

Siemens Medium Voltage Vacuum Roll-in Replacement Circuit Breakers

Increase equipment reliability and minimize downtime

Challenge

With vintage circuit breakers, utilities are facing obsolescence, lack of availability of parts, increased maintenance costs, and reliability/performance issues.

Solution

Roll-in replacement breakers provide a cost-effective way to upgrade current vacuum technology while increasing equipment reliability and minimizing downtime. Framatome is now an official channel to market for safety-related Siemens medium voltage vacuum roll-in replacement circuit breakers.

The fortitude of Framatome's Commercial Grade Dedication (CGD) program and seismic and environmental qualification capabilities translates into increased confidence that you will receive the safety and quality products you need.

Siemens has designs for most major breaker models including:

Manufacturer	Model
ABB/ITE	HV, HK
Siemens/ Allis-Chalmers	AM, MA, MB/MBV, MC/MCV, MSV/FA, FB, FC/FCV, FSV, GMI
Federal Pacific	DST2, MOP
General Electric	AM, AMH
McGraw Edison	PSD
Westinghouse	DH, DHP

Customer benefits

- Improved employee safety with new technology
- Current production product with readily available spare parts
- Framatome's nuclear IE-rated world-class CGD program, equipment qualification, application engineering and product management
- Rigorous testing to industry standards ensures the breaker will perform as required in a safety-related application
- Siemens extensive replacement breaker and retrofit experience — more than 2,400 projects since 1983
- Increased reliability and performance
- Reduced operating and maintenance expenditures
- Reduced downtime, minimal changeover time during upgrade
- Preserved investment in existing cubicles



Your performance
is **our** everyday **commitment**

Framatome's safety-related program including CGD testing and seismic and environment qualification

With more than 20 years of CGD experience, Framatome offers the best value, highest reliability and industry-leading quality in CGD services. Fully aligned with EPRI's latest "Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications" (2014), our CGD services give you the best value by doing it right, the first time. We have a Center of Excellence for Electrical Commercial Grade Dedication in Cranberry Township, Pennsylvania.

In addition, Framatome provides world-class seismic and environmental qualification. We have the experience and knowledge to provide high quality solutions in a cost-effective manner.



Get more miles out of your circuit breakers

Framatome's Maintenance Interval and Life Extension Solutions Program prolongs your maintenance intervals. This program is possible by addressing industry grease hardening concerns through extensive testing and incorporation of a new synthetic lubrication on the operating mechanism. The advanced lubricant can be supplied on new circuit breakers, replacement operating mechanisms, reconditioning parts kits or through our reconditioning services. It comes standard with our certification to ensure compliance with our qualification testing program.

Framatome has extended our program to simulate 25 years of circuit breaker aging. Framatome's circuit breakers lubricated with advanced synthetic grease maintained consistent and acceptable functional test results throughout 25 years of simulated aging. When supplied with our certification, circuit breakers carry justification for extending maintenance intervals and achieving related cost savings, while improving overall safety and equipment reliability. An extended warranty can also be provided on new breakers supplied with the lubricant or breakers reconditioned by Framatome under the program.

Why Siemens Breakers?

Long operational life

Siemens replacement breakers have an expected life of 30,000 mechanical operations and a maintenance interval of 10 years or 10,000 mechanical operations, which far exceeds most operational requirements in industrial and utility applications.

Direct interchangeability

Siemens replacement breakers, including those that utilize the patented MOC-Saver design, are interchangeable with no adjustments required from cubicle to cubicle, regardless of the number of mechanism-operated contacts switch banks within the existing cubicles.

Extensive experience

Siemens has supplied thousands of medium voltage replacement breakers from the manufacturing facility in Wendell, North Carolina, successfully completing more than 2,400 projects since 1983. More than 1,000 breakers are located in nuclear 1E-rated applications.

Standardization design

Siemens uses the 3AH operator for the complete family of more than 150 different medium voltage replacement breaker designs, including spare parts and training requirements. More than 600,000 3AH series circuit breakers are in service worldwide.

3AH operator features

- Spring charge motor mechanism — lifetime lubricated gear box
- Operating linkage — machine parts versus stamped metal
- Change-out of components — easily accessible
- Vacuum contact erosion — indication easily verifiable

Siemens
Business Partner
of Framatome for
Energy Management
Customer Services

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