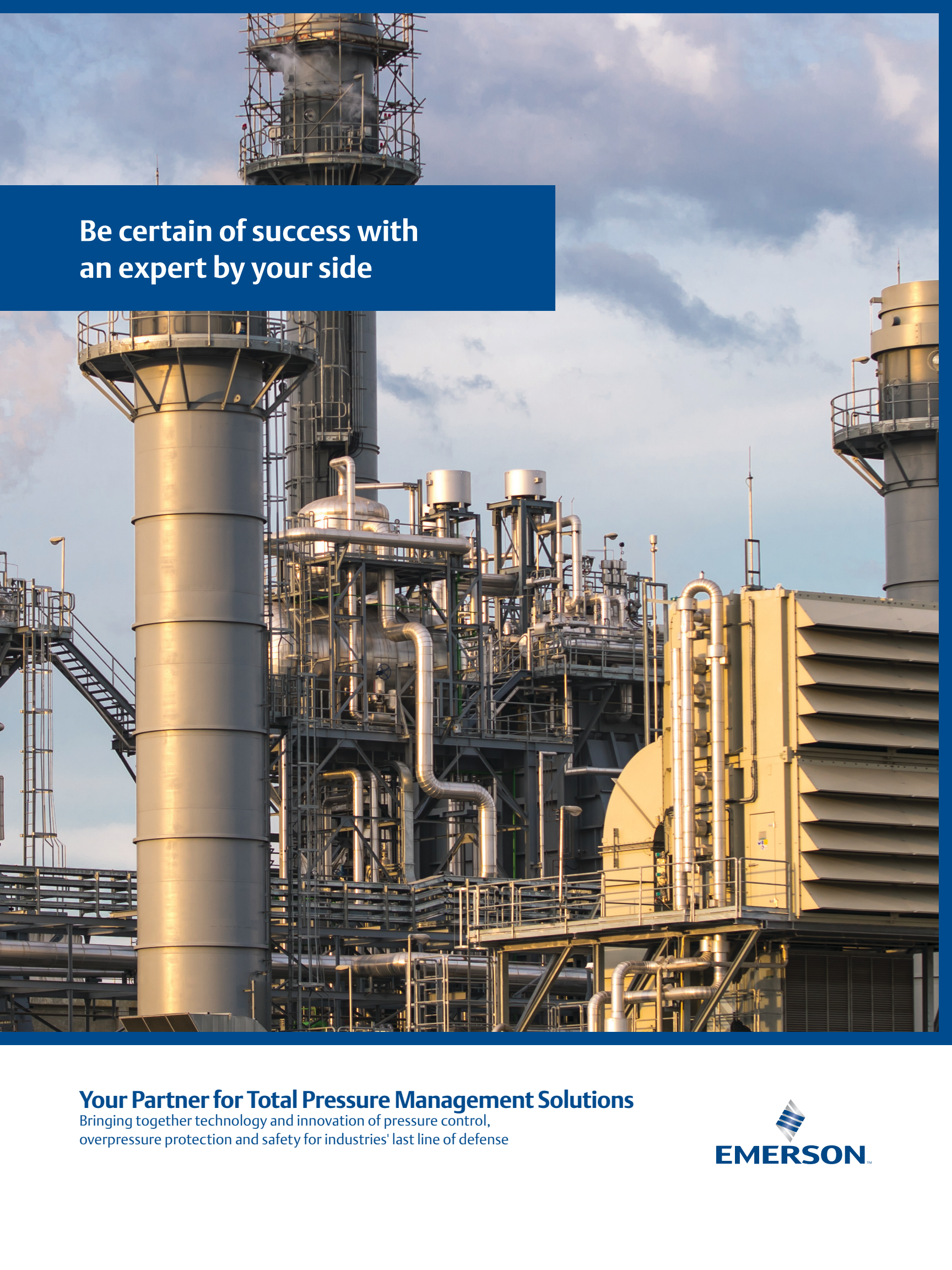


A photograph of a large industrial facility, likely a refinery or chemical plant. The image features several tall, cylindrical distillation columns with metal scaffolding and walkways. A complex network of silver-colored pipes and smaller vessels is visible between the columns. The sky is blue with some light clouds. A dark blue banner is overlaid on the left side of the image, containing white text.

**Be certain of success with
an expert by your side**

Your Partner for Total Pressure Management Solutions

Bringing together technology and innovation of pressure control,
overpressure protection and safety for industries' last line of defense



Meeting all your pressure control and safety needs

Following a major expansion of our valves and controls business, Emerson has reinforced its Final Control portfolio, encompassing a complete range of pressure control, overpressure protection and safety solutions for natural gas and liquid propane, process and specialty gases, liquids, steams and mixed phases from deep cryogenic to super-critical boilers.

Our pressure regulators and safety relief valves are renowned for setting industry standards for design and technology innovation, superior performance and unbeatable reliability and durability under extreme conditions in even the world's most rugged environments.

We add value with engineering services starting from the earliest project planning stages through front-end engineering, project management, product and system integration, fabrication, implementation, start-up, testing and ongoing support.

With our extensive network of dedicated sales and service representatives, you know that, with Emerson, you will always have the support you need - to help you operate safely, improve reliability and optimize plant performance.

You can be sure that Emerson has complete solutions.





Serving Asia. From Asia

With Asia Pacific headquarter established in Singapore since 1961, Emerson is committed to delivering world class technology products and solutions to customers in Asia.

We combine our breadth of technologies and quality certified processes with local knowledge and expertise to deliver **quality innovative pressure control and safety solutions** that are perfectly tailored for local markets.

Our two Engineering Centers have been awarded 100+ innovation patents over the years. Our four strategically located manufacturing facilities with state-of-the-art testing facilities in Chennai (India), Chengdu and Qingpu (China) and Singapore, ensure rapid response and fast delivery to meet the industries' demands.

Our Sales, Application Engineering, Project Management and Service teams across 90+ locations are dedicated to help you solve your business, process and application challenges.

With more than 1,000+ experts around Asia, Emerson's Pressure Management is ready to take on our customers' toughest challenges and bring predictable success anytime, anywhere.

Control your system with certainty

Natural Gas Industry

Emerson leads the way in providing **comprehensive pressure control solutions from wellhead to customer** - from **city gate/transmission, district/distribution, industrial, commercial, smart grid management**.

Our natural gas technology ensures system reliability in gas distribution applications by providing uninterrupted, safe and accurate gas supply while optimizing ownerships costs.



Oil and Gas Industry

Safety is paramount in the oil and gas industry – right across upstream, midstream and downstream.

Managing pressures are a large part of the control strategies for **upstream oil and gas applications**. From extremely high pressures to vacuum management in tanks. Fisher™ pressure regulators are designed to exceed applicable standards, **keeping upstream process compliant and safe**.

Significant demand for cleaner energy has driven the growth of **midstream industry**, particularly LNG market. Storing and handling LNG requires specially designed and engineered equipment to perform safely under demanding conditions. Combined with the substantial energy potential and flammability of the gas, the potential for hazardous events from overpressure is significant. Anderson Greenwood™ and Crosby™ Pressure Relief Valves have been known for years to perform critical protection on LNG applications as the **last line of defense** to avoid the risk of destructive explosion.

Catering the downstream industry, Emerson's Fisher LP-Gas Equipment designs and manufactures the broadest line of pressure regulators, over 180 internal valve constructions, as well as durable Emergency Shut-off and Relief valves for LP-Gas, Anhydrous Ammonia and the NGL industries.



Learn More:



Natural Gas Pressure Regulation Page



Bulk Storage and Transport Equipment Page

Optimize your last line of defense

Process Industry

Emerson offers a dynamic range of pressure regulators, safety and relief valves and tank management solutions for a wide range of application in the **world's toughest process environments**. Emerson enables process optimization and mitigate unplanned shutdowns through top-tier engineering, reliable speed of response and easy maintenance options. Additionally, integrative solutions like remote pressure monitoring and wireless position indication can eliminate process blind spots and move customers toward operational certainty.



Power Industry

Protecting steam processes against over-pressure has always been one of the most challenging applications. Emerson has built on more than 140 years of experience with leading brands such as Crosby, Anderson Greenwood, Sempell, Kunkle and Sapag to provide the safety valves that will fit your exact requirements to reliably protect assets.

From low pressure steam to super-critical boilers, each safety valve is supported with some of the largest steam testing facilities in the world and portable test equipment to maintain protection and reduce operation costs.



Brands

Our solutions are backed by Emerson's **industry-leading brands** embody our proven innovation, engineering expertise and best-in-class technologies over hundred years.

FISHER™
ANDERSON GREENWOOD™
CROSBY™
ENARDO™
TARTARINI™
YARWAY

PENBERTHY™
SEMPELL™
KUNKLE™
BIRKETT™
JEON™
CASH™



Pressure Regulators Page



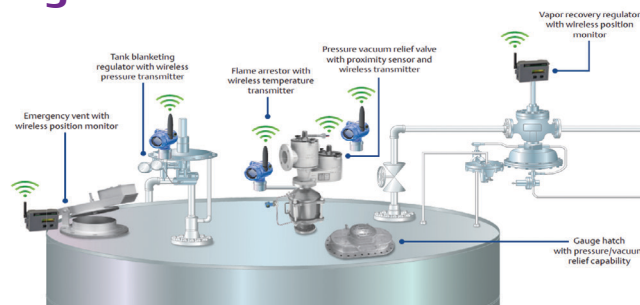
Pressure Safety and Relief Valves Page

Solution Portfolio

Total tank pressure control and safety management

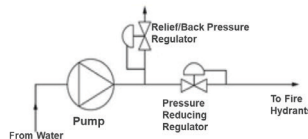
Incompatible multi-vendor systems for total tank protection can result in greater risks in employee safety, asset protection and product integrity and make emissions and environmental regulatory compliance a challenge.

Our combination of pressure and safety devices and wireless monitoring provides a total solution that reduces operational and maintenance costs, product losses and gain safer operational visibility.



Maintain a robust fire protection system for platforms and floaters

Given the extensive amount of heat generated by industrial equipment and the highly flammable liquids on board maritime vessels, the risk of a fire outbreak is high. And with fire outbreaks comes the possibility of electricity outages. That's why having a robust, self-operating fire-fighting system is critical.



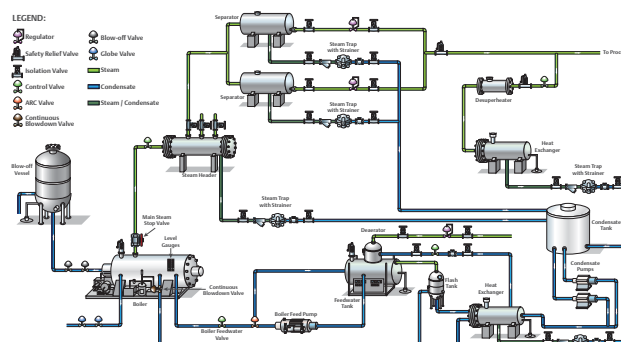
Designed to deliver high pressure water at fast speeds without the need for external power, Emerson's proven regulators ensure the protection of your pipeline and critical equipment in case of fire.



Improve boiler performance and enhances safety

Boiler pressure changes could create critical safety issue if not managed properly.

Emerson's broad portfolio of steam solutions includes thermodynamic, thermostatic and mechanical steam traps; blow-off and blowdown valves for removing sludge or dissolved solids from the boiler drum; gauges for monitoring the boiler drum water level and automatic recirculation control (ARC) valves for protecting the boiler feed pump. Our experts can conduct [steam system surveys](#) and recommend solutions to ensure optimal operation and enhance energy efficiency.



All-in-one solution for reliable natural gas delivery

From high-pressure production and transmission segments to lower pressure distribution and industrial and commercial segments, Emerson's reliable natural gas solutions ensure system reliability in gas distribution applications by providing uninterrupted, safe and accurate gas supply.

We create value by delivering best-in-class pressure control equipment, solutions, project management and services for an unparalleled range of applications.



Marine overpressure protection

In marine applications, reliability and performance are extraordinarily important. Emerson offers best-in-class pilot operated pressure relief valves with unmatched flow capacity and seat tightness designed specifically for LNG and LPG Carriers, FSRUs and FLNG ships

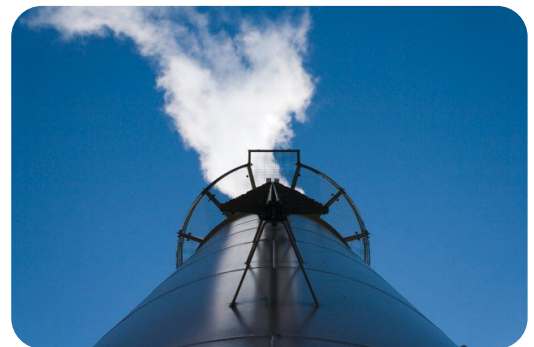
Designed to solve the toughest marine applications, the Anderson Greenwood™ 9300H Series' help reduce vessel penetrations, product waste and maintenance costs by allowing for smaller and fewer valves.



Meeting the fugitive emissions challenge

Emissions of hazardous air pollutants from leaking equipment may cause serious health effects and risk penalties from government regulators. Valves are one of the sources of these fugitive emissions and an important place to look for improvements.

Emerson creates testing protocols to ensure fugitive emission compliant PRVs. We offer a wide range of Thermal Relief Valve and API 526 Spring / Pilot Valve, of which designs ensure compliant for a safer working environment (* designs includes proper O-ring/groove design, proper bolt torque and gasket seals and material porosity and density)



Delivering safety and reliability for power plant boilers

Over-pressure occurrence in boilers can lead to catastrophic damages.

Our unmatched quality with ISOFLEX® design PRVs, world-class steam testing facility, combine with unrivalled technical expertise offer the best available solution to protect your power plant.



Increase operational efficiency with wireless pressure relief valve monitoring

Undetected Pressure Relief Valve (PRV) relief events may affect valve performance, leading to leakage or failure to reclose after a release. In addition to safety and regulatory concerns, an undetected failure may cause significant costs in product and energy losses that will remain unnoticed for years.

Monitoring PRVs provides real-time information enabling you to proactively develop proper corrective action, optimize maintenance schedules and improve asset management while ensuring regulatory compliance.



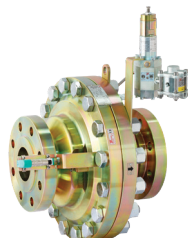
Product Portfolio

Pressure Regulation and Control

Operated Pressure Reducing Regulator



Fisher™
Type MR95



Tartarini™
Type FLA1



Cash Valve™
Type E-55

Slam-Shut Valves



Fisher
Type OSE



Tartarini
Type BM9

Operated Backpressure Regulators (Relief Valves)



Fisher
Type T208



Fisher
Type Y696



Jeon™
Type DG

Internal Relief Valves



Fisher
Type C407



Fisher
Type N301/N310 Series

Tank Safety and Pressure Protection

Pressure Vacuum Relief Valves



Fisher
Type 950



Anderson Greenwood™
Type 4040



Fisher
Type 850

Flame and Detonation Arrestor



Fisher
Series 7



Anderson Greenwood
Amal IRDB

Tank Blanketing and Vapor Recovery Regulators



Fisher
Type T205

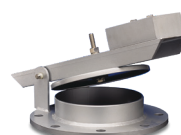


Fisher
Type 1290



Fisher
Type ACE95

Emergency Pressure Relief Vents



Fisher
Type 2000



Fisher
Type 2500

Learn More:



Natural Gas Regulator
Application Guidebook



Industrial Regulator
Application Guidebook



Total Tank Protection
Catalogue

Pressure Relief and Safety

Direct Spring PRV



Crosby™
J-Series



Crosby
Type HSL



Anderson Greenwood™
Type 80

Low Pressure Pilot PRV



Anderson Greenwood
Type 9300H



Anderson Greenwood
Type 93



Anderson Greenwood
Type 96A

Specialty Valves



Anderson Greenwood
Safety Selector Valve



Block Body
Safety Valves



PRV Wireless
Monitoring

High Pressure Pilot PRV



Anderson Greenwood
Type 800



Anderson Greenwood
Type 5200



Anderson Greenwood
Type 400

Steam Generation and Distribution

Steam Traps



Yarway™
Type 129Y

Blow Down and Blow Off Valve



Yarway
Type 5505



Yarway
Type 5817



Yarway
Type B

Injector



Penberthy™
Type CTE



Penberthy
ELL

Sight Flow Indicator



Penberthy
XXXXX

Colourport



Yarway
Series 3000

ARC Valves (Centrifugal Pump Protection)



Yarway
Type 9200



Yarway
Type 9100

Yarway
Type 5300

Level Gauges



Penberthy
XXXXX



Yarway
ColorPort

Welbond Valves



Yarway
Series 5600



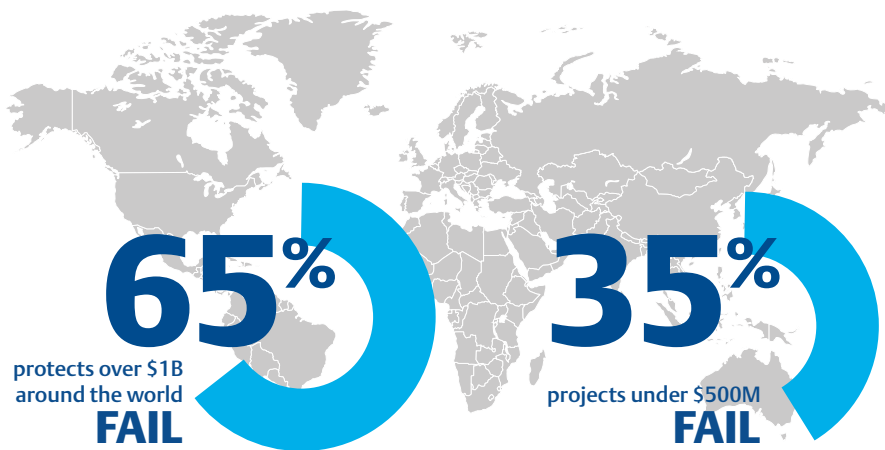
Pressure Relief Valves Catalogue



Steam Traps and Level Gauges Page

Delivering project success

With increasing size, growing complexity, and shorter schedules, the challenges of executing a project on budget and on time are becoming increasingly challenging.



25% over budget

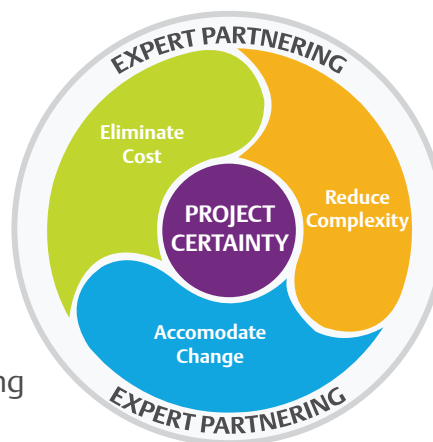
50% over schedule

Eliminate Cost

- Eliminate unnecessary work
- Automate steps to reduce hours
- Utilize standardized technologies

Expert Partnering

- Strategy alignment: Consulting and vision, FEED and integrated project management
- Application Expertise: Industry knowledge and deep understanding of automation technology
- Global engineering: On-site and remote engineering resources; dedicated project resources; global tools and processes



Reduce Complexity

- Utilize cloud engineering
- Decouple dependencies
- Improve information management

Accommodate Change

- Add speed and flexibility
- Absorb late design changes
- Eliminate plant start-up delays

Conquering Uncertainty

When you are under intense pressure to deliver complex projects on time and on budget, ambiguity is always the adversary. Emerson's Pressure Management Project Management Office (PMO) is your ally.

Our PMP® Certified project managers control uncertainty through formalized communication, documentation management and consistent application of project management best practices.

Whether you are embarking on a natural gas city gate station project or pressure relief valve package for LNG project, you can have the confidence that we are committed to your project success. With regional support and a network that spans the globe, Emerson's Pressure Management PMO will bring more order and certainty to your complicated world — for one less project risk.

Your Project Lifecycle



Our Project Management Process

DISCOVERY	PROPOSAL	INITIATE	PLAN	EXECUTE	CLOSEOUT
EARLY ENGAGEMENT Understand project philosophy, scope and preliminary technical requirements. Develop communication process and project plans.	ALIGN PROJECT TEAMS Develop and deliver a project proposal optimizing product solutions. Confirm technical, commercial and material specifications.	CONFIRM REQUIREMENTS Review purchase order for compatibility with our capabilities, and accept.	FACTORY ALIGNMENT Complete engineering and product calculations based on final data. Finalize material and production schedules.	BUY, BUILD, SHIP Monitor and manage your order for accurate execution.	EVALUATION Deliver Rosemount product and documentation. Review project and lessons learned.
Identify risks early	Improve scope management	Reduce project risk	Optimize project plans and schedules	Manage and control change continuously	Seamless transition to the next phase

Leveraging proactive and predictive maintenance to deliver operational excellence

Reliability

Improve your asset reliability and preserve your investment

- Shutdown, turnaround and outage planning and support
- Preventive and predictive maintenance and repair
- Connected services for remote monitoring of asset condition



Performance

Optimise your plant performance and achieve your goal

- Total asset management with long-term service agreements
- Resident asset managers or engineers placed on site
- Turnaround and start-up project management

Maintenance

Keep your plant operating safely, consistently and economically

- On-demand support and emergency response
- Focused walkdown and asset management tag installation
- Parts and replacement supply

As your strategic partner, Emerson will help you uncover WHEN and HOW valves impact your overall operations and your ability to reach Top Quartile Performance.

Imagine how smoothly your operations would run if you could delegate all of your maintenance challenges to an expert you trust. Let us help you in planning and optimizing your maintenance effectively.

Lifecycle Service Key Capabilities for Pressure Management



Delivering operational success

Operational Involvement	Operational Certainty Enablers	Outcomes
Companies in the Top Quartile show significant performance improvements, our operational certainty methodology will help drive your business to achieve these goals.		
Safety		
Don't risk the welfare of your employees and security of your facilities, Emerson is a trusted service partner who values and promotes a strong safety culture-just like you. We will help you with asset efficiency and plant assessments, working together to meet your performance goals.	Zero compromise on plant and personnel safety • Employees removed from hazardous activities • Constant monitoring of worker and plant health	Ensure safety 3 x fewer recordables and process incidents 
Production		
As a Main Valve Partner we can assist with your production team with planning and scheduling, control and optimization, fiscal and regulatory reporting, operations management, SureService agreements, emergency onsite services and conditioning monitoring.	Production optimized to market conditions • Continuous visibility enables active business management • Business areas optimized in real-time across interconnected systems • Predictive diagnostics enable exception management along entire value chain	Optimize production 20% lower operating costs 10% higher utilization rates 
Reliability		
With both on-site and off-site support Emerson can manage your MRO, upgrades and optimization, spares management, walkdowns, STO planning and execution and obsolescence management with our resident engineers, mobile service centres and QuickShip program.	No unplanned downtime at minimal cost • Eliminate the unknowns with prognostics and planning • No reactive repair: pre-failure corrective action by automated closed-loop systems • Extend available asset up time	Improve reliability 4% higher availability 50% lower maintenance costs 
Emissions		
Emerson has the expertise to minimize your emissions. Digital instrumentation monitors valve performance to drive efficiency and keep resources from going into the field and exposure to the environment.	Recognized sustainability leader • Continuous analytics predict and prevent releases • Plant performance measured and dynamically optimized with production	Minimize emissions 30% lower emissions 

Developing innovative solutions to address more demanding processes

Our Engineering Centers in Chengdu and Qingpu* are dedicated to **new product development, sustaining engineering and global customer support** for Regulators and PRVs respectively. With **500+ years of combined experiences and 100+ innovation patents**, our engineering team work closely with global engineering organization to develop technology to make Emerson pressure control and safety solutions more productive, efficient and cost effective.

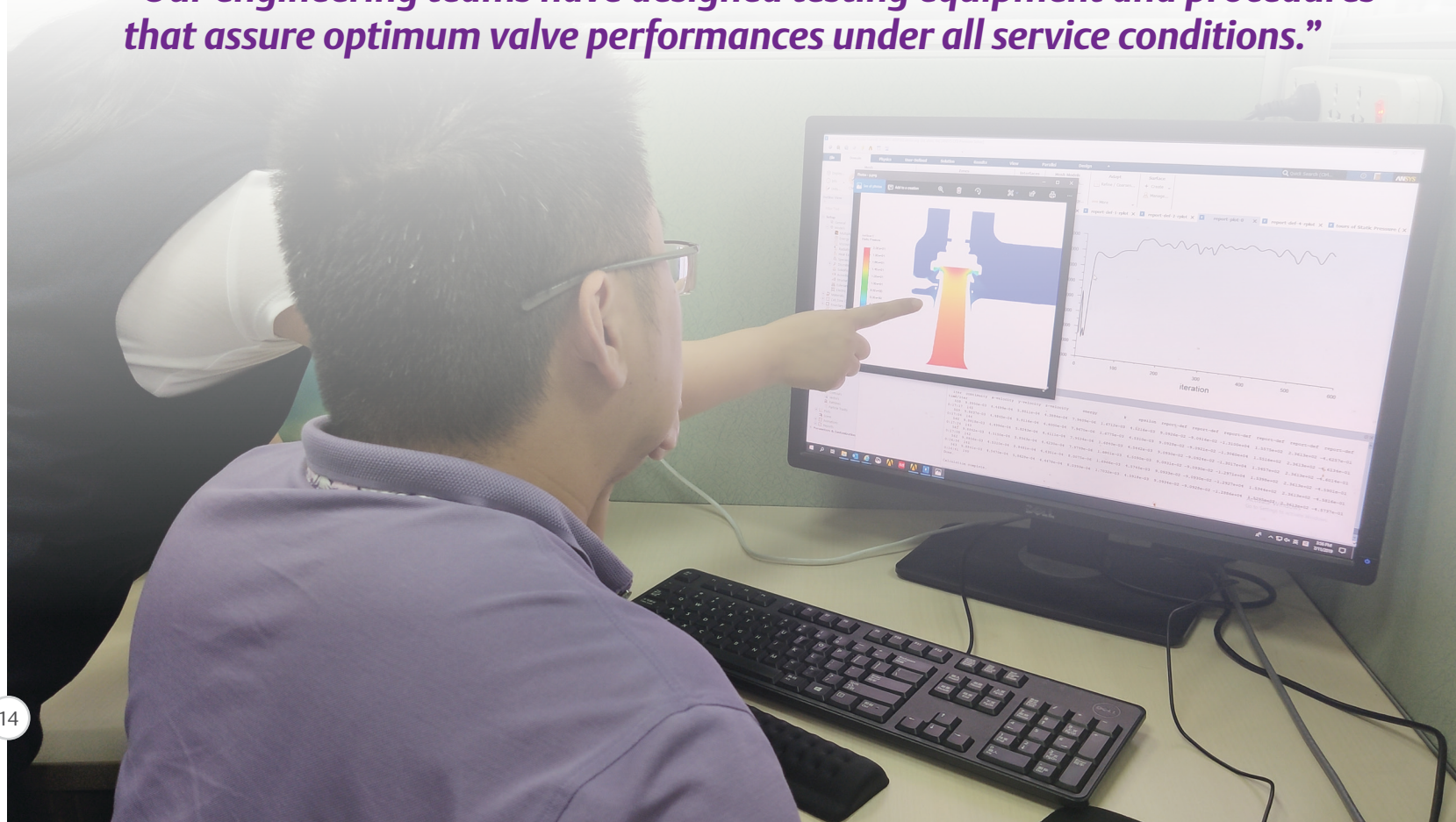
Our test and evaluation** facilities provide the engineering expertise required to ensure superior quality product design and high performance results wherever our products are deployed. At these facilities, Emerson tests all sizes and types of regulators and PRVs under real world plant conditions to ensure production performance, efficiency, environmental compliance and safety before actual installation at your site.

All the test lines utilize Emerson solutions such as Fisher™ control valves, Micro-Motion™ flow meters and Rosemount™ pressure sensors and advanced Labview data acquisition system providing the most accurate data analysis possible. Our Flow and Steam Test Lab are equipped with advanced video conferencing enabling real time connectivity with customers anytime, anywhere and allowing real-time inspection/test witnessing.

*Chengdu Regulator Engineering Center (CREC) and Shanghai PRV Engineering Center (SPEC)

**Testing and evaluation includes Computational Fluid Dynamics Analysis, Finite Element Analysis, Failure Mode and Effects Analysis, Validation Test

“Our engineering teams have designed testing equipment and procedures that assure optimum valve performances under all service conditions.”



You demand high performance. We ensure it.

You demand products to withstand your toughest conditions, while delivering continued optimal performance, efficiency, reliability and safety.

Our design, test and evaluation technologies and techniques validate a full range of product offerings in each of these critical areas, providing flow, material and environmental testing under real-world operating conditions before you place them in your application.



Our state-of-the-art, 6000 ft² Flow Test lab in Chengdu utilize the latest equipment to allow our engineers test our pressure regulators and execute real-time conditions which is unparalleled anywhere in the Asia Pacific region.

Also, environment chambers, cycle test benches and a hydrostatic test room which make it possible to examine how units perform under extreme conditions.

Tests performed at the flow labs include flow performance, hydro leakage, cycle, temperature, noise/sound level (IEC) and bench (AG/SG) testing.

Our ASME Certified facility in Qingpu, Shanghai has been the catalyst in continuing many years of product development and industry leadership. The world-class steam test dedicated for power application has the highest rated accumulators in Asia.

The same facility also features the 5800 ft² engineering lab area encompasses nitrogen and liquid flow lines, temperature chamber, along with test samples assembly analysis area.

Tests performed at the flow labs include flow capacity, set pressure, blowdown, seat leakage and cryogenic testing.

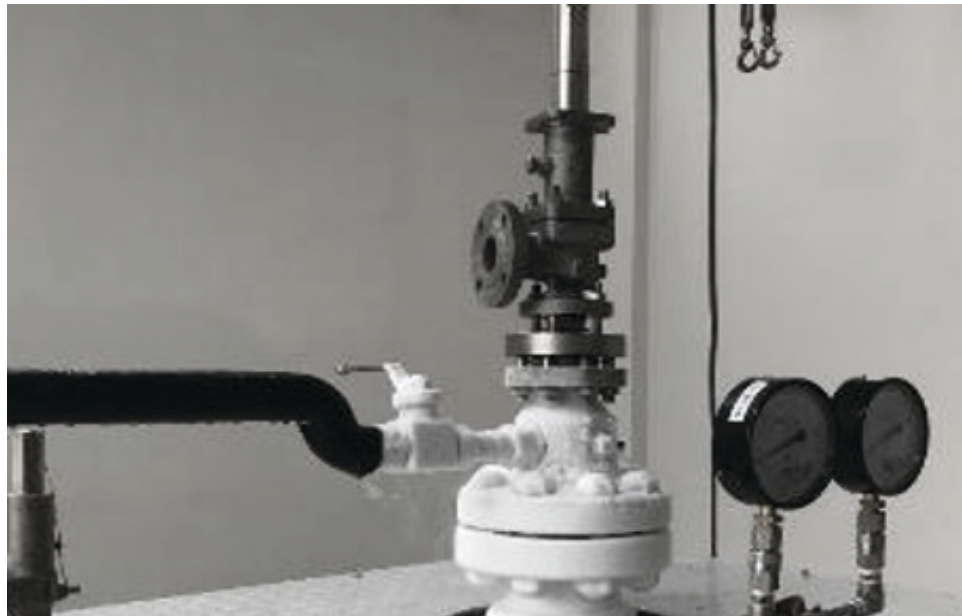


World-class engineering and test lab driving paving the way for



Chengdu, China | 1st row: Flow Lab | 2nd and 3rd row: Clean Room with Degreasing Capability

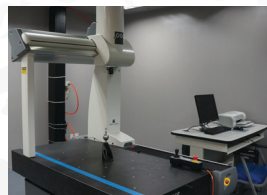
future innovations



1st row: Cryogenic Test | 2nd row: Nitrogen Gas and Liquid Flow | Test Stand: Seismic Test | Qingpu, China

Global strength and local expertise

Emerson is committed to delivering world-class solutions to its customers. Our global footprint of Manufacturing Facilities means that we are close to you and familiar with your needs. With local knowledge and expertise, we can provide you with the best solutions for your specific requirements. Our plants are fully accredited to meet stringent international quality standards and equipped with sophisticated manufacturing technologies. We have an advanced and well established supply chain in Asia Pacific to meet customers' demand and lead time expectations. Our supply chain includes components that are sourced locally to ensure fast response time for supplies and achieve high efficiency in production.



Asia Center of Excellence - Regulator

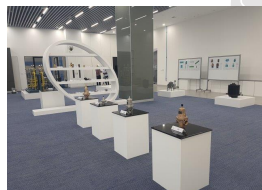
The 130,000 ft² plant assembles Fisher™, Tartarini™, Cash™, Jeon™ regulator, as well as natural gas skids. The Chengdu plant is capable of product assembly, design and development, engineering design, system integration, welding and machining. Equipped with Flow Lab and Class AAA / AA Clean Room, the plant also includes state-of-the-art customer experience and training center.

Chengdu, China

MWC (Mahindra World City)

The facility assembles both Fisher and Jeon regulator products, as well as Natural Gas and Industrial Skids. The 55,083 ft² plant boasts a wide range of CNC machines, turning machines, drilling machines and assembly shop and valve testing stations. The plant also focuses regulator products designed to fit special applications or specific material.

Chennai, India



t we are never far away from you.
xpertise, we go further in exceeding your expectations.
nology to provide you with world class products and solution.
suppliers are stringently selected to provide high quality



Asia Center of Excellence - PRV

The Qingpu facility provides Emerson's customers with the convenience of one-stop Anderson Greenwood and Crosby™ pressure relief valves manufactured, assembled and tested in the same location. The 295,000 ft² plant advanced steam lab, flow lab and cryogenic test lab fully compliant with strict regulation on China Safety Supervision of Special Equipment as well as the ASME Boiler and Pressure Vessel Code Section 1 Standards. Our customer experience and training center are open for visit both physically and virtually.

Qingpu, China

South East Asia Oil and Gas Quickship Hub

Known as Singapore PRM Order Fulfillment Center, the facility assembles both regulator and pressure relief valves, as well as Natural Gas skid. The ISO and ASME certified facility dedicated to provide greater local support to Asian customers serving major oil and gas projects across the region. Our comprehensive support also includes Service and Repair, Factory Acceptance Test (FAT), Site Commissioning, Industrial Conversions and Specials and Technical Training.

Gul Road, Singapore



Driving commitment to quality

Total commitment customer satisfaction and continual improvement has always been our top priority. Our Quality Management System ensures highest standard in products, services and support. We implement the best management practices from Enterprise Resource Planning. Lean Manufacturing to Total Quality Management.

- ISO 9001 and 14001
- ASME Code Section I (V)
- ASME Code Section VIII (UV)
- Association of American Railroads
- ATEX
- Canadian Registration
- EN ISO-4126
- European Community (EC) Directive 94/9/EC
- Factory Mutual
- GGTN - GOSGORTEKHNAZOR of RUSSIA
- GOST (Russia)
- National Board of Boiler and PressureVessel Inspectors
- OHSAS
- People's Republic of China
- Pressure Equipment Directive 97/23/EC
- Pressure Equipment Directive (PED)
- Safety Integrity Level (SIL)
- SEP Declaration
- Type Approvals
 - ABS
 - Bureau Veritas (BV)
 - Det Norske Veritas (DNV)
 - Nippon Kaiji Kyokai (NKK)
- Underwriters Laboratory

Train your team to adapt to new technologies and products

Your asset knowledge with the help of Emerson experts

Consider Emerson training as the effective short- and long-term solution to maximize the return on your most significant investment: your employees.

Through Emerson course work, employees obtain the knowledge they need to not only perform their jobs, but seek efficient solutions to daily issues.

Whether you choose individual classes or a complete education program designed specifically for your organization, Emerson can be your single expert training source and offer flexibility to work within your schedules and shifts.

Your facility will benefit from these options:

- Accelerated boot camp developed for your new recruits.
- Assessments for skill gap analysis specific to your facility.
- Efficiently delivered blended learning approach.

Virtual Training School for Pressure Management

Emerson's Virtual Training School delivers real-time value-based Instructor-Led Training to customers' anywhere in the world. There is no travel required which means fewer expenses. Class takes place in a live online training room using a teleconference bridge.



Emerson Training Center

Emerson training centers for Pressure Management in Asia are located in Singapore and China (Chengdu and Qingpu) and offer classroom and hands-on training when travel is an option. You also get the benefit of visiting an Emerson office and facility where you can often get other questions answered and meet Emerson experts. Traditional classroom-based training is just one of many modes in which you can learn with Emerson.



Connecting the experts with customers globally – anytime, any



where



PRV Customer Experience Center in Qingpu

Your Partner for Total Pressure Management Solutions



Expertise, technologies and services to take on your toughest challenges and bring predictable success. Anytime. Anywhere.

Emerson Automation Solutions

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CONSIDER IT SOLVED.™