OUTDOOR MEDIUM VOLTAGE SWITCHGEAR - UP TO 24kV

A division of ACTOM Pty Ltd

ACTOM

Formerly ALSTOM South Africa

ACTOM Outdoor Medium Voltage Switchgear

Rhino substations up to 24 kV

- The Rhino outdoor substation has been specifically designed to house the SBV4 and SBV24 range of vacuum switchgear so this type of equipment may be installed outdoors without the necessity of building a conventional brick type substation.
- The SBV4 – 12 kV is a compact range of switchgear available in single busbar arrangement with a continuous rating of up to 2000A and a rated short circuit capability up to and including 31,5 kA for 3 seconds.
- The SBV5 – 12kV is interchangeable with the SBV4 and shares the same housing enclosure but uses an advanced magnetic actuator mechanism for applications where a large number of switching operations are required, for example, motor operation and power factor correction device switching. This range is available in single busbar arrangement with a continuous rating of up to 1 250 A and a rated short circuit capability up to and including 25 kA for 3 seconds.
- The SBV24 – 24 kV is a compact range of switchgear available in single busbar arrangement with a continuous rating of up to 1 250 A and a rated short circuit capability up to and including 25 kA for 3 seconds.
- All SBV4, SBV5 and SBV24 medium voltage switchgear have been tested at KEMA or NETFA.
- This range of switchgear is ideally suited for fitting into outdoor type steel enclosures due to the compact nature of the switchgear. Virtually any combination or number of panels may be accommodated, dependent only on the limitations of handling and transporting the complete outdoor assembly.
- The outdoor enclosures can be manufactured from mild steel plate or 3CR12 corrosion resistant metal, dependent on the user's requirements. All steelwork is powder coated using the most up to date static deposition and baking techniques.
- Enclosure bases are of the RSJ type for rigidity and are hot dip galvanised for enhanced corrosion resistance.
- Voltage transformers and battery tripping units are mounted in an end compartment together with the relay protection, metering and indication devices normally associated with an indoor MV switchboard.
- All enclosure doors in front of the switch panels are designed to open into a horizontal position where the inside of the door is used as the runner to withdraw the circuit breaker truck.
- All doors are fitted with a tamper proof locking system to prevent vandalism and access to the MV compartments.
- Generous cable access space is available at the rear of the enclosure for bottom entry power cables.

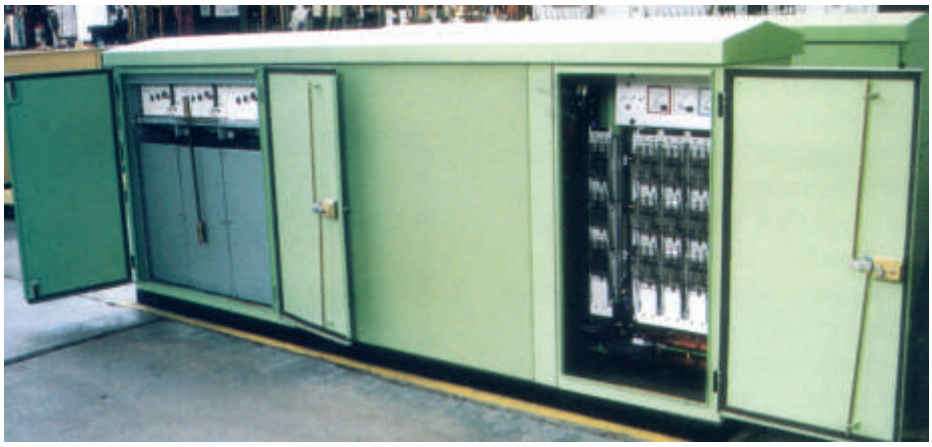
Rhino outdoor substation.

Rhino outdoor substation suitable for systems up to 24 kV.

Miniature substations up to 24 kV

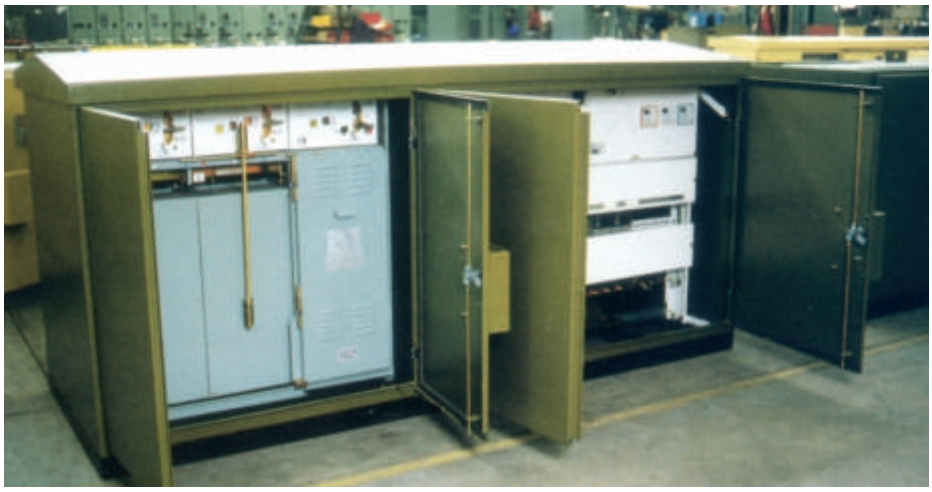
- ACTOM miniature substations have been developed over many years as a cost effective method of reticulating power to residential, industrial and development areas where the essential components are combined in a single robust enclosure suitable for outdoor applications.
- Miniature substations generally consist of a steel enclosure housing an MV ring main switch, a step-down transformer with ratios typically 22 000/420 V or 11 000/420 V and a low voltage distribution compartment.
- The MV compartment may contain one of the following which are generally purchaser specified:
  - 3-way oil insulated isolator ring main unit type K3
  - 4-way oil insulated isolator ring main unit type K4
  - 3-way oil insulated isolator/air insulated fuse ring main unit type K3/AF
  - 4-way oil insulated isolator/air insulated fuse ring main unit type K4/AF
  - 3 or 4-way gas insulated ring main unit

A fibreglass miniature substation.



Front view of a type A miniature substation.

Side view of a type A miniature substation.



*Type B miniature substation with all compartment doors open.

- The transformer compartment contains a sealed type oil immersed step down trans - former of the low loss type with aluminium windings in accor - dance with SABS 780 and is normally supplied with an oil level indicator and an off circuit tap switch. These transformers can be supplied on request with dual inputs, for example, to operate from either 11 000 V or 6600V medium voltage systems.
- The LV compartment contains circuit breakers, HRC fuses, metering and instruments to specification.
- Miniature substations are norm- ally available in type A or type B configurations dependent on the specification.
- The units are factory assem- bled bled and tested and despatched as complete units and are suitable for installation in public areas, such as on residential pavements, near shopping complexes and in industrial parks.
- Miniature substation fitted with gas insulated ring main units having an internal arc classifica- tion IAC AB in accordance with SANS 62271-202 are available.

Type B miniature substation suitable for systems up to 24 kV.

Miniature substation with IAC.