

# PowVac<sup>®</sup> Metal-Clad Switchgear

*Metal-Clad Switchgear for 5kV to 15kV Applications*

## QUALITY DELIVERED

The PowVac switchgear design combines circuit breaker and switchgear structures that are completely designed and fabricated by Powell. The highest quality components are installed within this structure to complete a finished product that meets all applicable industry standards set forth by ANSI, NEMA and IEEE, including ANSI C.37.04, C37.06, C37.20.2 and NEMA SG5. PowVac Switchgear is also tested per ANSI C37.09 and C37.20.2.

## POWLAC CIRCUIT BREAKERS

The most critical element of your distribution equipment is the vacuum circuit breaker. For over 35 years, Powell has been manufacturing proven, reliable PowVac metal-clad switchgear circuit breakers. As the industry has demanded more performance over time, Powell has sought new ways to improve its already superior circuit breakers. The evolution of the PowVac metal-clad switchgear system is another testament to Powell's commitment to continuous improvement.

PowVac is a 3-cycle circuit breaker completely tested and rated for K factor = 1 with continuous current ratings of 1200A through 3000A and a fan cooled rating of 4000A. Interrupting ratings range from 25kA through 63kA.

## ONE-HIGH OR TWO-HIGH ARRANGEMENT

The PowVac circuit breaker is available in one-high and two-high arrangements. The upper portion of the one-high cubicle can house one or two rollout drawers for voltage or control power transformers and their associated fuse assemblies. The two-high arrangement consists of two circuit breakers per vertical section. A maximum of 3200A continuous current is allowed per section. In the case of the two-high assembly, either the lower or upper position of the arrangement can be designed to house up to two rollout drawers.

*K factor = 1 Rated Circuit Breakers*

*On-Board Racking<sup>®</sup> Option Available*

*Arc Resistant Construction Available*

*One-High or Two-High Construction  
Interrupting Ratings from 25kA to 63kA*



## FLEXIBLE DESIGN

Like all Powell equipment, PowIVac circuit breakers are engineered to order, delivering a high degree of flexibility to the customer. PowIVac products set the industry standard for safety and customization. PowIVac Switchgear complies with all applicable ANSI, IEEE and NEMA standards. Additional construction advantages include:

- The optional On-Board Racking feature allows for control of the racking process via a digital HMI. No manual or remote racking devices are required.
- The self-aligning floor pan assembly provides a positive ground connection between the circuit breaker and the cell assembly and interlocking to prevent insertion of an improperly rated circuit breaker.
- All PowIVac circuit breakers have a UL and C-UL Label as standard. All PowIVac switchgear testing has been witnessed and reviewed by Underwriter's Laboratory and switchgear assemblies can carry a UL or C-UL Classification label upon request.
- Our 3000A/2000A Breaker are interchangeable for use in a 1200A cell, eliminating the need for multiple spare breaker ratings.
- One-High Breakers are designed so that a Lift Truck is not needed to insert the breaker into the switchgear cell.

## ONBOARD RACKING OPTION

The most significant safety advantage that is offered with PowIVac Switchgear is the On-Board Racking device. A circuit breaker equipped with this feature may be remotely racked via a digital HMI on the switchgear or from any control panel. No external racking devices are required to be added to the circuit breaker or switchgear compartment door. The operator can control the racking process while being entirely absent from the arc flash zone.

5kV									
Nominal Voltage (kV)	Sym. Inter. Rating (kA rms) <sup>(a)</sup>	Power Withstand Frequency (kV)	Continuous Current (A)	BIL (kV Peak)	Momentary Close & Latch (kA)	% DC Interrupting Current (%) <sup>(c)</sup>	Rated Interrupting Time (cycle/ms)	Short Time Current 2 sec (kA)	Back to Back Capacitor Switching (Amps) <sup>(d)</sup>
4.16	36	19	1200, 2000, 3000, 4000 <sup>(b)</sup>	60	94	50	3/50	36	1800
4.16	50	19	1200, 2000, 3000, 4000 <sup>(b)</sup>	60	130	50	3/50	50	1800
4.16	63	19	1200, 2000, 3000, 4000 <sup>(b)</sup>	60	164	50	3/50	63	1800
15kV									
Nominal Voltage (kV)	Sym. Inter. Rating (kA rms) <sup>(a)</sup>	Power Withstand Frequency (kV)	Continuous Current (A)	BIL (kV Peak)	Momentary Close & Latch (kA)	% DC Interrupting Current (%) <sup>(c)</sup>	Rated Interrupting Time (cycle/ms)	Short Time Current 2 sec (kA)	Back to Back Capacitor Switching (Amps) <sup>(d)</sup>
13.8	25	36	1200, 2000, 3000, 4000 <sup>(b)</sup>	95	65	50	3/50	25	1800
13.8	36	36	1200, 2000, 3000, 4000 <sup>(b)</sup>	95	94	50	3/50	36	1800
13.8	50	36	1200, 2000, 3000, 4000 <sup>(b)</sup>	95	130	50	3/50	50	1800
13.8	63	36	1200, 2000, 3000, 4000 <sup>(b)</sup>	95	164	50	3/50	63	1800

(a) Interrupting current constant for all voltages less than the maximum voltage. Rated voltage range for factor k=1

(b) Compartment mounted Forced Air Cooling fans required for current in excess of 3000 Amperes.

(c) 5 cycle breakers available at the same % DC Ratings

(d) Back-to-back capacitor switching rating is good for all circuit breakers as per the ANSI standards. For 1200A circuit breakers, the continuous current limits the capacitors' switching current.

Powered by Safety<sup>®</sup>

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