Material Handling
Service & Workshop
Power Conditioning
Motor Control
Automation & Integration
Consumables & Enclosures
WHO ARE WE?

Established in 1993, R&D Technology’s focus has been to satisfy an ever growing market demand for specialised electrical engineering and mechanical products. Our focus on excellence in customer service and product support has seen us grow to be one of the Hunter’s fastest growing companies. In 2005 R&D Technology acquired Powerhouse Systems in Brisbane, thus enabling R&D technology to add battery chargers and power conditioning to their growing range of products and services.

WHY R&D?

As an Australian owned and operated business we bring world-class products and service to a market that is increasingly hungry for a distinctive advantage. In fact, our exacting service and support assist you to make better profits through continuous business operations and reduce costs through minimal down-time.

As a leading Manufacturer & distributor of specialised electrical engineering and mechanical products, our services are suited to new or existing plants. Our focus is maintenance and breakdown protection of all plant and equipment. Industrial applications that are ‘hot, hum or move’.

DISTINCTIVE ADVANTAGES

We add value to clients by supplying leading edge products and product advice to maximise plant and equipment productivity. Our exact service and support ensure that you make money through continuous business operations and save money through minimal plant breakdown.

Trained post-trade qualified staff have a proven track record in maintenance, commissioning, faultfinding, design sales, and application engineering.

In addition, we have in house capability to manufacture, modify, service and fault find the products we sell and support.

OUR PRODUCT RANGE

Our extensive range of quality products are sourced for optimum performance and dependability and are accessed within Australia and Worldwide. In turn, this not only allows us to supply the best product to suit your job, but deliver the support and back up to ensure maximum uptime.

Our products and support add value to the following applications:

- Material Handling
- Service & Workshop
- Power Conditioning
- Motor Control
- Automation & Integration
- Consumables & Enclosures
CARDIFF, NSW  Our 1780m² Cardiff headquarters includes a leading-edge manufacturing workshop, training facilities, telecommunications, computer networks, onsite printing, product showroom and in-house service facility.

BRISBANE, QLD  The Brisbane office specialises in the supply, installation and servicing of a wide range of power protection, UPS systems and power supply products.

GLOUCESTER, NSW  A purpose built 780m² Gloucester office & workshop specialise in the design and development of industrial products including agricultural motor starting, flow and level equipment and also provides assistance as a service and custom design workshop.

AWARDS

- 2015 - Outstanding Individual Contribution Award, Vacon Australia
- 2014 - Best sustaining Partner Award, Vacon Australia
- 2012 - Partner Growth Award, Vacon Australia
- 2011 - Small host employer of the year, Novaskill
- 2009 - Small host employer of the year, Novaskill
- 2007 - Small host employer of the year, NSW Group Training
CONVEYOR PRODUCTS

**PULL WIRE SWITCH:** Choice of non metal, stainless steel construction, all external parts 316 stainless steel, IP67, maximum 4 n/o + 4 n/c contacts

**BELTMISALIGNMENTSWITCH:** Choice of non metal or stainless steel construction, all external parts 316 stainless steel, IP67, maximum 4 microswitches, alarm and trip.

**BELT TEAR DETECTOR:** Choice of non metal or stainless steel enclosure, all external parts 316 stainless steel, various contact configurations available.

**EMERGENCY STOP PULLWIRE LABELS:** The sign also has the ability to be bent which makes the attachment to rounded surfaces increasingly simple. These product attributes, along with the UV stability make the Traffolyte Sign a reliable, long lasting label for conveyors where a pullwire is used.

**PULL WIRE SWITCH INSTALLATION KIT:** Stainless steel and galvanized kit comprising; 2x turnbuckles, 4x wire rope grips, 4x wire rope thimbles, 4x D shackles, 2x compensation springs or custom to suit your application.

**LANYARD WIRE SUPPORT:** (LWS) A unique shape allows lanyard wire to be clipped into the wire carrier. Once installed, the wire cannot be removed without intentional intervention of maintenance staff. Impact modified polymer (UV stabilized) with 10mm threaded rod galvanized or 304 stainless steel.

The recent addition to the LWS system is LWS11. The LWS11 is to suit larger signal line cables for non-tension systems. The larger opening on the LWS11 allows cables of 13mm nominal diameter to be installed.

**AKLS:** (Insulated Clamping Wedge) The insulated cable clamping wedge has been engineer designed to grip and support cable used as the pull wire emergency stop on a conveyor in conjunction with the LWS wire support.

**PULL WIRE ROPE:** Vectran™ is a UV Stable Red Polyurethane coated LCP (Liquid Crystal Polymer) 3mm ID x 5mm OD multifilament melt spun yarn rope, designed and manufactured for the purpose of a lanyard emergency stop pull wire system. Also available is a UV Stable Red Polyurethane coated 304 Stainless Steel.
SNAP ACTION SWITCH WITH TIME DELAY: Choice of 304 stainless or steel chrome plated finish, built in time delay. PVC or heavy duty braided cable option, earthed body on all switches, optional accessories include wear plates & extension tubes.

MERCUERY TILT SWITCH: Choice of 304 stainless or steel chrome plated finish, PVC or heavy duty braided cable option, earthed body on all switches, optional accessories include wear plates & extension tubes.

LIGHTWEIGHT TIME DELAY TILT SWITCH: Plastic float ball or plastic straight shaft, PVC or heavy duty braided cable option, earthed body on all switches. Optional accessories include wear plates & extension tubes.

IS TILT SWITCH: Designed for use with Intrinsically Safe Circuits. The independently tested LP03 Tilt switch can be used in hazardous areas. 304 stainless or steel chrome plated finish, built in time delay. PVC or heavy duty braided cable option.

TYPICAL TILT SWITCH APPLICATIONS:
- High bin level indication and/or control.
- Plugged conveyor transfer point detection.
- Plugged chute detection.
- Crusher bowl level indication and/or control.
- Conveyor loss of feed indication and/or control.
- Conveyor belt drift indication and/or alarm.
- Boom stackers.
- Radial stacker

THERMOTILT SWITCHES

Thermo Tilt RTD: Monitors shaft angle & temperature at the bearing on dead shaft tail rollers & dead shaft pulley rollers.

Thermo Tilt Probe Switch: Monitors shaft angle & temperature at the bearing on dead shaft tail rollers & dead shaft pulley rollers.

Thermo Tilt Switch: Brings together proven tilt switch technology and simple robust temperature switching devices to detect both over temperature and changed orientation in normally static machinery.

FLOAT LEVEL & FLOW SWITCHES

FLOW SWITCHES: Glass reinforced polypropylene, trailing wire and paddle style
LEVEL SWITCHES: Glass reinforced polypropylene, tank side and top entry switch styles
INLINE FLOW SWITCHES: Glass reinforced polypropylene and brass construction
FLOAT SWITCHES: Polypropylene, heavy duty switch, cable length 1 to 30m

MATERIAL HANDLING ACCESSORIES

- ROPE BRAKE
- CABLE BUN
- MULTI FUNCTION SOUNDERS
- STROBES
As part of our commitment to customer service, R&D Technology have fully equipped electrical workshops. Our product support engineer and licensed electricians have the expertise to:

- Design
- Modify
- Enclose
- Assemble
- Calibrate
- Test And Inspect
- Perform Pre Delivery Commissioning

We are also happy to attend your site to assist with the application installation on our entire product range.
R&D Technology’s service division provides a complete commissioning, inspection and maintenance service for VACON drives, UPS, Powerhouse DC power systems, Power Factor Correction Unit (PFCU) and conveyor equipment.

Our experienced service technicians have been extensively trained on VACON® & Danfoss Drives, UPS, Powerhouse DC Systems & Power Factor Correction. Because of this training and years of experience, we are able to service the above either on-site or our workshop, so you can be assured of the same quality and professionalism as you will find throughout the rest of our or-

- Rapid response to minimise downtime
- Provision of 24/7 service & support
- Planned Maintenance Programs
- Engineer, Install & service
- On-Site Training
- UPS Audits
Powerhouse Systems Phase Control DC Systems are of constant voltage and current limited type. Utilising SCR phase control design they provide a rugged and highly reliable battery charger.

Available with single and three phase inputs, the Powerhouse Systems battery charger series is ideal for charging sealed lead acid, vented lead acid and lithium phosphate batteries.

Phase Control DC systems are in widespread usage throughout Australia:

- Supply LV & HV switchboards
- DC substations
- Emergency power and lighting system
- Hospitals
- Airports
- Utilities
- Communications
- Mining
- Petrochemical industries.

**MODULAR DC SYSTEMS**

Powerhouse is proud to announce its new range of modular DC systems, an excellent composite alongside our Powerhouse phase control chargers the modular range offers many key features and benefits such as:

- High efficiency
- 100A per 1 RU Shelf
- Ethernet and USB communications
- ELVD (Electronic low voltage disconnect)
- N+1, N+2, etc redundancy
- Advanced Battery Management
- Hot swap modules and ease of paralleling
- All this fitted into our fully segregated enclosures.

These units are capable of up to 38 rectifiers totalling 1266A and are made locally in our Newcastle workshop. We can also supply these with normal lead acid or lithium batteries. An excellent addition that can be tailor made to suit a variety of environments, mining, data centres, commercial and industrial applications.

**BATTERIES**

Our range of batteries include Valve Regulated Lead Acid VRLA in either Absorbed Glass Mat AGM or GEL. For higher performance and longer life we offer Lithium LiFeP04.

- UPS
- DC systems
- Solar panel systems
UNINTERRUPTIBLE POWER SUPPLY (UPS)

**INTERACTIVE TECHNOLOGY:** 650VA - 5kVA, pure sine wave output, microprocessor control, extended autonomies, computer interface, rack mount options

**ONLINE TECHNOLOGY:** 1kVA to 10kVA, microprocessor control, extended autonomies, computer interface, rack mount options

POWER SUPPLIES

**DC-AC INVERTERS:** Vented case, modified and true sine wave, 250W to 5kW power outputs, 12V, 24V, 48V, 120VDC input, 115V and 230VAC output

**BATTERY CHARGERS:** Vented case, wall mount, free standing, single and three phase input, 12V, 24V, 48V, 110V and 220DC output, 5A to 1000A nominal current, complies with AS 1956 and AS 4044

**SWITCH MODE:** Vented case, din rail mount options, 5W to 25kW power outputs, 85V to 264V ac input, 5V, 12V, 15V, 24V and 48VDC output

**LINEAR SERIES:** Vented case, DIN rail mount options, fully regulated, unregulated, filtered unregulated, manufactured to your specifications

**DC-DC CONVERTERS:** PCB mount, vented case, 1.5W to 10kW, 5V, 12V, 15V, 24V and 48V dc input. 5V, 12V, 15V, 24VDC output

**CONTROL & CONSTANT VOLTAGE TRANSFORMERS**

**CONTROL TRANSFORMERS:** Open and enclosed, single and three phase, 5VA to 20kVA, earth screened, centre tapped, R&D technology can supply to your specific requirements

**CONSTANT VOLTAGE TRANSFORMERS:** Open and enclosed, single and three phase, 150W to 5kVA, earth screened, centre tapped, R&D technology can supply to your specific requirements

POWER FACTOR CORRECTION SYSTEM

The Powerhouse Systems Power Factor Correction equipment is based on many years of experience with the application and installation of automatic power factor correction equipment in Australia for Australian conditions and using the latest Australian and Overseas standards.

INDUSTRIAL LED LIGHTING

**SURVIVOR XTREME LED SYSTEM:** Purpose designed IP66 LED Lighting system for the mining industry, available in 24VDC/48VDC/240VAC/ELV, 600mm & 1200mm Lengths, IP66 rated to AS60529, 50,000hr LED life, 5yr warranty.

**BURNBRITE LED LIGHTING:** Burn Brite’s portable LED and fluorescent lights boast a reputation for strength and reliability, proven by the fact they’ve been the light of choice in Australia’s industrial, automotive, outdoor and leisure markets for nearly 60 years.
ISOLATORS

The XT3 Xtreme Series IP66 sloped Roof visual isolator have been designed & manufactured for the most physically demanding applications. Unlike conventional isolators that are certified IP66 on the enclosure only, our unit is certified IP66 for the complete finished product.

- Certified to IP66 (entire isolator)
- New design isolator handle
- 316 Stainless or powder coated option
- Small to large double sided handle
- 160A to 1250A ratings
- Guide to centre any slightly misaligned shafts
- LED lighting option
- Flame retardant & UV stabilised handle

XTREME ISOLATOR HANDLE

Features:
- Glass reinforced material
- Raised lettering
- Small to large double sided handle
- Mount compatible with HOLEC K3D-K6D & H1-H5
- Accepts standard lockout arrangements
- Guide to centre any slightly misaligned shafts
- Certified to IP66
- Flame retardant & UV stabilised
- Internal stops
- Clevis pack supplied

Benefits:
- Superior Tensile Strength
- Easy ON/OFF Identification
- Handle lockable in OFF position
- Universal applications
- Easy visual Inspection of locking arrangement
- Ensures positive engagement of isolator
- Material is ROHS compliant
- Extended life in outdoor environments
- Eliminates potential to damage switch mechanisms
- Clevis Kit consists of: 1 Clevis, 1 x 2mm Allen Key, 2 x M4 grub screws, 2ml packet of vibratite thread lock

MOTOR CONTROL

XTREME SERIES ENCLOSURES

IP66 CERTIFIED
AS60529-2004
VLT® | VACON® AC drives technology is designed to fulfill the requirements of all Mining & Minerals processing applications with a single product family. The VLT® | VACON® AC drive product line ranges from 0.25 kW to 5 MW, with supply voltages up to 690 V.

The compact size and full modularity of VLT® | VACON® AC drives together with well-designed mechanical construction and instructions minimise your installation time. Informative PC tools reduce commissioning time and optimise machine tuning for a successful start-up.

VLT® | VACON®

MOTOR PROTECTION RELAYS

- **EOCR-SS**: Overcurrent electronic relay, phase loss, definite time 0.2-10sec
- **EUCR-2C/3C**: Electronic under current relay, definite time 0.2-30sec
- **EOCR-DSL/DS3**: Overcurrent electronic relay, 0.5-400A, locked rotor, phase loss
- **EOCR-SSD**: Overcurrent electronic relay, locked rotor, phase loss, digital display
- **DSP-AOL**: Overcurrent electronic relay, locked rotor, phase loss, digital display panel mount, current unbalance, ground fault, phase reversal selector, displays last 8 trips.
- **DSP-AOM**: Overcurrent electronic relay, locked rotor, phase loss, digital display, current unbalance, ground fault, phase reversal selector, displays last 8 trips.
- **ECR-3DD**: Overcurrent electronic relay, undercurrent, locked rotor, phase loss, digital display, phase loss & phase unbalance, definite time 0.5-25sec

AC & DC MOTORS, TRANSMISSIONS & PUMPS

Partnering with CEG, we now offer an extensive range of products including:
- AC electric motors
- DC electric motors
- AC flame proof motors
- Water pump and associated equipment
- Submersible pumps
- Electronic motor speed inverters
- Transmissions
- Ventilation and industrial fans.
Neutral Earthing Resistors (NERS) are employed in AC distribution networks to limit the current that would flow through the neutral star point of a transformer or generator in the event of an earth fault. The rating of the NER is chosen so that the fault current is limited to that necessary to operate the protection relays within the required time.

**TRAPPED KEY INTERLOCK SYSTEMS**

**mGard** is the premier range of robust modular trapped key products. Trapped key technology offers mechanical solutions to safeguarding dangerous machines and hazardous processes.

**amGARD**: amGard is the ultimate range of safety gate switches. The robust modular arrangement offers an extensive variety of access solutions that can be tailored to suit any application.

**NEUTRAL EARTHING RESISTORS**

**Insulation Monitoring Devices**
**Measuring and Monitoring Relays**
**Equipment for Insulation Fault Location**
**Power Quality and Energy Measurement**
**Residual Current Monitoring Systems**
**Test Systems**
INDUSTRIAL AUTOMATION

- Sensor Technology
- Connection Technology
- Identification Systems
- System Solutions
- Interface Technology
- Fieldbus Technology

BANNER SENSORS

- Photo eyes, fiber optic sensors, ultrasonic sensors
- Wireless sensors, wireless monitoring control
- Safety controllers, safety light screens, safety switches
- Machine vision, vision sensors, vision lighting
- Indicator lights

Application: Environment Monitoring

IMO AUTOMATION

- Cam Switches
- Power Supplies
- Timers
- Contactors
- DIN Rail Terminals
- Relays & Sockets
- PLCs
- Proximity Switches
- HMI
- Photoelectric Switches
- Fieldbus Remote I/O
INTEGRATION

R&D Technology’s Integration Engineering team provides instrumentation, control, automation and telemetry solutions together with support in the water, waste water, mining, manufacturing, food and beverage sectors. The Integration Engineering team offer the following expertise:

SCADA, Radio, PLC, Telemetry Engineering and Support
New Systems –
• Architecture, network, communication design and rationalising
• Functional design, control logic programming, peer to peer control and safety systems
• Design and configure databases, operational mimics and server/client infrastructure and configuration.
• Ongoing support, maintenance and fault finding.

Legacy systems –
• Upgrade existing redundant SCADA, Radios, PLCs and RTUs to modern alternatives
• Work with the client to determine the least disruptive upgrade path
• If upgrading is not required, R&D Technology offer expertise in a range of SCADA systems, PLCs, RTUs and radios to assist you achieving the optimal out of your existing network.

System Auditing
Looking to upgrade or update your systems such as;
• Network overviews, including peer-to-peer communications
• Technical drawings
• Logic programs
• Hardware configurations
• Functional Descriptions.

R&D Technology can audit your Telemetry and PLC systems to ensure you know how the system operates and have up to date backups of all critical hardware to minimise downtime.

Control & Telemetry Overview Design
**CONSUMABLES**

**Cable Glands** Manufactured from UL approved Nylon 6 94V-2 black. Temperature -40°C to +105°C. “Cable Grab Claw” stays on gland body to reduce installation time.

**Heat Shrink** Φ0.8 - Φ180mm (3/64-5 inch or larger). Special sizes are available. Black, Red, Yellow, Green, Blue, White, Grey, Clear and Yellow and Green. Can produce upon customers special requirement. Operating Temperature: -55ºC-125ºC.

**Terminals, Disconnectors & Lugs** The range include ring terminals PVC insulated spade terminals, PVC insulated pin terminals, PVC insulated blade terminals, PVC insulated butt connectors, PVC insulated female disconnectors, PVC fully insulated female disconnectors, PVC insulated male disconnectors, PVC insulated piggy back disconnectors, PVC fully insulated receptacle disconnectors, PVC insulated bullet disconnectors, Twin Cord-end terminals, Nylon insulated cord-end terminals, Bellmouth Lugs.

**Hose** A Full range of FRAS hose is also available.

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**ENCLOSURES**

**METAL ENCLOSURES:** Wall mounted enclosures, terminal boxes, free standing, IP65, 1.5mm sheet steel, powder coated RAL 7032.

**STAINLESS STEEL ENCLOSURES:** Wall mount 304 Stainless Steel (IP65). 316 stainless steel (IP66, IP67) Available in a choice of standard or sloping roof, terminal boxes and visual isolators.

**POLYESTER ENCLOSURES:** Wall mount, pedestal, modular, IP67.

**ACCESSORIES:** Fans with filters, anti condensation heaters, thermostats, heat exchanger, conditioner.

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Terminal Box IP67  
Sloped Roof IP66  
Enclosure IP66  
IP66 Isolator with Fortress locks  
IP66 Visual isolator  
Customised Enclosures