Welcome to ABB Australia

AUTOMOTIVE, CEMENT, MINERALS AND MINING, CHEMICAL INDUSTRIES, COMMERCIAL AND INDUSTRIAL BUILDINGS, CONSUMER INDUSTRIES, ELECTRIC UTILITIES, GAS UTILITIES, MARINE AND TURBOCHARGING, METALS AND FOUNDRY, OIL AND GAS, PETROCHEMICALS, PHARMACEUTICALS, POWER GENERATION, PULP AND PAPER, SYSTEM INTEGRATORS, TELEPHONE AND DATA COMMUNICATION, WATER UTILITIES.

ABB Capability Guide

Power and productivity for a better world™
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Did you know?

In 1988 Asea and BBC merged to form ABB (Asea Brown Boveri Ltd), one of the largest electrical engineering companies in the world.

Management team

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ABB mission

**Improve performance:** ABB helps customers improve their operating performance, grid reliability and productivity whilst saving energy and lowering environmental impact.

**Drive innovation:** Innovation and quality are key characteristics of our product, systems and service offering.

**Attract talent:** ABB is committed to attracting and retaining dedicated and skilled people and offering employees an attractive, global work environment.

**Act responsibly:** Sustainability, lowering environmental impact and business ethics are at the core of our market offering and our own operations.
Did you know?

In 1998 ABB acquires Elsag Bailey Process Automation, the largest acquisition in its history, to become the market leader in the global automation market.

ABB vision

As one of the world’s leading engineering companies, we help our customers to use electrical power efficiently, to increase industrial productivity and to lower environmental impact in a sustainable way.

Power and productivity for a better world.
ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group is a global company without boundaries, acting locally in every one of the more than 100 countries in which we do business. Each of our customers benefits from the sharing of ABB’s research, supply, manufacturing, distribution, information technology and benchmarking capabilities.

At ABB our customers make our business. This is why we have some of the most extensive and comprehensive range of support services in addition to our products and systems. Our customer focus does not stop at completion of a project and in Australia we can boast the following customer support features:

- **SupportLine** - a dedicated 24-hour single point of contact for sales, service, training and support calls. SupportLine’s success is underpinned by a series of databases, holding key information such as account histories, site configuration and other important customer data.

- **Customised training** - ABB provides second to none training for all customers ranging from in-house and on-site product training to skills consultation, needs analysis, and competency-based tuition.

- **Feedback** - customer feedback is critical to the quality and innovation of our products and systems. That’s why we survey our customers when we win business, complete business and if we are unsuccessful at getting the business.

- **Complaints resolution** - we pride ourselves in being active in dealing with complaints. Through our worldwide Customer Complaints Resolution Process we actually encourage our customers to complain!
Underpinning all the work we do, is our emphasis on safety and quality. The health and safety of our people and our customers is a fundamental part of our commitment to sustainability. We care deeply about how our operations and products affect our employees, customers, contractors and our neighbours.

Many of the industries in which we work - often on customer sites - are by their nature very challenging. Accordingly we have to operate to the highest standard of occupational health and safety excellence, and remain constantly vigilant in carrying out our duty of care. In Australia we have enhanced our safety performance by achieving notable incident-free milestones, across a wide range of industry sectors.

To address environmental standards, ABB has adopted ISO 14001:1996 as our environmental management system standard. Our aim is to reduce the environmental impact of our operations and products, conserve resources and deliver products that are safe to use, can be recycled, reused or disposed of safely.

Did you know?
Worldwide, a team of more than 400 ABB experts are working to improve health and safety, environmental and social standards in ABB operations and at customer sites.
Power Products Division

High Voltage Products
Medium Voltage Products
Transformers
Power Services
Advanced technology enables competitive and innovative high voltage products

Chris Geeves
Contact: (02) 9821 0198

High Voltage Products

PORTFOLIO:

- HV breakers - gas insulated switchgear, live tank circuit breakers, dead tank circuit breakers, modules
- HV components - instrument transformers (current and voltage), surge arresters, capacitors, insulators, disconnectors
- High current systems - generator circuit breakers, isolated phase busducts
- Cables - Solid dielectric power cables, specialty cables, cable accessories

ABB offers its customers a complete range of the most competitive and innovative high voltage products (50-500kV) in the market. Packages of equipment are supplied to power stations, utilities and contractors, either direct to the end user or through a channel partner.

Through the local manufacturing facilities at Moorebank in NSW and Lilydale in Victoria, ABB is able to provide a strong installation capability as well as consultancy services. Local knowledge, leading technologies and a partnering approach gives ABB the competitive edge. Our ability to supply a full range of products or ‘one-stop-shop’, where you can purchase everything you need on one contract, ensures ease of operation as well as full compatibility amongst products.

CASE STUDY:

ABBACUS Metal Enclosed Capacitor Bank - a hit in Belgium

ABB’s Lilydale capacitor factory in Victoria has supplied more than eight ABBACUS Metal Enclosed Capacitor Bank (MECB) solutions to companies in Belgium, thanks to a collaboration between the Australian development team and ABB Belgium’s Herwig Vande Voorde. An expert in the reactive compensation field, Vande Voorde has suggested many improvements and features that are now part of the product.

The Lilydale capacitor team progressively looks to develop new capacitor solutions for local and export markets and its factory has the design and manufacturing flexibility to produce MECB solutions for most medium voltage customer requirements.
Did you know?
ABB is the only company in Australia manufacturing high voltage instrument transformers up to 330kV.

Did you know?
ABB is supplying one of Australia's largest installations of 145kV GIS switchgear at Integral Energy's Springhill Substation in NSW.

Did you know?
ABB has been manufacturing HV capacitors in Australia for 40 years. As the only local manufacturer, ABB has unrivalled knowledge in HV capacitors and their many applications.

Innovation

The ABBACUS Metal Enclosed Capacitor Bank (MECB) offers a compact, expandable, highly flexible and reliable power factor correction system for utility and industrial customers. Utilising components from ABB’s low, medium and high voltage divisions, the MECB is a total ABB solution, designed for local and export markets, that can be supported by the global ABB infrastructure now and long into the future.

A new pole-mounted capacitor switch and controller, developed, designed and manufactured by ABB Australia, is being exported to the USA and other countries around the world.

The new higher performance IMB current transformer for 72-300kV, features an aluminium tank and a silicon polymer insulator, making it lighter, safer and more environmentally friendly.
ABB develops, produces and delivers a full range of medium voltage products

Medium Voltage Products

PORTFOLIO:
- Medium Voltage (MV) switchgear - gas insulated primary switchgear, air-insulated primary switchgear and gas- and air-insulated secondary switchgear
- Indoor apparatus - breakers, contactors, sealed switches, instrument transformers and sensors
- Outdoor apparatus - reclosers and breakers, switches and cutouts
- Distribution automation - protective relays for various protection applications

ABB is the market leader in the supply of medium voltage switchgear products and systems in Australia and South East Asia, with the capability to develop, produce and deliver a full range of medium voltage (1-36kV) products used in utilities, manufacturing and process industries, infrastructure and residential and commercial buildings.

Whilst ABB’s medium voltage manufacturing facility at Moorebank produces a wide range of switchgear solutions in collaboration with other ABB switchgear factories, it also acts as a global factory with R&D responsibility for the ABB UniGear type ZVC vacuum motor starter switchgear, a unique high performance motor starter for the utility, oil, gas and mining industries. With global responsibilities, the Moorebank operation supports various multinational projects.

The company’s outdoor switchgear factory at Moorebank has regional factory responsibilities, servicing local utility customers and providing a range of pole mounted switchgear to regional export markets.

Supported by a strong local engineering team, the ABB medium voltage operation provides customers with the benefits of a complete manufacturing facility: research and design, engineering, project management, manufacturing and service support.

CASE STUDY:

Safety in switchgear
ABB Australia will supply around 300 sections of medium voltage switchgear including UniGear ZS1 switchgear and UniGear ZVC motor starters to Dalrymple Bay Coal Terminal, near Mackay, Queensland.

While the ABB switchgear is compact, reliable and well proven within the mining and general manufacturing industries, safety was a prime consideration in the selection process.

Many of the switchboards have been designed for installation into transportable substations on the Dalrymple Bay site. Transportable buildings provide some tremendous advantages, but are not without their technical challenges. When using MV switchgear at high fault levels in the confined space of transportable buildings, switchgear should be selected carefully to avoid internal arcing.

ABB offered a reliable solution that uses type tested arc ducting to direct hazardous arc products to a safe area outside the switchroom. The switchgear can also be operated remotely for maximum operator safety.
Innovation

ABB has established a dedicated team to bring together packaged switchgear solutions. Combining the expertise of the medium and low voltage switchgear businesses, the team develops customised solutions for integrating switchgear and related equipment into modular transportable switchrooms. ABB customers benefit from significantly shorter on-site installation times, lower associated site costs and lower risk in achieving plant startup to schedule.

Did you know?

ABB’s VisiVolt Passive Voltage Indicator reduces the incidence of serious accidents in both indoor and outdoor power systems. The low cost LCD panel indicator is highly sensitive to electric fields, requires no power source or electronic circuitry and is a part of ABB’s “Engineered for Safety” campaign.

Unique slim UniGear type ZVC fused contactor panels for Qinshan 2

Qinshan Nuclear Power Company has again selected ABB to supply contactor panels for its Qinshan 2 nuclear power plant, impressed by the performance of ABB’s UniGear type ZVC fused contactor panels at its Qinshan 1 site. ABB’s Moorebank facility, the company’s global factory for combined fused contactor technology, will supply the equipment.

The slim UniGear type ZVC fused contactor panel has proven to be highly successful in critical installations where compact size, reliability and quality count.
ABB leads the market in the manufacture of electrical transformers

Transformers

PORTFOLIO:

- Distribution transformers - liquid filled and dry type, pole, pad and ground mounted
- Power transformers - generator step-up, network couplings, shunt reactors, phase shifting and HVDC convertor transformers
- Industrial and special transformers
- Traction and rail transformers (including boosters)
- Insulation and components - bushings, tap changers and mechanical components
- Service, retrofit and engineering support

ABB is Australia’s leading manufacturer of electrical transformers, with two distribution transformer manufacturing locations in Brisbane and Perth. The company also delivers quality and value to the higher end of the market, i.e. >10MVA 33kV, through the Front End Sales Engineering and Contracts group in Moorebank, Sydney.

ABB transformers are installed in a variety of applications, ranging from rural overhead distribution of electricity to heavy industrial installations within the mining, petrochemical and manufacturing industries. Customers include electricity supply authorities, engineering procurement and construction clients, consultants, contractors, resellers and end users.

Speed is our business vision, whereby ABB customers

CASE STUDY:

ABB transformer solution saves Horizon Power $160K and reduces environmental impact

A self-contained transformer kiosk designed and built by ABB resolved a major challenge mid-way through Horizon Power’s port upgrade project at Exmouth, on the tip of the North West Cape, 1270 kilometres from Perth. The West Australian regional electricity supplier had anticipated a costing of $40K for the civil works associated with a transformer pad and oil separation facility but received a quotation of $240K from its power station sub-contractor. With time pressures, a remote location and a heated economy, the options to obtain alternative contractors did not prove fruitful.

ABB developed a solution that has left the hard ground largely untouched, since bunding is enclosed within a self-contained ‘kiosk’. The 15 tonne, 3.5 MVA kiosk was designed and manufactured at ABB’s Osborne Park facility and shipped to site, as separate units. The design was a first for ABB and Horizon Power and has potential for other sites, especially as it was constructed for cyclonic conditions.

Horizon Power’s building schedule continued to plan, and Exmouth’s new 7 MW power station completed its 60 day trial in April 2007.

Graham Jones
Contact: (07) 3713 9121

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Horizon Power’s building schedule continued to plan, and Exmouth’s new 7 MW power station completed its 60 day trial in April 2007.
receive fast quotations, improved decision making and short delivery times together with ABB brand quality. The business is working towards the implementation of a highly-flexible value chain that is web-enabled for online ordering and inquiry, without losing the personal touch of ongoing face-to-face contact.

ABB is investing in the latest, most cost effective technology in all its Australian manufacturing facilities, at the same time encouraging a culture that continuously develops the capability of its employees. An environmental management system certified to ISO14001 also reduces the environmental impact of ABB operations and products and ensures compliance with applicable regulations and laws.

This approach ensures ABB remains a competitive provider of high quality and innovative transformer products, solutions and services.

Innovation

ABB is supplying medium and low voltage intelligent switchgear and motor control centres, along with specifically-designed transformers for the Woodside Energy’s Angel gas platform on the North West Shelf of Western Australia.

Adapted to accommodate specific environmental requirements, the special ABB transformers use environmentally friendly Midel® transformer fluid which is readily biodegradable and non-hazardous, making it safe for use even in the most ecologically sensitive areas.

Did you know?

Globally, ABB produces 400,000 distribution transformers, approximately 2000 power transformers and hundreds of thousands of instrument transformers each year.

Did you know?

ABB encourages partnerships with customers wherever possible. Experience gained through current alliances with Australian utilities and large industrial companies proves that long-term alliances are highly beneficial to ABB customers.
Service underpins everything we do

Power Services

PORTFOLIO:

- After-sales service for ABB medium and high voltage switchgear and transformer products
- Installation and commissioning services
- Preventative and corrective maintenance services
- Industrial substation shutdown maintenance services
- Circuit breaker workshop repairs
- Asset assessment and diagnostics
- Retrofitting of circuit breakers, control and protection
- Distribution and power transformer workshop repairs, rewrinds, mid-life refurbishments, vapour phase dry-out and testing
- Tap-changer retrofits, repairs and maintenance
- Spare parts

ABB offers the power utilities and process industries, power service expertise to cover the entire life cycle of power equipment and systems, from commissioning a new plant, through maintenance and field services, retrofit and mid-life refurbishment, to end of life decisions. Spare parts are also available.

ABB’s Power Services business is structured in a way that meets every customer’s needs and empowers assets for profitable performance. Service management of a customer’s assets range from: product-based services; fleet-based services; plant-based services; or customer-based services where full service of all assets is undertaken by ABB.

Unsurpassed sector experience together with competence, speed, reliability and performance are the

CASE STUDY:

Energex award for ABB customer service excellence

Energex recently presented ABB with the Customer Service Excellence Award, in recognition of excellent work done in supporting Energex to replace more than 500 Krone ring main units (RMUs) over a 13-month period.

Due to safety concerns, Energex placed a ban on live switching of the old RMUs and initiated this fast-track project, retrofitting ABB’s modern SF6 ‘Safelink’ CF and CFC fuse switch units into Energex’s pad-mount substations.

ABB coordinated the civil work, crane supply, modifications to pad-mount cubicles, removal of old units, installation of the new units and commissioning, and completed the project on schedule. Energex has subsequently awarded further pad-mount transformer refurbishment orders to ABB.

Douglas Pitt
Contact: (02) 9821 0147
Innovation

Through ABB’s refurbishment and type-tested retrofit circuit breaker solutions for medium voltage switchgear, equipment is returned to as-new condition, minimising the need for replacement and protecting the customer’s investment by extending the equipment’s lifespan and raising safety, reliability and performance standards. Standard safety features such as remote operation and remote racking of the circuit breaker can be achieved with retrofitting.

Did you know?

ABB’s product and system heritage is unmatched and provides the largest installed base in the power transformer industry.

Did you know?

ABB has national service coverage with service centres in Western Australia, New South Wales, Queensland and Victoria.

Did you know?

ABB has a fully operational workshop in Sydney, dedicated to power transformer repairs. The facility is equipped with 200T lifting, vapour phase system, HV test bay and is capable of repairing transformers up to 500 kV.

Did you know?

ABB has designed a program to address aging transformer assets and produce tangible benefits for the asset owner.

reasons customers choose ABB for their service needs.

As the authorised service provider for ABB power products, power services has access to global ABB application engineering, enabling a broad portfolio of retrofit, refurbishment and engineering upgrade solutions for ageing equipment, including ABB to ABB as well as non-ABB to ABB equipment.

ABB can provide computer-based scenario modelling to evaluate the impact of various fleet and facility management, maintenance and replacement strategies and to assist with capital investment planning.

In addition, advanced life time assessment and diagnostic tools offer insight into equipment condition not previously available and are a valuable component of a reliability-centred maintenance programs.
Power Generation
Substations
Grid Systems
Network Management
Creating an environment of optimised and efficient operations

Power Generation

PORTFOLIO:

- Distributed control systems
- Control room upgrades
- Turnkey pumping station – SCADA and DCS
- Turnkey plant electrical systems
- Plant optimisation
- Complete IC&E integration
- Power station maintenance

ABB’s power generation business offers complete lifecycle support for the products and systems we deliver. From design and installation to the decision to retrofit, upgrade or replace, ABB is there to support your systems.

With the largest installed base of control systems in the world, ABB can provide professional system integration and project management to ensure safe, reliable and economical operation for power plants and water utilities.

We create an environment of optimised and efficient operations by combining innovative products, power generation-specific solutions and the latest IT technology, delivered by the industry’s most experienced engineering staff.

CASE STUDY:

Strategic alliance with WA Water Corporation delivers so much more

18 months into a five year strategic alliance agreement with the Water Corporation of Western Australia, ABB has, amongst other projects, successfully completed the MicroSCADA transition to the new State-wide Operations Centre, enhancing the monitoring and remote control of the state’s water distribution network.

The growth of the ABB team, from 8 to 30 full time employees, is helping the Water Corporation clear a backlog of works that are improving the reliability of water supply, while work continues on several other major projects including the upgrade of the G&AWS (Goldfields) radio communications network.

The Integrated Control Engineering (ICE) alliance was established to deliver SCADA integrated control engineering services, including the integration of the high profile Perth Saltwater Desalination Plant at Kwinana into the state water network. Ongoing maintenance of the SCADA and communications system, vital to its continued operation, is also included in the alliance agreement.

The Water Corporation selected ABB to leverage off its global experience and expertise in water technologies and for the potential additional value added services that ABB can provide. Through embracing an alliance approach to business, the Water Corporation is well on its way to meeting its ultimate goal of a fully integrated...
Did you know?

ABB’s major replacement of Yallourn power station’s instrumentation and control systems is nearing completion. The works have contributed to the achievement of record power production for the station over the past years and through improved efficiency, have also assisted in reducing emissions to the environment.

Did you know?

ABB’s Optimax Combustion Optimizer software helps power plants to reduce harmful NOx emissions by 5 to 35 percent.
Recognised technology and market leader in the field of substation technologies

Rory McDonald
Contact: (07) 3713 9149

Substations

PORTFOLIO:
- Turnkey transmission and distribution substations
- Mobile substations
- Upgrade/refurbishment of transmission and distribution substations
- Industrial system and mining project electrification
- Railway power supply systems

Industries and utilities are under extreme pressure to meet consumer and regulatory demand for high quality energy supply at competitive prices while lowering environmental impact. As the recognised leader in the substation market, ABB provides optimised economical and technical turnkey solutions for all substation requirements.

With direct access to ABB’s technology-leading range of high voltage and medium voltage equipment, we are able to provide market leading technological solutions to the conflicting demands of reliability, performance, cost and environmental impact.

CASE STUDY:

ABB installs $13.5 million Hope Downs substation

ABB is installing a $13.5 million full turnkey substation for Rio Tinto. The Hope Downs substation will provide power to a new iron ore mine in the Pilbara region of Western Australia.

The project delivers a 220/33 kV substation and 33kV switchgear, and includes primary and secondary design, supply of all primary and secondary products, civil construction, electrical construction and commissioning of the substation as a completed ABB integrated solution.

ABB is supplying all the HV products and all protection and control systems: the 220 kV circuit breakers are supplied from Sweden and the 220/33 kV 45/55 MVA transformer is supplied from the ABB factory in Bangkok, Thailand. ABB has performed all functions of the turnkey supply of this project as well as being responsible for all commissioning. This includes both Factory Acceptance Testing of protection and control panels in the factory and full primary and secondary commissioning on site after complete equipment installation.

This is the fifth full turnkey substation installation that ABB has been involved with for Hamersley Iron in the Pilbara region.
Innovation

The new global IEC 61850 standard for communication in substations brings open, interoperable systems and flexible architectures to the substation automation domain, making it easier for various substation automation devices such as protection relays and bay controllers, as well as their engineering tools, to exchange data.

ABB has taken a leading role in the elaboration, implementation and verification of this standard and is the first manufacturer to achieve official Conformance Test Center status. The certification authorises ABB’s System Verification and Validation Center in Baden, Switzerland, to perform IEC 61850 Conformance Testing in accordance with the UCA International Users Group’s Quality Assurance Testing Program Procedures.

Did you know?

ABB, together with Hamersley Iron, is in the process of implementing the latest IEC 61850 substation technology at Juna Downs. The 220kV substation will be a key node in the Hamersley Iron 220kV transmission system, improving power supply reliability to major iron ore mine sites in the north west of Western Australia.

Did you know?

ABB is the world market leader for turnkey substations. Since 1900 we have delivered over 5500 substations rated up to 800kV.
Enhancing the security, capacity and flexibility of power transmission systems

ABB’s patented HVDC technology is used to transmit electricity over long distances by overhead transmission lines or submarine cables. It is also used to interconnect separate power systems, where traditional alternating current (AC) connections cannot be used.

ABB FACTS (Flexible AC Transmission Systems) enhance the security, capacity and flexibility of power transmission systems. FACTS solutions enable grid owners to increase the capacity of existing transmission networks, while maintaining or improving the operating margins necessary for grid stability.

ABB wins $25 million order to secure power supply in Queensland

ABB has won a contract worth $25 million for an installation to improve the capacity and reliability of power supplies in Southern Queensland.

The contract was awarded by Powerlink, Queensland’s state-owned transmission network operator, for a turnkey installation of Flexible Alternating Current Transmission Systems (FACTS) technology that will help Powerlink meet the rising demand on the transmission grid from the fast growing Southern Queensland region.

FACTS technology increases the capacity and stability of the existing transmission network, allowing it to transport more electricity across the grid. The contract includes a Static VAr Compensator (SVC) turnkey delivery – part of the FACTS portfolio – that will be located at Woolooga.

ABB will provide the complete scope of design, engineering, equipment, installation and commissioning. Since an SVC has a comprehensive control system plus some unique features, an intense training program is a key part of the delivered services. The equipment includes 275 kV power transformer, power electronics and substation parts with switchyard and control building.

The Woolooga SVC is planned for commissioning in October 2008.

As the leading supplier of SVCs worldwide, ABB has more than 400 installations either in service or under construction. An SVC is a power electronics equipment that provides fast-acting reactive power compensation on high-voltage electricity transmission networks. SVC technology increases transmission capacity and stabilises power supply and is also a vital part of the transmission system for maintaining reliability during various system conditions.

Powerlink is a government-owned corporation that owns, develops, operates and maintains Queensland’s high-voltage electricity transmission network, which benchmarks in the top quartile internationally in terms of both cost efficiency and reliability. The organisation’s $3.9 billion network extends 1,700km from north of Cairns to the New South Wales border - approximately half of Australia’s eastern seaboard.
Innovation

HVDC Light® is a fundamentally new underground transmission technology developed by ABB, comprising two (or more) converter stations at the ends of the transmission and an underground (or submarine) cable link between them.

The cost of an HVDC Light link now approaches the cost of an overhead line, making it possible to build a long electric power transmission underground and avoid public opposition and long uncertain approval processes.

Besides being a cost competitive alternative to conventional AC and local generation, HVDC Light also opens up new possibilities for improving the quality of supply in AC power networks. A number of underground transmissions up to 330 MW are in commercial operation and more are being built.

Did you know?

ABB was recently awarded the contract for a 275kV Static VAR Compensator (SVC) having a swing range of -100/+250MVar in Queensland. The SVC will improve the efficiency and increase grid reliability to the power transmission system.
Providing centralised market and asset management systems

PORTFOLIO:

- Supervisory Control and Data Acquisition (SCADA) systems
- Utility communications services
- Teleprotection solutions
- Power line carrier systems
- Radio systems
- Network management
- Combined power line carrier, fibre optic and radio systems

ABB’s Network Management business provides centralised market and asset management systems for electrical networks, district heating networks, gas networks and energy markets.

It is a system integrator that offers total telecommunications solutions for the operational needs of utility industry customers, supporting them to grow on WAN applications.

The team also delivers worldwide communication solutions for the utility industry, from system-integrator services to turnkey projects.

CASE STUDY:

Ergon Energy - ABB SCADA system takes control

Ergon Energy has replaced six independent power control systems with a single ABB network manager SCADA system, improving the efficiency of electricity distribution to consumers in Queensland.

The ABB system comprises two control centres and six regional front end locations for data acquisition. It also includes the SCADA Load Management function, with automatic and manual control options.

Under Ergon Energy’s SCADA system design, there is a single database, a single historical database, standard naming conventions for all points, improved monitoring tools and security, maintenance is now managed from one location, and corporate users can access historical data through a single interface. Plus, built-in redundancy means control centres and front ends continue to operate, even on occasions when inter-site communications are lost.

As a result of the SCADA system installation and consolidation, Ergon Energy can deliver a more reliable power supply to its many customers and enjoy the benefits of lower operational and maintenance costs.

Ergon Energy distributes electricity to Australia’s second largest state, one of the largest electricity distribution territories in the world.

Alain Aurus
Contact: (03) 9735 7302

Network Management
Did you know?

ABB's Network Management SCADA system is the centre piece of Ergon Energy's new Control Centres. The recently completed project has been the culmination of three years of work by ABB, performed in Australia and the USA.

Innovation

ABB's Network Manager™ SCADA communicates with substation and feeder RTUs, smart relays and substation automation systems to monitor the real-time status of the network and provide remote control of devices such as switches, capacitor banks and voltage regulators. A full-graphics user interface, real-time relational database, and modern process communication system are features of the application that can grow from a small, limited-function system to a fully functional EMS or DMS with multiple control centres.
Low Voltage Products
Low Voltage Systems
Instrumentation
Variable Speed Drives
Motors and Machines
Power Electronic Systems
Drives Engineering Services
ABB low voltage products are aimed principally at the industrial, domestic and commercial markets

Shawn McIntosh
Contact: (03) 8544 0256

Low Voltage Products

PORTFOLIO:
- ACB/MCCB breakers
- After sales service
- Automation products
- Control panels
- Control products including pilot indicators, limit switches and wireless proximity
- Distribution boards
- Enclosures
- Form 1 MCC cabling systems
- Installation products
- Intelligent building automation
- MCB breakers
- Motor control equipment: contactors/overloads, plug-in relays and electronic relays
- PLCs
- Softstarters
- Switches and fusegear
- Terminal blocks
- UMC22 intelligent motor control protection

ABB manufactures and supplies a range of low voltage products through wholesalers, board builders, OEMs and direct to end users for commercial and industrial applications. ABB has an extensive range to cover customers’ power distribution and motor control needs, and also a range of more intelligent devices such as PLCs, wireless interfaces for sensors and actuators, logic relays, Arc Guard protection relays, UMC motor protection relays and i-bus building automation solutions.

ABB’s experience and expertise in low voltage power distribution solutions extends from the essential safety of a domestic switchboard to the often-complicated discrimination study-based designs required for large industrial and commercial sites.

Easy-to-use software packages make analytical design simple, enabling complex scenarios to be calculated and displayed on a computer. Using the power of the software, it is possible to develop an economic model of product selection far beyond what is generally seen in conventional selection processes.

The ABB low voltage products business provides power distribution and motor control applications for rigorous industrial environments, state of the art automation requirements for process industries, advanced power distribution solutions in commercial sites where economy, performance and safety are highly regarded, and also domestic power distribution where true value for money is needed.
Innovation

New developments in power distribution are allowing ABB to challenge its traditional approach to a network solution in low voltage protection. The Early Fault Detection and Prevention (EFDP) concept is an advanced algorithm able to detect a developing fault in as little as 300 micro seconds. By using a data communication system with the EFDP, advanced zone interlocking provides discrimination to high levels. This system can also incorporate MCCBs and ACBs into a total zone interlocking solution, spanning a current spectrum from 100 – 6300A.

Did you know?

The ABB i-bus control system has been implemented successfully in many Australian domestic, commercial and industrial buildings. Complying with the open KNX standard, these buildings now offer a flexible multi-vendor communication network, ensuring integration of various building functions such as lighting/blinds/energy management and many others.
ABB delivers timely, cost effective and technically efficient power distribution and control solutions

Low Voltage Systems

PORTFOLIO:
- Energy distribution systems (up to 690V)
- Motor control centres (up to 690V)
- Intelligent motor control (up to 690V)
- Electrification Packages with powerhouses
- Busducts
- Energy management systems for low voltage switchgear

ABB’s low voltage systems business provides low voltage switchgear, motor control centres and portable prefabricated buildings (powerhouses) to oil and gas, mineral processing, power, water, chemical and other industries in Australia.

While the majority of engineering and manufacturing is executed out of the Moorebank factory in NSW, ABB low voltage businesses around the world provide additional engineering and manufacturing capacity in the event of very large projects or multiple simultaneous projects.

Together with other ABB businesses and through alliances with engineering companies, the low voltage systems business also offers customers “E-packages” (Electrification Packages) of switchgear and distribution solutions fully integrated and tested in “Powerhouses” (transportable buildings).

It even exports projects, typically as E-Packages to places such as Africa, the Middle East, Russia and Asia. The team has a powerful balance of experience and youth across multiple disciplines. With over 20 electrical engineers, technically competent sales engineers, experienced project managers and supporting product managers, its ability to confidently engineer and deliver electrical solutions is unmatched in Australia.

CASE STUDY:

ABB supplies almost $30 million of equipment for the Woodside LNG Train 5 project

Woodside, Australia’s largest publicly traded oil and gas exploration and production company, awarded ABB almost $30 million in contracts to supply equipment to the next phase of Woodside’s LNG expansion project. During the Train 4 project, the ABB team impressed with their experience and expertise and ability to work closely with Woodside’s engineering, procurement and construction management contractor, Foster Wheeler Worley Parsons.

For the Train 5 project, ABB will supply 415V switchgear and tie-ins, power and distribution transformers, a packaged substation, Is-limiters, 6.6kV switchgear and tie-ins, 33kV switchgear, analysers houses and LCI compressor drives.

The Woodside-operated North West Shelf Venture is building the fifth LNG processing train on the Burrup Peninsula near Karratha in Western Australia. Once complete, the fifth train will boost total production capacity of the plant to 16.3 million tonnes a year and take Woodside’s investment in North West Shelf Venture facilities to more than $16 billion.
Once a project is finished and delivered, the dedicated and experienced service team continue to support clients with commissioning, testing, planned maintenance, spare parts, switchgear extensions fault finding and other services.

**Innovation**

ABB’s Low Voltage Systems and Medium Voltage Products businesses have a dedicated “E-Packaging Team”. This group of estimators, designers and project managers are experienced in designing, preparing, managing, delivering, installing and servicing large packaged projects in Australia and around the world.

The new ABB MNSiS intelligent switchgear solution is a paradigm shift in low voltage switchgear globally. MNSiS recognizes that low voltage switchgear is now the domain of both Control system and Electrical engineers and accommodates both.

For the control systems operator they can access all the critical control functionality without being exposed to the Low Voltage area of the switchgear. From an electrical perspective the separation of the control functionality from the switchgear modules allows greater standardization and a far more compact solution. Operationally the system is significantly safer to operate, requires fewer spares, has a simple HMI and can be operated remotely.

MNSiS is an integrated system and offers a wealth of data collection capabilities. This data opens up exciting new opportunities for condition based maintenance, maximising availability and minimising unnecessary maintenance costs.

**Did you know?**

Five to ten percent of all motors burn up during plant start-up due to insufficient thermal protection. This unbudgeted cost typically goes unnoticed. By utilising Intelligent Motor Control Centres, one customer reduced this loss to zero.

**Did you know?**

ABB’s new MNSiS switchgear has taken operator safety to a new level by separating control and power.
ABB is a global leader in instrumentation with solutions certified to international standards and a worldwide network of manufacturing plants, sales offices, after-sales service centres and calibration facilities, strategically located around the world.

ABB has proven expertise in providing leading edge instrumentation across industries such as power, water and waste water, chemical, oil and gas, pharmaceutical, pulp and paper, mining, food and other process industries. When you choose ABB, you receive the extra assurance that comes from knowing high-quality products are supported by worldwide teams of ABB factory-trained engineers. From installation and commissioning, to maintenance and training, ABB provides the very best in customer care as part of an overall package. In Australia, ABB has sales and service offices in every state providing after-sales service and access to our NATA (National Association of Testing Authorities) approved flow calibration testing facilities.

**CASE STUDY:**

ABB’s water monitoring solution contributes to efficiency of Alcan Alumina Plant

ABB has collaborated with Alcan Engineering to design, construct, test and deliver a multi-purpose water monitoring system to Alcan Bauxite and Alumina’s (Alcan) alumina plant at Gove, in the Northern Territory of Australia. The challenge was to create a more efficient process for monitoring and treating the boiler water supply in the Gove plant’s steam power station.

Due to the complex nature of the application and the site's remote location, Alcan needed a packaged solution: industry experience, design and manufacturing expertise, quality products, and onsite support and ABB were the supplier best suited to provide the complete package.

The customised solution, ABB silica, phosphate, pH, conductivity and dissolved oxygen monitors mounted on a purpose-built sample conditioning ‘wet rack’,
The instrumentation group has a strong history and is built upon leading names and brands in the automation world; Alfa Laval Automation, Bailey Controls, Bush Beach Engineering, Fischer & Porter, Hartmann & Braun, Kent, Schoppe & Faeser, Sensycon, Taylor and TBI-Bailey.

Fieldbus-enabled instruments from ABB with Foundation Fieldbus, Profibus or Hart Communications deliver the option to choose the best fieldbus solution as well as open engineering with FDT/DTM (stand alone or system integrated), special solutions for intrinsic safety and increased availability. The device type management with FDT/DTM allows asset monitoring for enhanced asset optimisation, by delivering more reliable status data and accurate measuring values. The remote diagnosis capability and device status data allows maintenance management systems to provide plant efficiency, plant security, plant availability, plant reliability, and process optimisation.

Did you know?

ABB is a leader in the manufacture of innovative instrumentation for a multitude of industries including power.

Did you know?

Over the last 20 years, ABB Australia has manufactured, installed and commissioned over 50 boiler feed water and steam sampling systems and associated analysis racks, complete with analytical instrumentation. These have been supplied to power stations and other plants in Australia, Asia and North America.

Did you know?

ABB’s flowmeter calibration laboratory is the largest NATA accredited facility in Australia.

The ABB laboratory can test flowmeters from 1mm up to 750mm in size, and has a maximum flow capacity of up to 750 litres per second.
ABB is the number one supplier of variable speed drives, with the widest product range available in Australia, delivering solutions that closely fit customers’ business needs.

ABB manufactures the most technologically-advanced range of component, general machinery, standard and industrial drives on the market, used in industrial, commercial and residential applications and across a wide range of industry sectors.

ABB at the forefront of environmental innovation

ABB will supply over $5 million of motors and drives to the largest desalination plant on Australia’s eastern seaboard, at Tugun on Queensland’s Gold Coast, saving the plant hundreds of thousands of dollars in running costs and reducing CO2 emissions by many tonnes.

Desalination allows the delivery of high quality drinking water to continue, even if there is no rain. However, key challenges associated with this form of water treatment include energy consumption, ongoing operating costs and environmental impacts.

The installation of ABB motors and drives will help address these challenges – ABB motors have an energy efficiency of 97 percent.

The world’s technology leading supplier of AC and DC drive products and systems

PORTFOLIO:

- Low voltage AC drives
- Medium voltage AC drives
- DC drives
- Drive PC tools
- Drive services

With new technology and product enhancements, ABB continues to offer customers the most comprehensive drives and drive service portfolio in the automation industry.

This focus on products, tools and services helps improve productivity and gain energy savings, fuelling the growth of ABB customers’ businesses.

Teamwork is critical to achieving this growth and excellence; teamwork that includes support between ABB personnel, the local ABB sales teams, and ABB distributors; all focused on getting customers what they need to operate their motors, machines and automation equipment.

ABB people, partners and products work in powerful combination with customers to achieve mutual growth.
Innovation

The new ABB wind turbine converter is prepared for the future needs of wind energy generation. Designed to withstand harsh climatic conditions, it is compact and modular and provides improved system efficiency, high power quality and availability. The converter is available for powers up to several megawatts.

The introduction of a dedicated ABB drive for heating, ventilation and air conditioning (HVAC) marks a significant milestone in the development of AC drives. This drive comes with the most common HVAC applications, for example, supply and return fans, cooling tower fans, booster pumps and condensers, built-in. Selecting the application takes just seconds, and setup is a matter of following a set of simple instructions. The ABB drive for HVAC includes a swinging DC choke that cuts harmonics emissions by up to 25 percent.

Did you know?

The worldwide installed base of ABB drives saved about 130 TWh in 2006, equivalent to the annual consumption of more than 32 million families. ABB drives also reduced CO2 emissions by 109 million tons in 2006.

Did you know?

AC drive technology extends the motor speed range from zero to high above the rated speed, increasing the productivity of the driven process. When a low capacity is enough, the drive reduces the machine speed and saves energy.
ABB designs electric motors for reliability and high efficiency to help reduce energy consumption and eliminate breakdowns - saving time and money

Motors and Machines

PORTFOLIO:
- DC motors
- Low voltage motors
- High voltage induction motors
- Permanent magnet motors
- Motors for hazardous areas
- Synchronous motors and generators

ABB believes it is important to produce quality motors with reliable, high efficiency design to reduce energy costs, eliminate breakdowns and ultimately save money for customers. ABB continues to develop and invest in a better product with even higher levels of performance.

ABB’s ‘Process Performance’ motors are particularly suited to demanding 24/7 operations, where end users cannot afford the loss of production through breakdowns.

Innovation

The low voltage Permanent Magnet (PM) motor is a new type of synchronous motor designed for low speed applications, using a variable speed drive. While similar in construction to the robust induction motor, it matches the accuracy of the traditional synchronous motor.

Its simplified design uses powerful permanent magnets to create a constant flux in the air gap, eliminating the need for the rotor windings and brushes used in synchronous motors. This means the PM motor can deliver very high torque from a small motor size at low speed, eliminating the need for gearboxes.

With fewer components, the PM motor is more reliable, it takes up less space, is easier to install, and requires less maintenance and fewer spare parts than other low speed motor options. But more importantly, it delivers accurate and efficient speed control, from 100–850 r/min, in a smaller, lighter unit.

PM motors are used to power low-speed pumps, in wind and water-driven power generators, paper machine drives, low speed fans, elevators and in many other applications.
Innovation

Unique to ABB, the Motorformer is a very high voltage motor or generator suitable in any application where conventional synchronous machines are used. Operating at very high voltages up to 70kV, it can be connected directly to the grid, with no need for a transformer or secondary side switchgear. Its stator windings consist of standard XLPE-insulated power cables that are circular in shape, allowing for smooth field distribution around the conductor.

With no need for a transformer and switchgear, the ABB Motorformer is more efficient, has a smaller footprint, is faster to install, reduces energy loss by up to 25 percent, and requires less maintenance than the conventional synchronous motor system. A superior life cycle cost generates bottom line savings for ABB customers.

Did you know?

ABB motors are globally renowned for market-leading efficiency, reliability and longevity.

Did you know?

In 2004, the ABB Motorformer received the Control Engineering Editor’s Choice award in recognition of the product’s service to industry, technological advancement and market impact.

Did you know?

At 40 Megawatt shaft power, the ABB Motorformer is more efficient than a conventional motor, delivering about 280 kilowatts of additional electric power.
Recognised as a world leading manufacturer and system supplier of power electronics for industrial applications

Power Electronics Systems

PORTFOLIO:
- Static Excitation Systems and Automatic Voltage Regulators
- High Power Rectifiers
- DC Traction Substations
- Advanced power electronics
  - STATCOMs
  - Frequency converters

ABB is recognised as a world leading manufacturer and system supplier of power electronics systems for industrial applications, such as the voltage regulation of generators in power plants and electrolysis and electrowinning processes in aluminium smelters, nickel, copper and chlorine production facilities.

It also designs and manufactures traction substations, advanced power electronics such as STATCOMs for wind farms and auxiliary converters for trams and trains.

ABB’s Power Electronics Systems is a global organisation with product development, standardisation and core component production based in Switzerland. Local Engineering Centres are dedicated to the marketing, sales, engineering, manufacturing, commissioning and servicing of the product portfolio – based on the Swiss-made core components - in all major markets around the world.

Our customers benefit from:
- Fast and competent response to customer needs.
- Local expertise, project execution and support.
- High quality standards, utilising Swiss-made core components and proven solutions.
- Guaranteed safe and reliable operation of AC and DC power supplies in industrial plants.
- Compliance with local standards and regulations.
- The flexibility to implement customised requirements.

CASE STUDY:
Nufarm control upgrade of a high power rectifier with AC 800PEC

Crop protection company, Nufarm, wished to increase chlorine production; however, no service or spare parts were available for its rectifier control system - the rectifier manufacturer was no longer in business. Not only did this pose a significant risk to Nufarm’s manufacturing capabilities, it prevented any expansion of their production capacity.

Approached for assistance, ABB delivered an intelligent, cost effective solution to Nufarm. Rather than replace the complete rectifier equipment, most of which was still in good working order, ABB engineered a customised control package which included ABB’s dedicated Power Electronics Controller – the AC 800PEC, with integrated fibre optic thyristor control
Innovation

As the power output of today’s wind farms grows, they have a greater impact on the rest of the network. One of the major issues in this industry is the reactive power capacity of the wind farm to help the network cope with disturbances such as network faults and load switching. The latest technology to provide this capability is the STATCOM.

ABB has developed a medium voltage standard STATCOM in the power range of 6 MVar to 32 MVar called PCS6000. The water-cooled unit utilises a medium voltage IGCT converter and is available in either an indoor cubicle construction or an outdoor containerised version.

The standardised wind application STATCOM is easy to implement, has a predictable performance and is rapidly becoming a standard part of many large wind farms.

did you know?

Every generator connected to the National Grid has to comply with the National Electricity Rules. ABB Australia is specialised in providing compliance testing for any type of excitation system. Our extensive experience significantly simplifies the process of gaining approval by NEMMCO.

Automation Products Division

circuits, S800 and high speed Combi I/O modules. ABB also supplied and installed a new transformer of increased rating to provide a higher output voltage and therefore higher manufacturing capacity.

The solution was engineered and supplied in just six months, installed and commissioned in seven days, and spare parts and support would be readily available. Risk averted, Nufarm soon stepped up its chlorine production.
PORTFOLIO:

- Drives product and system support and breakdown specialists
- Service level agreements
- Preventative maintenance and life-cycle management programs
- Training courses
- Drive and system upgrades and modernisation
- Drive and automation turn-key projects and engineered solutions
- Process application and consulting
- Spare parts

Our engineers are factory trained, audited and certified to exacting standards with many years of field and application knowledge. Engineering Services strives to provide fast and professional support where and when you need it. We have offices in New South Wales, Queensland, Victoria and Western Australia and are further supported by product experts in ABB’s regional and global offices.

Product and system support includes telephone support, workshop repairs and field service, 24/7 breakdown response, commissioning, maintenance and spare parts.

Service Level Agreements cover periodic maintenance programs, guaranteed response and spares holdings.

Training courses cover standard, certified and customised product and system training courses (including Certificate IV Compliance) at ABB’s offices or on customers’ sites.

Turnkey engineering solutions and modernisation solutions include complete system design, integration, limited spare parts available and increasing maintenance and reliability issues. Tapping into the experience and expertise of ABB’s Drives Engineering and Services team, Tiwest opted for an upgrade rather than a complete replacement – a far more economical solution that reduced installation and commissioning time and disruption to plant operations.

ABB handled the project from design to removal of the old drives, supervision of the installation, through to commissioning and testing. Under the project plan, the existing cabinets and main switchgear components were retained, two new compact DCS800 drives and

CASE STUDY:

Tiwest looks to the future with ABB DCS800 drives system

West Australian titanium materials producer, Tiwest recently upgraded its outdated kiln drives system at the Chandala processing plant, 60km north of Brisbane, to a fully supported, state-of-the-art ABB DCS800 drives system. The new digital DC drive system is reliable and efficient, and allows online access to vital diagnostic, operation and maintenance information for optimal lifecycle management.

Aging DC drives had become a liability for Tiwest, with
upgrade programs and retrofits.

Process application and consulting includes optimisation, condition monitoring and trending analysis, and engineering consultation.

We support industries including pulp and paper, metals, manufacturing, water, mining, cranes, plastic, cement and marine.

Spare parts support comprises a 24-hour distribution and logistics centre, on-line services and site inventory management programs.

**Innovation**

Our maintenance programs include predictive maintenance based on condition monitoring, trending and analysis as well as recommended maintenance programs by the product factory, to ensure that equipment reliability is maximised and unplanned process stoppages are minimised.

two new digital pulse encoders were installed, and the drive control components were also upgraded for improved reliability. The operator control panel was mounted on each cabinet door, displaying comprehensive drive status information at a glance.

Tiwest is now running a very reliable DC drives system with all the benefits of current-generation drive technology. The mining company also enjoys peace of mind, knowing it can access ABB’s operational and product expertise and support whenever it is needed.

A similar project at Tiwest’s Cooljarloo operation is due for completion in the coming months.

**Did you know?**

An ABB maintenance program can improve your bottom-line profits.

Following our lifecycle support program will not only maintain your assets, but will also save you money in the long term.
Process Automation

Division

Process Automation
Turbochargers
Performance Services
Telecommunications
ABB offers an unrivalled array of services to interface its equipment

Simone de Bell
Contact: (03) 8544 0000

Process Automation

PORTFOLIO:

Integrated information and process control solutions:
- Minerals & Mining
- Metals
- Cement
- Oil & Gas
- Refining & Petrochemicals
- Power Generation
- Pulp & Paper
- Food & Beverage
- Discrete Manufacturing
- Life Science

ABB’s Process Automation division provides industrial and power customers with essential information on the performance of manufacturing operations using ABB’s world leading IndustrialIT technology and unrivalled process expertise.

Through integrated process control and management information systems, industry specific know-how and the ability to integrate automation and power products, ABB helps customers improve the efficiency and reliability of their manufacturing operations.

ABB helps customers design and implement an effective systems architecture to ensure that the right information reaches people when they need it to make decisions which directly impact on business profitability and regulatory compliance.

Specifically ABB designs and provides manufacturing execution systems, distributed control and safety systems, process analytical systems, paper quality control systems, force measurement, mine winders and

CASE STUDY:

800xA extended automation system for Australian Paper

ABB’s award winning IndustrialIT 800xA Extended Automation System has enabled Australian Paper (AP) to expand, modernise and centralise the plant automation system at its Maryvale site in the Latrobe Valley, an essential part of the pulp mill upgrade and bleach plant project.

The 800xA system has provided seamless integration of the different control systems previously implemented on the site, and connected to variable speed drives, motor control units, turbine governors and instruments, allowing real time integrated data to be made available for process and maintenance optimisation.

The first major shutdown for the pulp mill upgrade was completed on time, with superior system design, work planning, resource management and execution seeing the mill production restart as planned.

According to Jim Henneberry, Executive General Manager Australian Paper, “For Maryvale and Australian
drives systems from its offices across Australia and with support from ABB’s global centres of expertise.

The process automation business has the expertise to look at a project holistically and to provide a complete solution for all electrical, automation, drives and instrumentation needs. This removes the complex, and costly interfaces between multiple equipment vendors, typical of many major projects.

ABB offers an unrivalled array of services to interface its systems with certified third party devices. A comprehensive service, spares and after-sales support network also ensures that customers gain the benefit of their initial information system investment.

Mining and mineral operations also benefit from ABB’s experience and wide portfolio of industry specific solutions. ABB gearless mill motors and drives, AC multi-drives and mine hoist solutions are long recognised as technological and market leaders.

Did you know?

ABB can provide complete manufacturing execution systems for mineral processing plants to control production from ore feed to shipment from port.

Paper the DCS work was the highlight of the June shutdown.

I particularly want to thank ABB for their outstanding contribution by way of system design, work planning, professional resource management and execution which enabled the Mill to restart production as planned.”

To professionally deliver this complex project for Australian Paper, ABB worked with its local service team in the Latrobe Valley, backed up by specialised industry resources in Melbourne and the ABB Pulp and Paper Centre of Excellence in Singapore.
ABB is the world’s leader in turbocharging diesel and gas engines in the 500 kW plus power range

Steve Douglas
Contact: (02) 9821 0940

Turbochargers

PORTFOLIO:

Turbocharger service and repairs to:
- Ship owners and operators
- Diesel power plant operators
- Businesses operating an ABB turbocharger

ABB is a global leader in the manufacture of high performance diesel engine turbochargers. More than 50 percent of the world’s tankers, container ships, diesel power stations and mining vehicles are fitted with ABB turbochargers to help them increase the power output of their engines.

Our turbochargers are backed by a global service network that operates 24 hours a day, 365 days a year, to keep them in prime condition wherever they may be in the world. That network includes instant online access to the sales and service history of every single ABB turbocharger in use in the world, a vast inventory of spare parts, and global, uniform standards, solutions and processes.

In Australia, the ABB brand of turbochargers is only available through ABB. When you buy or service your turbocharger with us you receive our guarantee of high quality, genuine parts and service. When ABB replaces or refurbishes your turbocharger you can be sure of the same high level of service, expertise and rapid turnaround that is found wherever ABB operates.

CASE STUDY:

Partnership valued by Spirit of Tasmania

The relationship between Spirit of Tasmania Pty Ltd (TT-Line) and ABB began when the Tasmanian shipping operator brought two large passenger vessels from Europe to replace the m/v SPIRIT OF TASMANIA.

Each of the four-year-old vessels, SPIRIT OF TASMANIA I and II, had eight ABB VTR454-11 and three ABB VTR214P-11 turbochargers on board but no equipment history. Through its unique ‘A-Turb’ system – an online record of every ABB turbocharger in use in the world - ABB Australia was able to supply TT-Line’s Engineering Department with a full history and reports for all installed turbochargers. The two companies then began to work together under a two-year Service Maintenance Contract, now in its second term.

Under the agreement, ABB Australia keeps the ABB turbochargers in good condition. Every two months, each vessel’s total engine hours are checked and ABB’s Maintenance Scheduler program is updated. This enables TT-Line’s Engineering Superintendent to forward plan his turbocharger maintenance and take
All ABB turbocharger technicians are trained and certified at our global headquarters in Baden, Switzerland and receive additional mandatory refresher training. This ensures the quality of ABB’s service standards, giving you confidence that our unrivalled know-how, genuine spares and world leading technology will provide the performance that you expect from ABB turbochargers.

Turbocharger service centres in Sydney, Melbourne, Brisbane, Perth and new workshop in Darwin have recently been upgraded to Formula 1 standards of cleanliness and professionalism with dedicated clean rooms to maintain high standards of turbocharger reliability.

True to the ABB philosophy, our turbocharger experts are also constantly researching and adopting new technologies and service approaches to keep ahead of customer requirements.

Did you know?

By taking advantage of ABB’s global service network, a ship’s turbocharger service record can be accessed via ABB’s global database, which holds records of all work ABB has ever carried out on a ship’s turbocharger - anywhere in the world.

Did you know?

Worldwide, more than 175,000 ABB turbochargers are in operation - on ships, in power stations, on locomotives and in large off-road trucks.
ABB has over 250 maintenance service contracts and over 25,000 service professionals in over 20 countries worldwide.

Shane Coleman
Contact: (02) 9738 2078

Performance Services

PORTFOLIO:

- Outsourced maintenance performance management (full service)
- Equipment performance management
- Maintenance engineering and consulting services
- Performance service centres

ABB has the edge in maintenance with over 25,000 service professionals in over 20 countries worldwide helping customers meet productivity performance challenges, improve their overall plant equipment efficiency and lower maintenance costs.

Working closely with each customer, ABB Performance Services assists their business partners improve equipment availability and productivity, through effective maintenance and service solutions.

ABB’s performance-based contracts are designed to produce quantified, measurable results for the customer’s bottom line, reducing maintenance costs and improving productivity. The focus is on creating value, assisting customers with transformational change and driving a maintenance culture centred on continuous improvement and business excellence.

To ensure that maintenance outcomes contribute to business success, the ABB Performance Services business model is directly linked to each customer’s overall business objectives and strategies.

Our full service outsourced maintenance approach delivers:

- A performance-based agreement that allows customers to concentrate on core capabilities
- Value for customers through business excellence
- Reduced maintenance costs, with the maintenance function operating as a profit centre
- Continuous performance improvement

CASE STUDY:

ABB saves New Zealand Steel NZ$1 million in shutdown management

Contracted to manage the shutdown of New Zealand Steel’s iron making stream (klin and multitherm), ABB Performance Services completed the shutdown two days (52 hours) ahead of schedule, with all performance measures met, at a cost saving of approximately NZ$1 million. In addition, there was no lost time or medically-treated injuries over the 60,000 person-hours worked by New Zealand Steel employees, contractors and ABB personnel.
Maintenance Engineering and Consulting

ABB’s maintenance engineering and consulting team has a ‘hands on, hats off’ approach to its consulting strategy. After assessing the client’s current situation, ABB can unlock unforeseen value through improved equipment effectiveness. Its leading maintenance practices are designed to meet each client’s unique business needs.

Performance Service Centers

ABB Australia has four Performance Service Centers, located in Melbourne, Brisbane, Perth (Canning Vale) and Port Kembla, providing high quality service in a range of machining, repairs and overhauls to industries that include heavy industry, mining, railway, marine and utilities. Additional field service centres in Gladstone, Adelaide and Sydney, assure customers of Australia-wide coverage. ABB’s highly skilled field service teams can perform quality repairs within the ABB workshops or on-site, and provide a 24-hour service to reduce downtime.

Innovation

ABB’s pioneering condition monitoring system - the Advanced Rotating Machine Analysis (ARMADACMS), diagnoses 80 percent of the common problems encountered in electrical rotating machines, helping reduce valuable downtime.

Did you know?

ABB’s Performance Service Centres have capabilities in both mechanical and electrical maintenance. They can perform pump and gearbox overhauls and balance rotating components.
Superior end-to-end design, construction and maintenance solutions for Telecommunications, Utilities and Resource Sector companies

Roy Rowe
Contact: (08) 9456 7922

Telecommunications

PORTFOLIO:

- Telecommunication services for fixed, wireless, data centres and properties
- Telecommunications inspections services and maintenance solutions
- Project management services and solutions for power utilities
- Asset management services
- Subcontractor solutions

The ABB telecommunications team comprises some of the industry’s most innovative and experienced people who are focused on meeting the needs of customers on time, every time. ABB help’s customers achieve their business objectives by looking for ways to speed up delivery whilst lowering costs and improving productivity.

Offices and staff are located in all capital cities of Australia, as well as over 100 rural locations across Australia.

PROJECT SUCCESSES

Fibre Optic Installations – ABB have installed over 5,000 kilometres of fibre optic cabling throughout some of Australia’s most remote and harshest regions.

Project Management Solutions – ABB successfully helped a major power utility company complete a significant power under grounding program by overseeing and managing the selection and operations of their subcontractor workforce.

Inspection – ABB provided a purpose-built inspection program and methodology for a major telecommunications provider that identified potential network outage possibilities.

CASE STUDY:

In 2003, when Department of Education network solutions provider Uecomm needed a reliable and skilled company to deliver a turnkey fibre network solution on time, on budget and to exacting requirements, it turned to ABB.

ABB delivered on promise, successfully completing the design, procurement, construction and handover of a new fibre network that provides high speed data transmissions to more than 250 schools in New South Wales.

As part of the Department of Education and Training project, which included the installation of some 16,000 metres of fibre optic cabling in high traffic areas throughout the Sydney metropolitan area, over 1000 fibre connections and joints were made in the existing network whilst it was in ‘live’ mode.

Since the project required some major civil excavations both adjacent to and within school grounds, a major challenge faced by ABB was ensuring the safety of those in the area during the course of construction.
Innovation

ABB invests in the recruitment of new technicians for the telecommunications industry, continually taking on new recruits and training them on the latest technologies as well as upskilling existing technicians.

Did you know?

ABB has the systems and people in place to design and construct a complete end-to-end power and/or telecommunications network in any remote part of Australia.

To keep the school children, teachers, members of the public and the ABB workforce totally safe at all times, ABB developed a purpose-built safety management program that did what it set out to achieve; the project recorded 100,000 man hours with no instances of either medical treatments or lost time injuries.

Drawing on its skill and experience, ABB helped Uecomm deliver a high quality and reliable installation ahead of schedule, on budget, and with minimal impact on existing network customers.
ABB – the right solution and the right partner for profitability and long-term business success

Robotics

PORTFOLIO:
- Packing, palletising and picking
- Painting and coating
- Spot welding
- Waterjet cutting
- Arc welding
- Assembly
- Foundry applications
- Gluing and sealing
- Material handling and machine tending

ABB offers world-class manufacturing automation and robotics solutions for the automotive, general manufacturing and consumer goods industries. ABB robots, from small to large, are the product of innovative process engineering and world-leading robotics experience and expertise.

As Australia’s only direct robot supplier, ABB has the best robotics combination on offer in the country: reliable products, complete turnkey solutions, a dedicated service division, a dedicated training facility and a professional telephone support service.

Through ABB’s channel partner program, local engineering companies and niche manufacturers can also competitively integrate ABB robotic products.

ABB customers are choosing the right solution and the right partner for profitability and long-term business success.

CASE STUDY:
Foster’s enjoys the flexibility and reliability of its ABB robotic palletising system

One of Australia’s largest breweries, Foster’s, has implemented two ABB IRB 4400 robots in the palletiser area of its Yatala plant in Queensland. While traditional palletisers are fast and effective, it can take two hours to reset the equipment when patterns need to change. Their many working parts create a lot of noise, potential danger to workers and high maintenance costs.

The ABB robots, stipulated by ABB partner Foodmach, are efficient, easy to operate, flexible, predictable, low maintenance and extremely reliable. After 9000 hours of operation, they have stopped only for routine maintenance and instead of the 99.5 percent target, the robots have delivered 100 percent compliance.

The Robomatrix software allows operators to trial different virtual stacking patterns before instructing the robots, and changeovers between products and patterns are fast and easy.

ABB robots play a strategic role in the growth of automobile parts manufacturer Mett Pty Ltd.

At the same time many Australian manufacturers started to shift their operations offshore, Mett Pty Ltd (Mett) installed an ABB robot to improve the efficiency and profitability of its automotive parts production facility.
Innovation

Malaysia-based automotive manufacturer, Proton, installed 22 ABB paint robots equipped with ABB’s Cartridge Bell System (CBS) and recorded a 35 percent reduction in paint consumption at its state-of-the-art automotive plant near Kuala Lumpur. Jointly developed by ABB and Toyota, the CBS revolutionised paint technology by moving the paint tank to the robot arm in the form of a refillable cartridge. The CBS delivers substantial savings in paint and solvent, reduces solvent emissions by almost half, improves productivity and enables smaller, even paint-to-order production runs.

So impressed was Mett with the capabilities of its first robot cell, with the user-friendly software, and local support and training, it has progressively increased the number of robotic installations to 40, including IRB 2400, IRB 4400, IRB 6400 and IRB 6600 robots. Over the past 15 years, Mett has consistently achieved a return on investment within 12 months for most of the robots, which are used for machine tending, sawing, deburring, ladling, palletising, gluing, assembly work and cleaning.

Today, the Melbourne-based business runs 24 hours a day and successfully sells its products to customers in Europe, Asia, North and South America and to local industry in Australia.

Did you know?

ABB developed the world’s first microcomputer-controlled, all electric industrial robot, the IRB6 in 1974. Today, there are more than 140,000 ABB robots installed worldwide, with around 1,800 of those in Australia.

Did you know?

ABB holds more than $2 million worth of robotics spare parts in Australia and supports clients in industries ranging from automotive to food and beverage.
Did you know?
The HVDC Light power system that is unique to ABB has no electromagnetic field, lowers transmission losses for connected AC grids, uses environmentally friendly oil-free cables and - because it can run underground or underwater - avoids unsightly overhead lines.

Sustainability
Sustainability is built into different aspects of ABB’s business, including the manufacturing of energy-saving products, systems and solutions, the sharing of technology throughout the group, particularly with developing countries, and joining multilateral efforts to raise living standards around the world.

One of ABB’s main contributions to sustainability lies in the strong environmental performance of its products throughout their life cycles.

Using life cycle assessments, ABB supplies products and systems that are more compact, have greater efficiency and consume less energy - which means less harmful emissions, and enjoy long operating lifetimes - which means less waste.

ABB also works with international organisations to raise awareness and standards on key issues. It has partnered with the World Business Council for Sustainable Development on energy issues, joined the 3C Climate Change initiative led by Swedish utility Vattenfall, and continues to participate actively in the work of the UN Global Compact and the Business Leaders Initiative on Human Rights.

Did you know?
ABB Australia’s silicon polymer-housed current transformers use proven oil/paper primary insulation with a special quartz filler to minimise the oil component. They have a long lifespan and avoid the risk of leaks which can occur in transformers insulated with SF6, a greenhouse gas with a global warming effect 22,000 times more potent than CO2.

Did you know?
To reduce losses in water networks, ABB Australia has introduced the enhanced flow meter AquaMaster, a revolutionary total water management solution that includes leakage control and treatment works in a single instrument.

Did you know?
ABB is ISO 14001-compliant for environmental management systems at 98 percent of its manufacturing and service centres.
We are committed to increasing your productivity and energy efficiency

To power your operation while lowering consumption we provide you with stable, highly efficient electrical energy supply, distribution and conditioning. To increase employee productivity and engineering efficiency, we offer you powerful integrated control systems. To improve dynamic performance and cut the power losses of your mill, we provide you with state-of-the-art drive systems. To ensure environmental compliance, reduce product standard deviation and increase production, apply our expert and optimisation solutions. Maximise the return on project investment through our vast knowledge, know-how and extensive experience. Using quality ABB products helps you achieve industry leading productivity.

For more information, visit us at www.abb.com or call 1300 782 527.