

# Maintenance of AIS 3A circuit breakers

Grid Technologies Service



[www.siemens-energy.com/gt-service](http://www.siemens-energy.com/gt-service)

Circuit breakers are the central part of AIS and GIS switchgear. They have to meet high requirements in terms of reliable opening and closing, consistent quenching performance with rated and short-circuit currents even after many switching operations as well as high-performance and reliable operating mechanisms.

To assure these requirements Siemens Energy AIS circuit breakers need maintenance. Our experts monitor the equipment, increase its wear and tear reserve or even improve its reliability. Siemens Energy's scheduled maintenance concepts provide a system of overhauls and condition assessments. They are predefined according to manufacturer's recommendation but can flexibly be adapted to individual requirements. Siemens Energy supports its customers to choose an adequate and cost-effective solution. All services are supervised or performed by certified Siemens Energy specialists.

**Service content according to OEM's recommendation  
(example for 20 years revision of AIS 3AS 3<sup>rd</sup> generation)**

**1. Step: Diagnostic test**

- SF<sub>6</sub> filling & gas analysis
- Hydraulic oil

**2. Step: Inspection**

- Rupture diaphragm
- Visual check of circuit breakers
- Control of contact system
- Leakage test

**3. Step: Preventive maintenance**

- Replacement according to OEM recommendations
- Maintenance of operating mechanism
- Cleaning gas compartments
- Anti-corrosion protection



Circuit breaker 3AS2 245kV

**4. Step: Function test**

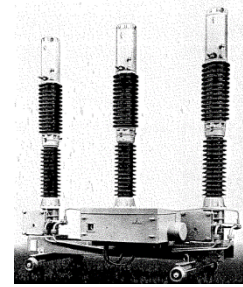
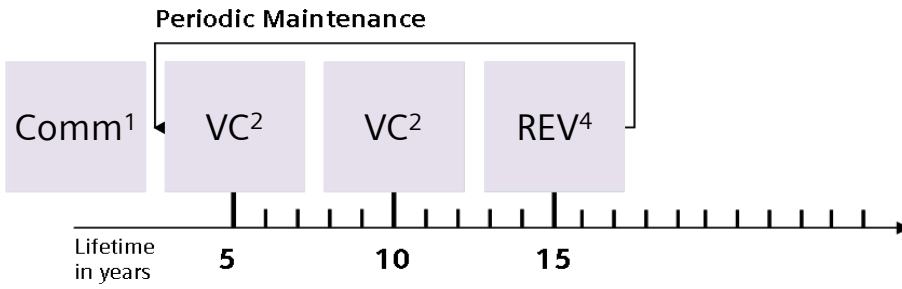
- Mechanical & electrical function test
- Test operation
- Hydraulic monitoring system
- Trip & close solenoids
- Safety valve

**Major benefits at a glance**

- Procedures strictly follow manufacturers' requirements
- Wide scope of measures to suit individual requirements, achieving economical solutions
- Certified technicians
- Original spares
- Fast execution
- Increased reliability of equipment

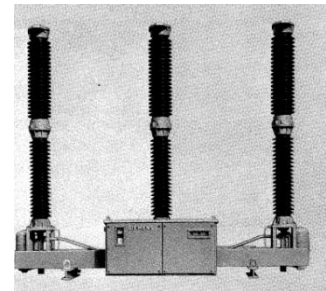
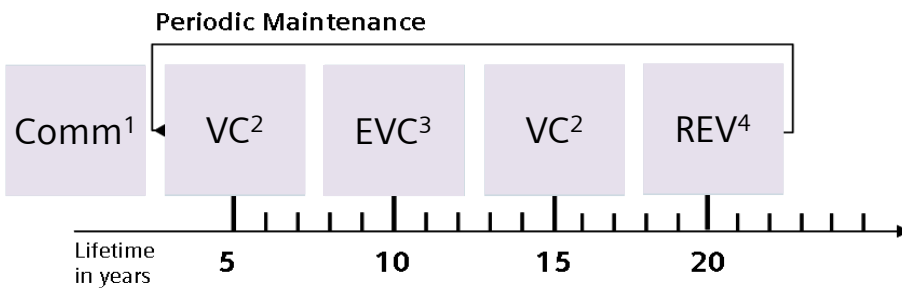
On the next page kindly find an overview of different circuit breaker types and their maintenance intervals.

1<sup>st</sup> – 2<sup>nd</sup> Generation: H620, H8XX series – Service recommendation



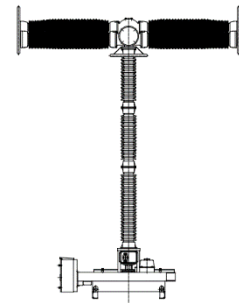
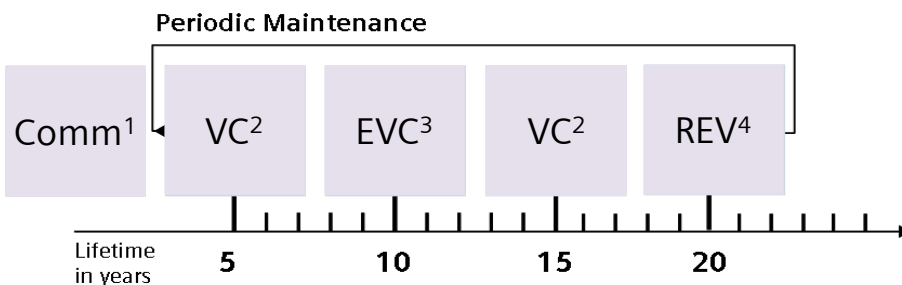
View of H801E air insulated circuit breaker<sup>5</sup>

3<sup>rd</sup> Generation: 3AR, 3AS – Service recommendation



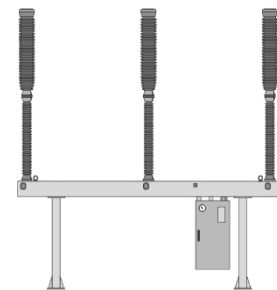
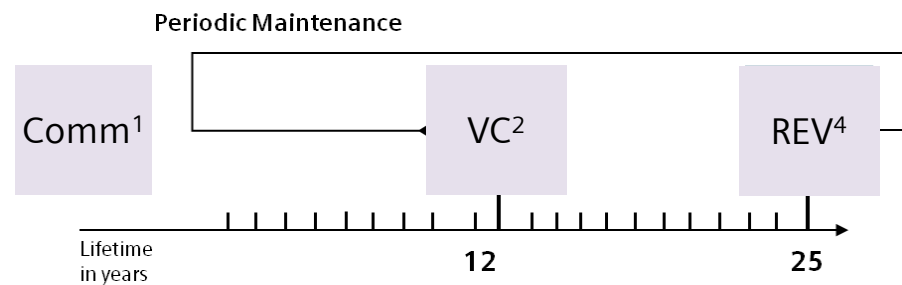
View of 3AR1 air insulated switchgear<sup>5</sup>

4<sup>th</sup> Generation: 3AQ, 3AT – Service recommendation



View of 3AT3 air insulated switchgear<sup>5</sup>

5<sup>th</sup>/6<sup>th</sup> Generation: 3AP, 3AV – Service recommendation



View of 3AP1 FG air insulated switchgear<sup>5</sup>

1 Commissioning | 2 Visual Check | 3 Extended Visual Check | 4 Revision | 5 View not true to scale

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Siemens Energy GmbH & Co. KG  
Grid Technologies Service  
Humboldtstr. 64  
90459 Nuremberg, Germany

Customer Support Center

Phone: +49 911 6505 6505

E-Mail: [support@siemens-energy.com](mailto:support@siemens-energy.com)

[siemens-energy.com/gt-service](https://www.siemens-energy.com/gt-service)

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