

Type VOR-M

Vacuum Circuit Breaker Retrofit

Replacement for Oil Beakers GEC BVP17, Brush VSI/VMV, SWS C4X, D4X, Reyrolle LMT and Others.

P&B started developing vacuum retrofit circuit breakers in 1991. Since then, we have become a market leader by designing, type testing and introducing many medium voltage vacuum breaker designs to replace air and oil break circuit breakers manufactured by a range of UK suppliers.

In many cases ageing switchgear can be given a life extension of up to 30 years by simply replacing the circuit breaker, as the switchgear fixed portion is usually almost as good as new.

Benefits of Retrofit Switchgear:

- » Increased operating reliability and safety
- » Enhanced short circuit ratings available
- » Reduced maintenance and environmental impact
- » Elimination of hazardous materials such as asbestos
- » Service life can be extended by up to 30 years

Benefits over replacing complete switchboards include:

- » Significant overall cost savings
- » Minimal disruption to site and supplies
- » No need to disturb or replace HV cables



Our VOR-M circuit breaker range has been designed for total reliability. It utilises latest technology ABB vacuum interrupters embedded in resin for high dielectric performance and protection against shock, humidity and dust. For ultra reliable performance we have incorporated a magnetic actuator drive which reduces the number of moving parts to the absolute minimum to achieve trouble free performance over many thousands of maintenance free operations.

Our offering includes for an "all new" design incorporating new primary and secondary contacts, bushings, etc using none of the existing parts. This allows for complete manufacture and delivery to site without the need to switch off your existing unit until the new one is ready and waiting minimising potential delays and consequential loss of production. Many options & unique features are available with this unit above your original specification.

RATINGS AVAILABLE

Maximum System Voltage	kV	12
Rated Power Frequency Withstand	kV	28
Basic Impulse Level	kVp	75
Normal Rated Current	A	up to 1250
Short Circuit Breaking Current	kA	up to 25 rms
Short Time Current	kA 3 secs	25
Peak Making Current	kAp	65
Mechanical Endurance Performance		> 10,000 Operations

State-of-the-art Mechanism Technology

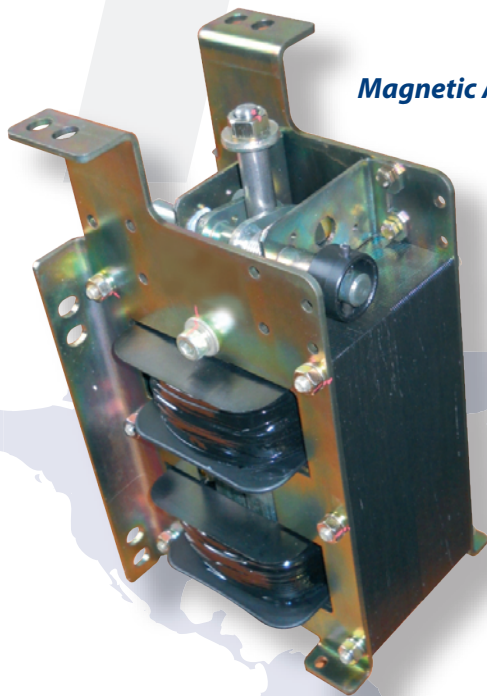
Ultra reliable high performance - the EPS MagLatch magnetic actuator has been repeatedly proven to outclass other mechanisms on endurance tests – typically 10 times the operational performance of traditional spring mechanisms.

Designed for more than 100,000 operations, the MagLatch allows a huge reduction in number of mechanism parts, giving high reliability and maintenance free operation over a very long life.

Open and closed latched positions are held by strong permanent magnets. Actuator drive operation is by excitation of one of the two coils to overcome the magnet retaining force. The operating drive shaft has been carefully designed to transmit exactly the right travel and force to the vacuum interrupters under all operating conditions.



Completed Assembly



Magnetic Actuator

- Minimum parts count
- High reliability
- Proven in arduous applications
- Ideal for very frequent operation duty

Operation is by a proven electronic controller, powered by a capacitor with sufficient energy to perform a complete auto-reclose cycle. Fast charging allows repeated sequences within seconds.

Contains watchdog features to monitor input voltage, capacitor voltage, trip and close timing and coil integrity.

Configurable inputs and outputs to suit customer requirements with external links for communications.