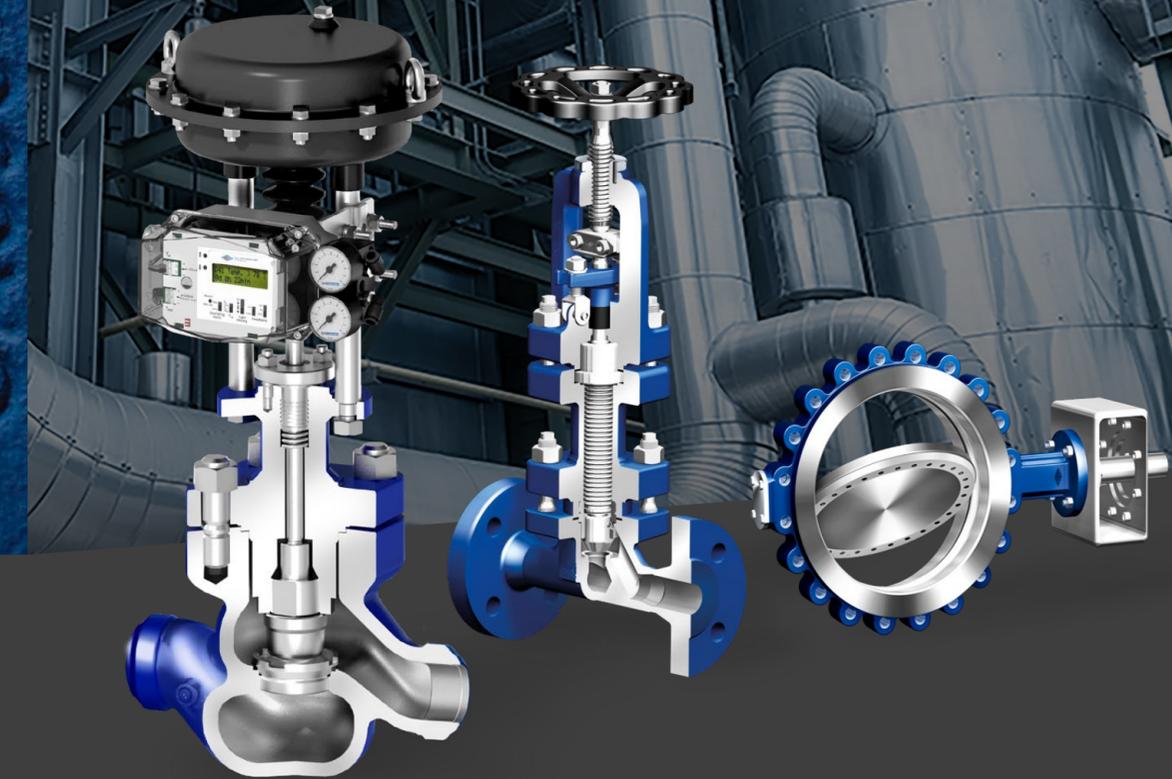
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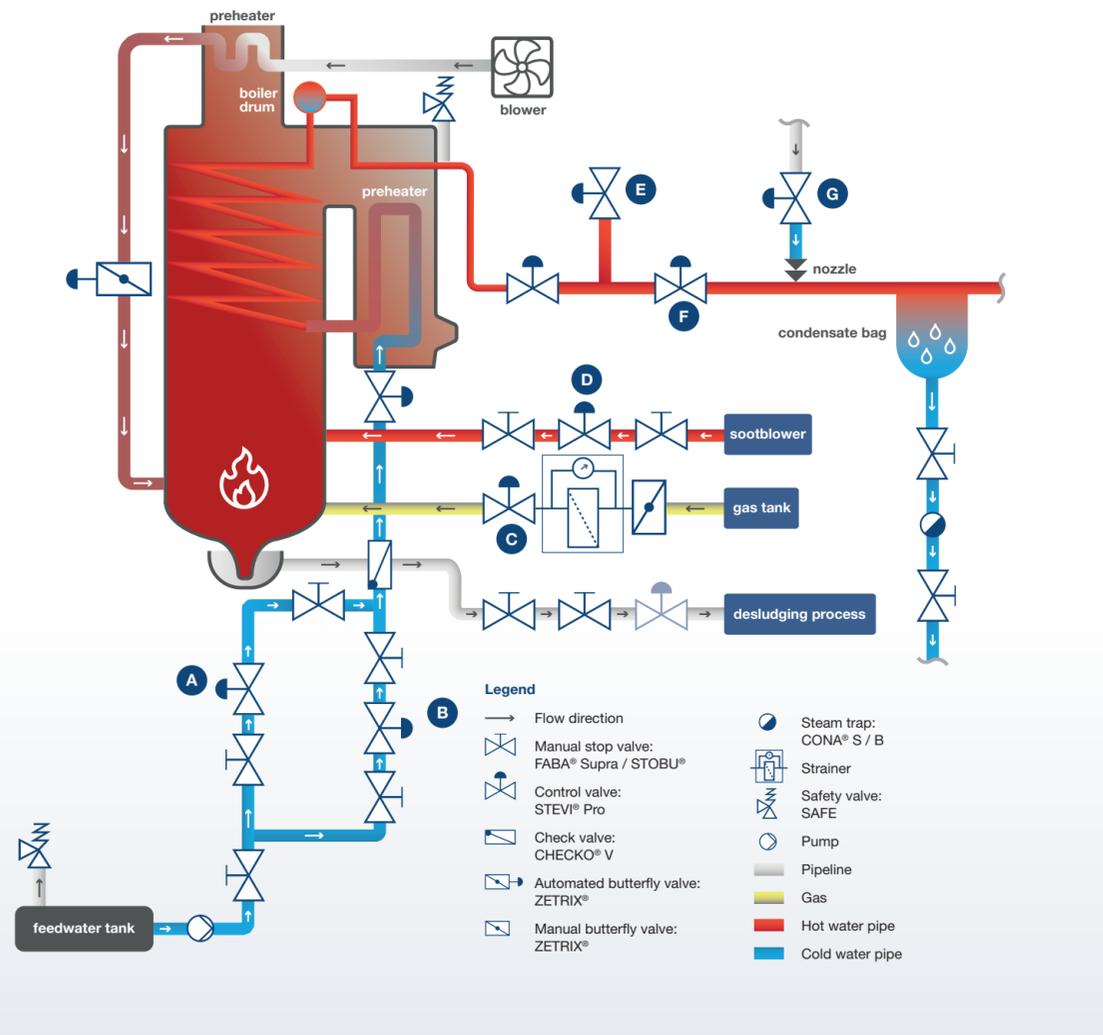
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BOILER HOUSE IN THE PRESSURE RANGE BETWEEN 63 AND 160 BAR

ARI® VALVES FOR USE IN THE BOILER HOUSE



BOILER HOUSE IN THE PRESSURE RANGE UP TO 160 BAR



Manual stop valve FABAs[®] Supra / STOBUs[®] PN 63 – 160

Stop valves are typically used in servicing and maintenance work to isolate critical components and enable a quick replacement in the event of malfunction. When using a standard manual stop valve, it is important to carefully select the mode of operation and design, particularly regarding the starting and stopping process. In principle, manual stop valves are designed for a simple open/shut function.

Your benefits at a glance:

- ✔ Flexible and automated isolation or changeover of processes
- ✔ Rapid replacement of sensitive components with minimal effort
- ✔ High level of process safety while also reducing the personnel required

Control valve STEVIs[®] Pro PN 63 – 160

A Control valve is a key element in the control circuit and consists of a final control element and an actuator, often operated electrically or pneumatically. It regulates the flow according to a control signal, thereby influencing pressure, temperature, level or volume flow. A positioner is often used as an interface for the system control and converts signals into lifting movements. The design is customised according to the specific operating data and system requirements.

Your benefits at a glance:

- ✔ Precise regulation of pressure, temperature, level or flow
- ✔ Ensures product quality and process stability
- ✔ Energy-efficient and reliable operation thanks to the customised design

Check valve CHECKOs[®] V PN 63 – 160

Check valves reliably protect important components in the system from any possible return flow of the medium. It is important to size the valves during stable operation to ensure safe functioning in the long term.

Your benefits at a glance:

- ✔ Prevention of return flow and any resulting damage
- ✔ Protection of sensitive components such as pumps and boilers
- ✔ Increased system safety and availability

Automated high performance butterfly valve ZETRIX[®] PN 63 – 100

Automated high performance butterfly valves are the best choice when it comes to bidirectional switching, quickly and for the long term. This makes them suitable for all switching and disconnecting processes. Their flexibility makes it possible to use them directly on the boiler as an initial shutoff – if needed also with redundancy as a “double block” with custom-made ARI[®] adapter and drainage.

Your benefits at a glance:

- ✔ Metallic sealing with genuine zero leakage and permanently tight
- ✔ Maintenance-free operation – only up to four spare parts required as part of servicing for maximum efficiency
- ✔ High level of process safety while also reducing the personnel required

Steam trap CONAs[®] S / B PN 63 – 160

Steam traps are used to specifically remove condensate from steam in the pipework. It is critical to carefully select the most suitable trap for reliable operation.

Your benefits at a glance:

- ✔ Efficient discharge of condensate for smooth operation
- ✔ Prevent energy losses and damage caused by corrosion
- ✔ Extended lifespan and high system availability

Strainer ARIs[®] STRAINERS PN 63 – 160

Strainers reliably protect the system and its components from dirt particles. Monitoring is through measuring differential pressure or by checking the pressure at the strainer inlet and outlet.

Your benefits at a glance:

- ✔ Effective protection from dirt and foreign particles
- ✔ Prevention of disruptions, breakdowns and wear
- ✔ Reduced maintenance costs and increased system reliability

CONTROL VALVES – BOILER HOUSE

A Feedwater control valve

The feedwater control valve has the primary task of regulating the level in the steam boiler. Its design is based on the mass flow of the boiler as well as the differential pressure between

the pump and boiler pressure. Thanks to its flow-optimised housing, the STEVI[®] Pro PN 63 – 160 is ideal for this task.

B Boiler filling control valve

This control valve undertakes the filling of the boiler drum. The high differential pressure that arises in the start-up process makes it necessary to have a specially designed trim, which can reliably withstand the demanding operating conditions.

Thanks to the precise seat and shaft guide, the various trims mean the STEVI[®] Pro PN 63 – 160 offers the ideal conditions to accurately regulate these pressures.

C Gas control valve

The gas control valve precisely controls the gas supply for the combustion process. An optimally designed control valve therefore guarantees an efficient and eco-friendly firing of the

burner. It is exactly this function that the specially developed trims are designed for in conjunction with the high-performance actuators and positioners of the control valve.

D Sootblower control valve

This control valve controls the steam supplied to the sootblower nozzles. These effectively clean the heat transfer surfaces from soot and deposits. The resulting high acoustic pressures can

be reduced in a targeted way by means of the multi-stage regulation, for example with the three-step perforated plug.

E Start-up control valve

During the start-up process, the steam is safely discharged through the roof via a valve. The high resulting differential pressure requires a multi-step pressure reduction in the valve. In most applications the control valve is also combined with a silencer. The control valve's optional one-to-three-step release

enables the STEVI[®] Pro PN 63 – 160 to reliably control the pressure. This can also effectively reduce undesired vibrations in the system.

F Steam pressure reduction valve

The steam pressure reduction valve decreases the pressure to the level required for downstream processes. Precise regulation by the STEVI[®] Pro PN 63 – 160 makes it possible to efficiently control downstream consumers. The precise control can be

achieved in the control valve through numerous ways such as special plug-seat combinations and via custom-designed actuators with positioners.

G Injection control valve

Boiler feedwater is usually injected into the overheated steam via the injection control valve to cool this down to a temperature closer to saturated steam. Thanks to the variable Kvs values of our STEVI[®] Pro PN 63 – 160, each valve can be precisely coordinated to the process conditions to ensure precise

adaptation to the respective requirements. This flexibility means the injected quantity can be optimally regulated, ensuring consistent and efficient process control.