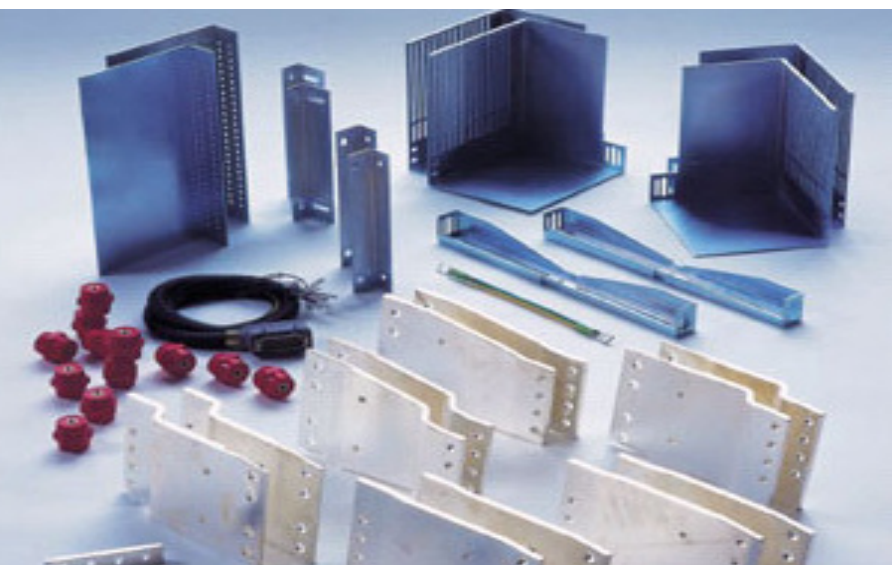


SERVICE, HIGH VOLTAGE PRODUCTS

Retrofit solutions for high voltage equipment

Adding next levels of performance



Retrofit improves the availability and reliability of your installations in the most cost-effective way. Retrofit means upgrading an existing system with modern components, in order to optimize technical, safety, economical, reliability, and maintenance factors. The ABB retrofit solution covers a replacement of components which have been subject to the most wear during the breaker's years in operation.

About us

ABB, the leading global player in high-voltage products, offers a wide range of electrical infrastructure solutions and services encompassing:

- Gas Insulated Switchgear (GIS)
- Hybrid Switchgear Plug and Switch System (PASS)
- Air Insulated Switchgear (AIS)
- Generator Circuit Breakers (GCB)
- Capacitor Banks and Filters
- Instrument Transformers
- Surge Arresters

As a globally operating technology organization and product manufacturer, we complement our offerings with a comprehensive range of round-the-clock support and life cycle services. The goal of ABB's product support services is to improve the reliability and extend the operating life of your high-voltage equipment, while reducing operation and maintenance costs in each life-cycle phase. To meet the challenges of the evolving high-voltage service market, we continue to develop our portfolio, increase customer satisfaction, and improve our operations.

Retrofits

Retrofit is the replacement of phased-out devices by the latest components currently in production after mechanically and electrically engineering them for the existing product. It includes measures taken to allow new or updated parts to replace old or outdated assemblies (like operating mechanism of circuit breaker). The result is an improvement in reliability, safety and performances.

Benefits

- Life extension with new technologies and short replacement time
- Increased product reliability with minimized shutdowns/ outages
- Upgradation with state-of-art technology
- No change of location – foundation not disturbed
- Re-routing of power / control cables not required
- Greater advantage than overhaul increasing the reliability of the system
- Shorter lead time for spare parts

Retrofit service products

The development, engineering, and production of retrofit kits is based on the long experience of ABB in the field of SF6 gas circuit breakers.

Main retrofit features

- Quick installation time
- 100% compatible retrofit kit includes
 - Same breaker mounting location
 - Universal AC/DC pump motor
 - Wiring diagram
 - Mechanism name plate
 - Mechanism wiring harness
 - Counter to count the close operation
 - HMB 8 coupling piece
 - Two HMB-8 instruction books
 - Additional circuit change components
 - Core rebate on reusable AHMA core
 - Credit on reusable HKA pressure switch.
 - One year warranty from date of shipment

Retrofit solution example

ELK-MEB03 is a retrofit solution for GIS type ELK-03 with

- latest 40kA MEB self-blast arcing chamber
 - latest HMB-2 operating mechanism
- This transforms it to a new IEC 62271-100 compliant solution

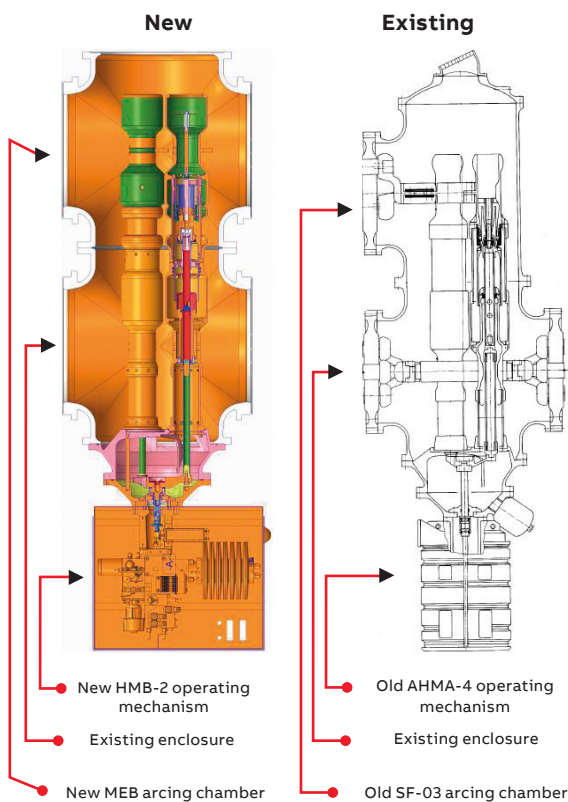
Recommended wherever

- There is high risk and / or high cost of downtime
- Components do not meet today's environmental standards
- Previous maintenance costs are too high due to outdated technologies
- Highly critical spare parts are no longer available in the future

Particular requirements

- Existing layout to remain unchanged
- Finding an economic life-cycle extension solution
- Coping with increased fault level

Retrofit for GIS type ELK-03 ELK-MEB03 01



ELK – MEB03 Application 02

Retrofitting of disconnecter switch



Technology

- Latest mechanism
- Upgrading of technical ratings to current standards
- Type-tested to latest standards



Quality

- Immediate spare parts supply from ABB's series
- Production



Reliability

- Breaker arcing chamber and
- Operating mechanism is state-of-the-art technology
- Know-how is available



Investment

- Prolongation of maintenance intervals
- Significant reduction of maintenance cost
- Extended mechanical life a further 2,000 operations

