

Arc Resistant Switchgear



An **arc fault event** can cause devastating damage due to the sudden increase in pressure and localized overheating of components surrounding the fault location. The resulting mechanical and thermal stresses experienced by components within the vicinity of the event; enclosure parts, conductors, insulators for example, are severe enough to produce molten, particulate or gaseous by-products that can impact the safety of nearby personnel.

RIC Power's Arc Resistant series utilizes a steel reinforced enclosure capped with a plenum and exhaust chute system in order to direct the fault explosion to a safe, designated area.

Product Elements

RIC Power's Metal Clad series minimizes the time required for inspection, repair and maintenance of the installed equipment, reducing down time and costs over the lifespan of the equipment. The medium voltage Arc Resistant Metal Clad switchgear is designed to meet the needs of customers who demand the highest quality power distribution assembly with the added benefit of being able to efficiently use available floor space.

Arc Resistant Rating: Designed and tested to IEEE C37.20.7, Type 2B, 0.5s rating, the Arc Resistant series provides arc flash protection for personnel in front, beside and behind the lineup with the instrument door open.

Withdrawable Circuit Breakers: Compartments requiring a circuit breaker will utilize withdrawable vacuum circuit breaker technology which provides the end user with a product that is simple to inspect and easy to maintain complete with a proven record of reliability.

Modular Design: Using a modular design concept allows for custom configurability while minimizing overall lead time and reducing costs often associated with products designed around a specific installation.



Typical Draw-out Set of 15kV PT's (Rackable w/ Door Closed)

Accessibility: Front accessible, line and/or load side current transformers (CT's), draw out potential transformers (PT's) and draw out control power transformers (CPT's) ensure ease of maintenance, minimal usage of floor space, and an overall safer environment. High voltage cable entry and exit is typically located in the rear compartment complete with rear accessibility.

Protection & Control Elements (P&C): RIC Power can custom tailor a P&C package suited to meet the needs of each unique project.



Typical 15kV Arc Resistant Lineup w/ Plenum and Exhaust Chute Extension

Applications & Specifications

- Primary circuit components are compartmentalized by the use of grounded metal barriers incorporated into the enclosure structural configuration.
- Front accessible draw out breakers, line and/or load side CT's, draw out PT's, and draw out CPT's.
- Front viewing windows.
- Polyolefin heat shrunk busbar c/w booted bus connections.
- Busbar support structure configured for optimum heat dissipation and strength under fault conditions.
- Ground ball studs where applicable for safe maintenance practices.
- Door interlocks ensure that withdrawable components are only rackable with door closed and latched.
- Plenum and exhaust chute designed to be installed in facility with minimal ceiling clearance.
- Rear infrared viewing ports (optional).

Standards

CSA 22.2 No. 31
ANSI/IEEE C37.20.2
ANSI/IEEE C37.20.7

Applications

- Oil, Gas, Pulp, Paper, Marine and Mining
- Department of National Defense
- Municipal and General Industries
- Data Centres
- Hospitals and Laboratories
- Solar Power Systems
- SCADA and Control Systems
- OEM Applications

Ratings

Arc Resistant Metal Clad Product Ratings	Nominal Voltage (kV)	Maximum Available Ampacity (A)	Rated Voltage Withstand / BIL (kV)	Breaker Interrupting Rating, rms (kA)
5kV	5	3000	19/60	41
15kV	12.47	3000	36/95	41
	13.8	3000	36/95	41
	14.4	3000	36/95	41
25kV	25	2750	60/125	25

Other ratings available upon request.

Typical Dimensions (in)

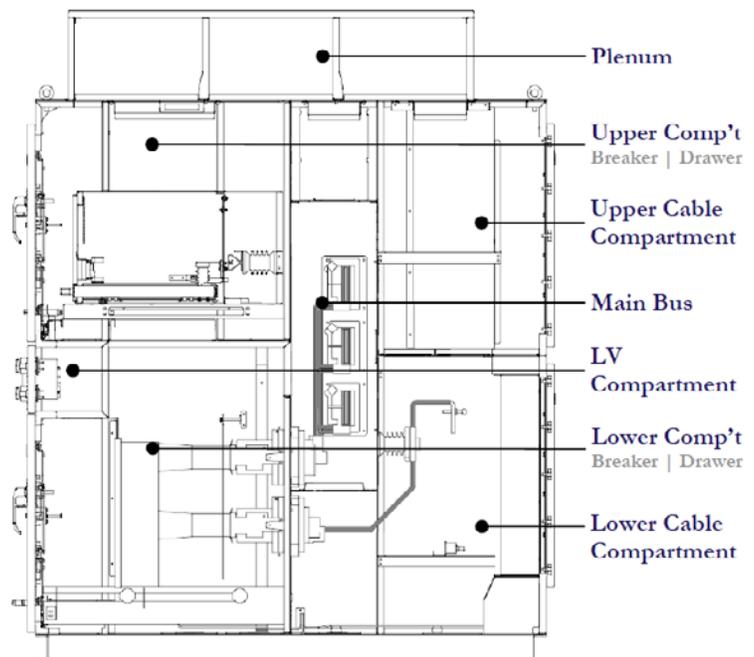
5/15kV

w Installed Plenum: 93"D x 36"W x 116"H
w/o Installed Plenum: 93"D x 36"W x 100"H

25kV

w Installed Plenum: 104"D x 38"W x 116"H
w/o Installed Plenum: 104"D x 38"W x 100"H

Custom dimensions available upon request.



Typical 15kV One-High Breaker Cell
(Side Walls Removed)