Advance® 27
ANSI 27 kV switchgear

Advance® 27 is ABB’s ANSI platform for 27 kV rated metal-clad switchgear featuring a narrow footprint and designed and tested per IEEE C37.20.2. Featuring galvanized steel construction, hem bending techniques, and Delrin arc-quenching contacts, Advance 27 is designed with safety, reliability, and durability in mind. Advance 27 is seismic-certified to IBC Region D.

Product highlights
- Fully compliant to IEEE C37.20.2-1999 for metal-clad switchgear construction
- Closed door PT and CPT racking
- Standard 36 inch wide, 92 inch deep, 95 inch tall frame
- SmartRack remote racking system for breakers, PT and CPTs
- UL and CSA certified
- Automatic secondary disconnects
- Large Lexan viewing window for viewing breaker status and position
- Modular design and construction
- Available two-high construction
- Available top and bottom cable or bus duct entry
- Delrin arc-quenching contacts
- ISO 9001 certified manufacturing facilities

Available configuration/competitive footprint
Advance 27 features the most competitive footprint in the market with available two-high configurations. Each switchgear frame measures 36 inches wide, 92 inches deep and 95 inches tall regardless of one or two-high. Each frame includes a separate isolated low voltage compartment that separates relays, meters and other instruments using grounded metal barriers, protecting maintenance personnel from exposure to high voltage.

Delrin arc-quenching contacts
For PT and CPT contacts, ABB uses Delrin arc-quenching contacts. A sleeve with a round conductor probe is inserted into a receptacle with recessed contacts. Due to the unique properties of Delrin, which include self-lubrication, arcs created during load break conditions are extinguished by a gas emitted by the Delrin material as it heats. The recessed contact design also eliminates the need for safety shutters as access to live bus is very difficult.

Galvanized steel construction
ABB Advance 27 is built using galvanized steel construction for increased protection from rust, scratches and corrosion. Galvanized steel is used inside low voltage compartments for its increased illumination properties to provide for better instrument viewing.

Hem bending
Hem bends, being the process of folding a single sheet of steel over upon itself, are used throughout construction of Advance 27 for increased rigidity and reduced arc propagation. This construction technique also protects maintenance personnel and any LV wiring inside the switchgear as it eliminates sharp edges and burs in the metal work.

Advance 27 accessories
- Racking crank
- Test cabinet
- Test jumper
- SmartRack electric racking device
- Lift truck

Advance 27 options
- IR viewing ports
- Ground CTs
- Lightning arresters
- Cable supports
- Ground studs

Power and productivity for a better world™
AMVAC breaker
The AMVAC breaker consists of unique technologies that decreases maintenance requirements while increasing reliability and personnel safety. The actuator in the AMVAC breaker requires no maintenance as it is only one moving part that requires no lubrication or adjustment. Magnetic actuation technology eliminates the cause of failure of traditional close and trip coils as it delivers a current limited pulse, as opposed to holding the current on the coils. Because of this unique design, the AMVAC also draws less than 100W during charging and less than 10W at rest. The AMVAC breaker comes standard with a 5-year warranty.

Instrument transformers
Current transformers
Advance 27 is designed and tested for use with the ABB SAB-1/1D current transformers for 1200 and 2000 A applications.

Voltage transformers
The VIZ-12 and VIZ-12G indoor voltage transformers are designed for service in metalclad switchgear and are used for metering, relaying, or control power. Both units are available in single, double, and tapped secondary designs with two accuracy and thermal rating options.

Distribution automation
Relion® relays
ABB’s Relion® family of protection and control relays for distribution applications provides the performance, safety, and ease-of-use that switchgear specifiers and users demand. The Relion 615 and 620 series offer complete protection and control for feeders, motors, and transformers in switchgear applications and are characterized by their flexibility and performance in today’s and future distribution schemes.