

A photograph of an industrial facility, likely a refinery or chemical plant, featuring several tall, silver distillation columns with yellow safety railings. In the foreground, a worker wearing a white hard hat and an orange high-visibility jacket with reflective white and blue stripes is seen from the side, holding a mobile phone to their ear. The background is a clear blue sky.

Protect the SAFETY of your people
and your production facility

Pressure Relief Valve Lifecycle Management






Better understanding of relief events will enable more profitable operations with improved safety and reliability


Delivering Operational Success


Operational Involvement	Operational Certainty Enablers	Outcomes
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Companies in the Top Quartile show significant performance improvements, our operational certainty methodology will help drive your business to achieve these goals.

Safety		
<p>Don't risk the welfare of your employees and security of your facilities, WPC 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.</p>	<p>Zero compromise on plant and personnel safety</p> <ul style="list-style-type: none"> Employees removed from hazardous activities Constant monitoring of worker and plant health 	<p>Ensure Safety 3 x fewer recordables and process incidents</p> 

Production		
<p>As a Main Valve Partner we can assist with your production team with planning & scheduling, control & optimization, fiscal & regulatory reporting, operations management, Long Term Service agreements, emergency onsite services and conditioning monitoring.</p>	<p>Production optimized to market conditions</p> <ul style="list-style-type: none"> Continuous visibility enables active business management Business areas optimized in real-time across interconnected systems Predictive diagnostics enable exception management along entire value chain 	<p>Optimize Production 20% lower operating costs 10% higher utilization rates</p> 

Execute		
<p>With both on-site and off-site support WPC can manage your MRO, upgrades & optimization, spares management, walkdowns, STO planning & execution and obsolescence management with our resident engineers, mobile service centres and QuickShip program.</p>	<p>No unplanned downtime at minimal cost</p> <ul style="list-style-type: none"> Eliminate the unknowns with prognostics and planning No reactive repair: pre-failure corrective action by automated closed-loop systems Extend available asset up time 	<p>Improve Reliability 4% higher availability 50% lower maintenance costs</p> 

Emissions		
<p>WPC 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.</p>	<p>Recognized sustainability leader</p> <ul style="list-style-type: none"> Continuous analytics predict and prevent releases Plant performance measured and dynamically optimized with production 	<p>Minimize emissions 30% lower emissions</p> 

Working directly with an OEM Authorized Service provider brings many advantages



VALVE KNOWLEDGE

Complete knowledge of the valves, designed and produced by Emerson factories



UNBIASED ADVICE

As an OEM, Emerson is unbiased towards repair or replace, advising only in the best interest of the client



RELIABLE SERVICE PARTNER

Long-term service agreements to establish a preferential relationship with our clients and ensure consistent & top-quality service

WPC value adds to PRV Maintenance



WHERE

- All PRV sites no matter who the producer
- Also includes ancillary units (steam or power generation)



WHAT

- Conventional Service
- Mobile service centers
 - Parts management
 - QuickShip program
 - OEM expertise



WHEN

- Major turnarounds
- Smaller and consecutive unit shutdowns
- Commissioning and test before start up



HOW

- Value-Driven Services
- Risk-based inspection
 - Digital monitoring and reporting
 - Radio-frequency identification technology



Mobile Service Centers - Reduce Uncertainties & Increase Plant Reliability

Max efficiency
as all onsite time can be used

No paperwork
for in/out valves

No delays
due to transportation

No valves damaged
during movimentation

No extra costs
for valve shipment

One stop shop
no need of dealing with other parties (e.g transport)

Minimum time with valves off the plant

Easy management
of regulators/ insurance

Flexibility in work organisation to better accomodate plants' needs

Easy adjustable
work schedule to accomodate last minute changes

Valves always available
onsite if needed (e.g emergencies)

Only power connection
required to the site





- 'Hot' Testing**
Testing the safety valve under process conditions and circumstances
- Testing Safety Valves**
Those that cannot be or difficult to remove from the plant
- 'Cold' Testing**
Testing without Process Pressure
- Availability**
No Loss of Production and profitability post-poning or even preventing plant 'Shutdown'
- Universal**
Applicable on all spring operated Safety Valves

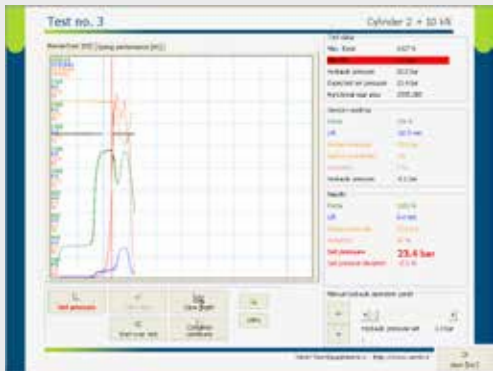


- How it works**
- Universal test bracket, featuring force, lift and acoustic sensors and a hydraulic cylinder is placed on the safety valve
 - Actual process pressure and expected set pressure are entered in to the Computer registration System
 - Disc-Seat dimensions are selected from the database or entered
 - The proportional rising force assists the valve to the 'cracking' point
 - The set pressure is automatically detected by the force, lift and / or acoustic signals
 - Force is released and the valve closes again

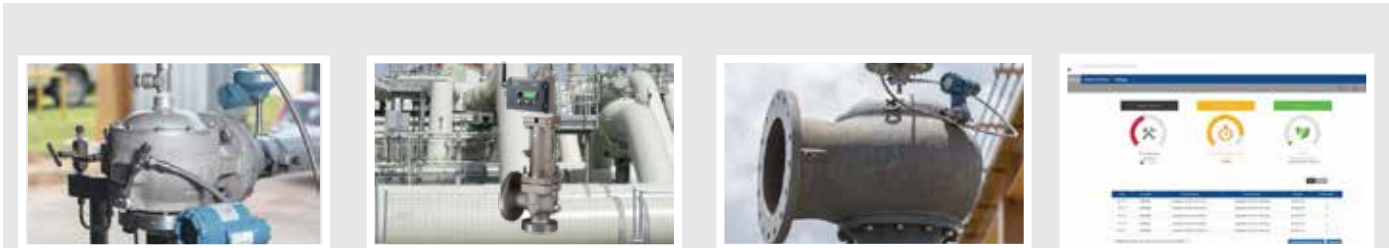
Test time approx. 10~15 sec, total sequence 20 – 30 min

Accurate diagnosis and registration of

- Set Pressure
- Performance
- Spring Settings
- Lift



Monitoring can be applied to a wide range of PRV installations. Emerson has the most comprehensive portfolio of pressure relief valves designed for gas, steam and liquid services from cryogenic applications to super-critical boilers.



All PRVs Non-Intrusive	Direct Spring PRVs	Pilot-Operated PRVs	Connectivity and User Interface
Rosemount™ 708 Wireless Acoustic Transmitter	Fisher™ 4320 Wireless Position Monitor	Rosemount 2051/3051 Wireless DP Transmitter	WirelessHart® Interface
• Event Timestamp and Duration	• Event Timestamp and Duration	• Event Timestamp and Duration	• Modbus® RTU/TCP, OPC and EtherNet/IP™
• Leakage Detection	• Volumetric Release	• Volumetric Release	• DeltaV™, AMS™, Plantweb™ Insight and More

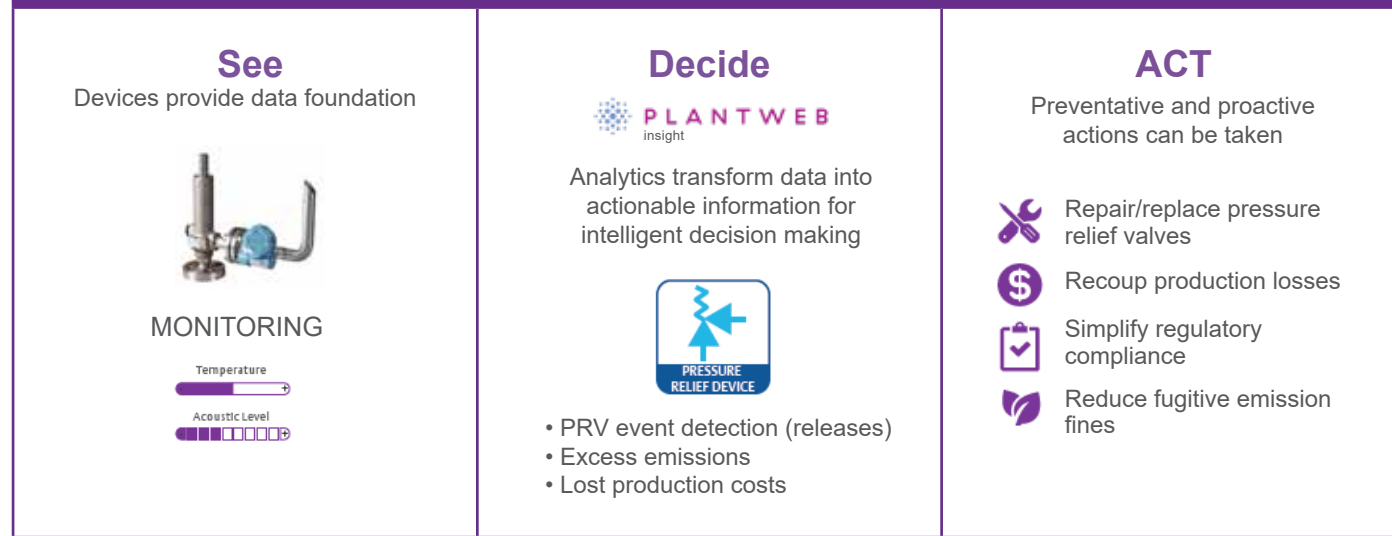
How does it work?

DATA	CONNECTIVITY
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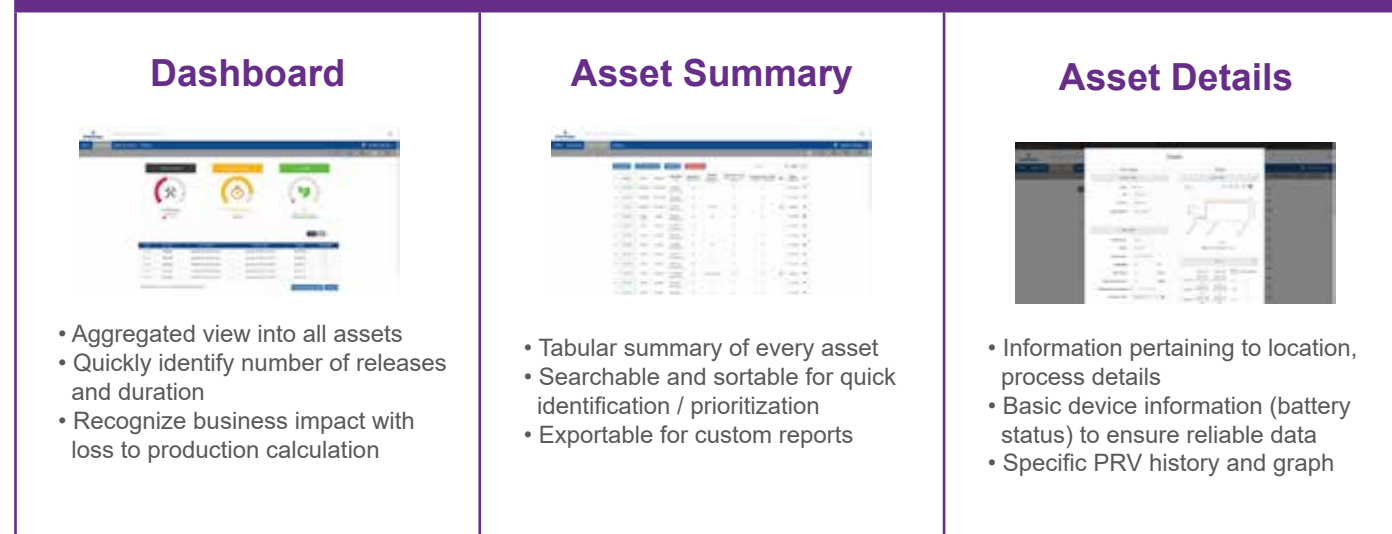


- Data is wirelessly sent to a control room for notification, recording and reporting.
- Lower installed cost and cost of ownership
 - Self-organizing, self-healing mesh network
 - Secure, end-to-end 128 bit encryption
 - Open IEC standard (IEC 62591)

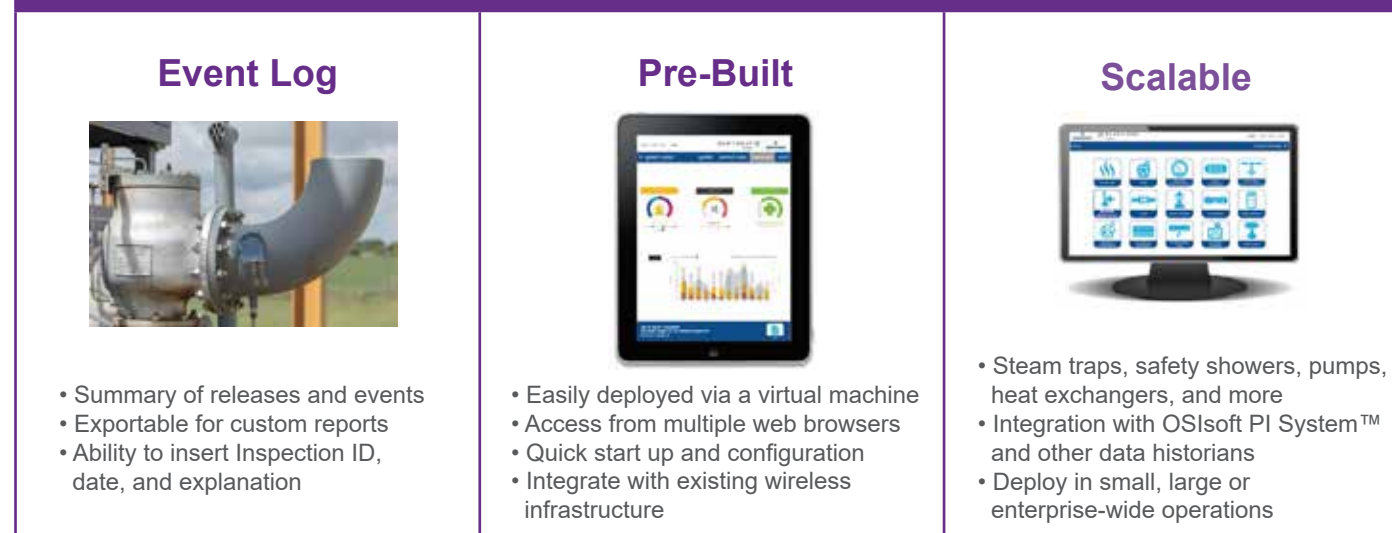
Simplify Pressure Relief Valve Monitoring and Event Detection



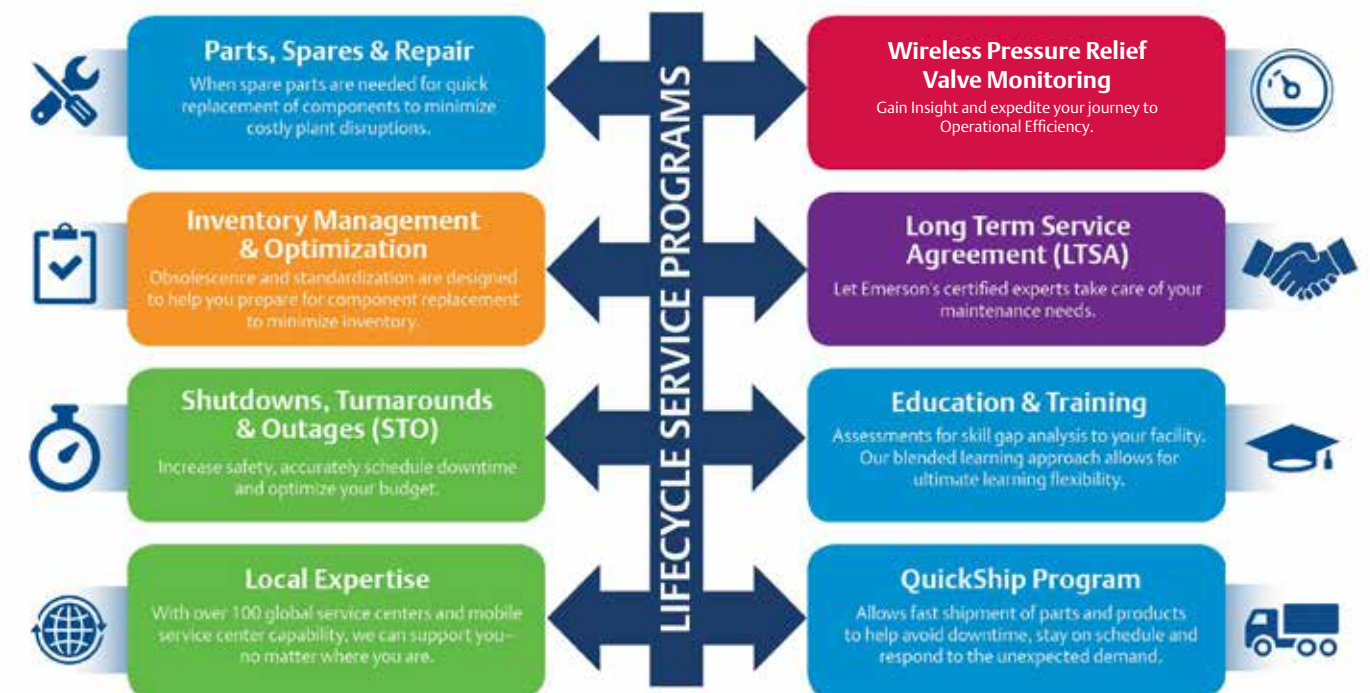
Intuitive Interface Allows Instant Identification and Diagnosis



Event Log Collects Relevant Information to Simplify Regulatory Compliance



Roadmap for PRV Service Excellence with WPC



PRV2SIZE is a comprehensive and easy-to-use program that offers a thorough and integrated approach for sizing all types of pressure relief devices, including low-pressure tank protection and recirculation control valve products in a single sizing, selection and configuration platform.



Sizing Methodologies:

- ASME Section VIII: API 520, Part I, 9th edition gas, liquid and steam phases
- ASME Section I: Steam phase
- ISO 4126-7: Gas, liquid and steam phases
- API 521: Fire sizing tank flow rate calculation method for gas and liquid filled vessels
- Two-Phase: API 520, Part I, 9th ed., 7th ed., and 6th ed. and ASME Appendix 11
- ARC Sizing: Yarway™ Automatic recirculation control (ARC) valve sizing
- API 2000/ISO 28300: Tank vent and flame arrester sizing



Reference Library:

- Catalogs: Emerson Anderson Greenwood™, Crosby™, Yarway and Varec™ product catalogs
- PRV2SIZE Quick Start Guide: Features and functionality guide
- Material Compatibility: Metals, soft goods, NACE and chemical compatibility reference
- Emerson PRV Engineering Handbook: Technical information resource
- Two-phase Data Form: Application data form for 9th and 7th editions
- Valve Features: Product model features
- PRV Overview: Emerson models overview



Sizing and Valve Selection:

- Sizing: Enter data in USC or SI units and values are converted when units are modified
- Valve Filtering: Limit selection based on product category and dataset (API or ASME)
- Generic Sizing: Generate drawing and calculation for special coefficients, dimensions or weight
- Multiple Valves: Select and stagger multiple valve set pressures for high flowrate applications
- Selection: Sort valves based on brand, model, type, size, required area and rated flow



Sizing Methodologies:

- Standard Configuration: Valid options identified in dropdowns with errors list
- Custom Configuration: Update material and dimensions for custom configuration
- Accessory: Valve accessories selection option
- Special Requirements: Project quality and documentation options
- Notes: Enter detailed custom configuration or project tag notes to be displayed on reports
- Calculations: Review or modify reaction force, noise and restricted lift calculations
- Valve Dimensions: Dimensions and weight display for standard or customized configuration
- Valve Features: Summary feature list and image of selected valve



Reports:

- Format: Reports can be generated in excel or PDF format
- Datasheet Report: Includes configuration, calculation and selection summary with tag notes
- Calculation Report: Variables, symbols, data input values, units, equations and results summary
- Drawing Sheet: Displays outline drawings with dimensions and weight
- Configuration Report: Includes ERP code for each selected option in valve configuration
- Flow Curves: Pressure and vacuum relief valve flow curves for Varec models
- Tank Calculations: Fire sizing capacity calculations for gas and liquid filled vessels



Software Utilities:

- Backup Tag Data: Tags database back up for replacing on new computer
- View Error List: Displays warnings and errors for sizing and invalid models for selection
- Show Program Data Folders: Provides quick access to program data folders
- Omega 9 Calculator: Liquid and gas density calculation using two phase mixture density



Sizing Methodologies:

- Tag Management: Update tag properties, copy, delete and move single or multiple tags
- Project Management: Set preferences for units and fluid, flowrate, valve or vessel properties
- Project/Tag Summary Report: Includes summary of sizing, selection and configuration data
- Export/Import Feature: Allows exporting and importing single or multiple project tags
- Fluid Property Database: Add new fluids or modify default gas, liquid or two-phase properties

Emerson PRV2SIZE Website
<https://valvesizing.emerson.com>



QuickShip PRV Assembler

WPC - ASME accredited assembler for your urgent Pressure Relief Valve requirements



QuickShip is a world-class fulfillment program offered by Emerson and their local business partners that allows for fast shipment of parts and products to maximize speed and responsiveness. It leverages Emerson's global infrastructure, local presence and commitment to service to help you avoid downtime, stay on schedule, respond to the unexpected and control costs in today's challenging environments.

With the rapid changes in today's business environment, you can't afford to slow down - especially when it comes to product repair and replacement.

What if you could:

- Get the items you need with shorter lead times?
- Reduce the impact of potential late-stage project changes?
- Backfill spares and build inventory faster?

WPC's Quickship Assembler Program can build, test and deliver urgently required Pressure Relief Valves (PRVs) locally for no additional cost.

The Quickship Assembler Program provides off-shelf manufacturing services designed to reduce lead time on commonly-ordered PRVs. PRVs are manufactured and tested locally at WPC. WPC's Hallam workshop is a marketleading ASME accredited facility, which means manufactured PRVs will carry compliance to ASME and UV/NB stamps, as well as full compliance to AS 1271. All WPC service workshops across WA and Victoria are NATA accredited laboratories.

Customers can select from an extensive list of available items and receive immediate confirmations and shipping quotes within 24 hours.



Available PRV configurations for Quickship PRV Assembler Program at WPC:

- Crosby™ J Series**
API 526 Spring-Loaded Pressure Relief Valve
- Gas / Liquid / G Bellow / L Bellow

Style	Orifice	Pressure Class and Materials											
		150# x 150#				300# x 150#				600# x 150#			
		Gas*	Liquid	G Bellow*	L Bellow	Gas*	Liquid	G Bellow*	L Bellow	Gas*	Liquid	G Bellow	L Bellow
JOS-E / JBS-E / JLT-JOS-E / JLT-JBS-E	D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	H	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	K	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	L	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* ASME Certification pending. WPC can assemble and certify to AS 1271.



Crosby™ Series 900 OMNI-TRIM®

Style	Connection Size	MNPT x FNPT
		CS "0"
9511	3/4" x 1"	✓
	1" x 1"	✓
9611	3/4" x 1"	✓
	1" x 1"	✓

Your Partner for Total Pressure Management Solutions



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

Connect with us on LinkedIn



www.linkedin.com/company/western-process-controls/



Local Business Partner



CONTACT US

PERTH | KARRATHA | MELBOURNE | ADELAIDE | LAUNCESTON | DARWIN

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Scan QR code for full contact details

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