

# Type E3 Vacuum Circuit Breaker Retroilt Replacement for English Electric E3 Type Air Breakers

## Vacuum Circuit Breaker Retrofit

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 E3 circuit breaker range has been designed for total reliability. It utilises the ABB VD4 vacuum circuit breaker which has a proven global track record designed to achieve trouble free performance over many thousands of maintenance free operations.

Our offering utilises many parts from the original truck including the original frame, pokers, cluster pots and interlock mechanism ensuring a perfect fit into your existing cubicle with only minimal alterations to the existing front door. All current carrying parts are fully refurbished & re-plated and all cluster springs are replaced. The unit is completely re-wired to your specific requirements. Many options including fused versions are already designed & available for this unit sometimes above your original specification. We have some units in stock so don't hesitate to call and discuss your requirements. We also offer full cubicle refurbishment including CT and protection upgrade specific to your requirements either on site or factory finished units. A full installation and commissioning service is always available.

### **RATINGS AVAILABLE**

| Maximum System Voltage           | kV       | 3.3                  |
|----------------------------------|----------|----------------------|
| Rated Power Frequency Withstand  | kV       | 10                   |
| Basic Impulse Level              | kVp      | 40                   |
| Normal Rated Current             | A        | 630 to 1600          |
| Short Circuit Breaking Current   | kA       | up 31.5 rms (150MVA) |
| Short-Time Current               | kA 3secs | 31.5                 |
| Peak Making Current              | kAp      | 80                   |
| Mechanical Endurance Performance |          | > 10,000 Operations  |