

Magneblast-VR Medium Voltage Circuit Breaker Vacuum Replacement

The Westinghouse Solution

As a leading supplier of nuclear safety-related products and services, Westinghouse has developed a nuclear solution for Magneblast vertical lift breakers. The breakers are replacements for GE Magneblast AM Series circuit breakers in 5kV, 7.5kV and 13.8kV applications.

Description

The Magneblast-VR circuit breakers are a new, factory designed and tested roll-in replacement for existing Magneblast air-magnetic circuit breakers. With vacuum technology, the new breakers require less maintenance, weigh less, have fewer components, and have improved reliability over the air-magnetic styles. In addition, the VR breakers are electrically and mechanically interchangeable with the existing breakers.



Westinghouse VR-Series+ Vacuum Circuit Breaker

Nuclear Qualification

Westinghouse VR circuit breakers are seismically qualified for nuclear safety-related applications. Westinghouse has performed extensive cycle testing to end-of-life prior to performing seismic-qualification testing.

The AM-VR circuit breakers will be seismically tested and qualified in accordance with the requirements set forth in Institute of Electrical and Electronics Engineers (IEEE) 323-1983 and IEEE 344-1987.

The seismic test levels to which the breakers are qualified envelop the majority of seismic requirements of the existing nuclear plant applications. The new breakers are tested in both the connected and disconnected positions. As a result of the Westinghouse qualification test program, qualification certification can be provided for the new AM-VR breakers installed in the existing GE Magneblast switchgear.

Warranty and Documentation

Class 1E AM-VR breakers are warranted and provided with a Certificate of Conformance to the purchase order requirements and a Certificate of Qualification when required for safety-related applications.

<https://info.westinghousenuclear.com/westinghouse-parts-business>

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Westinghouse Parts Business

Why Westinghouse

Westinghouse technology is fundamental to nearly 50% of the world's nuclear reactors. Now, that same trusted expertise is delivering the services and parts to meet the needs of 100% of the **nuclear plants across the globe.**

Direct Roll-in Replacement

The AM-VR is not a retrofit breaker. It is a qualified roll-in replacement for the Magneblast, thereby minimizing out-of-service time and parts normally required as part of a breaker retrofit service. It is wheel-mounted for easier handling and installation and rolls in and out of the breaker cell like the current model.

Lower Maintenance Costs

Vacuum technology reduces the maintenance associated with the Magneblast air-magnetic circuit breakers.

With the air-magnetic style, arc chutes can weigh up to 450 pounds each and are bulky to handle. With vacuum technology, the bulky arc chutes are eliminated, thereby reducing maintenance efforts and reducing the weight of the breaker by as much as 1,500 pounds. Arc chute components associated with air-magnetic breakers are subject to cracking, erosion and breakage over the long term, and require periodic inspection and cleaning. In addition to eliminating the arc chute components, the VR's state-of-the-art current transfer system and contacts are maintenance free. Lower maintenance costs are also associated with accessing the stored energy mechanism and control components.

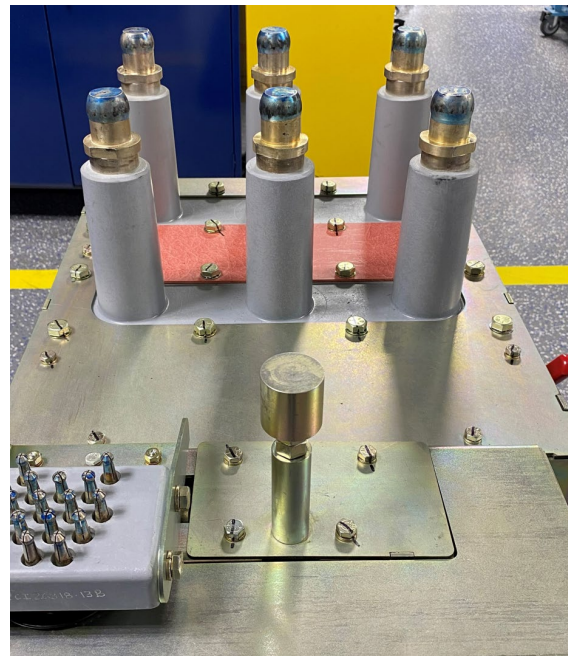
Options

Westinghouse offers a total solution to meet the customer's medium-voltage breaker requirements. In addition to the Class 1E vacuum breakers, Westinghouse offers a comprehensive package of products and services, including safety-related parts, breakers, breaker refurbishments, equipment qualification, field maintenance and technical support.

Fewer Parts – Less Expense

In general vacuum breakers have about 50 percent fewer parts than the air-magnetic designs. Bulky arc chutes and their associated mounting hardware have been eliminated. The stationary and moving contact assemblies have been replaced with a single vacuum bottle. As a result, spare parts inventories are considerably reduced, which is a significant feature since maintaining parts inventories can be expensive.

AM-VR parts are from current production and are generally less costly. Additionally, the operating mechanism shares many of the same parts with other vacuum breakers resulting in a higher level of parts availability.



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