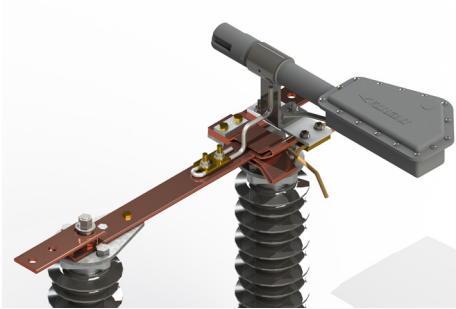


LineBOSSTM

AIR-BREAK DISCONNECT SWITCH ATTACHMENT

SELECTION INFORMATION

AmpRupterTM



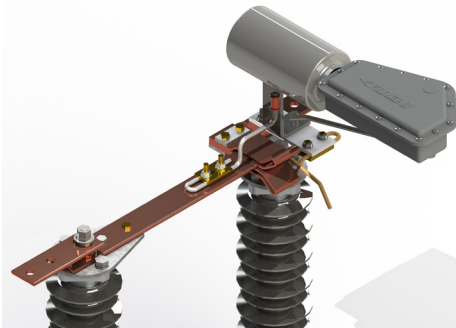
The Inertia AmpRupter utilizes expulsion tube interrupter technology to break current loads up to 900 amps at 27 kV. It is used for load-break, loop break, line charging and cable charging switching operations. The AmpRupter was tested to IEEE 1247-1998 Standard for Interrupting Switches for Alternating Current Rated Above 1000 Volts. The mechanical life of the AmpRupter is 2,500 operations. The electrical life of the AmpRupter is dependent on the amount of load interrupted.

AmpRupter load interruption occurs as the switch blade leaves the contact clip; making contact with the catch arm. At this point, current is shunted through the actuator arm, through the contacts to the load side. As the blade continues towards its open position, the internal spring powered mechanism trips; breaking the internal contacts.

LineBOSSTM Selection Guide suffix “L”

This action evolves a pressurized non-conductive gas that extinguishes the arc. This process occurs within one half cycle (first zero crossing), and will not “chop” the current upon circuit interruption. The speed of the AmpRupter mechanism is not dependent on the switch operating speed, insuring that the load breaking capabilities are consistent regardless of switch opening speed. The AmpRupter automatically resets for the next operation. The AmpRupter is not in the current path during the switch closing operation, and has no fault closing capabilities. The AmpRupter is in the current path **during the switch opening operation only.**

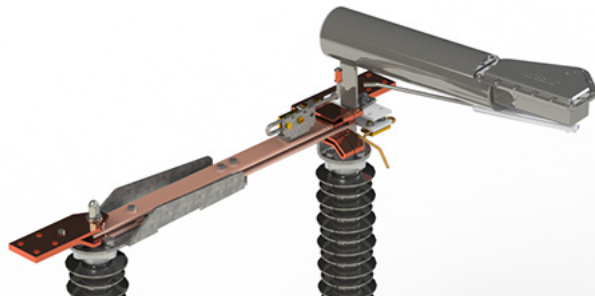
AmpVacTM



The AmpVac is an enclosed vacuum bottle interrupter where no gases are vented to the atmosphere. The AmpVac interrupter has much higher interruption capabilities than other load break devices. Single contact AmpVac interrupters break loads up to 1500 amps at 35 kV. Single vacuum bottle interrupters may be used at increased voltages for parallel or loop switching applications as long as the peak recovery voltage does not exceed 38 kV. The AmpVac is rated for 5000 operations. The AmpVac was tested to IEEE 1247-1998 .

LineBOSSTM Selection Guide suffix “V”

V4 & V7



The V4 and V7 vacuum interrupters are single-gap load-breaking devices that utilize vacuum bottle technology, where no gases are vented to the atmosphere. The new single vacuum bottle design can break loads up to 2000 Amps at 46 kV - 69 kV (48 kV - 72.5 kV) ; where it now replaces the original V2 and V3 multi-vacuum bottle designs. Vacuum bottle interrupters are not in the current path during the switch closing operation, and have no fault closing capabilities. The V4 and V7 vacuum interrupter is rated for 5000 operations.

LineBOSSTM 46 kV - 69 kV (48 kV - 72.5 kV) Selection Guide suffix “V4” and “V7”

ArcWhip

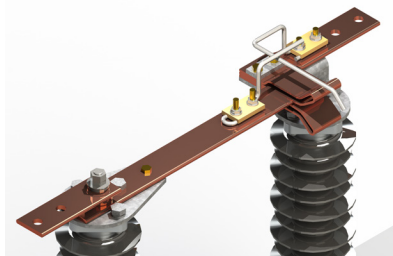


LineBOSS™ Selection Guide suffix “Q”

The ArcWhip has a small interrupting rating of between 10 and 20 amps. The ArcWhip can clear arcs from residual energy stored in capacitor banks, transformers or conductors. ArcWhips are only in the current path during switch opening operations, and have an average life of 150 open operations.

ArcHorn

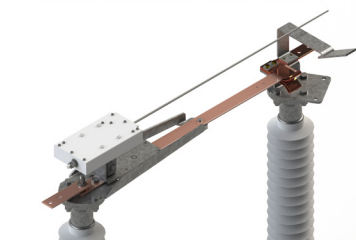
(Not an interrupter)



LineBOSS™ Selection Guide suffix “A”

The ArcHorn is not an interrupter and has no ratings. It is used as an arc deflecting mechanism to save the life of switch blades and contact clips. The ArcHorn, also known as “sacrificial arcing horn”, is the first point of contact during switch closing operations. The initial making current during a closing operation creates small arcs; pitting the arc horns. This “sacrificial” mechanism helps prevent degradation of the main contacts. The ArcHorn is used to redirect the arc resulting from residual or stored charge left after a down-line circuit is opened. ArcHorns will not prevent damage from the inadvertent opening of a loaded switch.

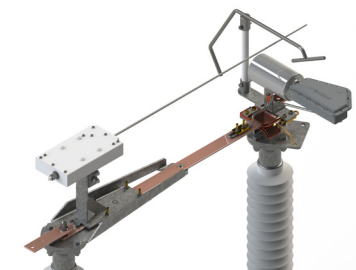
High Speed Whip



LineBOSS™ Selection Guide suffix “S”

The HSW, high speed whip (break) Interrupters are used to interrupt line charging current at system voltages up to 72.5 kV. They can also interrupt transformer magnetizing current at system voltages up to 72.5 kV. These interrupters are designed for 5000 open operations.

Sectionalizer



LineBOSS™ 46 kV - 69 kV Selection Guide suffix “SW”

Transmission line load sectionalizing requires moving blade gang operated switches to be able to interrupt parallel loops, line charging, and transformer magnetizing currents at system voltage levels. This is accomplished by combining the voltage interrupting capabilities of the High Speed Whip and the current interrupting capabilities of the AmpVac™ single gap vacuum interrupter.

Vacuum Bottle Interrupter Applications:

Type of Switching:	AmpVac™ ‘V’	V4	V7
Voltage Rating:	15.5 kV, 25 kV, 38 kV*	48.0 kV	72.5 kV
Loadbreak, 70% PF	2000 A	2000 A	2000 A
Parallel Break < 30% PF	1500 A	2000 A	2000 A
Cable Charging	40 A	10 A	10 A
Magnetizing	21 A	70 A	70 A
* Recovery voltage between source and load must be less than 38 kV, immediately.			

Interrupter Attachment Device Application:

Type of Switching:	ArcHorn	ArcWhip	AmpRupter™	High Speed Whip	
Voltage Rating:				48.0 kV	72.5 kV
Loadbreak, 70% PF	N/A	N/A	15 kV : 900 A 23 kV : 900 A 34 kV : 600 A	N/A	N/A
Parallel Break < 30% PF	N/A	N/A	5 kV : 900 A	N/A	N/A
Cable Charging	N/A	≤ 72.5 kV : 15 A	27 kV : 26 A	25 A-rms	20 A-rms
Line Charging	N/A	≤ 72.5 kV : 3500kVA	23 kV : 6.2 A	70 MVA	70 MVA
Magnetizing	N/A	N/A	27 kV : 2.7 A	N/A	N/A