



CSE - *W. Arthur Fisher*



TECHNOLOGICAL EXCELLENCE THROUGH INNOVATION



www.cse-waf.co.nz

A member of **CSE** *global*

CSE - W. Arthur Fisher

AMAL	Flame arresters
APCO Willamette	Check valves, Air valves, Ball & Cone valves, Priming systems
AUMA	Electric Actuators
BANNER	Machinery Guards, Photoelectric Sensing, Safety Products, Wireless I/O Systems
BECKHOFF	Bus Products, I/O Modules, Operator Interfaces, Industrial PC's
BEI	Rotary Encoders
BINDER	Cordsets, Connectors
BIRKETT	Safety relief valves
BLUE-WHITE	Rotameters, Flowmeters and Dosing Pumps
CHINO	Humidity indicators & controllers, temperature: measurement, controllers, sensors, recorders
COPEX-VULCAN	Desuperheaters
CORVAL (T3)	Valves
CSE-WAF	Control valves, Temperature & Level probes, Process Seals
DATA-LINC	Ethernet Radios
DATATAKER	Datalogging Hardware & Software
DeZURIK	Valves: Control, Butterfly, Plug, Knife, Gate
DURAG	Environmental monitors and monitoring systems
EGE	Flow & Level controllers
ERO	Digital indicators, instrument calibrators, voltage calibrators
EUCHNER	Safety switches, Limit switches, Pendant controllers
FAIRCHILD	Air pressure regulators, Air volume boosters, I to P transducers, Pressure Sensors
FOXBORO	Control systems, Process control instruments
FUJI	Variable speed drives
GEMS	Level & Flow Indicators & Switches, Pressure Transmitters & Switches
GE BENTLY-NEVADA	Condition monitoring systems
GE MULTILIN	Protection relays
GROVELEY	Gas Detectors
HAWK	Ultrasonic, Microwave & Submersible Pressure Level Transmitters
HEGWEIN	Burner Igniters
IN-LINE	Volume correctors
INDUSTRIAL DEFENDER	Cyber Security, Defence in-Depth
INOR	Signal conditioners, Temperature transmitters
JORDAN	Control valves, Steam traps
KELMAN	Transformer DGA (Dissolved Gases Analysis)
KEP	Flow computers
KINGFISHER	Telemetry equipment
KURZ	Thermal Mass Flowmeters
MACNAUGHT	Flowmeters
MARIMEX	Viscometers
MERIAM	Flow measurement instruments, Level gauges, Manometers, Pressure gauges
METRITAPE	Level measurement systems
METRIX	Vibration Monitoring instruments
MODICON	Programmable controllers
MOIST TECH	Moisture measurement - NIR
MONITOR	Weather stations - automatic
NASH	Vacuum pumps, Compressors
OHMART	Nuclear density measurement, nuclear level measurement, nuclear weighing
OMNI	Flow computers
ORION	Flameproof pressure switches
POLYJET	Control valves
Q-PUMPS	Centrifugal and Sanitary pumps
RED LION	Indicators, Timers, Counters, Controllers, Operator Interfaces
ROBERT JAMES	Tube fittings, Sanitary Products & Valves
RUBBERFAB	Sanitary gaskets
RUGGEDCOM	Ethernet switches, routers, servers
SOLCON MV	Soft-starters
SOLINST	Groundwater and Surface water instrumentation
SPONSLER	Turbine flowmeters
TELEDYNE	Process gas analysers, Emissions Monitoring
THERMOKON	Controls: Air conditioning, Alarm, Exit door, Fire door, Humidity, Heating, Thermostatic, Timing, Wireless Building Management systems
TURCK	Proximity sensors, Speed monitors & Monitoring systems, Speed Rotational monitors & monitoring systems, Distance Measuring equipment, Ultrasonic level sensors, Flow sensors
W + S MEASURING	Rotary Encoders

About Us

We have been operating in New Zealand since 1927 as a supplier and systems integrator of Instrumentation and Control systems. Our extensive portfolio of world-class products and services include many well-known brands, all of which are supported by our Engineering, Service, Sales and Administration teams in both the North and South Islands.

In January 2009, W. Arthur Fisher Limited was amalgamated with CSE Uniserve NZ Ltd and the new company renamed CSE – W. Arthur Fisher Limited, now part of the CSE Global Group, a leading global technologies company with an international presence spanning the Americas, Asia Pacific, Europe, Middle East and Africa.

At CSE – W. Arthur Fisher we take pride in our ability to deliver cost-effective quality solutions because we believe in nurturing long-term business relationships. A number of our clients have been doing business with us for many years simply because they know that we understand their needs and supply them with tried and tested quality products.

Our ISO9001:2008 certification represents a commitment to ongoing quality improvements and a dedication towards our customers to provide:

Customer Satisfaction, **Everytime**



MODICON



Programmable Logic Controllers & Automation products:

The entire family of Modicon PLC's offers ingenuity, flexibility and openness for increased productivity of machines & process.

Hardware:

- M340, Quantum, Premium & Momentum
- TSX Micro, Twido, Zelio
- Advantys Distributed I/O: STB & OTB
- Magelis HMI (Human Machine Interface)
- Connexium Networking products



Software:

- Unity, ProWorx32
- Concept, PL7
- Twidosuite, ZeliOSOFT
- Vijeo
- Connexview

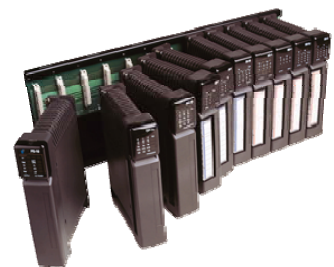
KINGFISHER



Kingfisher RTU's:

The Kingfisher line provides the industry's strongest platform for RTU telemetry applications.

- Powerful Communications supporting over 70 protocols
- Extensive Range of Modules
- Sequence of Events (SOE) monitoring
- Redundancy
- IEC Programming with ISaGRAF (ToolboxPlus+ software)
- Fail safe output configuration
- Ladder Programming (Toolbox 32 software)
- Cyber Security



TBOX

TBox RTU's:

TBox Remote Terminal Units are ideal for decentralised telemetry architectures including remote asset monitoring, process automation and metering.

- Powerful Communications
- Extensive Range of Modules
- IP Telemetry
- Data Logging and Web Server
- Low power, Rugged, Modular, Small Form Factor
- Embedded reports

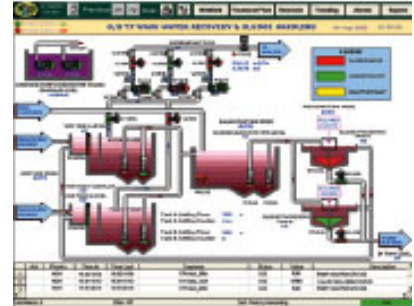


Automation, Telemetry & SCADA



We can supply/engineer an HMI & SCADA of your choice with our Control System, Telemetry Communication system, Protection and Instrumentation products.

We also offer comprehensive SCADA Security (Defence-in-Depth & Unified Threat Management) from Industrial Defender.



The TRIO Datacom E Series provides a range of UHF data radio products suitable for a variety of complex and critical SCADA and Telemetry systems.



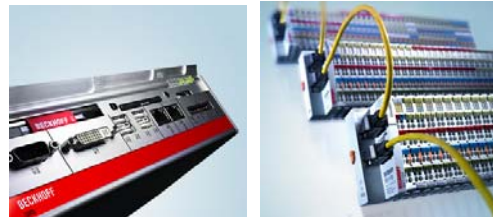
- Multiple user Data Protocol Capability and Routing
- 19,200/9600 bps over-the-air data rates
- Ethernet/serial interface
- Collision avoidance
- Exceptional environmental performance
- User friendly windows software based configuration
- Matching standard and redundant/Hot-Standby Full Duplex Base/Repeater Stations
- System-wide non-intrusive Remote Diagnostics and Network Management option
- DIN rail mounting option (data radio)



BECKHOFF

PC Automation:

- PC Control systems
- Operator interfaces
- I/O Modules
- Bus products



HMI Operator Interface, Panel meters, Monitors and Control Solutions

- HMI operator interfaces
- Panel meters
- Data Acquisition
- Protocol converters
- Signal conditioners
- Sensors for linear and rotary measurement

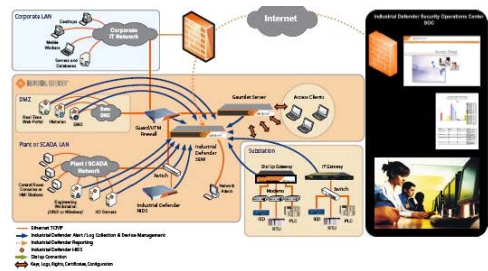


Substation Automation Systems



Cyber Security:

- SCADA & Controls security
- NIDs, HIDs & Agents
- NERC-CIP compliance
- Review, Gap analysis & Implementation



Substation Hardened Ethernet IP equipment:

- Substation Hardened Routers, Ethernet Switches, Serial Servers, Media Converters
- Layer 2 & Layer 3 Technology
- Cyber Security enabled
- KEMA certified
- IEC61850 compliant and Smart Grid enabled
- 5 year warranty



Making Smart Grid Rugged



Substation Data Manager

GE Energy and SUBNET Solutions Inc. have teamed up to create one of the most advanced substation communication servers available today. SUBNET's powerful SubstationSERVER.NET™ software, coupled with GE's industry proven hardware platform has created the D400-S. This robust and flexible server is feature rich and is making substations smarter.

- Easy Drag and Drop configuration
- Seamless Protocol Translation
- Unprecedented SEL® Relay Connectivity
- Automated Event File Collection
- IEC®-61131 PLC Logic Support
- OPC Client and Server Interfaces
- Expandable and Upgradeable
- Robust, Substation hardened hardware with hot swappable communications cards
- Support for NERC® CIP compliance and configurable user security access
- Dual hot swappable power supplies



Asset Condition Monitoring & Protection



GE Multilin Protection and Power Analysis:

- Generator, Transformer, Bus, Transmission line, Feeder, Capacitor bank, Motor, Network management relays
- N60 – Network management system
- C90^{Plus} – Substation Controller
- IEC61850 Station Bus
- IEC61850 Process Bus
- Special Function relays
- Power Analysis and Monitoring
- EnerVista Monitoring Software



Kelman & Hydran Transformer Oil (DGA) Monitoring:

- Critical asset protection and performance
- No calibration needed
- Portable or permanently installed (single or multiple transformers)
- Early fault detection & life extension of Transformers
- Photo-Acoustic Spectroscopy (PAS)
- 8 Gases + Moisture analysis



Plant Optimisation & Control

Bently Nevada™ Asset Condition Monitoring

- Vibration & machinery protection solutions
- Asset Condition Monitoring
- Control Solutions
- Optimisation & Diagnostics software



Vibration monitoring instruments and protection sensors to measure and monitor machine condition, providing early warning of potential machinery failure:

- Vibration sensors
- Seismic sensors
- Vibration signal conditioners



Sensors



Leading manufacturer of sensors and automation products:

- Inductive sensors
- Capacitive sensors
- Ultrasonic sensors
- Flow and Pressure sensors
- IS Barriers and Signal conditioners
- Fieldbus I/O
- RFID sensors and controllers
- Cordsets and connectors



Innovative Sensors from a Leading Manufacturer:

- Photoelectric sensors
- Ultrasonic sensors
- Vision sensors
- Wireless networks
- Safety Products



Pressure and Level Sensors

- Liquid level sensors
- Pressure sensors
- Float Switches
- Flow switches



A complete line of pressure regulators in four main groups:

- Pneumatic pressure regulators
- Volume boosters
- Pneumatic relays
- Electro-pneumatic transducers for I to P and P to I applications



Sensors



EUCHNER

Safety switches and Safety relays:

- Non-contact safety systems
- Safety switches in metal and plastic housings
- Enabling switches
- Safety relays
- Safety products with Integrated Bus interface



A world leader in level, positioning and flow measurement to the mining/mineral, water and waste water, bulk material handling and chemical industries.



INOR

- Process input isolators
- Signal conditioners
- Configurable isolation transmitters
- RTD/Thermocouple, Process and Potentiometer inputs
- Single & Dual channel
- Unipolar and Bi-polar inputs/outputs



Full range of process, industrial and flameproof pressure switches:

- Flameproof pressure switches with IECEx and Baseefa approvals



Instrumentation

invenys
Foxboro

Foxboro Measurement and Instruments:

- Pressure, Temperature, Flow, Level, Valve, Humidity, Positioners Analytical
- Recorders, Controllers
- Density \ Interface



Process Gas and Liquid Analysers:

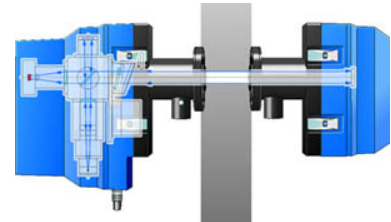
- NIR & UV Analysers
- Flame Ionisation Detection (FID)
- Stack emission & combustion efficiency
- Moisture & O₂ analysis



DURAG

Combustion Instrumentation and Environment Control:

- ◆ Combustion control
- ◆ Environment Monitoring
- ◆ Pilot burners and associated products



VEGA

Nuclear based products:

- Non Contact measurement of Level, Weight and Density with Real time measurements
- Proven, Low maintenance & Reliable technology



- Positive displacement flow meters and transmitters
- Wide range of sizes and applications



MoistTech.com

On-Line N I R & RF Moisture & Constituent Sensors for Process Measurement & Control:

- Non-contact, reliable and accurate
- Low installation cost and quick payback
- World leaders in IR & RF Technology

Applications: Food, Minerals, Pulp & Paper, Pharmaceutical, Wood



Flow Computers for transfer measurement of hydrocarbons:

- Flow Computers – 32bit panel or field mount multi-run
- Gas chromatograph
- Reports & Archiving
- All gas and liquid applications



dataTaker

Data Loggers and Data Recording:

- Data Logging and storing
- Geotechnical data logging
- Drivers for most of the main HMIs
- Expandable to 800 Inputs
- User friendly configuration



IN-LINE

In-Line Volume Correctors:

- Gas Transmission & distribution metering
- Battery or external power
- Password security & Alarm Phone home
- Economical & Wide Range
- 5 Years Warranty





CSE-WAF General Service & Sanitary Control valves are proudly made in New Zealand by CSE - W. Arthur Fisher Limited:

- All stainless steel construction
- Sealed with food grade compounds
- Screwed body General Service valves from 15mm to 50mm diameter
- Sanitary Control valves from 25mm to 80mm



Heavy Duty Valves:

World leader in innovative safety valves for Pulp & Paper, Process Industry, Water & Waste Water:

- Plug valves
- Knife gate valves
- Bare shaft or complete with Actuators
- Pulp Consistency Transmitters
- Globe & Rotary Control valves



Birkett Safety Relief Valves

- API/ASME pilot operated
- Spring loaded safety relief valves
- Thermal relief valves - protects pressurised systems from the effects of exceeding design pressure limits.



Amal Flame Arresters/Combination Flame Arresters and Relief Valve

- Detonation and deflagration
- Range available for gases, vapours and liquids



Valves and Pumps



Liquid Ring Vacuum Pumps & Engineered Solutions:

Gardner Denver Nash has over 100 years experience in liquid ring vacuum products to meet your vacuum and compressed gas needs.

- Liquid Ring Vacuum pumps & Compressors
- Steam Jet Ejectors
- Design, fabrication, commissioning & ongoing maintenance support



- Check valves
- Air valves
- Ball & Cone valves
- Priming systems



CRANE

Crane Energy Flow Solutions ®

- Multi-turn valves
- Quarter-turn valves
- Check valves
- Specialities
- Actuators
- Valve services



Motors, Soft Starters, VSDs



Medium Voltage Motors:

- 3.3kV, 6.6kV, 11kV
- Squirrel Cage & Slipring Induction Motors
 - TEWAC – Totally Enclosed Water to Air Cooled
 - TEAAC – Totally Enclosed Air to Air Cooled
- Cost effective replacement of Siemens old motors
- Special designs to suit specific applications, including:
 - Filter & Heat exchanger in the slipring chamber
 - Water leak detector



Low & Medium Voltage Softstarters:

- 400V, 690V, 1000V, 3.3kV, 6.6kV, 11kV & 15kV
- Up to 26,000kW
- Low Voltage test
- Pump & Special load control
- Direct Power factor connection
- Comprehensive Motor protection
- Multi-motor starting
- Synchronous motor starting



Fuji Variable Speed Drives for Optimum Motor control under any operating conditions:

- Available in 400V, 3.3kV, 6.6kV
- Ideal combination of power and multi function
- Dynamic Torque - Vector control
- High starting torque
- Multiple motors controlled with single drive
- On-line tuning



Medium voltage VSDs & LRS:

- 400V, 3.3kV (24 Pulse), 6.6kV (36 Pulse) & 11kV (54Pulse)
- 280kW to 8000kW
- Cell cascaded Multi PWM
- Low dV/dt for voltage & no cable length restriction
- By-pass function for mission critical applications
- Fiber optic interface to power cells
- > 96% efficient & >0.95 PF at full load
- IGBTs to provide smooth current & voltage wave forms
- Fixed Speed and Variable Speed LRS



“We Sell, We Support”



At CSE – W. Arthur Fisher our talented staff have been supporting our clients since 1927 and working hard over those last 80+ years to grow both our clients and our business with their ‘can do’ attitude.

Over the years we have partnered many of the world’s leading companies such as General Electric, Ruggedcom, Invensys, Turck, Banner, DeZURIK and Safety Systems ... *(to name a few)* by representing their innovative products in New Zealand. These partnerships allow us to deliver to our clients **Technological Excellence Through Innovation.**

Our qualified Engineering team offers design, integration, commissioning and training for a wide range of plant automation, telemetry, radios and SCADA applications and can manage all stages of a project to completion.

Our Service engineers are fully qualified and trained to provide on or off-site instrument calibration and repair, plant audits and valve and pump repairs/reconditioning.

At CSE W. Arthur Fisher Ltd **Customer Satisfaction, Everytime** is our vision and we provide pre and after sales support either on or off-site to our customers across a wide range of industries including Aluminium Smelters, Cement Works, Processing industries, Mining, Water/Waste Water, Railways and Power Utilities throughout New Zealand and the Pacific. We are always ready to discuss how we can assist with your Product, Service or Engineering requirements.

Our Engineering

Whether it is a new design or a system expansion, our Auckland based Systems Engineering Team reaches out to customers from the far north to the deep south and can be relied on to offer the right solution so that customers can achieve their key project outcomes. Our highly experienced and specialised engineering team apply world-leading technologies and deliver complete engineered project solutions to a wide range of customers from Aluminium Smelters, Cement Works, Processing Industries to Water/Waste Water and Power Utilities.

CSE–W. Arthur Fisher can engineer complete turn-key solutions around our core technologies and can manage all stages of a project to completion.



Our key skills and capabilities include:

- Design, Integration, Commissioning and Training for:
 - Telemetry, RTU's and Radios
 - PLC and SCADA solutions
 - Power System Protection
 - IEC61850 Schemes
 - Ethernet and Serial Communication Networks
 - SQL Database and Reporting
 - Defence in-depth Cyber Security
- Modelling and Optimisation
- Power protection relay selection and application advice
- Ethernet network equipment selection and application advice, including Serial Servers, Ethernet switches, Routers and SDH multiplexers
- LV & MV variable speed drive complete turnkey engineered solutions
- Starting and speed control of a slipping motor using Slip Energy Recovery technology and Liquid Resistance starters
- Complete 'packaged' solutions including motor, motor protection, advice on motor starting, harmonic solutions

Legacy Support includes:

Modicon PLC Hardware:

- 984-38x, 48x 68x, 78x
- Modicon Micro, Compact, Nano
- S908 and 800 series Remote I/O
- Modbus Plus Networks

Software:

- ProWorx Plus (Taylor), Nxt, 32
- Modsoft
- PL7, Concept

Our Markets

CSE – W. Arthur Fisher has been operating in New Zealand for over 80 years as a supplier and systems integrator of Instrumentation and Control Systems. Today we are a leading provider of Sensors, Instruments, Valves, Power Protection and Communications systems for mission critical, heavy industries and utility infrastructure clients throughout New Zealand.



Water Utilities

We supply our clients, which include over 10 major Water and Waste Water utilities throughout New Zealand, with:

Kingfisher telemetry, Modicon PLCs, SCADA, Cyber Security, Fuji, Variable Speed Drives, Turck/Banner Sensors and GE Multilin Power monitoring.



Communications

Kingfisher telemetry, RuggedCom IP, Radios and engineered solutions for Railways, Tunnels, Power Utilities, Metal Processing and Refineries.



Power and Energy

We supply the Generation, Transmission and Distribution industries with:

Kingfisher telemetry, Modicon PLC's, SCADA, Cyber Security, GE Multilin Protection Relays with IEC61850 Station & Process Bus, GE Hydran and Kelman Transformer DGA, GE Bentley-Nevada, RuggedCom, Ethernet IP Routers, Switches and Serial servers.



Renewable Energy

Kingfisher telemetry, SCADA, Cyber Security, RuggedCom Ethernet IP Routers, Switches and Serial servers, GE Multilin Protection relays with IEC1850 Station and Process Bus.

- Wind
- Geothermal



Oil & Gas

Kingfisher telemetry, Modicon PLC's, SCADA, Cyber Security, GE Multilin Motor management relays, Omni flow computers, In-Line Volume correctors, Turck/Banner Sensors, Softstarters, Hyundai Medium Voltage motors supplied to:

- On/Off Shore Oil & Gas Production Platforms
- Gas Transmission and Custody transfer
- Oil & Gas processing plants



Mineral & Mineral Processing

Kingfisher telemetry, Modicon PLC's, SCADA, RuggedCom Ethernet IP Routers, Switches and Serial Servers, GE Multilin Protection relays and power monitoring, Medium Voltage motors, LRS, SER Drives supplied to:

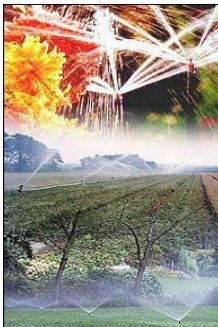
- Gold and Coal mining



Processing Industry

Kingfisher telemetry, Modicon PLC's, SCADA, RuggedCom Ethernet IP Routers, Switches and Serial servers, GE Multilin Protection relays, Power Monitoring, Electric Motors, Valves and Instrumentation supplied to:

- Dairy Industry
- Timber Industry
- Heavy Industry
- Pulp & Paper Mills



Agriculture & Irrigation

Kingfisher telemetry, PLC Control Systems, Medium Voltage motors, Starters, VSD's, HMI, Valves, Instrumentation & Sensors.



Transportation

Kingfisher telemetry, SCADA, Cyber Security, RuggedCom Ethernet IP Routers, Switches and Serial servers.

CSE – W. Arthur Fisher Limited

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Christchurch 8140

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Fax: +64 (03) 379 5895

SALES

General Sales enquiries:
sales@cse-waf.co.nz

Sensors

Manager - Chris Leyenaar
chrisl@cse-waf.co.nz

Flow Control & Instruments

Business Development Manager – Ian Duigan
iand@cse-waf.co.nz

Manager – John Bray
johnb@cse-waf.co.nz

Smart Grid Technologies

Manager – Harry Singh
harrys@cse-waf.co.nz

SYSTEMS ENGINEERING

Manager – PLC, Telemetry & Systems
Neil Pearce
neilp@cse-waf.co.nz

SERVICE

Service Manager – David Pipes
davidp@cse-waf.co.nz

General Service enquiries:
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