

# SIEMENS

*Ingenuity for life*

## HVR & HKR medium-voltage vacuum roll-in replacement circuit breakers

ANSI 4.76/8.25/15 kV, at 250-1,000 MVA  
1,200-2,000 amperes

Roll-in replacement breakers provide a cost-effective way to upgrade to current vacuum technology while increasing equipment reliability and minimizing downtime. Siemens provides the experience your company needs to successfully extend the life of your equipment. Our circuit breakers are assembled utilizing tools and fixtures to replicate the original ITE/BBC/ABB manufacturing specifications.

### Why replacement breakers?

- Increased reliability and performance
- Reduced operating and maintenance expenditures
- Reduced downtime, minimal changeover time during upgrade
- 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 750 projects since 1983. Over 350 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



Siemens HKR  
(replacement for ITE HK)



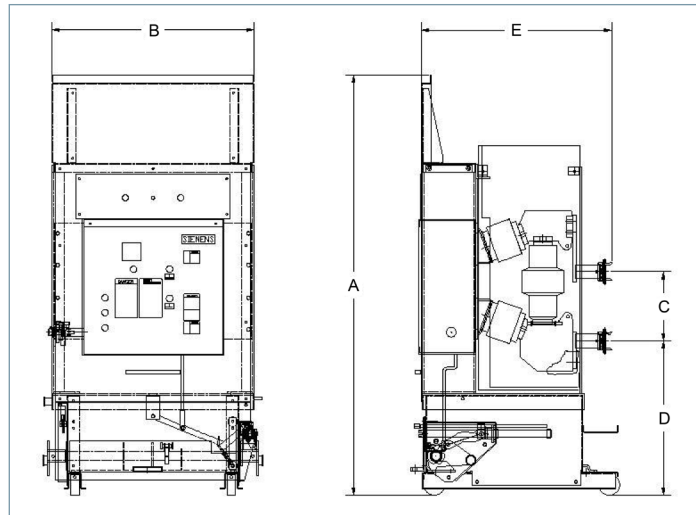
Siemens HVR  
(replacement for ITE HV)

**For ITE/BBC/ABB**

The following circuit breakers are available as pre-engineered designs:

Replacement circuit breaker	Nominal voltage class	Nominal 3-phase MVA class	Maximum voltage	Voltage range factor	Interrupting time	Full wave withstand test voltage	Continuous current (60 Hz)	Short circuit current (at max kV)	Close and latch capability	Nominal weights
	kV	MVA	E kV rms	K	Cycles	kV Peak	Amperes	I kA rms	1.6 x KI kA rms	lbs.
SHVU-250	4.16	250	4.76	1.24	5	60	1,200, 2,000	29	58	710/760
5HVR-250	4.16	250	4.76	1.24	5	60	1,200, 2,000	29	58	710/760
7HKR-500	7.2	500	8.25	1.25	5	95	1,200, 2,000	33	66, 77	750
15HKR-500	13.8	500	15	1.3	5	95	1,200, 2,000	18	37, 38	750
15HKR-750	13.8	750	15	1.3	5	95	1,200, 2,000	28	58, 77	790
15HKR-1000	13.8	1,000	15	1.3	5	95	1,200, 2,000	37	77	775

Dimensions (inches)			
	SHKU-250	SHKR-250	715-HKR 500/750/1000
A	63.25	63.44	60.62
B	22.88	22.64	29.26
C	8.00	8.00	10.00
D	28.88	28.88	22.25
E	32.41	32.41	27.52



Sample dimensional diagram – HKR

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