



SIEMENS



西门子高温高压调节阀手册 Control Valve Products and Services

<http://www.siemens-sppa.com/>



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OVERVIEW 概述

Made in Germany

You are getting a top-quality product from the German valve engineering industry

德国制造

你将从德国阀门行业中获得到最高品质的产品



WELLAND & TUXHORN AG
ARMATUREN- UND MASCHINENFABRIK

Success Story Siemens-SPPA-W&T in China

Since middle of the 1990's Siemens SPPA and German Valve Company Welland & Tuxhorn (est.1901) are working as partners for the supply of Siemens DCS and W&T Bypass Systems on the Chinese Market. Together many successful references were built up in the rapidly growing thermal power station market.

Dimension, Pressures and Temperatures increased drastically and TBS had to adapt to this requirements. Nowadays Bypass systems are used up to huge 1000 MW coal fired power plants handling temperatures and pressures of 620°C and 350 bars.

SPPA-W&T took a strong part of the market of coal fired power stations and CCPP. More than 1000 TBS were supplied to Chinese customers until today. All this experience and Know-How is also integrated in the W&T control valve range to increase reliability and efficiency of the plant.

Siemens-W&T is distinguished by the highest developmental and quality Standards and makes their products well-known in many countries. Research and development cooperation with scientific and technical institutes creates new knowledge which is directly used for optimizing the products. The specialists use innovation to continuously expand the already high technological standards.

Success proves our point-W&T control valves are in operation all over the world.

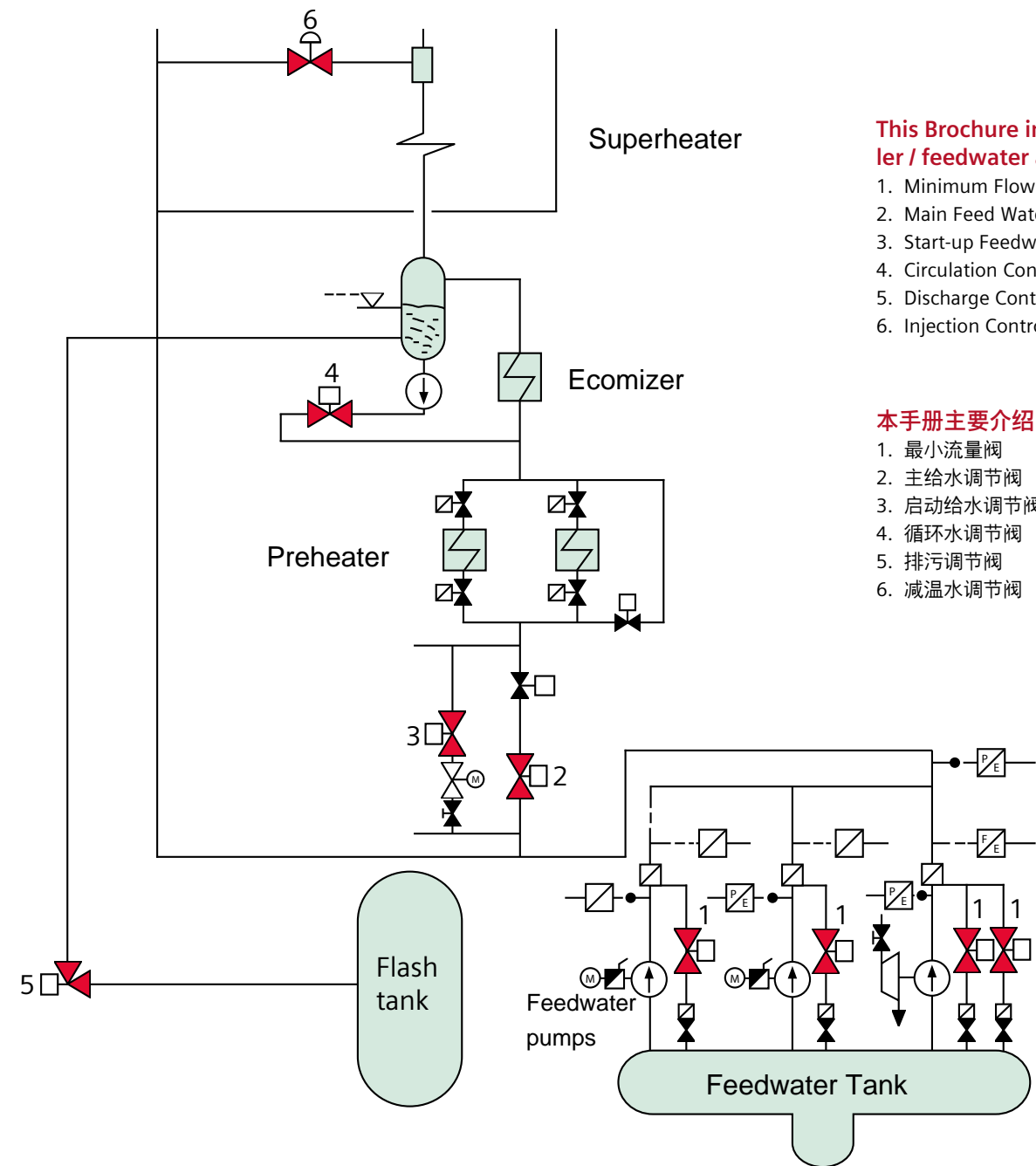
西门子-SPPA-WT在中国的成功故事

九十年代中期，西门子电站自动化有限公司（SPPA）与成立于1901年的德国阀门公司W&T作为合作伙伴开始在中国电力市场供应西门子DCS系统和W&T电站旁路阀门系统。并在快速发展的火电业务领域取得许多成功旁路系统业绩，对我国电站市场的迅猛发展是非常有帮助的。

随着大容量机组的发展而变为高参数，系统尺寸，压力和温度等参数急剧增大。TBS旁路系统技术随之也突飞猛进满足这些市场需求。如今SPPA-W&T旁路系统用于完全满足1000MW燃煤发电厂参数要求，蒸汽温度和压力分别可达到620°C和350bar。到目前为止，SPPA-WT已经发展成为中国燃煤电站和CCPP联合循环燃气电站市场用户重要伙伴，为中国用户提供阀门系统产品和服务远远超过你想象。所有这些经验和技能也都集成在SPPA-WT高温高压调节阀中，以更好地满足现代化电厂对可靠性和高效率的要求。

SPPA-W&T公司以最高的质量和研发标准著称，这使得我们的产品有口皆碑，誉满全球。与世界各大科研院所合作产生的新理论知识可直接应用在阀门产品上，并优化产品设计。原有高技术标准在SPPA-W&T专家的不断創新中也得到持续提高。

事实证明，Siemens-W&T的各类调节阀在全世界范围内正取得越来越多的成功应用。



This Brochure introduces only Control valves for boiler / feedwater applications

1. Minimum Flow Control Valve / Leak-off Valve
2. Main Feed Water Control Valve
3. Start-up Feedwater Control Valve
4. Circulation Control Valve
5. Discharge Control Valve
6. Injection Control Valves

本手册主要介绍

1. 最小流量阀
2. 主给水调节阀
3. 启动给水调节阀
4. 循环水调节阀
5. 排污调节阀
6. 减温水调节阀

Special Control Valves for Boiler applications

锅炉侧调节阀



Special Control Valves for Boiler applications

Steam conditioning there exists wide field of applications with highest relevance to the most reliable and, even more important, the safest operation of your plant: Boiler applications.

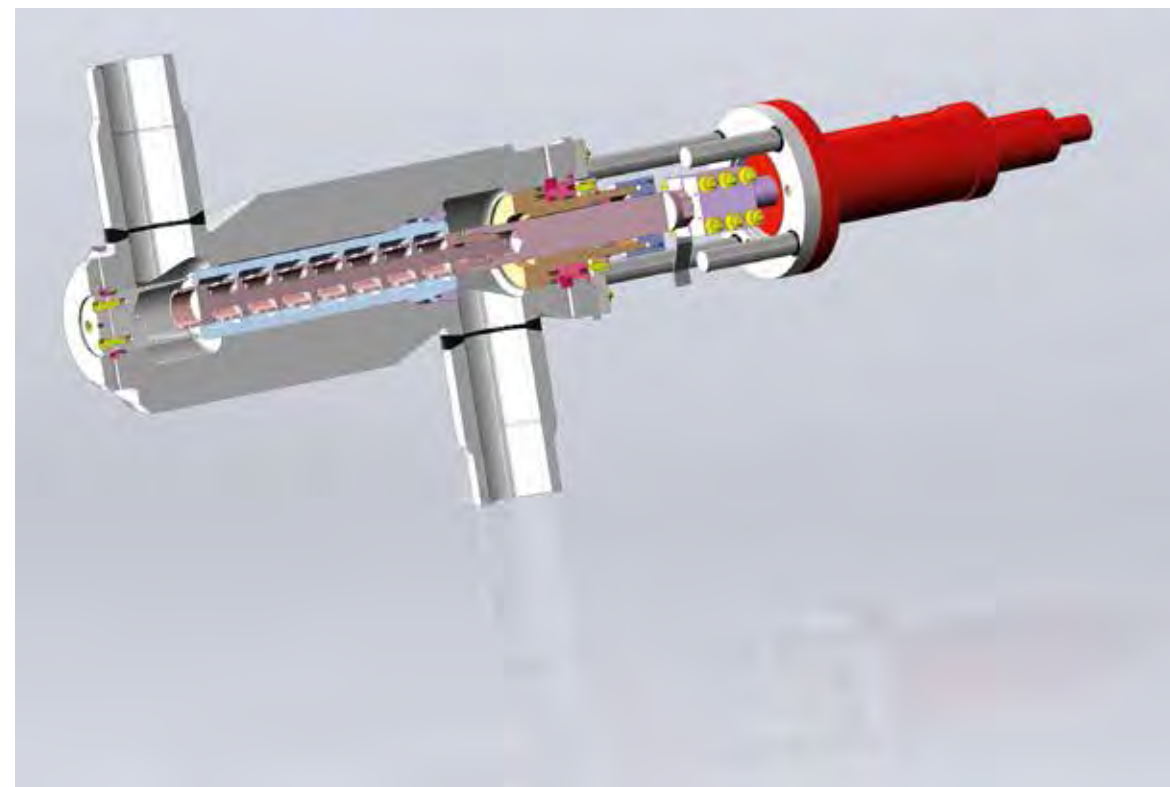
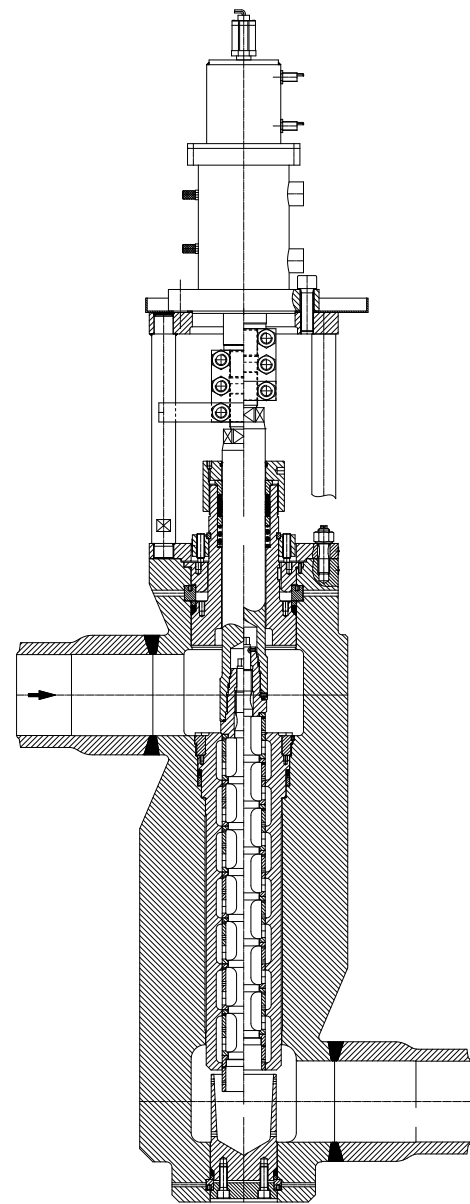
The various types of boilers that are typically used in power stations as well as the various operating conditions that must be considered, demand perfectly engineered solutions. With the application of Special Control Valves by

Siemens-WT you can participate in our know-how and long experience with these most pressing challenges.

锅炉侧调节阀

调节阀最重要的广泛应用领域，密切关乎电厂最高要求、最高可靠性甚至更重要安全运营的是：锅炉应用。

用于电站的各种不同类型的锅炉，及其各种不同的运行工况，必须考虑完美的工程解决方案。通过西门子提供特殊调节阀的锅炉应用，您可以与我们分享，先进的技术和专业技能以及丰富的经验，共同迎接这些最紧迫的挑战。



Seat Ø mm 阀座口径		40-150	
DN form-to 公称口径	Inlet/Outlet	mm	50-300
		inch	2-12
PN up to 公称压力	[bar]	630	
	[lbs]	4500	

Minimum flow control valve

最小流量阀

Application

The minimum flow generally means the lowest continuous flow the pumps are permitted to operate. A decrease of feedwater flow to the boiler below the minimum flow of the pumps will result into cavitation and an unallowably high heating up of the feedwater pump. However, under certain operation conditions of the boiler (start-up, operation within a wide pressure range, low load operation) the feedwater flow required by the boiler would drop below the minimum flow of the pump. This most critical operating condition would damage the pumps. With the application of a pump bypass system with a minimum flow-control valve as its key component, a discharge flow above the minimum flow of the pumps is verified at all times. Therefore the minimum flow-control valve can be considered a pump safety valve!

应用

最小流量通常是指水泵运行允许的最低的连续流量。锅炉给水流量减少至低于泵的最小流量的结果会产生汽蚀并且会使给水泵发热而超限。然而，在锅炉一定的运行条件下(启动、宽压范围运行、低负荷运行)锅炉所需给水流量可能会低于泵的最小流量，这最临界的运行条件可能会损坏给水泵。采用最小流量调节阀可以保证泵的出口流量任何时候大于泵的最小流量，从而保障泵的安全运行。因此最小流调节阀被视为水泵的安全阀！

Design

Forged bodies: Angled or Z-shaped valves, for welding connections according to DIN, ANSI or other standards.

Actuators

All our minimum flow-control valves can be equipped with a compact hydraulic or pneumatic actuator. Actuators provide you with the following control types: Quick open/close, Step to set-point, continuous control

Distinctive features

1. Highest possible level of cavitation prevention
2. Highest possible level of erosion prevention
3. State of the art design minimizing oscillations or vibrations
4. Precise characteristic
5. Noise levels < 75dB(A)
6. Fail-safe technology: Valve opens in case of energy blackouts or malfunctions
7. Quick maintenance and servicing due to easy-to replace internal parts and components – replaceable without mechanical work
8. Long service life

设计

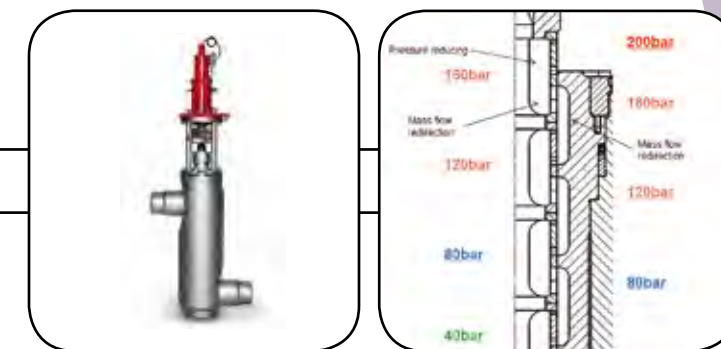
锻造阀体，角式或Z型样式，接口焊接型式遵照DIN,ANSI和其他标准。

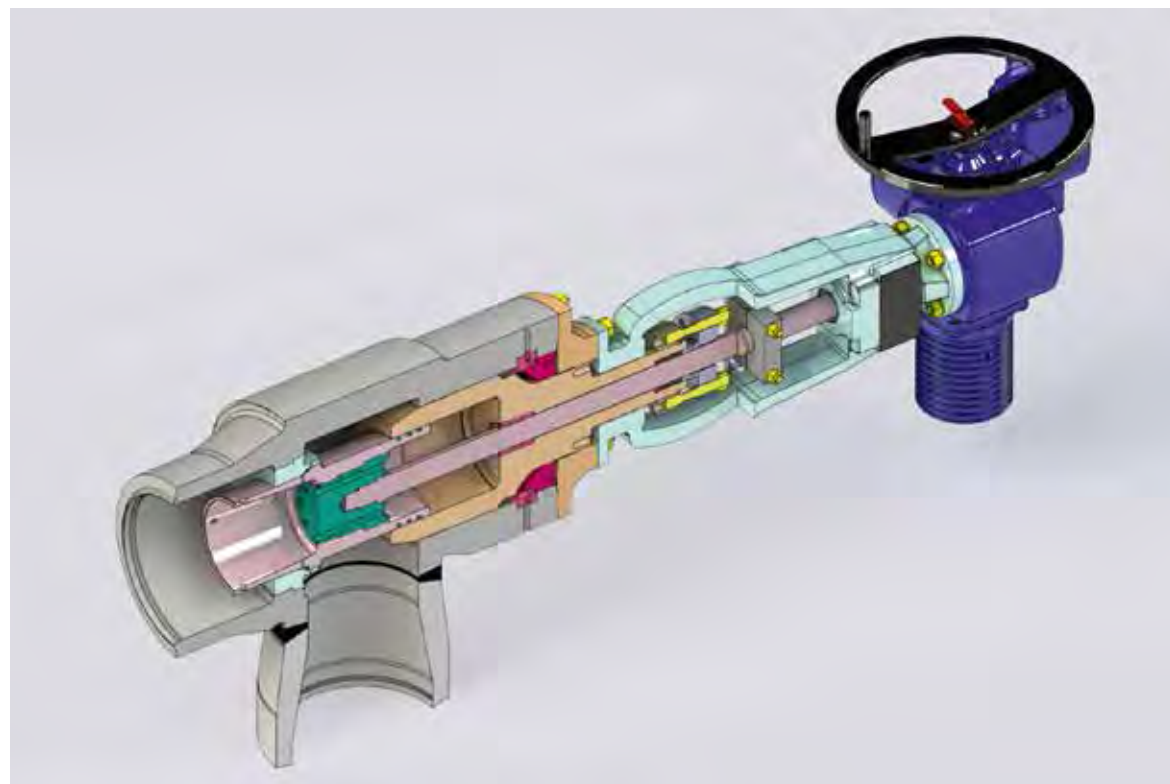
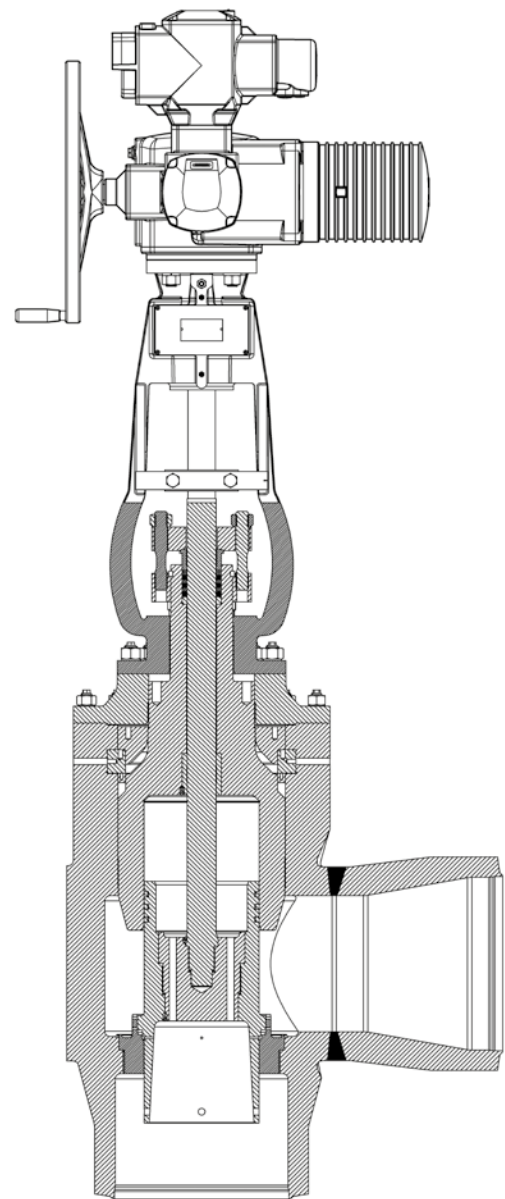
执行机构

所有的我们的最小流量调节阀都可以配有紧凑型液压执行机构或气动执行机构。执行机构可以提供下列控制类型：快开/快关，步进调节，连续调节；

特点：

1. 最高预防汽蚀级别；
2. 最高预防腐蚀级别；
3. 最先进的设计将振动降到最低；
4. 精确特性；
5. 噪音 小于75分贝；
6. 故障安全技术：故障安全开启技术；
7. 内部部件和组件无需机械作业便可进行更换，易于快速维护和服务；
8. 使用寿命长；

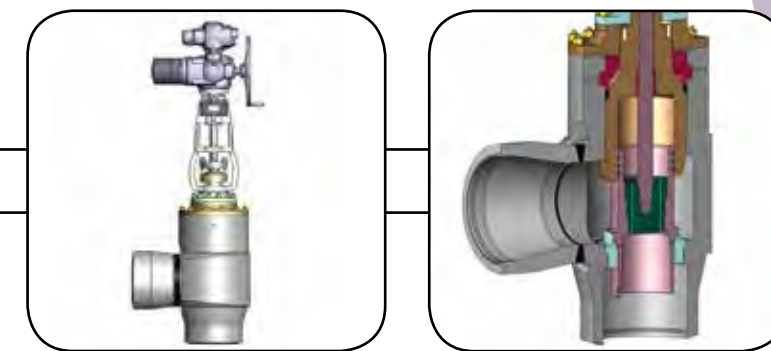




Seat Ø mm 阀座口径		150-600	
DN from-to 公称通径	Inlet/Outlet	mm	200-600
		inch	8-24
PN up to 公称压力	[bar]	630	
	[lbs]	4500	

Main Feedwater Control Valve

主给水调节阀



Application

Controlling, regulating and adjusting the flow of feedwater into the boiler. With feedwater control valves by W&T all requirements brought on by various boiler types and operating conditions are addressed:

Drum boilers require a feedwater level control and/or differential pressure control for variable speed drive turbo pumps.

Once-through boilers require additional means to reduce the amount of the feed water flow, especially when the outlet of the feedwater pumps cannot be throttled any further.

Full-load operation requires control valves that cause the smallest possible pressure drop. The control valves are set up to handle the entire amount of feedwater flow into the boiler. For this application the control valves are arrayed in the main feedwater line. Start-ups, shut-downs and low load operation require management of high pressure differences with a considerable low flow of feedwater.

应用

控制、调节和调整进入锅炉的给水流量。在使用主给水调节阀情况下，各种锅炉类型和运行条件下的所有需求叙述如下：

汽包锅炉需要对变速汽泵有给水液位控制和/或压差控制；

直流锅炉需要额外的手段减少给水流量，特别是当给水泵的出口不能进一步节流的情况下；

满负荷运行时需要压降尽可能小的调节阀。给水调节阀设置为处理进入锅炉的总给水流量，这就要求调节阀设置到主给水线路上。锅炉开启，关闭和低负荷运行时需要对高压差下相当低的给水流量进行调节。

Design

Cast or forged bodies, straight, angled or Z-shaped, for welding connections or with flanges, according to DIN, ANSI or other standards

Distinctive features

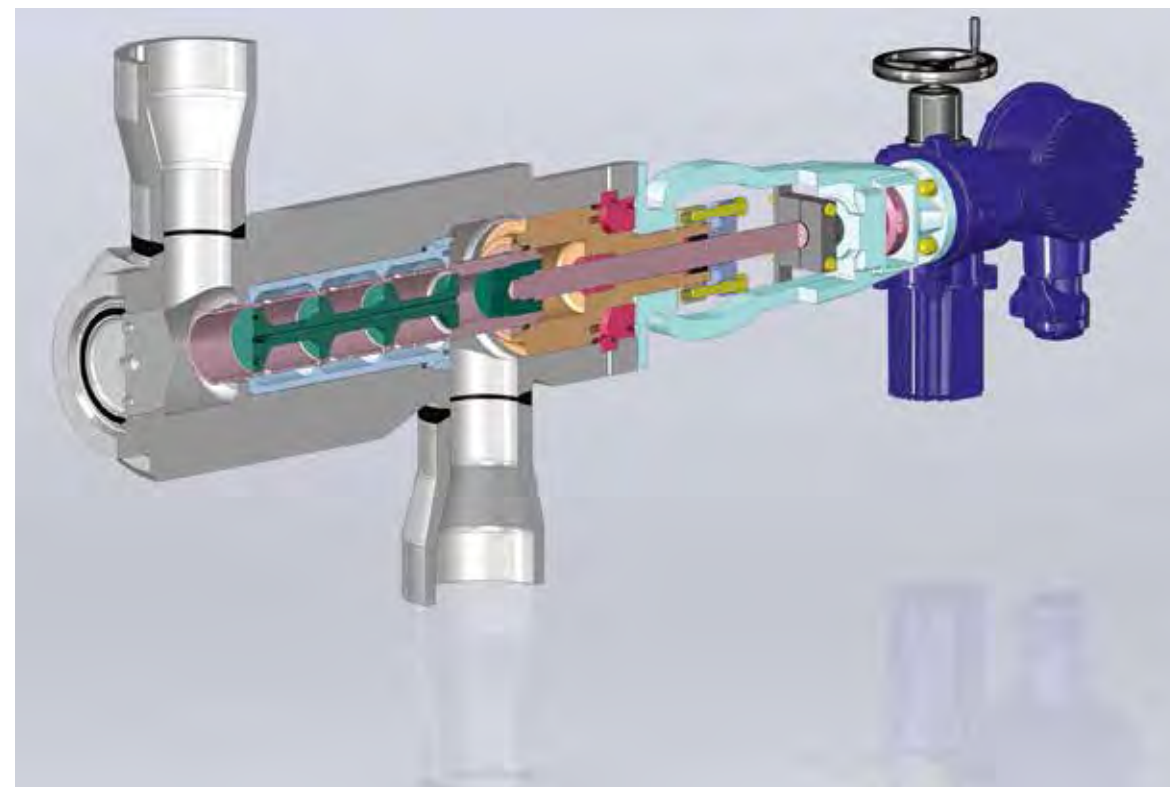
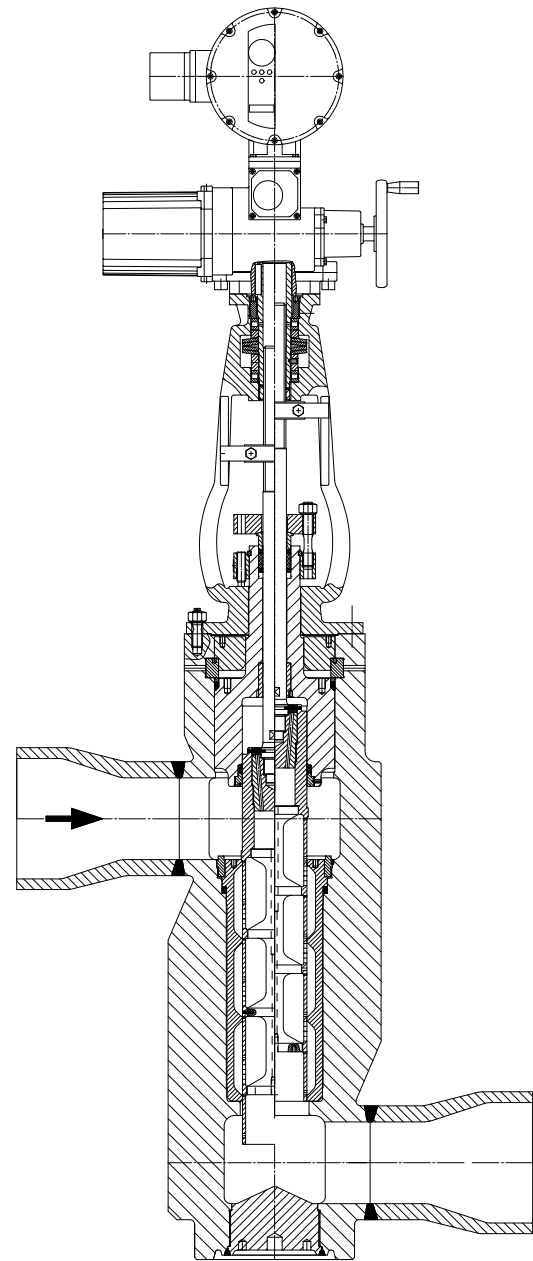
1. Highest possible level of cavitation prevention
2. Highest possible level of erosion prevention
3. State of the art design minimizing oscillations or vibrations ;
4. Precise characteristic
5. Noise levels < 80 dB(A)
6. Quick maintenance and servicing due to easy-to replace internal parts and components – replaceable without mechanical work

设计

锻造或铸造阀体，直通式、角式或Z型样式，焊接或法兰连接型式满足DIN, ANSI或其他标准。

特点：

1. 最高预防汽蚀级别；
2. 最高预防腐蚀级别；
3. 最先进的设计将振动降到最低；
4. 精确特性；
5. 噪音 小于80分贝；
6. 内部部件和组件无需机械作业便可进行更换，易于快速维修和服务；



Seat Ø mm 阀座口径		50-200
DN from-to 公称口径	Inlet/Outlet	mm
		inch
PN up to 公称压力	[bar]	630
	[lbs]	4500

Start Up Feedwater Control valves

启动给水调节阀

Application

During low-load operation as well as during start-ups, the boiler requires only relatively small amounts of feedwater (approx. up to 30% in compare to Full-load operation). At the same time pressure fluctuations are substantially greater than they are during full-load operation.

Low-load control valves by W&T not only master these challenges safely and reliably, but as well they provide you with an outstandingly high rangeability.

应用

在低负荷运行期间以及在启动期间，锅炉只需要相对少量的锅炉给水(约相当于满负荷运行时的30%)，同时压力波动实际上远远高于在满负荷运行时的情况。

W&T低负荷调节阀不仅安全、可靠地处理这些挑战，也为您提供一个非常高的调节范围。

Design

Forged bodies: straight, angle or Z-shaped valves, for welding connection manufactured according to DIN, ANSI, or other standards.

Distinctive features

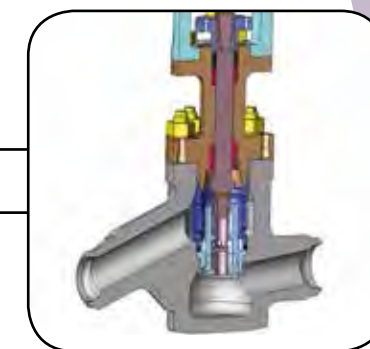
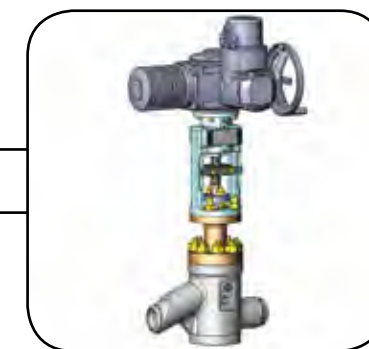
1. Highest possible level of cavitation prevention
2. Highest possible level of erosion prevention
3. State of the art design minimizing oscillations or vibrations
4. Precise characteristic
5. Noise levels < 75 dB(A)
6. Quick maintenance and servicing due to easy-to replace internal parts and components – replaceable without mechanical work

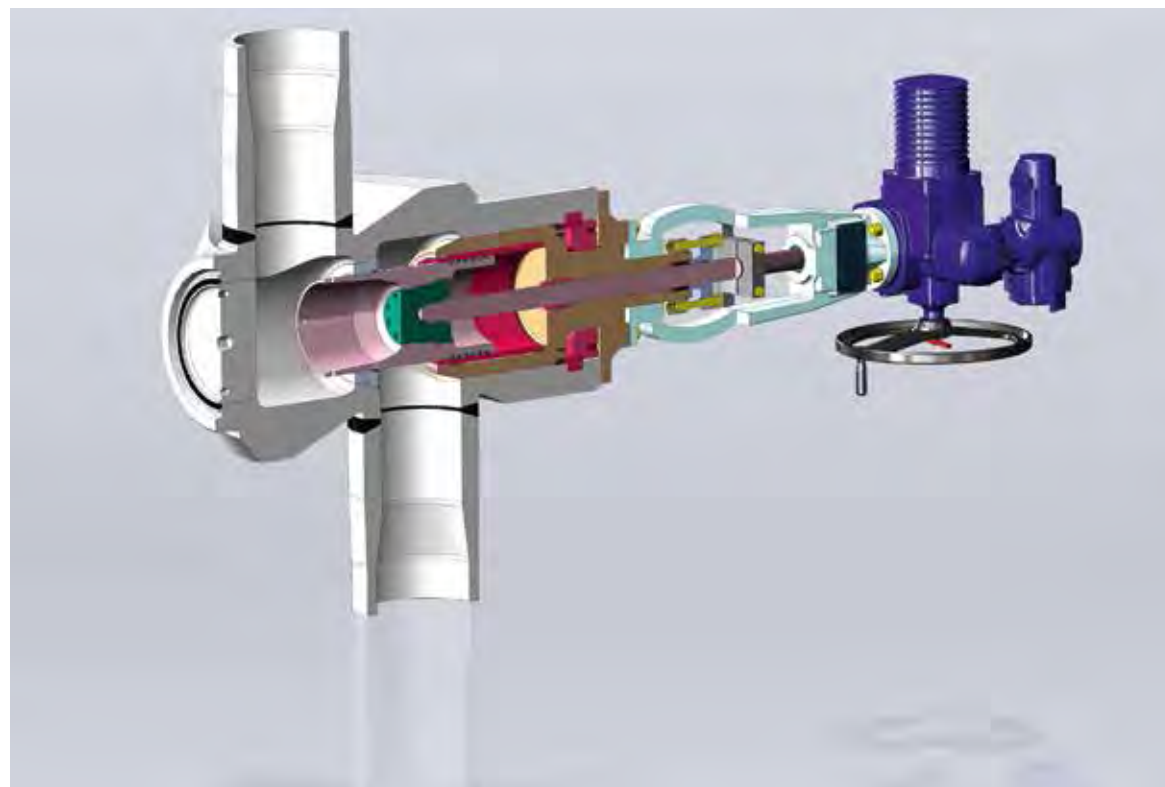
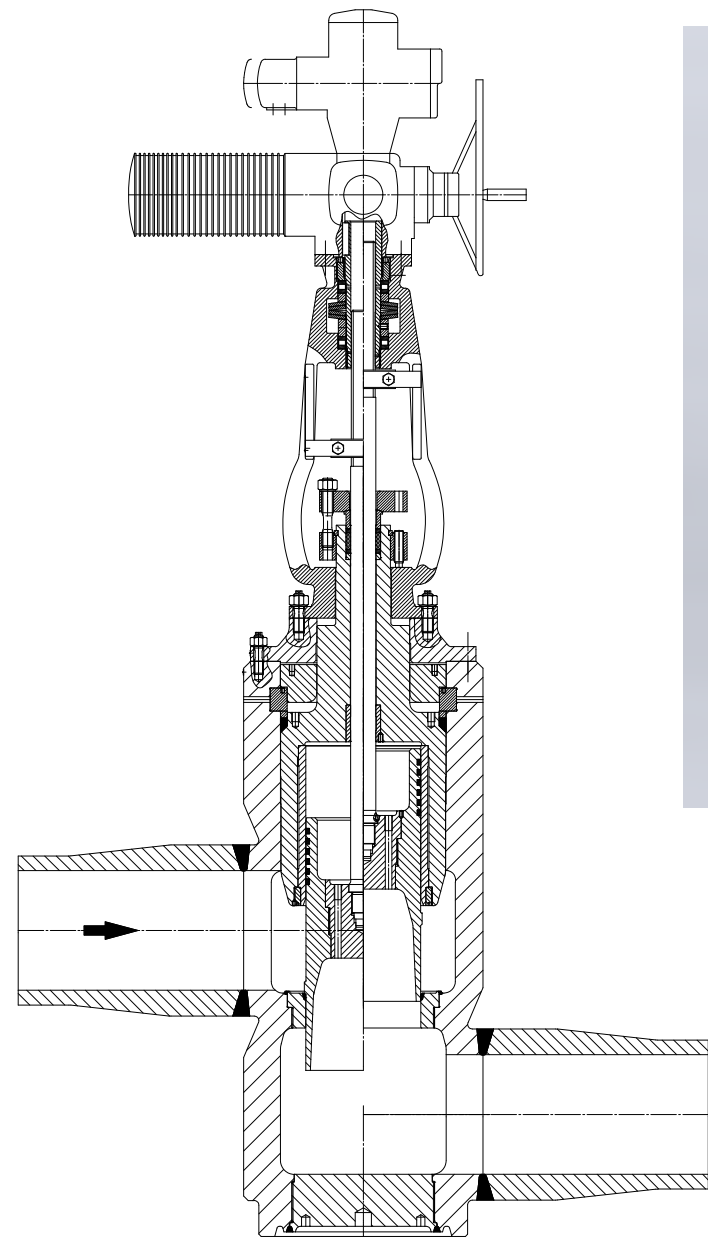
设计

锻造阀体，直通式、角式或Z型样式，接口焊接型式遵照DIN,ANSI和其他标准。

特点：

1. 最高预防汽蚀级别；
2. 最高预防腐蚀级别；
3. 最先进的设计将振动降到最低；
4. 精确特性；
5. 噪音 小于75分贝；
6. 内部部件和组件无需机械作业便可进行更换，易于快速维护和服务；





Seat Ø mm 阀座口径		100-250	
DN from to 公称通径	Inlet/Outlet	mm	100-400
		inch	4-16
PN up to 公称压力	[bar]	630	
	[lbs]	4500	

Circulation control valves

循环水调节阀



Application

As soon as the feedwater is heated up, the level control within the separator is realized with a circulation control valve. By means of a pump in combination with a circulation control valve boiling water is reintroduced into the circuit in front of the evaporator.

Design

Forged bodies, angled and Z-shaped valves for welding connections, manufactured according to DIN, ANSI, or other standards.

Distinctive features

1. Highest possible level of cavitation prevention
2. Highest possible level of erosion prevention
3. State of the art design minimizing oscillations or vibrations
4. Precise characteristic
5. Noise levels < 75 dB(A)
6. Quick maintenance and servicing due to easy-to replace internal parts and components – replaceable without mechanical work

应用

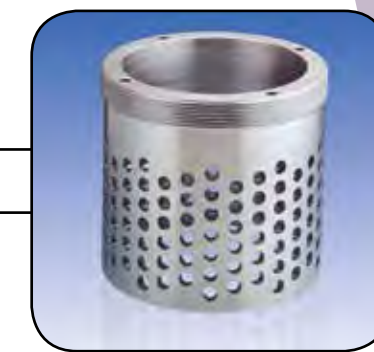
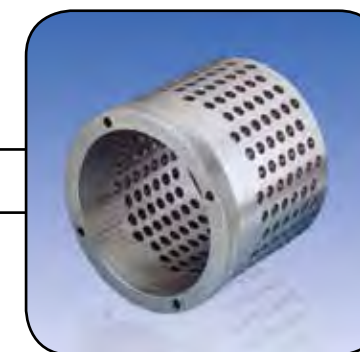
一旦给水加热，分离器内的液位控制需要循环水调节阀来实现。通过安装有循环水调节阀的水泵，沸水再次进入在蒸发器前面的回路。

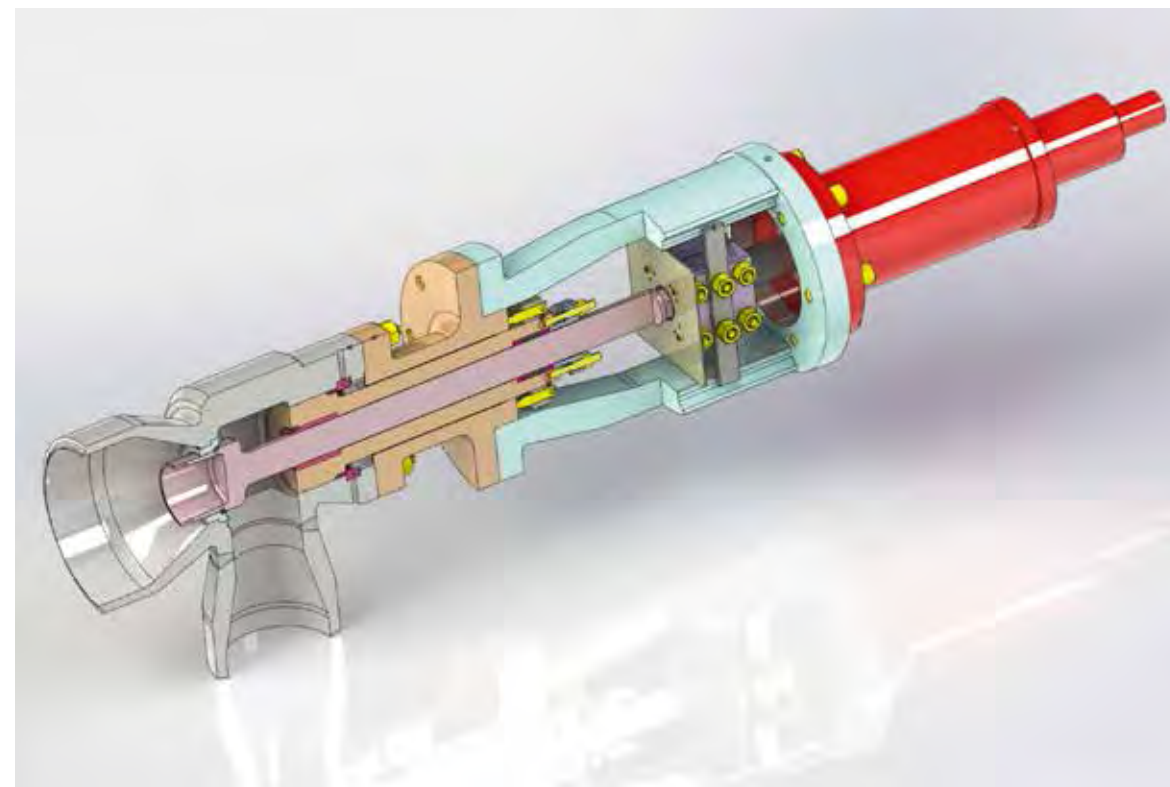
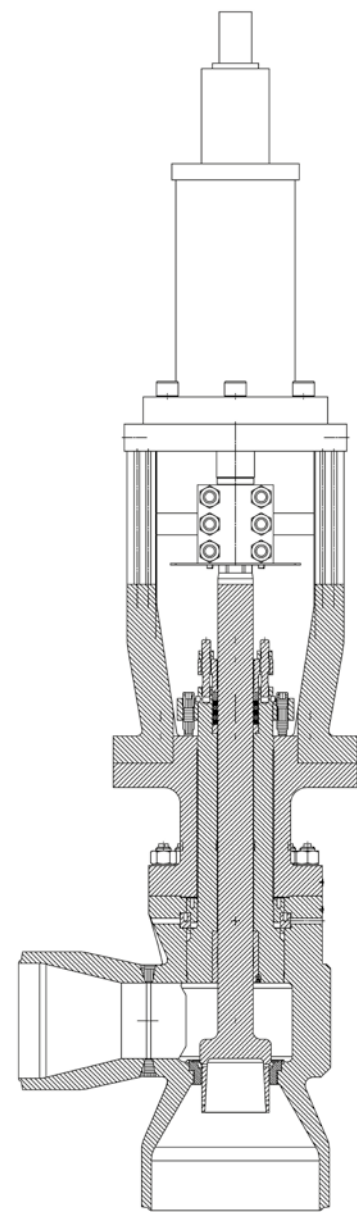
设计

锻造阀体，直通式，角式或Z型样式，接口焊接型式遵照DIN,ANSI和其他标准

特点：

1. 最高预防汽蚀级别；
2. 最高预防腐蚀级别；
3. 最先进的设计将振动降到最低；
4. 精确特性；
5. 噪音 小于75分贝；
6. 内部部件和组件无需机械作业便可进行更换，易于快速维护和服务；





Seat Ø mm 阀座口径			50-200
公称口径 DN from-to	Inlet	mm	80-300
		inch	3-12
公称压力	Outlet	mm	2-3 times larger than DN of inlet
		inch	
PN up to	[bar]	630	
	[lbs]	4500	

Discharge control valve / Blow Down valve

排放阀/排污阀

Application

During start-up as well as during low-load operation the level of water inside of the separator needs to be controlled.

With the use of a discharge control valve water or boiling water can be discharged and reintroduced into the circuit by applying one of following methods:

- Using a flash tank at atmospheric pressure
- Using the feed water tank.

应用

在启动和低负荷运行期间，分离器内水位需要控制。

借助于排放调节阀，水或沸水可以排放和再次引入回路，可任意采用下面两种方法：

1. 在常压下使用扩容器；
2. 使用给水箱；

Design

Forged bodies in angled shape with welded connections fulfilling DIN, ANSI or other standards.

Outlet size 2-3 nominal diameter levels greater than the inlet size due to evaporation.

Separated seat and control area.

Distinctive features

1. Highest possible level of cavitation prevention
2. Highest possible level of erosion prevention
3. State of the art design minimizing oscillations or vibrations
4. Precise characteristic
5. Quick maintenance and servicing due to easy-to replace internal parts and components – replaceable without mechanical work
6. Long service life

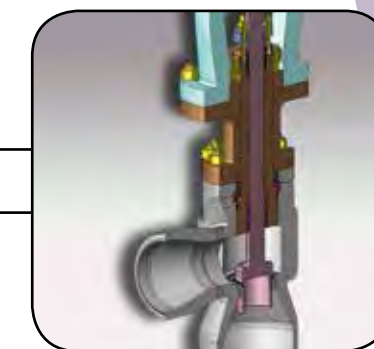
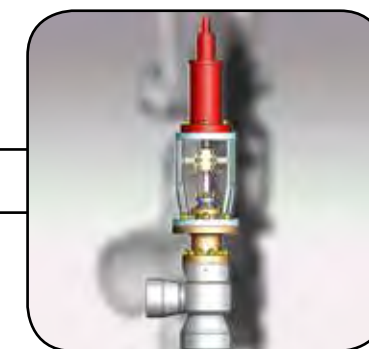
设计特点

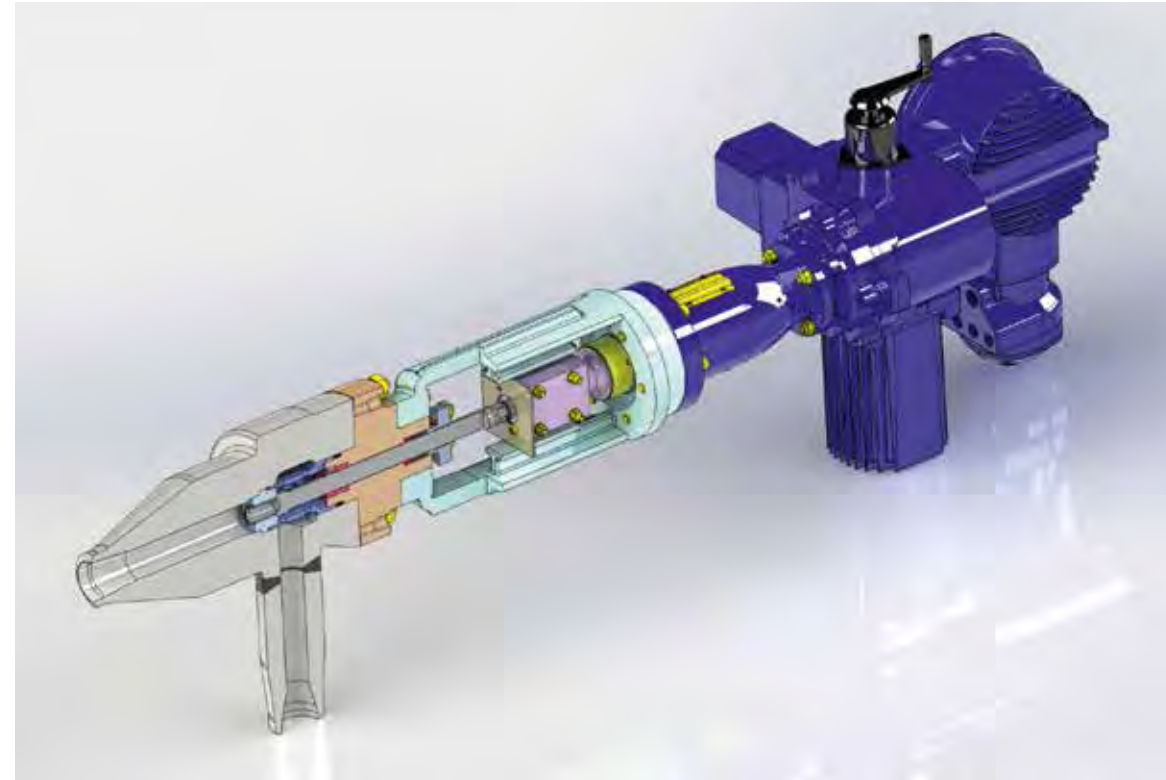
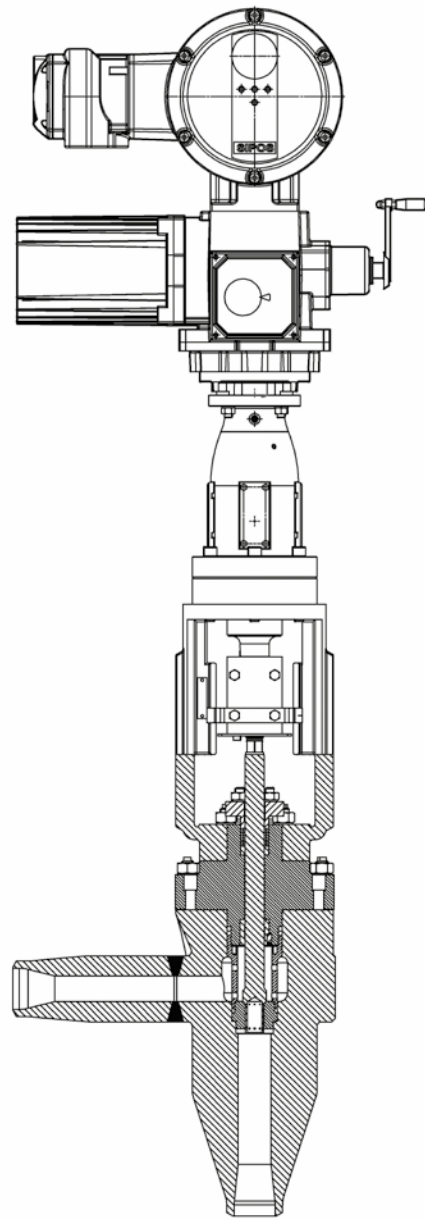
锻造阀体，角式样式，接口焊接型式遵照DIN,ANSI和其他标准；

考虑到蒸发，出口尺寸大于进口尺寸公称直径2-3个规格级别；
分开的阀座和控制区域；

特点：

1. 最高预防汽蚀级别；
2. 最高预防腐蚀级别；
3. 最先进的设计将振动降到最低；
4. 精确特性；
5. 内部部件和组件无需机械作业便可进行更换，易于快速维护和服务；
6. 使用寿命长；





Seat Ø mm 阀座口径		25-100
DN from-to 公称口径	Inlet/Outlet	mm
		inch
PN up to 公称压力	[bar]	630
	[lbs]	4500

Injection Control Valves

Single-stage for superheater / multi-stage for reheater

减温水调节阀

过热器采用单级调节/再热器采用多级调节

Application
 In the first place the amount of cooling water as required by the consumer must be controlled and adjusted precisely. This task is compromised by great pressure fluctuations at the point of consumption, when the pressure on the inlet side of the valve however keeps steady. To achieve satisfying operating results Injection Control Valves far mostly follow an equal percentage opening characteristic. To a great extent, this ensures a linear flow characteristic.
 When used in boiler applications, the injection control valves are in constant operation.

应用范围：
 首先，用户要求的减温水量必须精确控制和调整。当阀门入口侧压力保持平稳时，蒸汽压力波动对调节影响很大。为达到令人满意的喷水减温结果，喷水调节阀在很大程度上遵照等百分率开启的特点，在很大范围上，这确保了阀门的线性特性。在锅炉应用中，减温水调节阀通常都在频繁操作。

Typical design (single-stage)
 Forged bodies: Straight, angled or Z-shaped valves, for welding connections, according to DIN, ANSI or other standards.

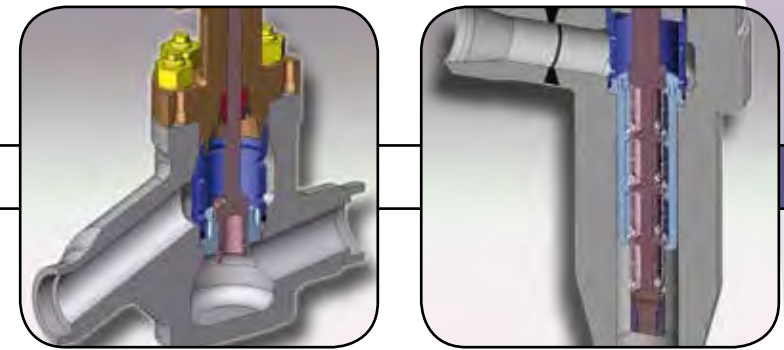
典型设计（单级）
 锻造阀体，直通式、角式或Z型样式，接口焊接型式遵照DIN, ANSI和其他标准。

Typical design (multi-stage)
 Forged bodies: Straight, angled or Z-shaped valves, for welding connections, according to DIN, ANSI or other standards.

典型设计（多级）
 锻造阀体，直通式、角式或Z型样式，接口焊接型式遵照DIN, ANSI和其他标准。

- Distinctive features**
1. Adaptable to prevalent operational conditions
 2. Pressure decrease stepwise (with multi stage design)
 3. Highest possible level of cavitation prevention
 4. State of the art design minimizing oscillations or vibrations
 5. Noise level < 80 dB(A)
 6. Precise characteristic
 7. Quick maintenance and servicing due to easy-to replace internal parts - replaceable without mechanical work
 8. Long service life ;

- 特点：**
1. 适应各种运行工况；
 2. 阶梯式降压（多级调节设计）；
 3. 最高预防汽蚀级别；
 4. 最先进的设计将振动降到最低；
 5. 噪音<80分贝
 6. 精确特性；
 7. 内部部件无需机械作业便可进行更换，易于快速维护和服务；
 8. 使用寿命长；





Hydraulic
液动执行机构



Hydraulic
液压站



Pneumatic
气动执行机构



Electric
电动执行机构

Actuator

Hydraulic, pneumatic, electric

执行机构

液动，气动和电动

A variety of applications

As well as steam conditioning and control valves we also provide you with the appropriate actuator components. Hydraulic actuating systems are particularly suitable for plants with high operating pressures and high requirements in terms of accuracy and precision of regulation.

We also offer electric or pneumatic actuator. Each type is harmonised exactly with our valves and integrated perfectly. This reduces your costs, increases the safety of your plant and ensures seamless, trouble-free operation.



多种应用

除了提供控制阀门外，我们也为您提供适当的执行机构组件。液压驱动系统特别适合于高运行压力和对准确性和精度方面要求高的电厂。

我们还提供电动或气动执行机构，每个执行机构类型都与我们的阀门完美集成。这样可以减少成本，增加工厂的安全性，确保无缝链接，无故障运行。



Developed by us

Based on our years of project experience, over time we have designed and developed our own hydraulic actuating system. Accordingly the adaption of the appropriate hydraulic drive can be perfectly matched to the requirements of the valve. Your very benefit is the significant increase of the reliability and safety of plants operated by you.

我们的研发

基于我们多年的项目经验，随着时间的推移，我们已经设计和开发了自己的液压驱动系统。选取完全匹配所需阀门的适当液压执行机构，可极大提高您工厂的操作可靠性和安全性。



Supply hub

Valves are the connection points for the entire power plant network. They regulate the circuit and control the results.

As a prerequisite for the highest possible degree of safety and seamless functioning of the system, they must be in perfect working order and therefore coordinated exactly.

供应传送枢纽

电站调节阀是整个发电厂管网的重要组成部分。它们负责调节回路和控制输出结果品质。作为整个发电系统中最高安全级和无缝连接的先决环节，这些调节阀必须精密工作并精准协调。

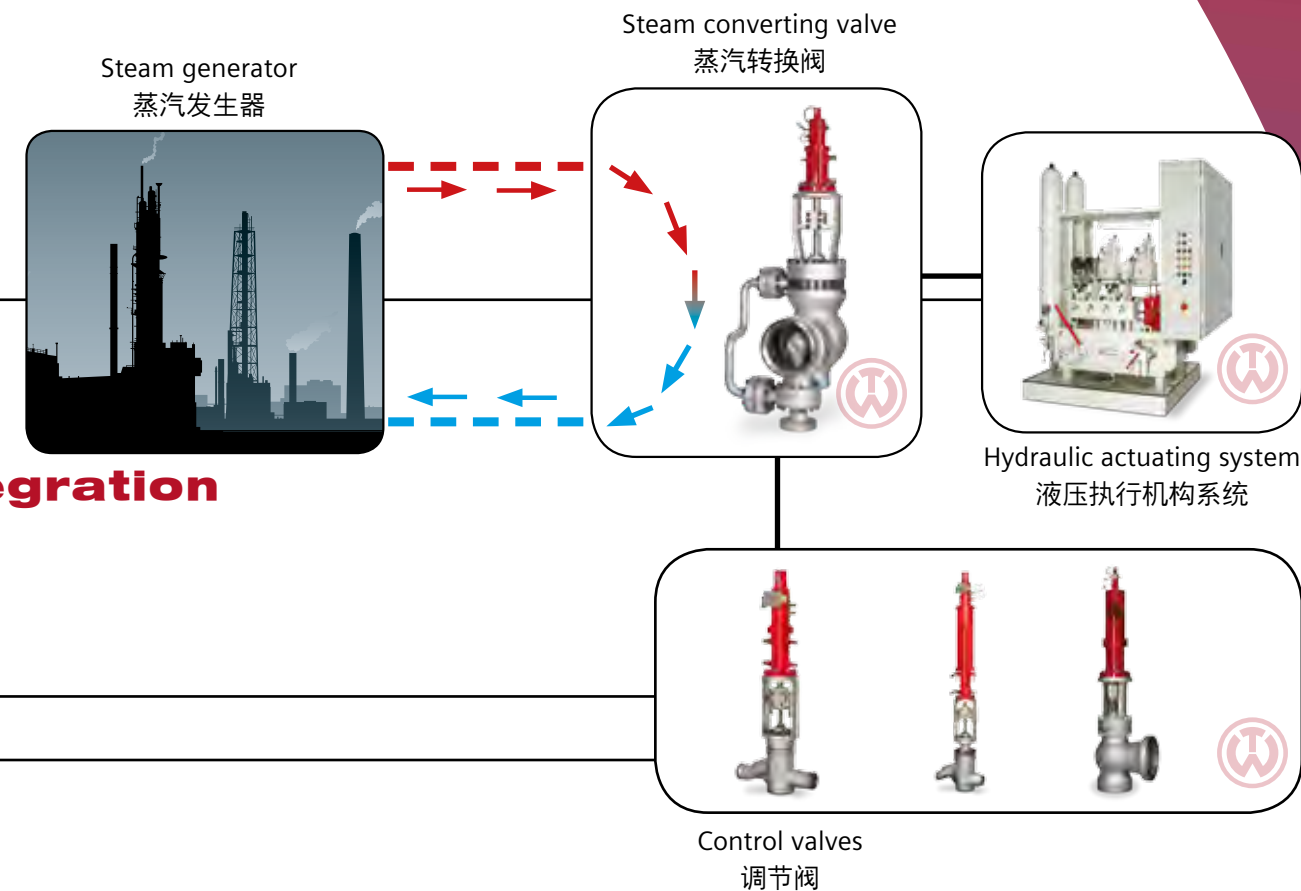


Seamless integration

A one-stop shop

无缝集成

一站式供货



The complete scope

We can provide the planning and deliver you all the types of control valves that you need to operate your power plant. In addition to this you will receive the appropriate actuator from us, also provide the commissioning of the system for operation as well as the possibility of hydraulic pipes and field cabling.

完整的供货范围

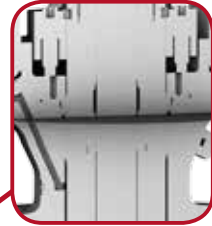
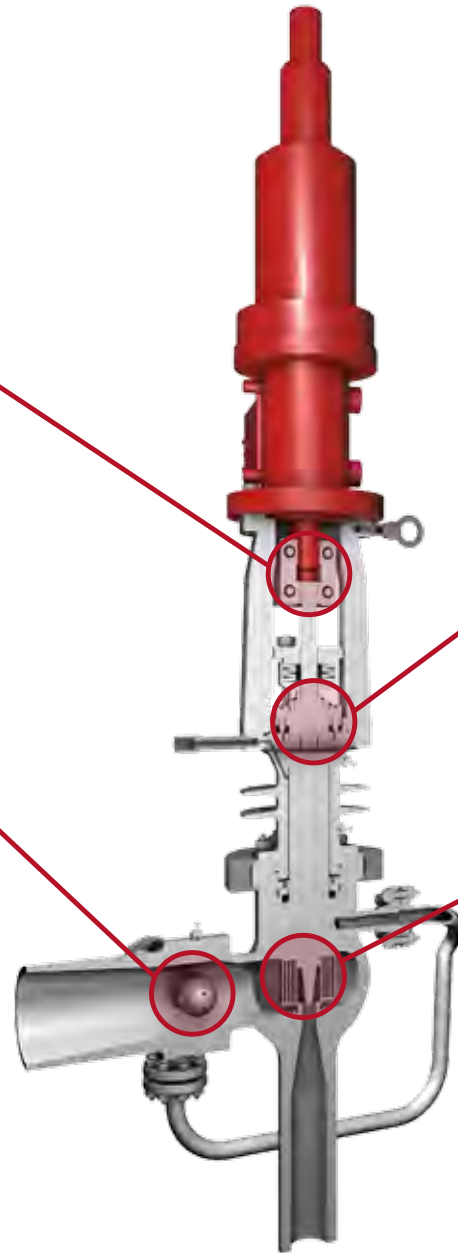
我们能够提供设计并交付您所需的所有类型的电站调节阀。除了这一点，您还可以从我们这里选取适当的执行机构。我们还可以提供系统现场调试以及液压管道设计和现场电缆布线。



Actuator coupling
执行机构连接



Integrated cooling water injection / motive steam assistance
集成冷却水喷射/动力蒸汽辅助



Cooling spacer with stuffing box
带填料的冷却垫片



Valve stem and 5-stages control/throttle element
阀杆和五级控制节流元件



Designing the future

Research project 725 °C

设计未来

725度高温项目研究

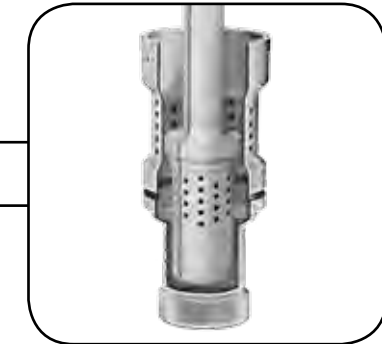
Improved CO2 balance

Since 2008 we have been running a research project together with other manufacturers, with the aim of increasing power plant efficiency. CO2 emissions can be decreased, making an important contribution towards protecting the environment.

Increasing efficiency

Long term testing of materials and components with high strength at high temperatures helps to increase the steam temperature and therefore increase the efficiency of the power plant by around 20%.

Our valve has been installed in the 725 °C high temperature material test facility (HWT II) at the large-scale coal power plant in Mannheim.



降低CO2排放

自2008年以来，为达到提高电厂效率的目标，我们与其他供应商一起开展一个研究项目，目的在于减少二氧化碳排放，对保护环境做出了重要贡献。

提高效率

在高温下，长期测试高强度材料和部件有助于提高蒸汽温度，从而提高电厂的效率20%左右。

在曼海姆大型燃煤电站，我们的阀门已经被安装在725°C高温材料测试设备(HWT II)中进行测试。

At a glance

Description: valve with integrated steam header
Operation: with hydraulic drive
Live steam: design: 725 °C / 205 bar
Nominal width: DN 80/150
Total weight: 420 kg
Stroke: 50 mm
Valve housing material: alloy 617mod

测试项目一瞥

说明：集成蒸汽管集箱的阀门；
操作：液压驱动；
蒸汽：725度，205Bar；
公称宽度：DN80/150；
总重：420kg
行程：50mm
阀体材料：合金617MOD；



ASME PP Certificate



DIN EN ISO 9001 2008 Certificate



Gost Certificate



KTA-Certificate



PED Certificate



SIL3 Certificate Hydraulic



SIL3 Certificate Pneumatic

Our Quality & Certificate

质量和标准



Our quality

Our consistently high product quality is the result of a well-thought-out concept: we implement a range of quality assurance measures and comply with all the requirements of DIN EN, VdTÜV, AD-2000, TRD, as well as ASME, ANSI, IBR and RTN. Our quality assurance system is approved by the following regulations: DIN EN ISO 9001:2000, Directive 97/23 EG (DGRL), KTA 1401 and ASME. We have our products inspected and evaluated by recognised authorities.

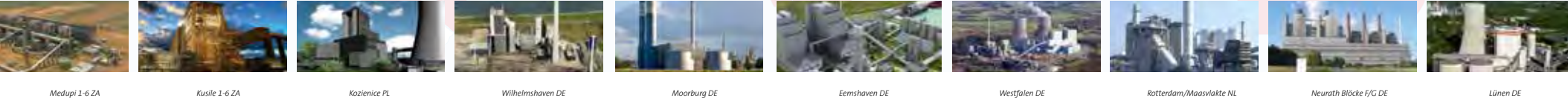
我们的质量

我们保持始终如一的高质量，得益于精益求精的理念：我们实施多种质量保证措施，遵守DIN EN, VdTÜV, AD-2000, TRD以及ASME、ANSI、IBR和RTN标准的所有要求。我们的质量保证体系通过以下认证：DIN EN ISO 9001：2000、Directive 97/23 EG(DGRL)、KTA1401和ASME。我们的产品通过了权威部门的质量检验和评估。

Reference projects

全球业绩分布

EUROPE	Denmark Asnaesvaerket	Ensdorf Hamm-Uentrup Herdecke Knapsack Köln-Niehl Lünen GKM 9 Moorburg Neurath Niederaußem Reuter Rheinhafen RDK Staudinger Walsum KW Westfalen	Hungary Gönyü Tisza	Moerdijk Rijnmond Rozenburg Swentibold	Slovakia Bratislava Malzenice	Turkey Adana Canakkale Denizli Iskenderun Kangal Mersin	AMERICA	Chile Nehuenco	Prairie State St. Francis West-Phoenix	Kusile Lethabo Majuba Matimba Matla Medupi Tutuka	Shenhua Shenton Taishan II Xingyi Xinshai Yanshanhu	Indonesia Belawan 1 / 2 Paiton	S. Korea Bugok Incheon Poryong	Sanandaj Shirvan	U.A.E. Al Taweelah Shuweihat
Austria Hallein Korneuburg Simmering Timelkam Voestalpine Linz Wien	Estonia Tallinn	France Chateauroux Dunkerque Richemont	Ireland Huntstown Poolbeg	Norway Karstoe Sarpsborg	Slovenia Sostanj	USA Allegheny Athens City of Austin Elm Road Harquahala Hines Ivanpah Solar Project Oklahoma Orion Kelson R.	ARGENTINA Atucha Genelba Manuel Belgrano Salta	Mexico Naco Nogales Pemex Valladolid	AFRICA	ALGERIA Mers el Bejaia Mers el Hadjadj Skikda	INDIA Anpara Bellary Bina Chhabra Derang Durgapur Faridabad Koderma Kothagudem Rihand Satpura Ukai Vindhyachal Vallur	Japan Ohi	Malaysia Paka Pasir Gudang	ISRAEL Gezer Hagit Haifa	Saudi Arabia Al Khobar Shuaibah
Belgium Gent T-Power	Finland Haapavesi Kymen Kymmene Metsä Botnia Olkiluoto	Greece Aghios Dimitrios Atherinolakkos Kardia	Latvia Riga TE 2 Riga	Poland Belchatow Dolina Odra Patnow Pomorzany	Spain Arrubal Gibraltar Palos Puertollano Trillo	UK Baglan Bay Bridgeport- Harbour Cottam Killingholme King's Lynn Rye House Seabank	BRAZIL Angra Culaba Norte Flumin- ense	Venezuela Tamara Termostuzilla	EGYPT Ayon Moussa Sidi Krir	ZIMBABWE Hwange	PAKISTAN Guddu Kot Addu Rousch	THAILAND Amata Bang Pakong	Taiwan Hsinta 1-5 Kuo Kuang Nan Pu	Qatar Ras Laffan	
Bosnia Herzegovina Tuzla	Germany Altbach Boxberg Datteln Emsland	Macedonia Bitola	Portugal Pego Ribatejo Tapada	ROMANIA Braila	SWITZERLAND Bern Cösgen Zürich	South Africa Duvha Kendal Kriel	CANADA Bear Creek	USA Allegheny Athens City of Austin Elm Road Harquahala Hines Ivanpah Solar Project Oklahoma Orion Kelson R.	MAROC Tahaddart	ASIA	PHILIPPINES Santa Rita	VIETNAM Ca Mau Phu My	RUSSIA Norilsk UFAORGSINTEZ Lukoil Chemical Novokuznet Sibirian Steel	AUSTRALIA Broadwater Condong Goro Nickel Loy Yang Perlis	
Bulgaria Kozloduy						UKRAINE Smijew					SINGAPORE Pulau Seraya	IRAN Damavand Jahrom Kerman Neka	JORDAN Rehab	NEW ZEALAND Otahuhu	



Medupi 1-6 ZA Kusile 1-6 ZA Kozienice PL Wilhelmshaven DE Moorburg DE Eemshaven DE Westfalen DE Rotterdam/Maasvlakte NL Neurath Blöcke F/G DE Lünen DE

Reference list

各种调节阀业绩表

电厂名称 Supercritical Power Plant	机组容量 MW	国家 Country	用户名 Customer	投运年份 Year	阀门类型 Kind of Valves	数量 Qty.
Medupi 1-6	6 x 800	RSA	Hitachi Power Europe	2008-2014	HP Bypass Stations, Reheater Safety Stations, Boiler Control Valves	436
Kusile 1-6	6 x 800	RS A	Hitachi Power Europe	2008-2014	HP Bypass Stations, Reheater Safety Stations, Boiler Control Valves	436
Kozienice	1075	PL	Hitachi Power Europe / Hitachi Japan	2013-2014	HP Bypass Stations, Reheater Safety Stations, LP Bypass Stations, Boiler Control Valves	47
Wilhelmshaven	800	DE	Hitachi Power Europe	2009-2010	Boiler Control Valves	77
Moorburg	2 x 865	DE	Hitachi Power Europe	2008-2013	Boiler Control Valves	105
Eemshaven	2 x 800	DE	Alstom / Siemens	2009-2013	LP Bypass Stations, Boiler Control Valves	104
Rotterdam/Maasvlakte	1100	NL	Hitachi Power Europe	2009-2014	Boiler Control Valves	83
Datteln	1100	DE	Hitachi Power Europe / Alstom / e-on	2008-2009	Boiler Control Valves	32
Neurath Blöcke F/G	2 x 1000	DE	Hitachi Power Europe / Alstom	2007-2012	Boiler Control Valves	48
Lünen	800	DE	IHI Japan / Siemens	2009-2010	HP Bypass Station, LP Bypass Station, Boiler Control Valves	49
Westfalen	2 x 800	DE	Alstom / Siemens	2009-2010	LP Bypass Stations, Boiler Control Valves	90





Custom-made systems with service

Fine-tuning in all areas

定制化系统和服务
全方位的优化



WELLAND & TUXHORN AG
ARMATUREN- UND MASCHINENFABRIK



Contact us. We would be happy to advise you.
联系我们，将竭诚为您提供建议！

Individual solutions

Siemens-WT deliver provides you with a system solution tailor-made to your requirements, designed by a qualified team of engineers.

个性化解决方案

西门子专业化的工程师设计团队，按照您的需求提供定制化系统解决方案。

Our service

After a product is delivered, an experienced team of service technicians is available for consultation during the start-up phase, or to carry out routine inspection work. As maintenance is integrated into our production process, the knowledge gained from this influences the development of new products.

我们的服务

阀门产品交付以后，不论是在项目启动阶段，还是投运后日常例行检查工作方面，我们有经验丰富的服务团队技术人员提供咨询。由于维修保养服务是我们生产流程中的一环，从而在实际服务中获得的知识又可对新产品开发起到积极作用。

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