

Medium-voltage vacuum roll-in replacement circuit breakers

Ratings from 5 kV to 38 kV, 250 -1500 MVA, 1200-3000 amperes

Roll-in replacement breakers provide a cost-effective way to upgrade to current vacuum technology while increasing equipment reliability and minimizing downtime. Siemens has designs for most major breaker models including:

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

Why replacement breakers?

- Increased reliability and performance
- Reduced operating and maintenance expenditures
- Reduced downtime and minimal changeover time during upgrades
- Preserved investment in existing cubicles
- Improved employee and environmental safety

Why Siemens?

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 our patented MOC-Saver™ design, are interchangeable with no adjustments required from cubicle to cubicle, regardless of the number of MOC switch banks within the existing cubicles.

Extensive experience – Siemens has supplied thousands of medium-voltage replacement breakers from our manufacturing facility in Wendell, North Carolina, successfully completing over 1,000 projects since 1983. Over 800 breakers are located in nuclear 1E rated applications.

Standardized design – Siemens utilizes the 3AH operator for our complete family of over 150 different medium-voltage replacement breaker designs, reducing spare parts and training requirements. Over 350,000 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

MOC-Saver

The Siemens MOC-Saver system addresses the various operational issues associated with certain air-magnetic circuit breakers. The MOC-Saver controls the velocity operating the original cubicle MOC system, thus mitigating the increased forces that would be applied to the cubicle MOC system. The MOC-Saver provides positive MOC switch actuation in the open and close directions. The MOC-Saver includes a bi-directional stored energy mechanism (snubber) and a bi-directional hydraulic velocity controller.



5-MSV (replacement for Allis-Chalmers MA)

The following circuit breakers are available as pre-engineered designs.
Other manufacturers, models and ratings can be engineered by Siemens.

Manufacturer	Model	kV	Rating MVA	Amp	
Allis-Chalmers (All air-magnetic)	AM	4.76	150	1,200, 2,000	
			250	1,200, 2,000	
	MB/MBV	8.25	250	1,200, 2,000	
			500	1,200, 2,000	
	MC/MCV	15	150	1,200	
			250	1,200, 2,000	
			500	1,200, 2,000	
	MA	4.76	250	1,200, 2,000	
			350	1,200, 2,000	
	FA	4.76	350	3,000	
	FB	8.25	500	1,200, 2,000, 3,000	
	FC/FCV	15	500	1,200, 2,000	
750			1,200, 2,000, 3,000		
1,000			1,200, 2,000, 3,000		
Siemens	3AF (2-High)	4.76	250	1,200, 2,000	
			350	1,200, 2,000, 3,000	
			500	1,200, 2,000, 3,000	
		8.25	500	1,200, 2,000, 3,000	
			750	1,200, 2,000	
		15	500	1,200, 2,000	
GE (All air-magnetic)	Magneblast (AMH)	4.76	250	600, 1,200, 2,000	
	Magneblast (AM)	2.4	100	600, 1,200, 2,000	
			150	600, 1,200, 2,000	
		4.76	100	600, 1,200, 2,000	
			150	600, 1,200, 2,000	
			250	600, 1,200, 2,000	
			350	1,200, 2,000, 3,000	
		8.25	500	1,200, 2,000, 3,000	
		15	250	1,200, 2,000	
			500	1,200, 2,000	
			750	1,200, 2,000	
			1,000	1,200, 2,000, 3,000	
Westinghouse	DH	4.76	150	1,200, 2,000	
			250	1,200, 2,000	
			350	3,000	
		8.25	500	1,200, 2,000	
			15	500	
			750	1,200, 2,000	
			1,000	1,200, 2,000, 3,000	
	DHP	4.76	250	1,200, 2,000	
			350	1,200, 2,000	
		8.25	500	1,200, 2,000, 2,500	
		15	500	1,200, 2,000	
			750, 750C	1,200, 2,000, 2,500	
		1,000	1,200, 2,000, 2,500		
ITE	HV	4.76	100	600, 1,200	
			150	600, 1,200	
			250	600, 1,200	
	HK	4.76	250	1,200, 2,000	
			8.25	500	
			15	500	
			750	1,200, 2,000	
			1,000 (36" Cell)	1,200, 2,000	
	VHK	15	500	1,200, 2,000	
	Federal Pacific	DST2	4.76	250	1,200, 2,000
				500	1,200, 2,000
		15	500	1,200, 2,000	
			750	1,200, 2,000	
MOP		27	1,000	1,200	
McGraw Edison	PSD	15	501	1,200	
			502	2,000	
			751	1,200	

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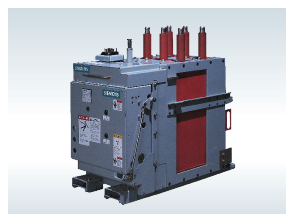
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Siemens HKR (replacement for ITE HK)



Siemens DHR (replacement for Westinghouse DH)



Siemens GER (replacement for GE Magneblast)