ZEST
WEG Group

PRODUCT
PORTFOLIO

PRODUCT PORTFOLIO

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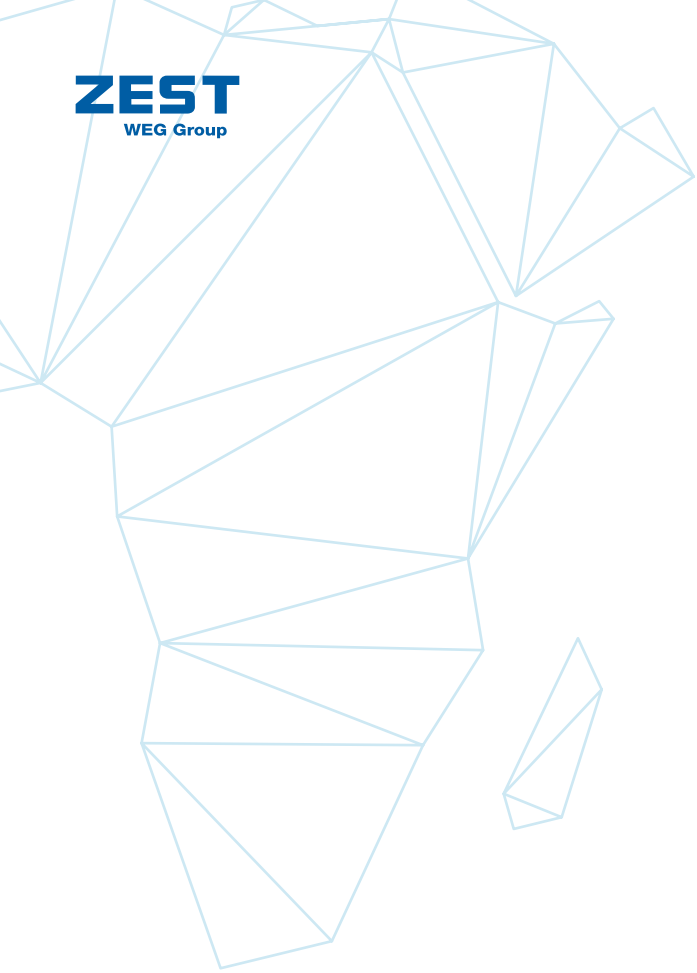

Zest WEG, a subsidiary of leading Brazilian motor and controls manufacturer WEG, has a strong commitment to contributing to the development of the African region, and has been servicing the continent for more than 40 years.

Its in-depth understanding of operating conditions, applications and years of experience on the African continent has ensured that the Zest WEG service offering is fit-for-purpose. By leveraging best practice engineering and manufacturing capabilities, Zest WEG is able to offer a range of standard off-the-shelf products as well as end-to-end energy solutions.

From single product installations to individually customised solutions, which are application specific, the latest technology is used to ensure optimum performance and reliability, whilst enhancing energy efficiency. Zest WEG's product line-up includes low, medium and high voltage electric motors, vibrator motors, variable speed drives, soft starters, switchgear, power and distribution transformers, MCC's, containerised and mobile substations, mini substations, diesel generator sets, and co-generation and energy solutions as well as electrical and instrumentation engineering construction and project management services in Africa. All products are engineered to facilitate a safe and reliable environment with operational stability and the highest possible production levels as an objective. Reduced maintenance, increased or improved energy efficiency and ease of serviceability assist in lowering the total cost of ownership.

Zest WEG operates local manufacturing facilities in Gauteng and the Western Cape. The two transformer manufacturing facilities position them as one of the largest manufacturers of mini substations and transformers. Zest WEG's genset manufacturing facility in Cape Town supplies standard off-the-shelf generator sets as well as custom built application specific units. The electrical enclosure manufacturing facility in Johannesburg focuses on world class electrical instrumentation and control solutions including custom built E-houses.

Supporting customers is key and Zest WEG is constantly reviewing its sales and support network to ensure that customers across the region have access to the highest levels of technical support as well as easy access to products and parts.

Beyond the head office based in Johannesburg, Zest WEG has 8 branches in strategic industrial locations; Cape Town, Durban, Middelburg, Port Elizabeth, Richards Bay, Rustenburg, Trichardt and Accra, Ghana. A further 13 distributors ensure the full support of its client base within South Africa. 30 Distributors and Value-Added Resellers (VARs) represent Zest WEG and its products in over 20 African countries, such as Angola, Botswana, Cameroon, Democratic Republic of Congo, Eswatini, Gabon, Ivory Coast, Kenya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Nigeria, Republic of Congo, Rwanda, Senegal, Tanzania, Uganda, Zambia and Zimbabwe.

Globally WEG is doing business in over 135 countries, and have commercial operations in 36 countries. WEG has 45 manufacturing sites in 12 countries, of which 4 are in South Africa.

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ELECTRIC MOTORS

LV & HV MOTORS

W22 Premium Range
Process and Mining Motors
IE1 or IE3 efficiency rated
- 0.12 kW to 500 kW
- 2, 4, 6 or 8 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 355)
- 525–550 V (Frames 63 to 100)
- 525–550–575 V/1000 V (Frames 160 to 355)

Smoke Extraction Motors
IE1 or IE3 efficiency rated
- 0.12 kW to 500 kW
- 2, 4, 6 or 8 pole
- 380–415 V or 525–550 V
- Frames 63 to 355
- 300 °C for 2 hours or
- 400 °C for 2 hours

IE4 Super
Premium Efficiency
- 3 kW to 500 kW
- 2, 4, 6 or 8 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 355)
- 525–550 V (Frames 63 to 100)
- 525–550–575 V/1000 V (Frames 160 to 355)

W20
General Purpose Motors
IE1 efficiency rated
- 0.18 kW to 355 kW
- 2, 4, 6 or 8 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 355)
- 525–550 V (Frames 63 to 355)

WMagnet
Permanent Magnet Motors
IE4 or IE5 efficiency rated
- 3 kW to 315 kW
- 1000, 1500 or 3000 r/min
- 380–415 V or 525–550 V
- Frames 132 to 355

Aluminium Motors
IE1 efficiency rated
- 0.18 kW to 7.5 kW
- 2, 4 or 6 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 132)
- 525–550 V (Frames 63 to 132)

Single Phase Motors
IE1 efficiency rated
- 0.25 kW to 7.5 kW
- 2 or 4 pole
- 220/440 V
- Frames 63 to 132

Brake Motors
IE3 efficiency rated
- 0.12 kW to 55 kW
- 2, 4, 6 or 8 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 225)
- 525–550 V (Frames 63 to 225)

Fan and Exhaust Motors
IE1 or IE3 efficiency rated
- 0.12 kW to 500 kW
- 2, 4, 6 or 8 pole
- 380–415 V (Frames 63 to 355)
- 525–550 V (Frames 63 to 112)
- 525–550–575 V/1000 V (Frames 132 to 355)
- Aluminium (Frames 63 to 132)
- Cast iron (Frames 63 to 355)

EC Motors
WEG Electrically Commutated Motors
IE5 efficiency rated
- Single phase 0.12 kW to 1.1 kW
- 3-phase 0.12 kW to 7.5 kW
- 1000, 1800 or 3000 r/min
- Frames 80 to 132

W40 ODP
Open Drip Proof
IE1 or IE3 efficiency rated
- 11 kW to 1400 kW
- 2, 4, 6 or 8 pole
- 380–415 V or 525–550 V
- Frames 160 to 450

Water Cooled Motors
Water jacket cooling system
- 18.5 kW to 2800 kW
- 2, 4, 6 or 8 pole
- 400 V to 4160 V
- Frames 180 to 560

Hazardous Area Motors
Ex nA, Ex tb or Ex ec
IE3 efficiency rated
- 0.12 kW to 500 kW
- 2, 4, 6 or 8 pole
- 230/400 V (Frames 63 to 100)
- 400/690 V (Frames 112 to 355)
- 525–550 V (Frames 63 to 100)
- 525–550–575 V/1000 V (Frames 160 to 355)

W22X Flameproof Motors
IE2 efficiency rated
- Ex db I Mb and
- Ex db IIC T4 Gb
- 0.37 kW to 4000 kW
- 2, 4, 6 or 8 pole
- 400 V to 11 000 V
- Frames 71 to 710

W21 Flameproof Motors
IE1 efficiency rated
- Ex db I Mb and
- Ex db IIB T4 Gb
- 0.37 kW to 330 kW
- 2, 4, 6 or 8 pole
- 380–415 V or 525–550/950 V
- Frames 90 to 355

Roller Table Motors
IE1 or IE3 efficiency rated
- 3 kW to 250 kW
- 2 to 12 pole
- 400/690 V or 525–550 V
- Frames 132 to 355

Low Voltage Slipring Motors
Cast iron IEC frames
- 1 kW to 450 kW
- 2 to 10 pole
- 380–415 V or 525–550 V
- Frames 100 to 450

Synchronous Motors
Salient or cylindrical pole
- Up to 110 000 kW
- 150 to 3600 r/min
- 400 V to 13 800 V
- Frames 280 to 1000

M Line Motors
Squirrel Cage or Slipring
- 250 kW to 50 000 kW
- 2 to 18 pole
- 400 V to 13 800 V
- Frames 280 to 1800

M Mining Slipring Motors
Continuous brushing and brush lifting
- 250 kW to 10 000 kW
- 2 to 14 pole
- 400 V to 13 800 V
- Frames 355 to 1000
- Integrated brush control system

W60
High Performance Motors
Compact design
MV VSD compatible
- 220 kW to 15 000 kW
- 2 to 8 pole
- 2300 V to 13 800 V
- Frames 355 to 710

W50
High Performance Motors
TEFC
IE1 or IE3 efficiency rated
- 75 kW to 1250 kW
- 2 to 12 pole
- 400 V to 6600 V
- Frames 315 to 450

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WEG MOTOR SCAN SOLUTION

WEG Motor Scan Sensor

WEG Motor Scan Gateway

Connectivity for performance and condition monitoring

The WEG Motor Scan® is a performance monitoring solution for industry 4.0

The WEG Motor Scan® sensor captures equipment data, sends it to the cloud via smartphone or automatically from the Gateway.
All collected information is stored in the cloud, which allows remote access in order to guarantee efficiency of the process.

Initially developed for electric motors, the solution can also monitor vibration and temperature of gearboxes, pumps, fans, compressors and other equipment powered by electric motors.

VIBRATOR MOTORS

Invicta Vibrator Motors

Suitable for hazardous areas

- Cast iron frames
- 0.07 kW to 12.5 kW
- 2, 4, 6 or 8 pole
- 400/690 V or 525–550 V
- Centrifugal force 50 kgf to 31 500 kgf
- Ex tb IIIC Db

GEARED MOTORS AND GEARBOXES

GEARED MOTORS

WG20 LINE

WG20 is the first geared motor range to be completely developed in-house at WEG with torques between 50 and 5000 Nm. The sophisticated, yet robust, housing provides a highly versatile and reliable product, with a wide range of possible applications.

Helical Geared Motors
- Nominal torque: 50–4500 Nm
- Power range: 0.12–30 kW
- Ratio range: 2.44–375.71

Parallel Shaft Geared Motors
- Nominal torque: 130–4500 Nm
- Power range: 0.12–30 kW
- Ratio range: 3.85–487.67

Helical Bevel Geared Motors
- Nominal torque: 110–4500 Nm
- Power range: 0.12–30 kW
- Ratio range: 3.82–277.79

Helical Worm Geared Motors
- Nominal torque: 50–1300 Nm
- Power range: 0.12–7.5 kW
- Ratio range: 3–3400

MAS LINE

The MAS line is a logically optimised modular assembly system for geared motors. The gear units are available for a torque range up to 20 000 Nm and can be equipped with various mounting systems, shaft executions and motor adapters for custom made solutions.

Helical Geared Motors
- Nominal torque: 23–14 000 Nm
- Power range: 0.12–55 kW
- Ratio range: 0.8–13 500

Shaft Mounted/Parallel Shaft Geared Motors
- Nominal torque: 56–14000 Nm
- Power range: 0.12–55 kW
- Ratio range: 2.9–18 800

Helical Worm Geared Motors
- Nominal torque: 50–1300 Nm
- Power range: 0.12–7.5 kW
- Ratio range: 3–3400

Helical Bevel Geared Motors
- Nominal torque: 53–20 000 Nm
- Power range: 0.12–90 kW
- Ratio range: 5.5–8900

GEARED MOTORS FOR SPECIAL APPLICATIONS

Single Worm Geared Motors
- Nominal torque: up to 60 Nm
- Power range: 40–1100 W
- Execution: foot, flange, hollow shaft

Double Worm Geared Motors
- Nominal torque: up to 30 Nm
- Power range: 40–1100 W
- Execution: foot, flange

Spur Geared Motors
- Nominal torque: up to 60 Nm
- Power range: 40–1100 W
- Execution: foot, flange

Worm-Spur Geared Motors
- Nominal torque: up to 120 Nm
- Power range: 40–1100 W
- Execution: foot, flange, hollow shaft

Flat Geared Motors
- Nominal torque: up to 30 Nm
- Power range: 40–1100 W
- Execution: hollow shaft

Vertimax
- Extruder execution
- Nominal torque: 680–13 000 Nm

Coaxial
- For cooling towers
- Power range: 9.2–110 kW

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INDUSTRIAL GEARBOXES

Helimax
- 1-stage execution
- Nominal torque: 6830–95 000 Nm

Helimax
- Bipartite execution
- Nominal torque: 5800–600 000 Nm

Helimax
- Extruder execution
- Nominal torque: 4000–170 000 Nm

Helimax
- For cooling towers
- Power range: 75–185 kW

ENGINEERED GEARBOXES

G3 Full Planetary Gearboxes
- Torque range from 400 kN.m up to 8750 kN.m
- Central application in Diffusers, Sugarcane Mills and Dewatering Units
- Pinion-Less and Assist Drive applications
- Bearings with surface treatment in Black Oxide, designed for more than 100 000 hours of operation
- Up to 10 years without the need of an intervention for major services

Protetork® and Monitork®
A pioneer in the electronic monitoring of gearboxes, TGM WEG offers Protetork® and Monitork® to monitor all operation variables, from basic lubrication and torque control to a complete vibration analysis system. It is a simple and smart system that, in addition to monitoring the oil temperature, pressure and vibration variables, ensures that the gearbox will not be subject to over torque, avoiding accidents and guaranteeing an operation within the established limits. This system provides for better use of the equipment, enabling the user to monitor the operation and reduce maintenance costs.

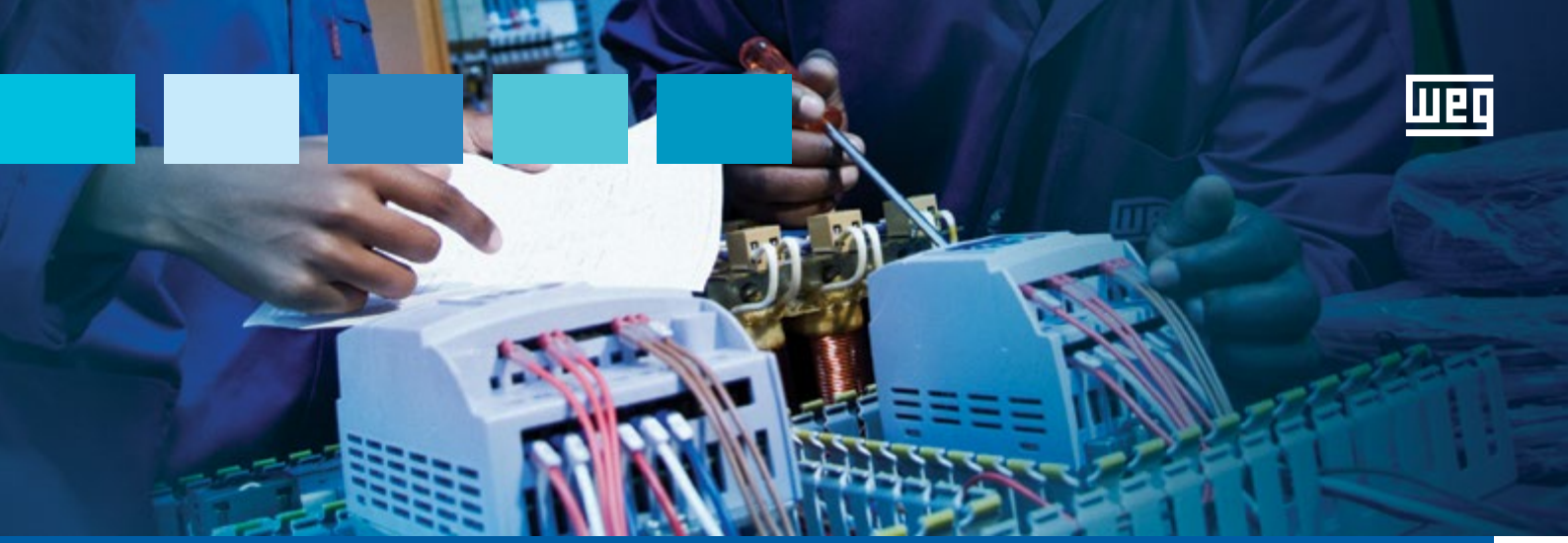
Turbo Gearboxes
ST Line
- Power range: 20–60 MW
- Ratio range: 2.0–6.3
- Single stage

Turbo Gearboxes
RTS/RTM Line
- Power range: 0.1–20 MW
- Ratio range: 2.0–25.0
- Single or multiple stages

Flexible Coupling for Turbo Gearboxes
GF Line

Designed for applications up to 60 MW. The GF line compensates the effects of angular, axial and parallel misalignments between the shafts, guaranteeing safe operation of the equipment.

Custom-Made Gearboxes
- Reduction or multiplier gearboxes up to 60 MW
- Special designs for replacement of old equipment with minor base modification
- Designed with parallel or orthogonal shafts, horizontal or vertical, from one to four stages



DRIVES AND CONTROLS

LV & MV VARIABLE SPEED DRIVES

CFW100
- 0.18–0.75 kW power rating
- Single phase
- Power supply: 200–240 V
- Overload capability: 150 % current for 60 seconds
- IP20 protection degree

CFW500
- 0.18–55 kW power rating
- Single and 3-phase
- Power supply: 200–240/380–480 V
- Overload capability: 150 % current for 60 seconds
- IP20/IP66 protection degree

CFW300
- 0.18–7.5 kW power rating
- Single and 3-phase
- Power supply: 110–127/ 200–240/380–480 V
- IP20 protection degree

CFW700
- 1.1–110 kW power rating
- Single and 3-phase
- Power supply: 200–240/ 380–480/500–600 V
- Overload capability: ND - 110 % / HD - 150 % current for 60 seconds
- IP20 protection degree

CFW11
- 1.1–630 kW power rating
- Single and 3-phase
- Power supply: 200–240/380–480/ 500–600/660–690 V
- Overload capability: ND - 110 % / HD 150 % current for 60 seconds
- IP20 or IP54 protection degree

CFW501 HVAC R
- 0.25–15 kW power rating
- Single and 3-phase
- Power supply: 200–240/380–480 V
- ND (normal duty) ratings
- IP 20 protection degree

MW500
- 1.1–7.5 kW power rating
- Single and 3-phase
- Power supply: 200–240/380–480 V
- HD (heavy duty) ratings
- Wall or motor mounted

CFW701 HVAC R
- 0.75–110 kW power rating
- Single and 3-phase
- Power supply: 200–240/380–480 V
- Overload capability: ND/HD
- IP20 and IP54 protection degree

AFW11 Modular
- 300–1875 kW power rating
- 3-phase
- Power supply: 380–480/ 500–600/660–690 V
- Overload capability: ND - 110 % / HD - 150 % current for 60 seconds
- IP43 protection degree

MVW01
- 3.3, 4.16, 6.6 kV (NPC)
- Includes input switchgear if required
- Separate ONAN transformer or integral dry type option.
- Highest efficiency

MVW3000
- 3.3 kV to 13.8 kV integral version (CHB)
- Includes input switchgear if required
- Multi-level output
- Multi-pulse input for low harmonics

LV & MV SOFT STARTERS

SSW07

- General purpose soft starters - light loads
- Power rating: 4 to 300 kW
- Voltage range: 200–575 V
- Same control power board for 220 to 575 Vac
- Blank/remote or local HMI
- Over/under current
- Over/under voltage protection
- Current and voltage imbalance
- Built-in by-pass
- Ambient temperature: 0–55 °C
- Profibus: DP, DeviceNet, Modbus-RTU via MFW
- Pump control
- Voltage ramp
- Voltage kick-start
- Current limit

SSW7000

- 70 A to 600 A rating
- 2.3 kV, 3.3 kV, 4.16 kV, 6.6 kV, 11 kV, 13.2 kV
- Disconnect switch with fuses or Vacuum CB
- Single unit stand-alone, or multiple units with common bus
- IEC and NEMA option

SSW900

- General purpose soft starter - heavy loads
- Voltage range: 220–575 V for 3-phase power supply
- Current range: 10 up to 1400 A 575 V
- Overload capability: 300 % for 30 seconds, 10 Starts/hour for frame sizes A through D
- Overload capability: 300 % for 30 seconds, 5 Starts/hour for frame size E
- Degree of protection: IP20 (10 to 105 A) and IP00 (130 A and above)
- Operating temperature: 0 to 55 °C for frame sizes A to D and 0 to 40 °C for frame size E
- Built-in by-pass
- Graphic keypad
- Soft PLC built-in
- USB built into the keypad
- Three different braking methods
- Standard three wires or inside delta connection (six wires)
- Fire mode
- Real time clock
- Thermistor input

LV & MV SWITCHGEAR

Enclosed Starters
- DOL starters single and 3-phase up to 450 kW
- Star Delta starters up to 800 kW
- Reverse starters up 355 kW

Switch Disconnectors
- Rated thermal current of 32, 40, 63, 80, 100, 125 and 160 A
- Rated insulation voltage of 690 V
- Door panel or base mounting
- Fuse switch disconnectors also available

Contactors & Overload Relays
- 9–800 A
- Designed to IEC 60947
- 3 and 4 pole options available
- Fixed or additional auxiliary blocks

Pushbuttons & Pilot Lights
- Pushbuttons, pilot lights, selector switches, mushroom and E stop pushbuttons
- In accordance with IEC/EN 60974-5-1
- IP66 degree of protection

Smart Relays
- Supply Voltage 24VAC/DC or 110–240VAC/DC
- Current measurement 0.25 to 840 A
- Voltage measurement up to 690 V

Power Factor Correction
- Single phase unit: 0.37–20 kvar at 208–240 V
- 3-phase unit: 0.37–35 kvar at 380–535 V
- 3-phase module: 1.85–15 kvar at 380–535 V (up to 60 kvar with 4 modules in parallel)

Fuses
- NH type with 4 size and current range up to 1000 A
- Class aR to protect semi conductors against short circuit 450–2000 A
- Short circuit breaking capacity of 100 kA at 690 V

Electronic Relays
- RTW timers up to 150 hours with 9 different functions
- RPW electronic monitoring relays
- RNW level relays for filling or draining functions

Circuit Breakers
- Rated current up to 100 A
- Motor starting protection up to 45 kW
- Adjustable thermal tripping for motor overload protection

Terminal Blocks (2.5–240 mm)

MTW05 11 kV Metal Clad
- 7.2 kV to 17.5 kV voltage range
- 630 A to 2500 A rating
- 31.5 kA (3s) withstand
- Metal clad, fully withdrawable
- IEC 62271-200
- IAC BF, ALR

MTW04 22 kV and 33 kV Metal Clad
- 22 kV to 33 kV
- Up to 4000 A
- 31.5 kA (1s) withstand
- Metal clad, fully withdrawable
- IEC 62271-200
- IAC AFLR

CCW07 11 kV and 22 kV Compact
- 12 kV to 24 kV voltage range
- 630 A (800 A upon request)
- 20 kA (1s) withstand
- Compact fixed type
- IEC 62271-200
- IAC AFLR

PACKAGED SWITCHGEAR AND AUTOMATION SOLUTIONS

MOTOR CONTROL CENTRES

Fixed or Semi-Withdrawable Motor Control Centres (MCC)

- From 380 V to 690 V, up to 3200 A, 65 kA/1s
- Indoor and outdoor arrangements
- Type tested and fully compliant with IEC61439
- IEC61641

Fully Withdrawable Motor Control Centres (MCC)

- From 380 V to 690 V–60/50 Hz, 50/80 kA
- Up to 6000 A
- Fully compliant with IEC61439
- IEC61641

MOBILE SKID SOLUTIONS

- Underground skid
- Booster pump skid
- Vent shaft fan skid
- Material handling skid
- Tailings slurry facility skid
- Open pit skid

PREFABRICATED E-HOUSE SUBSTATIONS

- MV E-House substation
- LV E-House substation
- Multi-pod configuration (modular)
- Stacker and reclaimer E-Room
- Petrochemical / Oil & Gas E-Room
- Mill E-Room

CONVENTIONAL CONTAINERISED SUBSTATIONS

- MV substation
- LV substation
- Multiple pod solution
- Control and engineering room

POWER DISTRIBUTION AND TRANSMISSION EQUIPMENT

MINIATURE SUBSTATIONS

- Enclosure type A, B and C
- Up to and including 1600 kVA
- Customised units up to 33 kV for the African market
- 6 mm standard high risk vandal proof Eskom approved minisubs
- Locally manufactured
- Manufacturing facility: WTA Wadeville
- Municipal
- Utility industry
- Power generation
- Industrial
- Commercial

DISTRIBUTION TRANSFORMERS

- Custom designed oil filled transformers
- Lighting and distribution 500 kVA to 3150 kVA
- Windings options: copper or aluminium
- Locally manufactured

POWER TRANSFORMERS

- Power 3150 kVA to 45 MVA 132 kV (locally manufactured in South Africa)
- 50 MVA to 550 MVA 400 kV to order from Brazil

PHOTOVOLTAIC TRANSFORMERS

- Custom designed for PV applications
- From 500 kVA up to 5 MVA, 33 kV
- Free breathing or sealed
- Winding options: copper or aluminium

** All distribution and power transformers are manufactured to SANS 60076, BS 171, and IEC 60076 specifications under ISO: 9001 quality standards*

POWER GENERATION SOLUTIONS

CONVENTIONAL GENERATION

Open, Canopy or Containerised Generator Sets

- Fully assembled in South Africa with fixed designs to EU, ISO and ABS standards
- Standard diesel generator sets from 10 kVA to 770 kVA
- Containerised or Plant Room diesel generator sets up to 3350 kVA
- Sound and fuel installations as per local council requirements (SANS, ISO)
- Multiple sets synchronised together including with the local utility supply
- Peak & load lopping options
- 190–690 V and MV up to 13 800 V
- Frequency: 50 Hz and 60 Hz
- Sound attenuated canopy up to 75 db(A) at 7 m
- 8 hr fuel tank capacity
- Exhaust system
- AMF panel
- AVR
- Locally assembled and/or manufactured
- Quality tested
- Installed and commissioned by technicians
- Custom designed solutions available for lower noise levels
- Flexible design capabilities in all well known diesel engin- and controller brands

Mobile Generator Solutions

- Integrated power generation and energy solutions customised to your specifications
- Custom designed mobile generator solutions
- Purpose built trailers in accordance with road ordinance requirements
- Generator cooling and lube oil on-board
- On-board fuel storage systems
- Synchronisation switchgear and protection systems, including import/export control
- Accessible operator interface with HMI
- Cable reel and quick cable coupling systems
- Site specific electrical integration solution to ensure safe interconnection and operation

Diesel Power Generation Plants

- Complete power generation plants
  - Design, engineering, project management and training services
  - Installation and commissioning
- Configurations
  - Open type sets
  - Containerised sets
  - Custom-engineered sets
- Generation and synchronisation options
  - Medium Voltage (MV)
  - Low Voltage (LV)
- Plant control systems
  - Parallel and island operational modes
  - Load management
  - Plant synchronisation and protection systems
  - Power import/export control
- Electrical integration solutions at LV and MV
- Balance of plant scope
  - Earthworks and civils
  - Bulk fuel storage and fuel control systems
  - Oil lubrication (new and used oil) systems
  - Piping, valves and instrumentation
  - Plant lighting, earthing and lightning protection systems

ALTERNATORS

Synchronous Alternators
G Plus, GT10 and AN Lines
- Up to 2455 kVA
- 4 to 26 pole
- 110 V to 690 V or
- 2300 V to 13 800 V

Turbo Generators
ST Line
- Up to 220 000 kVA
- ST40 Line 1800 r/min
- ST20 Line 3600 r/min
- Up to 13 800 V
- Frames 355 to 1250

Hydro Generators
S Line
- Up to 150 000 kVA
- 90 to 1200 r/min
- Up to 13 800 V
- Frames 355 to 4000

STEAM TURBINES

Steam Turbine Reaction Technology BT/BTE Line
Back pressure - Extraction
- Nominal power output up to 150 MW
- Inlet pressure up to 140 bar (a)
- Inlet temperature up to 540 °C
- Speed up to 13 600 rpm
- Extraction pressure up to 45 bar (a)
- Exhaust pressure up to 16 bar (a)

Steam Turbine Reaction Technology CT/CTE Line
Condensing - Extraction
- Nominal power output up to 150 MW
- Inlet pressure up to 140 bar (a)
- Inlet temperature up to 540 °C
- Speed up to 13 600 rpm
- Extraction pressure up to 45 bar (a)

Steam Turbine Impulse Technology TM-A/TME-A Line
Back pressure - Extraction
- Nominal power output up to 55 MW
- Inlet pressure up to 70 bar (a)
- Inlet temperature up to 530 °C
- Speed up to 8000 rpm
- Extraction pressure up to 30 bar (a)
- Exhaust pressure up to 10 bar (a)

Steam Turbine Impulse Technology TMC-A/TMCE-A Line
Condensing - Extraction
- Nominal power output up to 25 MW
- Inlet pressure up to 70 bar (a)
- Inlet temperature up to 530 °C
- Speed up to 8000 rpm
- Extraction pressure up to 30 bar (a)

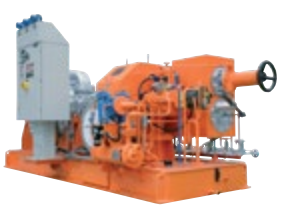
Steam Turbine Impulse Technology TM/TME Line
Back pressure - Extraction
- Nominal power output up to 20 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 8000 rpm
- Extraction pressure up to 20 bar (a)
- Exhaust pressure up to 6 bar (a)

Steam Turbine Impulse Technology TMC/TMCE Line
Condensing - Extraction
- Nominal power output up to 17 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 8000 rpm
- Extraction pressure up to 20 bar (a)

Steam Turbine Impulse Technology TM FLEX Line
Back pressure
- Nominal power output up to 5 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 6500 rpm
- Exhaust pressure up to 10 bar (a)

Steam Turbine Impulse Technology G5 Fast Line
Back pressure
- Nominal power output up to 4 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 6000 rpm
- Exhaust pressure up to 10 bar (a)

Steam Turbine Reaction Technology MCT Line
Condensing
- Nominal power output up to 3 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 9000 rpm



Steam Turbine Impulse Technology TS-P/TS/TG Line
Back pressure
- Nominal power output up to 2 MW
- Inlet pressure up to 45 bar (a)
- Inlet temperature up to 450 °C
- Speed up to 10 000 rpm
- Exhaust pressure up to 15 bar (a)

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CO-GENERATION

Complete Steam Turbo Generator Sets

- Design, installation and commissioning
- Reaction and impulse steam turbines design
- Back pressure and condensing steam turbines, up to 150 MW
- 2 and 4-poles turbo generators, up to 200 MVA
- Equipment lubrication, control and protection systems
- Heat and mass balances studies
- Layout studies for new installation or old equipment replacement

Electrical Integration Solutions at LV & MV

- Plant control systems
- Parallel and island operational modes
- Load management
- Plant synchronisation and protection systems
- Power import/export control

RENEWABLE ENERGY GENERATION

SOLAR

Centralised Solar Inverter Stations
SIW750

- Custom-engineered, locally manufactured and tested
- Modular design promotes flexibility and can easily be integrated in accordance with all solar power plant requirements

SUBSTATION AND ELECTRICAL INFRASTRUCTURE

DESIGN, CONSTRUCTION AND SUPPLY

FIXED CONVENTIONAL SUBSTATIONS

- Complete substation solutions (up to 275 kV)
  - New substations
  - Expansions
  - Refurbishments
  - Designs, installation and commissioning
  - Indoor and outdoor configurations
- Protection systems
  - Equipment and protection grading

MOBILE SUBSTATION SOLUTIONS

- Custom designed mobile solutions (various configurations)
  - Substation solutions (up to 275 kV)
    - Specialised transformer design for mobile applications
    - Multi-ratio transformer options available
  - Switching stations
- Robust and purpose built trailers
  - In accordance with road ordinance requirements
  - Various axel configurations to improve manoeuvrability
- Skid type solutions (various configurations)
- Indoor/outdoor switchgear options
- On-board protection systems, including AC/DC distribution panels and BTU's
- Earthing and lightning protection, with system connection points
- Equipment installation and commissioning
- Designs, installation and commissioning
- Project engineering and management services
- After sales support and maintenance services

ELECTRICAL LOW VOLTAGE AND HIGH VOLTAGE RETICULATION

Electrical

- LV & MV cable reticulation
- Cable and racking layouts
- Building services including lighting, power distribution, earthing and lightning protection
- Power factor correction
- Energy management systems
- PV installations, DC to MV

Overhead Lines (up to 132 kV)

- Up to 132 kV, with higher operational voltages upon request
- Surveying and profiling
- Civil, mechanical and electrical designs
- Wood, steel and concrete poles
- Lattice structures
- Complete construction, installation and commissioning

Control and Instrumentation

- Process instrumentation reticulation
- Plant automation and control with PLC/SCADA systems
- Network cabling and equipment

FIELD SERVICES

ELECTRIC MOTORS

- Installation assistance
- Commissioning assistance
- On-site and remote fault-finding assistance
- On-site repair

DRIVES AND CONTROLS

- Installation assistance
- Commissioning
- On-site and remote fault-finding
- Repairs at Zest WEG

POWER DISTRIBUTION AND TRANSMISSION EQUIPMENT

- Installation assistance
- Commissioning assistance
- On-site and remote fault-finding assistance
- On-site repair

DIESEL GENERATION EQUIPMENT

- Installation assistance
- Commissioning assistance
- On-site and remote fault-finding assistance
- On-site repair

STEAM GENERATION EQUIPMENT

- Installation and commissioning assistance
- On-site and remote fault-finding assistance
- Revamp and modernisation of old equipment
- Equipment parts manufacturing
- On-site repair

ENGINEERED GEARBOXES

- Installation and commissioning assistance
- On-site and remote fault-finding assistance
- Revamp and modernisation of old equipment
- Equipment parts manufacturing
- On-site repair


EMERGENCY STOP
HEATER HEATER HEATER
VACUUM PUMP
SUCTION PUMP
DELIVERY PUMP

CONTACT DETAILS

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GEARED MOTORS AND GEARBOXES
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