

MANUFACTURING OVERVIEW

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ABOUT US & CERTIFICATIONS

Power Plant Electrical Technologies is an Integrated Electrical Engineering Organisation, focused on supplying high end systems and solutions to mining operations, utilities and industry. We design, manufacture, supply, install and commission electrical, control and instrumentation solutions.

Power Plant Electrical Technologies (Pty) Ltd, is certified in various specialist degrees:

- SANS 1973-1 & SANS 1973-3:2017 for IEC 61439 (Reg No - 10392/16413)
- TUV Rheinland ISO 45001:2018 (Reg No – 01 100 161874)
- TUV Rheinland BS OHSAS 2009:2015 (Reg No – 01 113 060716)
- ABB International Authorized Value Provider
- ABB Service Provider
- CIDB Grade 8EP (Reg No – 114085)
- We are BBBEE Level 1 contributor
- South African Association for Energy Efficiency (SAEE)
- South African Photovoltaic Industry Association (SAPVIA)





VISION & MISSION STATEMENT

We are dedicated to helping our customers reach their production and efficiency targets. We aim to utilize our knowledge, experience, and expertise to support this objective.

VISION

To achieve regional domination and maintain a Multi-National presence in Electrical Engineering Consulting, Project Execution, Installation and Supply, whilst maintaining flexibility through an efficient and dynamic core structure offering a differentiated service.

MISSION

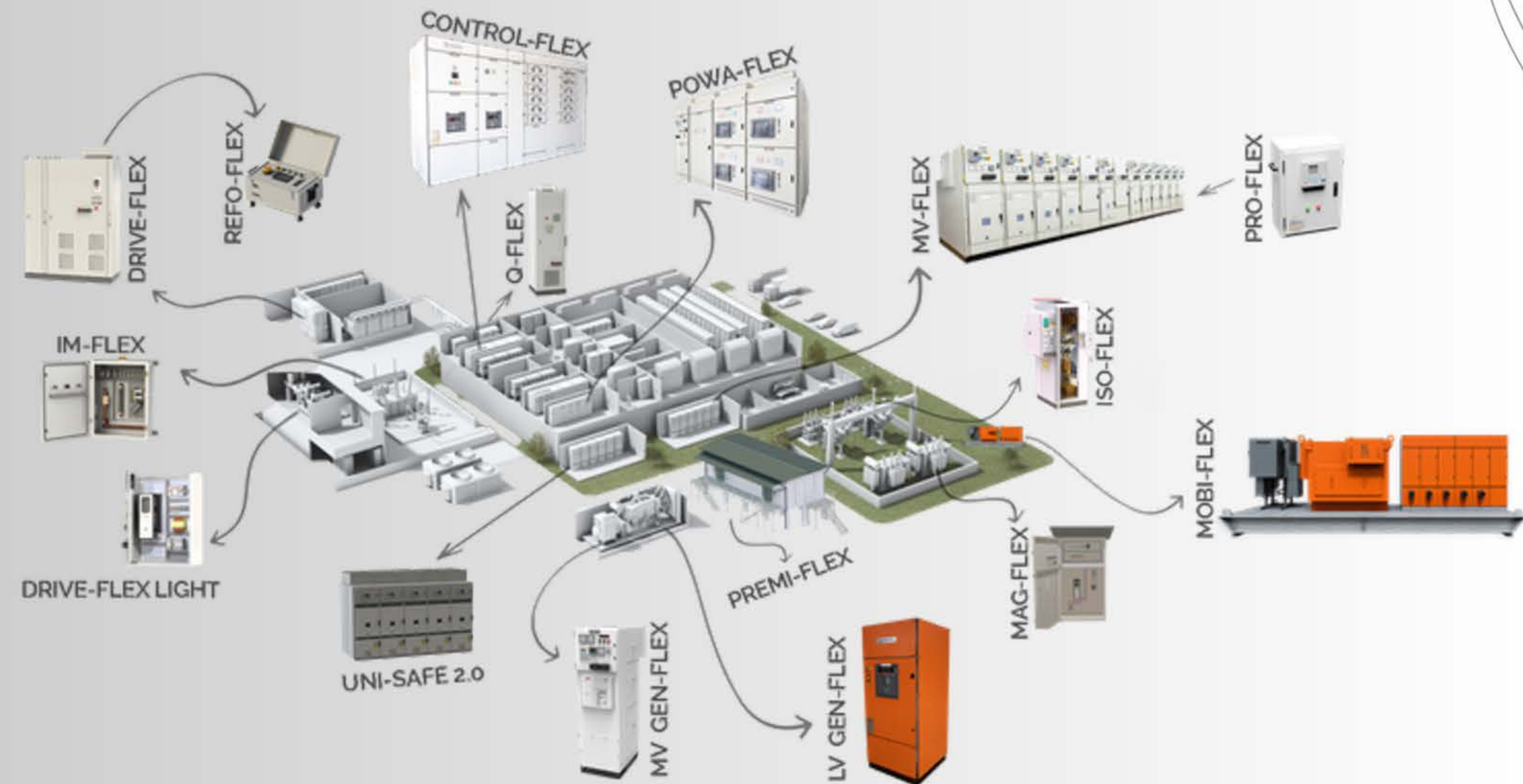
To provide a world class, differentiated service, focused on adding value to the customers process, whilst addressing customers' needs in a professional and dynamic manner.



THE FULL FLEX PRODUCT RANGE

We have developed a range of electrical solutions to meet the diverse needs of our customers. Known as the Flex range, we emphasise adaptability in application, approach, and our overall solutions. Our in-house designed and manufactured Flex solutions are detailed below:

- **Drive-Flex:** Low-voltage industrial drive free-standing cabinet solutions.
- **Q-Flex:** Low-voltage power factor correction and filter bank solution.
- **MV-Flex:** Medium-voltage primary switchgear solutions.
- **IM-Flex:** Insulation monitoring and high-impedance earthing system.
- **Retro-Flex:** Retrofit solution for legacy MV circuit breakers and contactors to modern systems.
- **Gen-Flex:** Compact MV or LV generator synchronising and control breaker cabinet technology.
- **Premi-Flex:** Prefabricated or containerised E-house design solution.
- **ISO-Flex:** Heavy-duty medium-voltage snap-action on-load isolator.
- **Refo-Flex:** Automated AC VSD stack reforming tool with intuitive reform ramp.
- **Pro-Flex:** A practical training and demonstration platform for the ABB Relion range of protection relays.
- **Control-Flex (Non-drawout or draw-out configuration):** Motor control centre solution.
- **Mobi-Flex:** All-in-one movable power block.
- **Mag-Flex:** Power transformer pre-magnetisation system.
- **Powa-Flex:** Bulk electrical power control centre/load distribution centre switchboard solution.



FURTHER PREVALENT OUR PRODUCTS

We offer a comprehensive range of services including product provision, stocking, and manufacturing, all tailored to meet your requirements promptly and efficiently.



POWER & POWER
QUALITY



INSTRUMENTATION &
ANALYTICS



LV & MV PRODUCTS



LV, MV MOTORS &
GENERATORS

PLC AUTOMATION &
CONTROL SYSTEMS



OUTDOOR
SWITHEGEAR



POWER PROTECTION &
AUTOMATION PRODUCTS



RENEWABLE ENGERY



TRANSFORMERS



DRIVES



RING MAIN UNIT &
MINI SUBSTATIONS

PREMI-FLEX: MODULAR SUBSTATIONS & E-HOUSES

Cost Effective and Time Efficient
Compact Substation Solutions for:

- Low Voltage Motor Control Centres
- Low Voltage Power Distribution Centres
- Complete Automation and Control Systems
- Production Control Rooms
- Chemical and Water Treatment Plants
- Forced Ventilation (Transformer Room)
- Air Conditioned (MV and LV Room)
- ISO 830: Freight container specifications
- Built to IEC 62271-202: High Voltage Switchgear and Control Gear,
- High Voltage/Low Voltage Prefabricated Substation
- IEC/EN 60529: Specification for degrees of protection provided by enclosures (Ingress Protection Rating)



MV-FLEX: MEDIUM VOLTAGE SWITCHGEAR

Our MV-Flex primary switchgear solution is sturdy and robust, with high flexibility, fast delivery, and a high level of safety. Its compact height profile makes it suitable for installation in confined spaces such as mining cubicles and e-houses.

- Voltage range 3.3kV to 22kV
- Current ratings from 630A to 2500A
- Current fault levels ratings of 31.5kA
- Flexible and compact design
- Equipped with Vacuum or SF6 Circuit breakers, Vacuum Contactors, or fused and non-fused Isolators
- Fitted with a range of protection relays and others if required
- ARC venting and ducting (as standard)
- Integrated Internal ARC detection for High-Speed Protection and High Levels of Operator Safety
- Short delivery lead time 8 to 14 weeks
- Extension options to other manufacturing switchboards
- Built to IEC 62271-200 standards
- The MV-Flex fits within the height of a standard Hi-cube container



POWA-FLEX: CUSTOM POWER CONTROL CENTER/LOAD DISTRIBUTOR CENTERS

Where Bulk LV Power is to be Distributed In a factory or Mine, our Load Centre is the Answer

- With high inherent safety
- Operational voltage up to 1000V AC
- Current ratings up to 6300A
- Current fault levels up to 120kA short and up to 264kA peak
- Built to IEC 61439 standards
- IP ratings up to IP65



CONTROL-FLEX LOW VOLTAGE SWITCHGEAR

We manufacture a range of LV switchboards for power distribution and motor control. Both non-drawout and drawout configurations are available.

- Fully Type Tested Panel Solutions
- Equipped Motor Starter Panels, DOL, Star Delta, Soft Starters,
- Variable Frequency Drive Cabinets
- Power Factor Correction Systems
- Operational voltage up to 1000V AC
- Current ratings up to 6300A
- Current fault levels up to 120kA short and up to 264kA peak
- Built to IEC 61439 standards
- IP ratings up to IP65



DRIVE-FLEX: VARIABLE SPEED DRIVES & INVERTERS

Our product lineup includes top-selling solutions such as Cabinet Drive Solutions, for high power Low Voltage Variable Frequency Drives, DC Drives, and Inverter Solutions, all designed to meet your needs and optimize your operations for success.

- Our Drive Flex Cabinet Drive Solution is designed for maintainability and is manufactured for fast delivery.
- LV operational voltage from 380 to 690V AC
- LV power applications from 1.1kW to 560kW
- We integrate DC Drive Solutions from 20A to 5200 Amp
- VSD offerings have IP ratings from IP20 to IP54
- We carry the Largest stock holding of ABB LV Variable Frequency Drives in Sub-Saharan Africa



UNI-SAFE 2.0

MANUFACTURED UNDER LICENSE TO ABB ITALY

Air insulated Medium voltage Switchgear for primary distribution Up to 24kV, 2500A, 31.5 kA

- Fully Type Tested Panel Solutions.
- Functional units with withdrawable circuit breakers.
- Voltage Ratings 12-24kV
- Current Ratings 630 - 2500A
- Rated short-time withstand current 31.5kA (3s)
- Internal Arc withstand current 31.5kA (1s)
- IP Rating; IP4X
- IEC-62271-200 Standards
- AFLR Internal ARC Class.
- Indoor Air-Insulated single busbar system.
- Used to distribute electric power for utility and industrial purposes.



ZX0.2

GAS-INSULATED MEDIUM VOLTAGE SWITCHGEAR
MANUFACTURED UNDER LICENSE FROM ABB GERMANY.

Gas-insulated medium voltage switchgear rated for voltages up to 31.5kV, 2500A with exceptional short-circuit strength.

- **Maximum Operator Safety:** Hermetically sealed high-voltage compartments ensure no accidental contact with live components.
- **Internal AFLR classification (1AC)**
- **Compact & Space-Saving:** Its sleek, modular design makes installation easy, even in tight spaces.
- **Low Maintenance, High Reliability:** SF6 gas insulation prevents dust, moisture, and contamination — meaning minimal maintenance and long-term performance.
- **Cost-Effective:** Reduced space requirements and maintenance costs mean greater savings over time.
- **Compact, modular design for flexible configurations**
- **IP65-rated protection against external elements**
- **IEC-62271-200 Standards**
- **Plug-and-play installation with no gas work required on-site**
- **Operator controls are externally accessible for ease and safety**
- **Arc fault tested to ensure maximum protection**
- **Designed for a service life of over 40 years**



ZX2

**GAS-INSULATED MEDIUM VOLTAGE SWITCHGEAR (SINGLE OR DOUBLE BUS)
MANUFACTURED UNDER LICENSE FROM ABB GERMANY**

Gas-insulated medium voltage switchgear rated for voltages up to 40kV, 31.5A, up to 40kA with exceptional short-circuit strength.

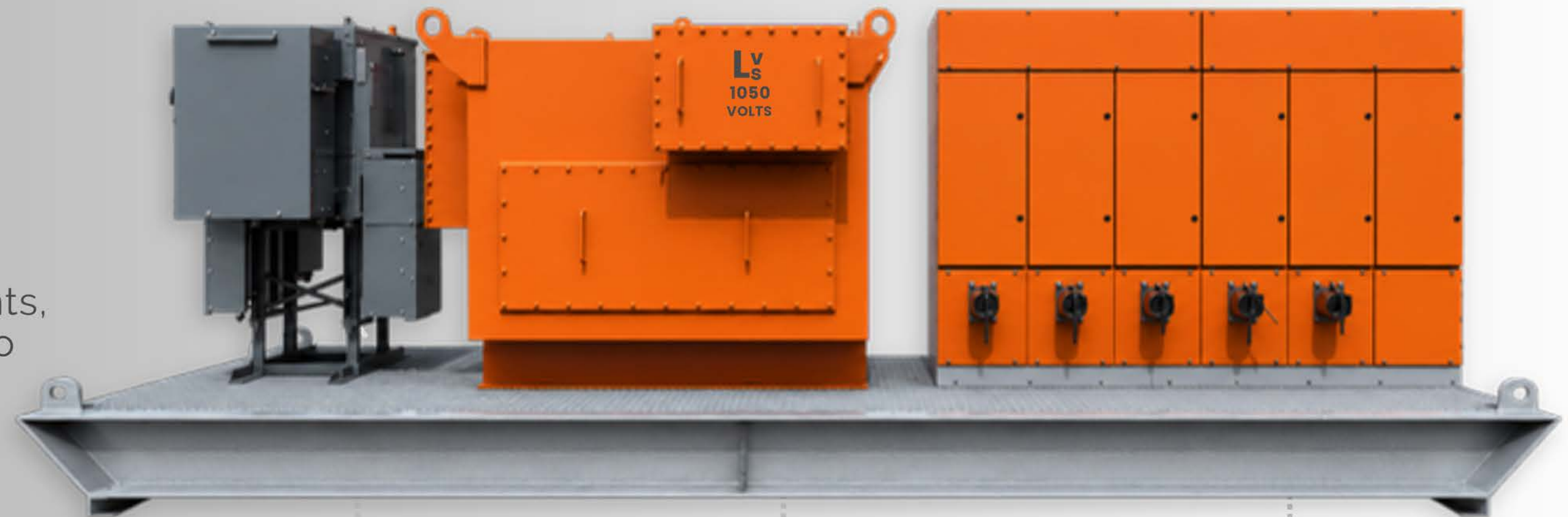
- **Maximum Operator Safety:** Hermetically sealed high-voltage compartments ensure no accidental contact with live components.
- **Internal AFLR classification (1AC)**
- **Compact & Space-Saving:** Its sleek, modular design makes installation easy, even in tight spaces.
- **Low Maintenance, High Reliability:** SF6 gas insulation prevents dust, moisture, and contamination — meaning minimal maintenance and long-term performance.
- **Cost-Effective:** Reduced space requirements and maintenance costs mean greater savings over time.
- **Compact, modular design for flexible configurations**
- **IP65-rated protection against external elements**
- **Plug-and-play installation with no gas work required on-site**
- **Operator controls are externally accessible for ease and safety**
- **Arc fault tested to ensure maximum protection**
- **Designed for a service life of over 40 years**



MOBI-FLEX

**COMPACT.
INTEGRATED.
RELIABLE**

All-in-one movable power block with customised voltage and power ratings. You name your requirements, and we build a Mobi-Flex to meet your needs.



SKID

Heavy-duty engineered base for easy lifting and transport

RMU

Ring Main Unit for incoming MV supply and protection.

TRANSFORMER

Step down transformer, MV to LV for safe and efficient distribution.

LV DISTRIBUTION SWITCHBOARD

Distributes power to multiple outgoing circuits with protection.

READY-FLEX: MOBILE MINI SUBSTATION

A customised solution ready for deployment of secondary power distribution, wherever you need it, whenever you need it.

- Voltage: from 400V to 24kV
- Current: Up to 630A
- Short Circuit: Up to 20kA
- Transformer: Up to 1600 kVA
- Enclosure: IP54/IP55
- Safe: Built for maximum operator safety
- Compact: Space-saving design for easy installation
- Reliable: Designed for uninterrupted power distribution
- Easy to maintain: Front access for simple operation and maintenance
- Sustainable: Eco-efficient solution for a better future

**Mobile. Reliable.
Ready to deploy.**



HIGH POWER DIESEL GENERATION SOLUTIONS

We fit, equip and intergrade; high power Diesel Power Generation Solutions

- Primary, standby, or co-generation applications
- Low and Medium Voltage Alternators
- Power ratings ranging from hundreds to thousands of kW's
- Fabricating of sound attenuated containerized solutions
- Containerized diesel storage solutions
- Automatic mains failure, load management, and synchronizing
- controller combinations custom designed for the application
- Electrical protection integration and trip co-ordination designed for safe and efficient operation
- Grounding and neutral earthing philosophies tailored to match local utility requirements and existing infrastructure constraints





OUR MANUFACTURING FACILITY

Our Head Office is supported by our Low Voltage and Medium Voltage Factory, where daily manufacturing takes place separated by a significant stock inventory. Additionally, we have a specialised sales distribution centers and service facilities in Gauteng, the Western Cape, and KwaZulu-Natal in South Africa.



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