

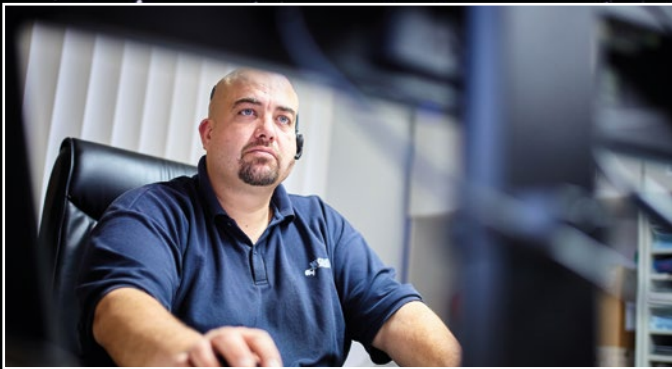
All Dimensions: Innovation that Makes the Difference

More Solution Efficiency – More Thrust under Extreme Conditions



WAGNER
Armaturen

... keeping flow controlled



Planning

- Consulting
- Customized Solutions
- Individual Documentation
- Engineering
- Technical Drawing
- Valve and Actuator Sizing

Quality Assurance

- According to ISO 9001:2015
- Internal Audits
- Testing/Calibration of positioners and feedback units with suitable testing equipment
- Regular Supplier Audits
- In-house valve testing bench for hydrostatic testing and leak detection

Supernaturally Reliable

Service with Foresight

Your Company - Complex Systems. It's good to have a partner you can rely on, even on your extreme industrial applications. Since 1998, Wagner Armaturen has stood for reliable consulting and quality. Our mission: a clear focus on emissions, sustainability, and solutions.

Our target: the right valve at the right time in the right place – for your systems.



Protection

Operational within 24 hours in the event of a building fire or virus attack

Proactive Operational Safety

Data Security

Service

Tagging of valves with plastic or stainless steel labels

Silicone-, oil-, and grease-free valves through ultrasonic cleaning

24/7 hotline at

+49 (0)4154 83845-5

Condensate trap testing/steam audits

Spare part management

Logistics

Double incoming goods- and dispatch control

Customized warehousing and consignment

High-quality packaging and secure shipping

Express & courier

Punctuality



In the Orbit of Extremes

Ball Valves and Butterfly Valves with Perfect Tightness – and Extraordinary Durability



Leakage-free valves – under thermally extreme conditions.

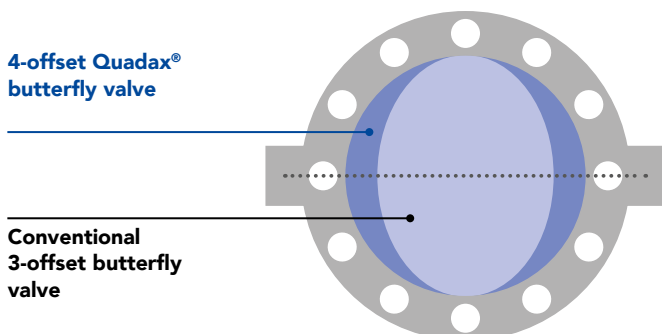
Whether cryogenic conditions or high temperatures - Quadax®'s 4-offset butterfly valves offer uncompromising quality. They meet 100 % of the highest sealing requirements, with nominal sizes ranging from 50 mm to 1800 mm. In extreme temperature ranges from -270 °C to +800 °C.

The use of an elliptical outlet cone and a specific cutting angle increases the sealing surface compared to conventional 3-offset valves.

Your Benefits:

- **Absolute tightness:**
Meets the highest tightness requirements even with significant temperature fluctuations
- **Made in Germany:**
Produced on modern 5-axis machining centers in Germany
- **4-offset design principle:**
Provides higher friction-free operation, higher CV values, and higher tightness under high pressures and extreme temperatures.

Enjoy clear advantages - with optimal solutions for extraordinary requirements.



4-offset: Rounder, larger sealing surface due to elliptical outlet cone



Self-lubricating ball valves – metallic tightness

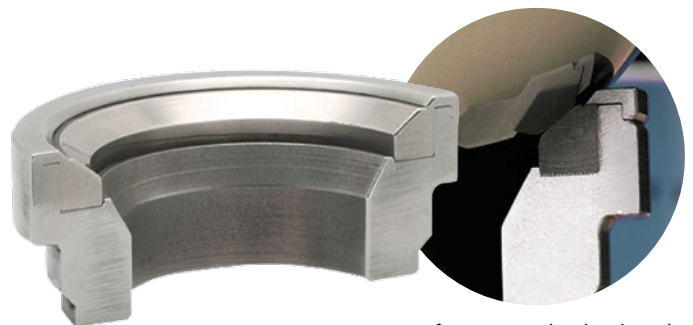
Floating or trunnion-mounted ball valves – Penta's metallic sealing ball valves shine with extraterrestrial reliability. They are perfectly suited for higher pressure and temperature requirements that go beyond the limits of soft-sealing ball valves.

The unique patented Pentafite metal seats are produced in a manufacturing process similar to sintering, where metal powder and graphite are pressed at high pressure and temperature. For valves under extreme conditions.

Your Benefits:

- **Perfect sealing, even with gases:**
Absolutely bubble-tight according to DIN EN 12266 Class A – thanks to the automatic adaptation of the seats to the ball shape due to the elasto-plastic properties of the Pentafite material
- **Low torque:**
The lubricating properties reduce friction between the seat and the ball even at high temperatures or high operating pressures; 40 % less torque is required to comparable ball valves
- **Easy maintenance:**
Simplified maintenance and assembly, as the seat and ball do not need to be lapped thanks to Pentafite-Technology.

Discover new horizons – with Penta ball valves for extreme applications.



Pentafite seats - absolutely tight



Diffusion and Corrosion – Light Years Ahead

Ball valves and shut-off valves with astronomically good protection

PFA-lined WA-ball valves – reliable for caustic solutions, acid, alkalis and other.

Reliable and cost-effective - PFA-lined WA-ball valves offer you options for use in pharmaceutical or chemical plants, as well as in the food industry.

Your benefits:

- **Emission-free certified according to DIN EN ISO 15848:**
through V-shaped PTFE or TFM1600 stem seal, in accordance with the new TA-Luft
- **Special seat design:**
for low operating torque and reliable sealing performance
- **Vacuum-tight:**
liner securely locked into the body by “swallowtail” shape slots and locking grooves to resist shrinkage and allow vacuum application
- **High quality lining:**
electrostatic spark test is 100 % conducted to ensure the integrity of the liner

Explore new worlds of perfect resistance.

PFA-lined WA-ball valve – highly resistant



WAGNER
Armaturen

PTFE-lined shut-off valves for challenging media

Toxic, abrasive, or corrosive media – GAR-SEAL® shut-off valves offer unique options in throttling, control, or shut-off: made in Germany. Durability through isostatic molding as well as easy maintenance increase operational safety and provide optimal application perspectives – even during long operating times.

Your benefits:

- **Emission-free certified according to DIN EN ISO 15848:**
Compliant with current TA-Luft regulations
- **Float-mounted disc on the shaft:**
for easy maintenance, better tightness, and less abrasion through optimal balancing
- **Homogeneous structure with optimal resistance:**
high material density isostatic molded from virgin PTFE
- **Long service life and reliability:**
with minimized tendency to crack or porosity Fulfill your mission: maximum operational safety under challenging conditions.

Fulfill your mission:
Maximum operational reliability under difficult operating conditions.

PTFE shut-off valves – particularly long life



Garlock®

Use Potentials, Save Resources

High-tech for entrepreneurial orbit: effective steam management

Steam audits: according to DIN ISO 16247-1 or DIN ISO 50001

Even the loss of 100 kg of steam/hour costs approximately 30,000 euros per year at a price of 35 €/t of steam – and generates a CO₂ emission of 17 kg/year, which could be avoided. Without periodical inspections, steam systems have an average failure rate of 20 % of all installed traps. A periodical steam audit reduces your GHG Scope 1 emissions and optimizes the rate to usually below 5 %.

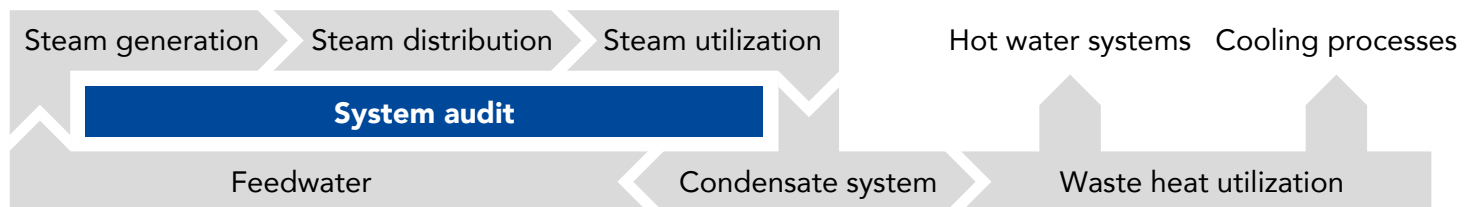
Recognize potentials, implement optimizations: with MIYAWAKI steam audits

The MIYAWAKI audit provides you with an analysis of your pure steam system as well as a report on the potentials for reducing your steam consumption – both in the steam system itself and in conjunction with thermal systems. As a result, you will receive a list of your potentials with suggestions and initial cost-benefit analyses.

Your benefits:

- Reduction of operating costs
- Increase your operational safety
- Improvement of your CO₂ balance
- Increase the operating time of your plant

Move towards achieving saving potentials – through the impressive opportunities of modern steam management.



1. System inspection

Initial analysis and discussion of the audit's focal points

2. System audit

Examination of the essential components

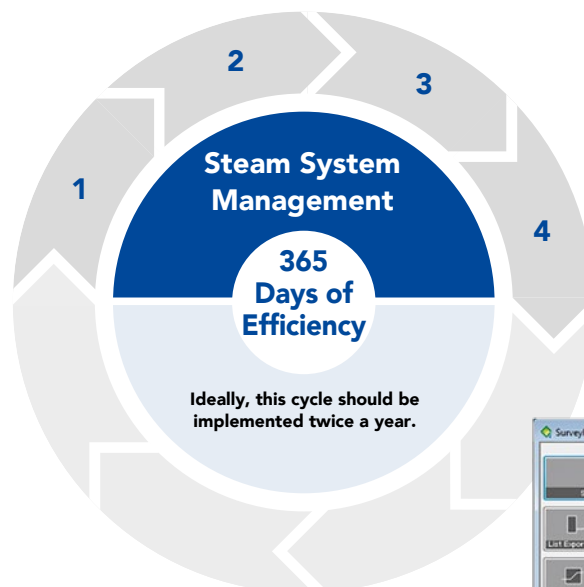
- Condensate traps
- Bypass devices
- Other valves

3. Optimization

- Evaluation of design data and current process parameters
- Identification of necessary changes
- Evaluation of measurement results and proposals for replacement

4. Optimization

- Consulting in technic and conception
- Procurement of components
- project management



Dr. Trap PM500 for preventive Maintenance



Proven for Decades: the SCCV-system

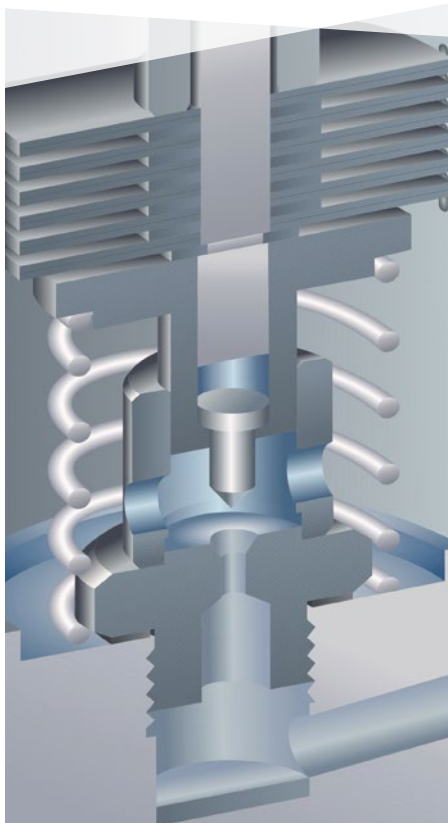
Efficiency and energy saving in steam management – on the subject of temperature control valves used for draining of trace heating or main steam services, MIYAWAKI's engineering brings a profitable advantage with the internationally patented Self Closing and Centering Valve system – the SCCV-system.

Intensive research and development activities over many years have enabled MIYAWAKI to incorporate the SCCV-system in various types of steam traps. Thus it became possible to adopt the SCCV-system to a wide pressure range and to utilize the SCCV-system not only for bimetal steam traps, but also for inverted bucket and float type steam traps.

Your benefits:

- **Better sealing:**
Through optimal centering of the closure device
- **Significantly higher lifespan:**
greatly reduced wear of all internal parts due to the reduction of the closing forces required to maintain a seal. No partial or one-sided precipitate wear of valve and seat
- **100 % protection against steam losses and pressure surges:**
the thoughtful use of bi-metal temperature control elements reduce steam losses and maintenance with the internationally patented SCCV-system.

Reduce steam losses and maintenance with the internationally patented SCCV system.



SCCV-system –
longer-lasting tight
than others

Excellence in Atmosphere: TA-Luft Compliance

Galactic solutions – certified
according to DIN ISO 15848-1

As an industrial company, it is important for you, to reliably meet the high requirements of the TA-Luft regulations. Wagner Armaturen supports you in this and offers you emission-free valves that meet the air quality requirements 100 % of the time. Including robustness, durability, and precise control of air quality levels.

Your benefits:

- **Certified according to ISO 15848-1:**
Many of our valves meet the requirements of the new TA-Luft directive
- **High leakage classes:**
Our GAR-SEAL® shut-off valves meet better leakage classes than the new TA-Luft minimum standard
- **Maximum reliable solutions:**
Through manufacturer certifications and possible post-certification

Rely on 100 % certified quality for your entrepreneurial expansion.

Key innovations of the TA-Luft 2021, an overview

- **Stricter limit values:**
Numerous limit values have been newly and more strictly defined.
- **More frequent measurements:**
Some measurements are now done annually instead of every three years.
- **Inclusion of new substances and new categorization:**
Whether furans, dioxins, benzopyrene – some substances have been newly included, while others, such as formaldehyde, have been reclassified in terms of hazardousness.
- **Expanded scope of application-range:**
Even previously unaffected facilities – such as biogas plants or shredder plants – are now subject to TA-Luft requirements.
- **Increased relevance of odors:**
Due to the new regulatory assessment of significant odor emissions.

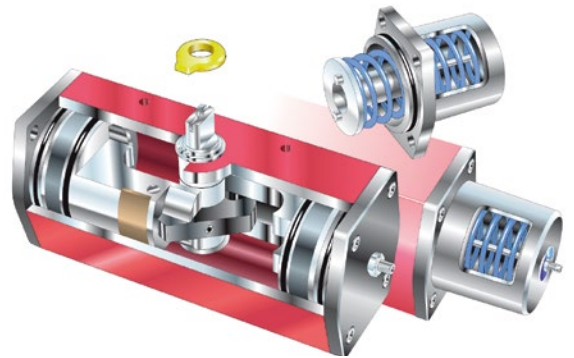
Actuators from the World Market Leader

Automation technology for industrial altitudes
– the ROTORK RC200 series & vane actuators

Automation based on the Scotch-Yoke technology:

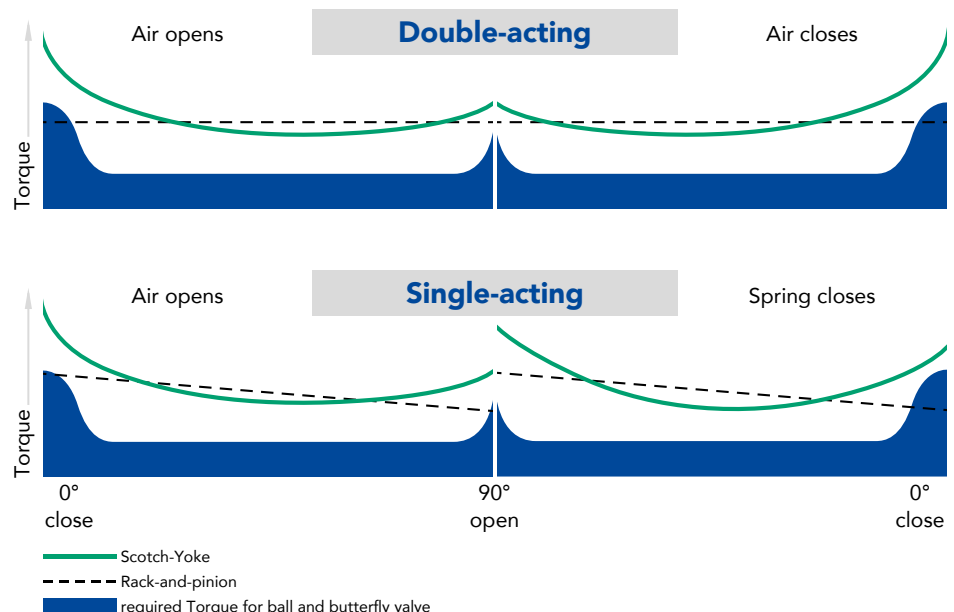
Pneumatically operated valves that save 30–40 % of the purified compressed air generate advantages and increase the efficiency of your butterfly- and ball valves. Especially the Scotch-Yoke actuators from ROTORK. As the exclusive sales and service partner of ROTORK, Wagner Armaturen maintains the largest stock of actuators and spare parts in Germany for you.

Scotch-Yoke actuators achieve a 50 % higher torque at the end positions compared to conventional rack-and-pinion actuators. Choosing a smaller actuator saves air, costs and procurement.



How it works: the Scotch-Yoke technology

The pneumatic force is converted into a rotary motion via one or two drive pistons. The piston roller attached to the piston moves in a yoke, which rotates the drive and valve shaft.



From high temperature to Arctic low temperature: ROTORK is "all-present"

In the standard version, ROTORK actuators can be used in a temperature range of -20°C to $+80^{\circ}\text{C}$. Additional variants allow for operation in high-temperature environments up to $+150^{\circ}\text{C}$, as well as in low-temperature environments down to -47°C . Optional features include manual override, extended travel adjustment, as well as special materials or coatings.

Additional advantages:

■ Certified actuators:

Approved for use in SIL2 systems as single channel configuration and in SIL3 systems in redundant configuration according to IEC 61508. Additionally, ATEX certified for use in gas and dust Ex-zones.

■ Standardized interfaces:

According to ISO 5211 and DIN 3337, in combination with a double square drive according to DIN 79 for mounting on the valve.

■ Side NAMUR flange:

For direct assembly of solenoid valves.

■ Interface according to VDI/VDE 3845/NAMUR:

For use with positioners and feedback units.

Gain an advantage, even in extreme environments in the harshest conditions.



Scotch-Yoke actuators – providing torque where it's needed.

rotork®



K-Tork actuators for efficient control

Rotary Vane Actuators – for the Highest Requirements

Ultra-precise, compact in design, and with high positioning accuracy, the automated valve solutions of the K-Tork product family provides optimal control for rotary valve actuators in extreme cycles. The pneumatic vane actuators, known as “True Rotary” actuators, do not require the conversion of linear to rotary motion and are specified for the most demanding applications. They operate in temperature ranges from $-40\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$ or from $-20\text{ }^{\circ}\text{C}$ to $+150\text{ }^{\circ}\text{C}$.

Your advantages:

- **High positioning accuracy:**
For precise control of valves, ball valves, or dampers.
- **Consistent torque output:**
Up to 18,300 Nm.
- **Extremely long life service:**
High switching frequencies due to low-friction, result of the dual-opposed lip and seal design.
- **Compact design:**
With an optimal torque-to-size ratio.
- **Modular design:**
a spring can be added to double-acting actuators to make them spring-return actuators.

More Thrust through Customized Solutions

Wagner Armaturen:
Your service partner for individual challenges

With Wagner Armaturen, you benefit from efficient solution concepts tailored to your industrial situation in petrochemical and refinery, chemical, pharmaceutical, metallurgical, paper processing, and other industrial companies.

We consult, plan, and provide you with all the necessary valves.

Customized valves – including special materials

You require special valves, such as for tank outlets, sampling, or handling solids, or for extreme temperatures and chemicals? Wagner is your solution partner, even if your requirements call for special materials such as Hastelloy, Inconel, Duplex, or Titanium.

Optimize the performance of your plant in collaboration with a team of specialists for all your challenges.



Unlimited possibilities

Therefore, here is only a “small” selection from our product portfolio.

Ball and butterfly valves

Variations:

- 2-way ball valve
- Multi-port
- Sampling
- Bottom outlet
- Double-Block & Bleed (DB&B)
- Rising-Stem Ball Valve (RSBV)
- Ball Segment, Ball Sector
- Cavity-filled (reduced dead space)
- Top-Entry
- Lift & Plug
- Fully welded
- Open-close
- Control

Seals:

- Soft and metal to metal

Connections:

- Male and female threaded
- Socket weld and butt weld ends
- Flanges

Standards:

- DIN-EN
- ASME
- API



Shut-off and control valves

Versions:

- Wafer type
- Lug type (with threaded holes)
- Double-flanged
- Top-Entry
- Gate Valve Replacement
- Welded version
- Louver, multi louver valves
- Damper valves, Double-blade valves
- Fire-safe design
- On-Off
- Control

Seat systems:

- Concentric
- Double-offset, triple-offset, and quadruple-offset

Seals:

- Soft and metal to metal

Connections:

- Flanges
- Welded ends

Standards:

- DIN-EN
- ASME
- API



Globe Valves

Variations:

- Open – close
- Control

Seat-closure Systems:

- Piston
- Cone
- Throttling plug
- Perforated (multi-hole) plug
- Multi-stage
- Rotary plug
- Special contoured
- Diaphragm

Seals:

- Soft and metal to metal
- Bellows

Standards:

- DIN-EN
- ASME
- API



Gate valves

Types:

- Gate valves
- High-pressure valves
- knife gate valves
- Slurry valves
- penstocks
- Multi-blade valves
- Double-Block&Bleed valves
- On-off (shut-off)
- Control

Seat-closure Systems:

- Wedge
- Disc
- Double-plate
- Rubber-coated
- Vulcanized

Seats:

- Soft and metal to metal

Connections:

- Flanges
- Welded ends
- Threaded ends

Standards:

- DIN-EN
- ASME
- API



Check valves

Versions:

- Lift check valve
- Swing check valve
- Disco check valve
- Dual plate check valve

Options:

- check valve with counter weight
- Damper check valve
- Spring-loaded check valve
- Nozzle check valves

Closure Systems:

- Wedge
- Flap/disc
- Double disc

Seals:

- Soft and metal to metal

Connections:

- Flanges
- Welded ends
- Threaded ends

Standards:

- DIN-EN
- ASME
- API



Strainers

Versions:

- Y-type
- Pot Strainer
- Double filters
- Flow-optimized basket filters (W-filter)
- Startup filter (conical sieves)

Screens:

- Coarse and fine screens
- Customized screens

Options:

- Filter replacement swivel (crane-independent sieve removal)

Connections:

- Flanges
- Welded ends
- Threaded ends

Standards:

- DIN-EN
- ASME
- API



Steam traps/Condensate recovery devices

Versions:

- Temperature control trap (Bi-metallic)
- Balanced pressure thermostatic trap
- Thermodynamic disc trap
- Ball float trap
- Inverted bucket trap
- Free float trap

Options:

- Outlet ball valve
- Outlet globe valve
- Separator
- Turn-key systems

Connections:

- Flanges
- Welded ends
- Threaded ends

Standards:

- DIN-EN
- ASME
- API



Actuators

Pneumatic:

- Rack and pinion
- Scotch-Yoke
- Rotary-vane
- Diaphragm actuators
- Piston rod actuators

Electric:

- 2-phase, 3-phase
- On-off
- control
- 3-position

Hydraulic/Electro-hydraulic:

- Linear, rotary and part turn actuators

Fail-Safe:

- Spring return
- Battery backup
- Reserve air tank
- Redundancy

Accessories:

- Solenoid valve
- Position feedback unit
- Initiators
- Positioner

Interfaces:

- 4–20 mA (HART)
- Bus systems (Profibus, Profinet, Modbus, ASi, IO-Link, Foundation, Devicenet, etc.)
- Bluetooth

Approvals:

- SIL (IEC 61508)
- ATEX
- FireSafe



Special Valves

Safety relief valves ■ Pressure reducing valves ■ Overflow valves
Sampling systems ■ Diverters ■ Steam-water mixing systems
Bottom outlet valves ■ Changeover valves ■ Line blind systems
Steam injectors ■ Steam coolers ■ Steam dryers ■ In-Tank Emergency Shut-Off (TESO) ■ Rupture discs ■ and more.

Options for all valves

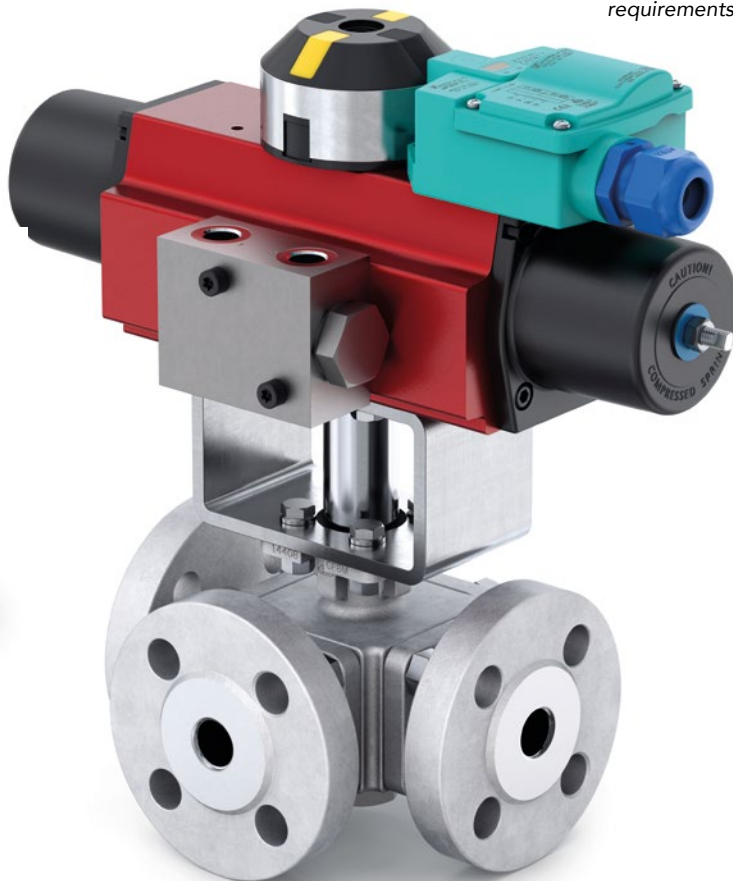
■ **Possible materials:** Brass, cast iron, ductile iron, cast steel, stainless steel, duplex, super duplex, Hastelloy, Inconel, titanium, cast or forged, hardened, coated, ceramic, plastic, PTFE/PFA-lined.


■ **Possible approvals:** TA-Luft (ISO 15848), FireSafe, SIL (IEC 61508), ATEX, FDA, BAM, DVGW (gas, water), Vessel Type Approval.

■ **Possible testing methods:** Dye penetration testing, magnetic particle testing, PDI, ultrasonic testing, X-ray.

■ **Options:** heating jacket, hand lever extensions, stem extensions, locking devices, spring return handles, gearboxes, actuators (electric, pneumatic, hydraulic), chain wheels, flexible stem extensions, fireproof insulation (Pyro jacket).

Automation solutions for all requirements.





We can be reached fast and reliably everywhere

Around the clock –
around the globe.

Always personal, whether by phone or email

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cyberspace!

www.wagner-armaturen.de