



MGE
New Zealand



PRODUCT BROCHURE



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ABOUT MGE



MGE is the Auckland based switchboard engineering facility owned by McKay of Whangarei. The business caters to all segments of the switchboard manufacturing market with special emphasis on solutions that require high-level engineering such as motor control centers and power distribution switchboards for commercial and industrial applications.

MGE is the former Schneider Electric switchboard manufacturing division that was the amalgamation of Merlin Gerin (originally A&G Price) and Telemecanique (originally Turnbull & Jones Controls).

MGE has a number of standard switchboards readily available for manufacture. These include Motor Control Centres (withdrawable, demountable or fixed), Main Distribution Switchboards and Power Factor Correction units.

In addition to the above standard lines MGE is able to accommodate special requirements through a number of other options. MGE can also assist with on site engineering installations, modifications and retrofits of switchboards where needed.

MGE is comprised of approximately 30 staff with a high degree of engineering capability. A number of the staff is from the original Turnbull & Jones Controls and A&G Price companies bringing a wealth of technical and practical experience to MGE. MGE has specialist engineering, project management and a test technician in-house.



MGE predominantly uses Schneider Electric equipment to manufacture switchboards but is able to source alternative product where needed. MGE also manufactures Schneider Electric medium voltage switchgear.

POWERAK PLUS

A versatile, free-standing, heavy-duty, modular, design of switchboard purpose built for industrial applications. Walk-in busbar chamber for easy access. Manufactured by MGE so it can be any height, width, depth, or colour. It is solid and well-built with a 2mm thick steel shell



Two Sizes

95mm wide for top main structure and intermediate heavy load supports. 47.5mm wide for bottom main structure and intermediate general supports.

Fabricated Steel Base

75 - 100 mm high channel.

External Panels

1.5mm thick roof plates and floor plates if required for vermin proofing.

Cubicle Front, Rear and Side Panels

1.5mm thick machine folded pan doors, either fixed to or hinged from the cubicle structure. Knurled screws or door lock hinged door fitting available.

Accessories

Cubicle divider plates, cells, gear plates, wireways, meter panels, mounting plates for specific propriety equipment are also available and are continually being developed.

Finish

Preparation - Tricho degreasing

Finish Coat - Epoxy Powder polymerised at high temperature

Colour - BS or RAL standard colours or as per customers needs

Application

Typical applications of the Powerak have included:

- Power distribution switchgear.
- Motor Control Centres.
- Communications equipment.
Will accept international chassis and racking systems.
- Instrumentation - Protection.
- Metering - Relay control etc.
- PLC cubicles.

The versatility of 'Powerak' is a definite design advantage and it should be noted that cubilces can be remodelled or extended at any time utilising stock cubicles. In addition Powerak Plus complies to AS/NZ 61439.

Construction Features

Corner Post

2.5mm thick 'G' section machine folded and prepunched.

Horizontal Rails

2.5mm (12BG) machine folded channnels employed as cross or depth rails.



MGE can guarentee that the Powerak Plus is NZ owned, designed and manufactured by NZers for NZ conditions and applications

POWERAK PLUS

Powerak NZ designed / Manufactured switchboards certified to AS/NZ 61439 Standards and offering fully type-tested up to form 4b, rated to 7000A, with a withdrawable option. In addition the Powerak Plus is suitable for MSB's MCC's, DB's and APFCU's



Assembly

Corner posts are bolted directly to the base channel (on top of floor plate) followed by horizontal rails and sheathing. Accessories and propriety are added as required.

Door Fastening

Fixed doors fitted with four M6 set screws.

Hinged doors - two or more hinges plus standard door catch.

Critical Dimensions

Refer assembly drawing.

Openings

Module width less 95mm

Module height less 48mm

Total height - cubicle height plus base channel.

Other heights in modules to order.

Door size - module width/height less 12mm.



Design & Data

Cubicle Depth

Popular sizes: 380mm, 760mm, 950mm and 1140mm, 1235mm
Full range from 380mm to 1235mm

Cubicle Height

Popular size: 2280mm.
Alternative: 1900mm.
Note add base height (80mm).

Cubicle Width

Popular sizes: 570mm, 760mm, and 950mm.
Full range from 380mm to 1140mm.

Wireways

Additional termination or wiring space can be made available with the introduction of a vertical duct or wireway between cubicles, fitted with individual access covers. Preferred size is 475mm



CUBIC

The CUBIC modular system is based on a concept of standard modules for the construction of electrical panels. Using a relatively few standard parts it is possible to construct a bespoke enclosure from a range of standard components.

Application

The modular system can be used in many situations, where electrical switchboards are a necessity to secure the operation of electrical equipment.

- Main and distribution boards
- MCC panels
- Marine panels
- Draw-out panels (Multi Drawer)
- Distribution boards
- Control panels
- Desks
- 19" Racks

Design & Data

Material: Electro-galvanized / iron-phosphated steel plate

Colour: Light grey, RAL 7035, powder lacquered 60-80 µm

Busbar systems: System 225, 2000 and 7000

Supply systems: TN-C, TN-S, TN-C-S, TT and IT

Internal separation: FORM 1, 2a, 2b, 3a, 3b, 4a, 4b and FORM 4, type 1-7

Multi Drawer: Up to 630 Amps / 220 kW AC3, lcc up to 120 kA

Electro-magnetic compatibility: EMC environment 1, 2 and # 1 and 2

Type test: According to IEC/EN 60439-1

Rated current: Up to 8750 Amps

Dielectric properties: 3.5 kV

Rated short-time withstand current: Up to 120 kA

Rated peak withstand current: Up to 264 kA

Rated voltage, insulation: 1000 V AC

Rated operational voltage: Up to 1000 V, 50 Hz

Degree of protection: Up to IP54

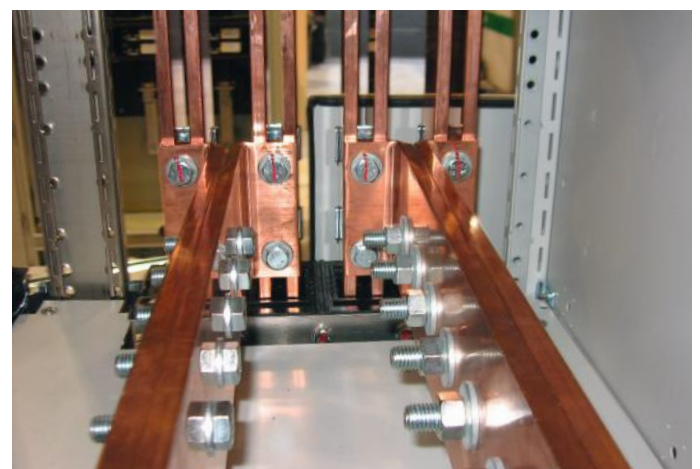
Vibration test: 2 G in frequency area 2.5-500 Hz in three directions

Shock test: 30 G in 12.5 ms in six directions

Seismic test: Earthquake test carried out with biaxial horizontal and vertical multi-frequency movements

Arcing test: Type B assembly' according to IEC 61641 as well as to AS/NZS 3439.1

Surface treatment: Tropical test ISO 6270, class C2 high, according to ISO 12944



Construction Features

The versatility of the modular system makes it easy and quick to assemble and install electrical panels as well as to extend and/or modify existing panels - including older enclosures. The versatility of the modular system makes it easy and quick to assemble and install electrical panels as well as to extend and/or modify existing panels – including older enclosures

ON SITE SWITCHBOARD SERVICE

Mitigate Safety Risk and Maximise Productivity Using MGE's New On Site Switchboard Service



A New Service - On Site Switchboard Service

Thanks to its new mobile workshops, MGE can immediately complete any remedial work required on site, greatly reducing production down time as well as any health and safety risks to staff.

In addition to inspection, auditing, testing, cleaning and preventative maintenance of switchboards, MGE also offers:

- Adaptations and modifications to existing switchboards
- Retrofitting of new switchgear by replacing old circuit breakers with new ones inside existing switchboards
- Customer personnel training

Minimise Risk

Electrical faults continue to account for a significant number of fire losses in New Zealand. Switchboards wear and need replacement over time. Demands on the installation change and network system upgrades affect fault levels. To minimise the considerable risks to safety and productivity, many insurers strongly recommend that businesses put in place a regular switchboard inspection and maintenance programme.

MGE is fully equipped to carry out comprehensive switchboard inspections and testing including; thermography, dielectric strength (kV/Hi Pot), insulation testing and contact resistance (Ductor). MGE will then produce a report indicating any switchboard 'hot spots' or potential problem areas.



MGE offers the following services:

- Switchboard Engineering Solutions
- Switchboard On-site Inspection
- Switchboard On-site modifications, additions, and installation
- Service and Maintenance Contracts
- Power Factor Correction Design
- Testing Procedures
- Thermal Imaging



Quality in Focus

Safety, Quality and Reliability are MGE's core objectives. The company is ISO accredited, PREQUAL certified and a member of Nesma (the National Electrical Switchboard Manufacturer's Association).

With over 50 years experience in the electrical industry, and clients such as Fonterra, Genesis Energy, Refining NZ and NZ Steel, MGE is the partner of choice for all on site switchboard service

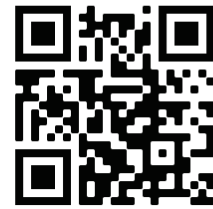


Free Consultation

If you would like your business to enjoy uninterrupted production, maximise the life cycle of its assets as well as increase efficiency, safety and reliability, contact MGE for a free consultation

CONTACT US

Scan to find out more



or visit www.mgenz.co.nz



We would love to hear from you! Contact any of our two offices that are located in Auckland and Whangarei to discuss your switchboard and electrical engineering requirements.



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