

The Siemens logo is displayed in a bold, teal, sans-serif font. It is positioned in the upper right corner of the page, set against a white rectangular background that partially overlaps the image of the power substation.

**SIEMENS**

*Ingenuity for life*

# Merlin Gerin high-voltage breaker parts and service

Service solutions for your T&D infrastructure

The Merlin Gerin type FA live-tank, high-voltage (HV) circuit breakers have offered dependable service for the past 30 years. As the supplier of OEM parts for your Merlin Gerin HV breakers, Siemens is committed to supporting you with qualified parts and factory trained field service support throughout your breaker's life cycle.

#### Field service:

Siemens provides technical field assistance, turnkey maintenance, testing and project management services. Project engineers strictly follow OEM guidelines to minimize downtime and maximize breaker reliability and performance.

#### Customer benefits:

- Improved outage planning and support
- Comprehensive project management with access to OEM engineering departments
- Most advanced equipment available
- Extended breaker service life
- Reduced ongoing maintenance costs

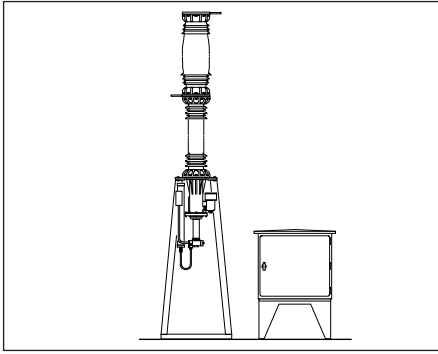
#### Maintenance training:

When combined with a scheduled maintenance outage, breaker technical field assistance and on-site training provides the following hands-on experience for maintenance crews:

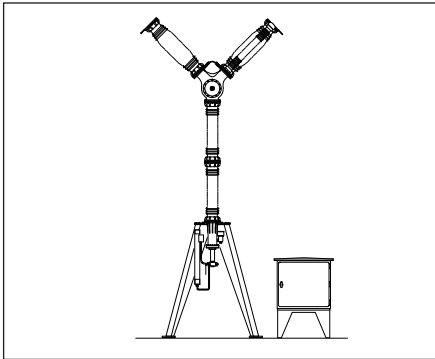
- Maintenance and repair sequencing
- Factory adjustment procedures and tolerances
- Part identification
- Troubleshooting, failure analysis

There have been several design improvements in the FA breaker since its introduction in 1974. The following improvements, depending on your breaker, can be field installed:

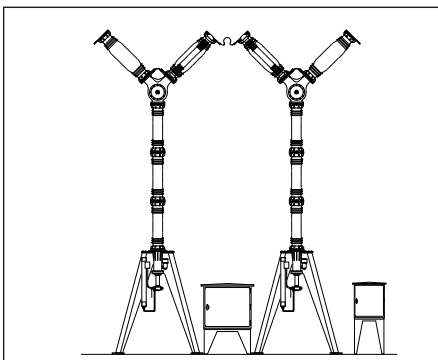
- **New-style oil filter**  
Facilitates replacement of oil filter, increases filter capacity, stops leaks and allows increased oil flow through filter
- **New contact spring**  
Improves contact life and reliability
- **New density switch**  
Upgrade from analog to new digital density switch for more precise measurement and stability
- **Major inspection kit**  
All required o-rings, lubricants and consumable materials to replace items subject to wear
- **Maintenance tool kit**
- **Density switch overhaul kit**
- **Oil pressure switch overhaul kit**



Type FA1 (72.5 - 170 kV)



Type FA2 (170 - 362 kV)



Type FA4 (362 - 550 kV)

### Major maintenance program – 15 year

Performing major maintenance on Merlin Gerin HV circuit breakers enables reliable service for an additional 15 years or more.

Operation	Parts/tools required
<b>Circuit breaker</b>	
Analyze SF <sub>6</sub> gas	SF <sub>6</sub> moisture and purity meters
Recover SF <sub>6</sub> gas	SF <sub>6</sub> gas recovery cart
Check overhaul density switch	Density switch overhaul kit or upgrade to new digital density switch
Replace seals	Major inspection kit
Replace arc contacts	Major inspection kit, maintenance tool kit
Replace screw and bolts	Screw and bolts kit
Check breaker timing and contact resistance	Circuit breaker analyzer, 100-amp DC microohm meter
<b>Hydraulic control</b>	
Change oil and filter	New-style oil filter, replacement oil
Repair or correct leaks	Stainless steel pipe kit and couplings
Test hydraulic control	Oil pressure relief device

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