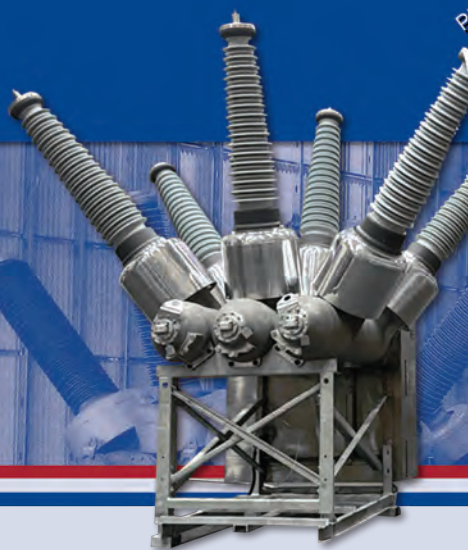




Pennsylvania Switchgear

HIGH VOLTAGE DEAD TANK CIRCUIT BREAKERS



PB123
PB145
PB170

PB 145

Family of Breakers

123kV - 170kV • 40kA

Superior Performance

The PB145 breaker family delivers superior performance with advanced spring and interrupter technology:

- Tested to L30 line fault duties for proper interruption at typical short-circuit levels
- First-pole-to-clear factor of 1.5 at 170kV for ungrounded and improved grounded system performance
- High asymmetry ratio of 33, nearly double the standard required ratio of 17
- 50kA short-time current test, 25% above standard, with no deformation or welding of contacts
- Certified for Definite Purpose For Fast Transient Recovery Rise Times per ANSI C37.06.1

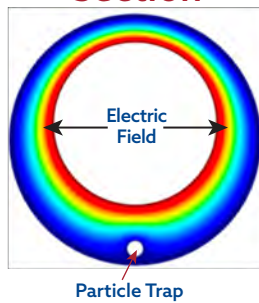
Ease of Maintenance

Maintenance is simplified with built-in lube fittings on all main bearings, hand-charging via a standard wrench, and auxiliary switches mounted directly on the mechanism—eliminating the need for special tools or linkage adjustments.

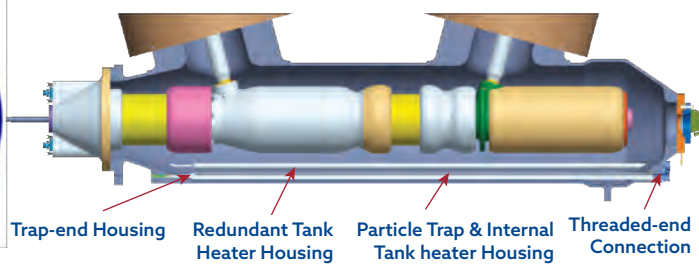
PB145 Breakers - Performance, Reliability, Simplicity

The PB145 Family of High-Voltage Dead-Tank Circuit Breakers (123-170kV) combines proven performance with easy maintenance and long-term reliability. With advanced insulation, efficient heating, and customizable options, they deliver dependable protection in even the toughest conditions.

Tank Cross Section



Integral Particle Trap/Tank Heater



Design Features

Integral Particle Trap: Improved dielectric performance is achieved through the patented particle trap design, integral to each interrupter's enclosure. The trap ensures that any particles or arc by-products generated during breaker operations are electrically shielded at the enclosure's lowest point.

Internal Tank Heater

Specialized Heater Element: Unlike conventional external heaters, Pennsylvania Switchgear heaters are installed inside the tank to directly heat the SF6 gas. The heater element can be replaced within minutes without opening the tank or removing the SF6 gas.



Pennsylvania Switchgear
A Division of Pennsylvania Transformer Technology, LLC
(724) 873-2100 • sales@paswitchgear.com
30 Curry Avenue, Canonsburg, PA 15317



paswitchgear.com

HIGH VOLTAGE DEAD TANK CIRCUIT BREAKERS

PERFORMANCE.
RELIABILITY. SIMPLICITY.

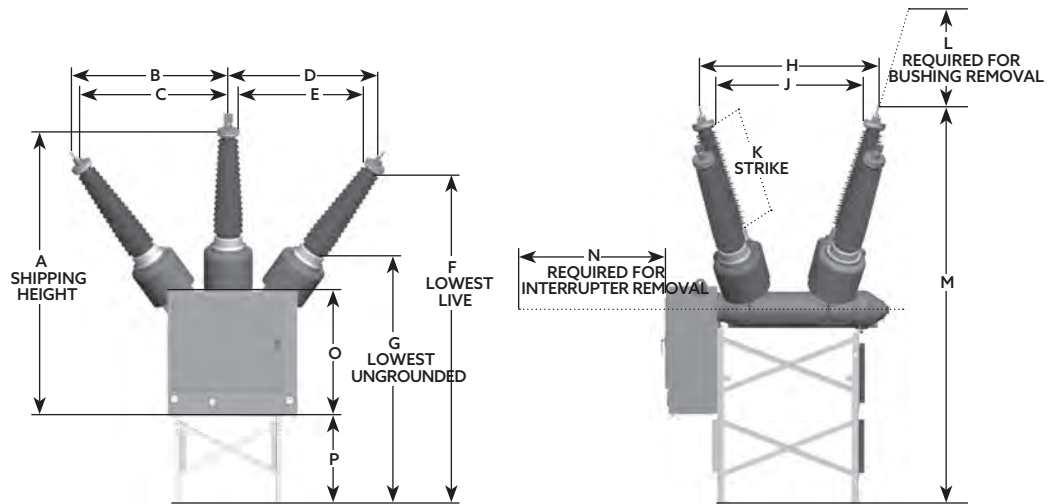
Standard Features

- Integral particle trap
- Porcelian insulators
- Galvanized support frame
- Powder-coated control cabinet
- Stainless steel door handles
- Stainless steel SF6 tubing
- Ganged SF6 monitoring
- SAE hardware
- Fully assembled shipments

Optional Features

- Low temperature performance to -30°
- ASME Pressure Vessel Certification
- Internal tank heater
- Extra-high creep/high-altitude insulators
- High seismic performance
- Individually-phased SF6 monitoring
- Custom control package
- Extra auxiliary contacts
- Custom support structure
- Side-mounted position indicator for long-distance viewing

Inches	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
PB123-40	138	74	71	71	58	153	115	82	68	48	22	181	84	58	41
PB145-40	138	74	71	71	58	153	115	82	68	48	22	181	84	58	41
PB170-40	143	77	74	74	62	158	115	85	72	56	22	188	84	58	41



RATINGS	PB123-40	PB145-40	PB170-40
Standards	ANSI/IEEE	ANSI/IEEE	ANSI/IEEE
Maximum Voltage	123kV	145kV	170kV
BIL	550kV	650kV	750kV
Frequency	60Hz	60Hz	60Hz
60Hz Withstand	260kV	310kV	365kV
Short-Circuit Current	40kA	40kA	40kA
Continuous Current	2kA/3kA	2kA/3kA	2kA/3kA
Interrupting Time	3 cycles	3 cycles	3 cycles
Duty Cycle	O-0.3s-CO-15s-CO	O-0.3s-CO-15s-CO	O-0.3s-CO-15s-CO
Temperature	-30°C to +55°C	-30°C to +55°C	-30°C to +55°C
Altitude above sea level	up to 3,300ft	up to 3,300ft	up to 3,300ft
Seismic (IEEE 693-2005)	High	High	High
Normal Operating Pressure	90psig@20°C	90psig@20°C	90psig@20°C
Minimum pressure to interrupt fault current	76psig@20°C	76psig@20°C	76psig@20°C
Minimum pressure to interrupt load current	76psig@20°C	76psig@20°C	76psig@20°C



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