



Cutler-Hammer

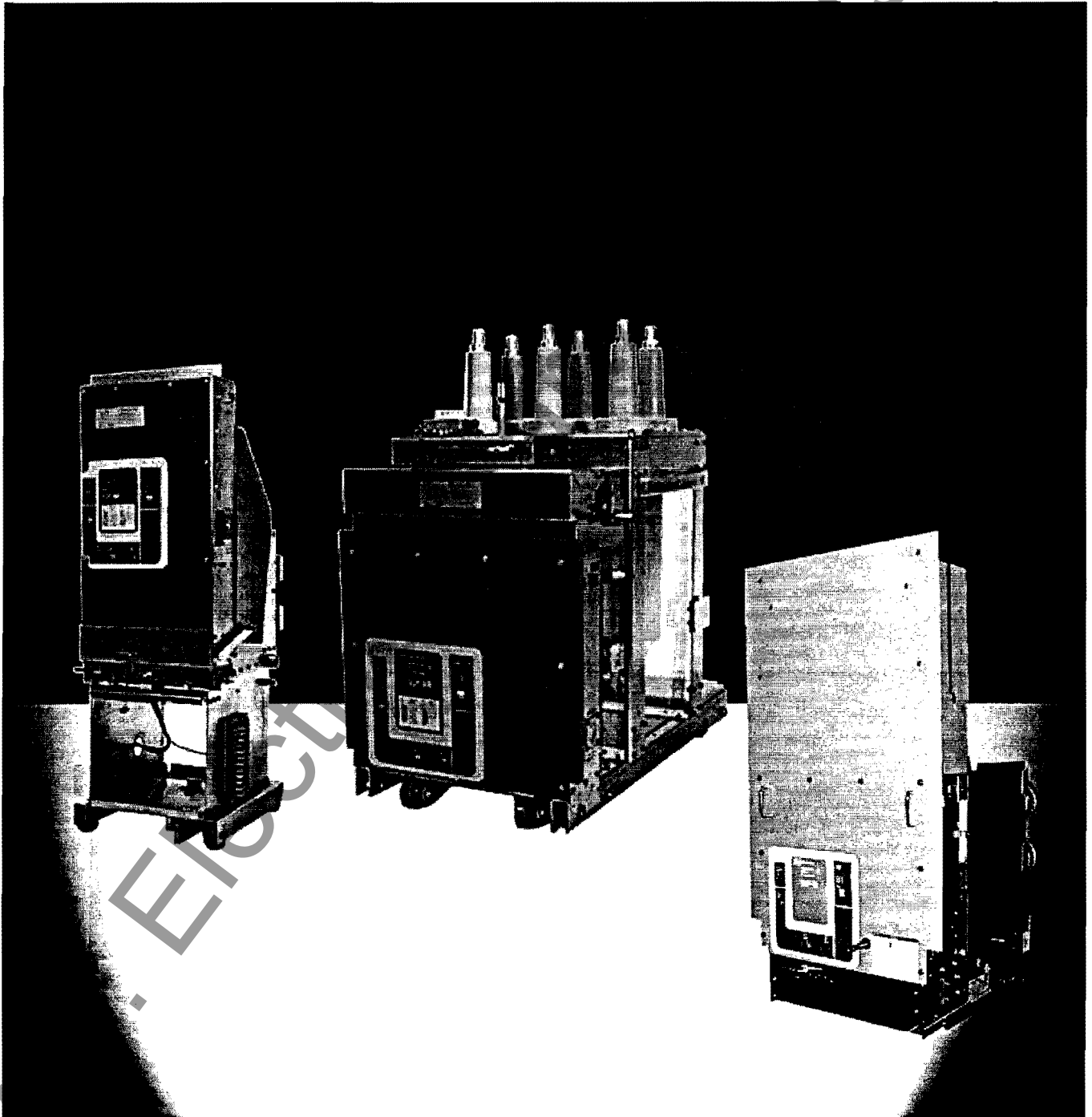
Price List

Effective: October 2000

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Supersedes PL84B.01B.P.E Dated July 2000
and PL33-730 Dated 4-24-1997

VR-Series Medium Voltage Vacuum Replace- ment Breakers



VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

Standard Features

- Maintenance Free Cutler-Hammer Vacuum Interrupters with Visual Contact Erosion Indicator
- "T" Cut-out Visual Wipe Spring Indicator
- Patented Non-sliding/Non-rolling Current Transfer System
- Cycloaliphatic Epoxy Pole Insulators on 29WR (Standard on DHP-VR, Optional on all others)
- Glass Polyester Pole Insulators on 18WR and 20WR
- Front-Accessible Operating Mechanism
- Electrically Operated Trip-Free, Spring Stored Energy Mechanism
- Provisions for Manual Charging of Closing Spring
- Manual Close and Trip Pushbuttons
- 5-Digit Mechanical Operations Counter
- Closing Spring Charged/Discharged Indicator
- Circuit Breaker Open/Closed Indicator
- Type SIS #14 AWG wire with cross-linked polyolefin insulation for all secondary wiring
- Ring-type Terminals for all wiring terminations
- Auxiliary Switch with 2A/4B Spare Contacts
- Latch Check Switch
- Spring Charging Motor, Close Coil, Trip Coil, and Anti-Pump Relay
- Nameplate with Serial Number, Circuit Breaker Type, Ratings, Etc.
- Quality Assurance Certificate
- Designed, Tested and Certified in accordance with ANSI Standards

Applications

Direct Replacement for most medium voltage air circuit breakers manufactured to ANSI Standards in North America.

VR-Series Breaker Accessories

- Under-voltage release
- Second shunt trip
- Three cycle ratings
- Special control voltages
- Many others-See the Modification and Accessories Section

MVA Rating Upgrades Available

Upgraded ratings for 250 to 350 MVA applications with the 250U, utilizing existing 250MVA cell design.

Upgraded ratings for 500 to 750 or 1000 MVA and 750 to 1000 MVA utilizing existing MVA cell design are also available with 500U, 500XU and 750U. Contact Cutler-Hammer for details.

ANSI Standards for VR-Series Breakers Rated on Symmetrical Current Basis

Nominal Voltage Class	Maximum Voltage	Existing 3-Phase MVA Class	Rated Continuous Current at 60 Hz	MVA Designation of VR-Series Breaker	Rated Voltage Factor	Rated Withstand ANSI Test Voltage		Inter-rupting Time	Permissible Tripping Delay	Short-Circuit Current (at Rated Max. kV)	Maximum Sym. Interrupting Capability	Close and Latch-Momentary Capability
						Low Freq. kV RMS	Impulse kV Peak		Seconds	kA RMS	kA RMS	kA RMS/Peak
kV	kV RMS E	MVA	Amperes	MVA	K			Cycles	Y	I	KI	
4.16	4.76	150-250	1200 2000 3000	250	1.24	19	60	5	2	29	36	58/97
		250	1200 2000 3000	250U	1.19	19	60	5	2	41	49	78/132
		350	1200 2000 3000	350	1.19	19	60	5	2	41	49	78/132
7.2	8.25	500	1200 2000 3000	500	1.25	36	95	5	2	33	41	66/111
13.8	15	250-500	1200 2000 3000	500	1.3	36	95	5	2	18	23	37/62
		500	1200 2000 3000	500U	1.3	36	95	5	2	28	36	58/97
		500	1200 2000 3000	500XU	1.3	36	95	5	2	37	48	77/130
13.8	15	750	1200 2000 3000	750	1.3	36	95	5	2	28	36	58/97
		750	1200 2000 3000	750U	1.3	36	95	5	2	37	48	77/130
13.8	15	1000	1200 2000 3000	1000	1.3	36	95	5	2	37	48	77/130
13.8	15	1000	1200 2000 3000	1000U	1.0	36	95	5	2	63	63	101/170

VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

Pricing and Order Entry Instruction Guide

This price list is a practical tool that can be used to determine the List Price for the VR-Series of Medium Voltage Vacuum Replacement breakers manufactured by Cutler-Hammer. The examples are designed to exercise the use of various aspects of the Price List to help the user become familiar and confident when pricing VR-Series breakers. After determining the total List Price for an item, the appropriate market level multiplier should be obtained from Cutler-Hammer and applied to obtain the net selling cost. All pricing and terms are per Cutler-Hammer Selling Policy 25-000 unless specifically amended or modified in writing by Cutler-Hammer.

Information Required for Pricing

- Original Manufacturer of the air-magnetic circuit breaker being replaced
- Breaker Type (Catalog Number)
- Continuous current rating (AMPS)
- Nominal operating voltage
- Short circuit rating of the breaker
- Control Voltages (24 VDC is very special)
- Does the breaker have a MOC operator?
- Required delivery date
- Any special shipping requirements
- Special materials
- Specification Review with Special Requirements
- Witness testing

Information Required for Order Entry

- All of the previous information plus:
- Up-to-date electrical diagram
- Up-to-date electrical schematic diagram
- Approval drawing requirements

Example

OEM of Breaker and Switchgear = General Electric
 Type AM-5
 1200A
 4,160VAC
 Short Circuit rating = 29 kA
 24 VDC Trip Coil required
 4A/4B extra contacts
 No customer Specification
 No MOC operator on the breaker

Solution for Example

- Turn to the VR-Series breaker pricing page for General Electric breakers.
- Original breaker Type = AM-5 (Note that these breakers have dual secondaries)
- Go to the Ratings Table on Page 3 and verify the AM-5-150/250 has 29 kA at maximum operating voltage - it does.
- Select the list price of \$18,017.00 for a 1200A design.
- Turn to section for Modifications and Accessories
- Add \$300.00 for extra contacts - Mod Code = B
- Add \$300.00 for 24 VDC Trip Coil - Mod Code = R

VR-Series Breaker = AM-5-VR-250-1200A - with Mode Codes B+ R

List Price / Each = \$18,617.00

For Cutler-Hammer (Westinghouse) Type DHP and DVP

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
50DHP75	50DHP-VR250	4.16	75	250	1200	20WR	\$ 19,600
50DHP250	50DHP-VR250 50DHP-VR250	4.16	250	250	1200	20WR	\$ 19,600
		4.16	250	250	2000	20WR	\$ 22,400
50DHP250H	50DHP-VR250H 50DHP-VR250H	4.16	250	250	1200	20WR	\$ 22,800
		4.16	250	250	2000	20WR	\$ 25,600
50DHP250	50DHP-VR250U 50DHP-VR250U	4.16	350	350	1200	20WR	\$ 25,600
		4.16	350	350	2000	20WR	\$ 28,500
50DHP350	50DHP-VR350 50DHP-VR350 50DHP-VR350	4.16	350	350	1200	20WR	\$ 23,900
		4.16	350	350	2000	20WR	\$ 27,800
		4.16	350	350	3000	29WR	\$ 46,100
75DHP500	75DHP-VR500 75DHP-VR500	7.2	500	500	1200	29WR	\$ 22,800
		7.2	500	500	2000	29WR	\$ 25,600
75DVP500	75DVP-VR500 ④ 75DVP-VR500 ④	7.2	500	500	1200	29WR	\$ 23,000
		7.2	500	500	2000	29WR	\$ 25,800
150DHP500	150DHP-VR500 150DHP-VR500 150DHP-VR500U 150DHP-VR500U 150DHP-VR500XU 150DHP-VR500XU	13.8	500	500	1200	29WR	\$ 20,700
		13.8	500	500	2000	29WR	\$ 23,500
		13.8	500	750	1200	29WR	\$ 24,200
		13.8	500	750	2000	29WR	\$ 26,500
		13.8	500	1000	1200	29WR	\$ 28,500
		13.8	500	1000	2000	29WR	\$ 30,600
150DVP500	150DVP-VR500 ④ 150DVP-VR500 ④	13.8	500	500	1200	29WR	\$ 20,900
		13.8	500	500	2000	29WR	\$ 23,700
150DHP500H	150DHP-VR500H 150DHP-VR500H	13.8	500	500	1200	29WR	\$ 23,500
		13.8	500	500	2000	29WR	\$ 26,300
150DHP750	150DHP-VR750 150DHP-VR750	13.8	750	750	1200	29WR	\$ 24,200
		13.8	750	750	2000	29WR	\$ 26,600
150DHP750C	150DHP-VR750C 150DHP-VR750C	13.8	750	750	1200	29WR	\$ 24,678
		13.8	750	750	2000	29WR	\$ 29,852
150DHP750H	150DHP-VR750H 150DHP-VR750H	13.8	750	750	1200	29WR	\$ 26,400
		13.8	750	750	2000	29WR	\$ 28,600
150DHP750CH	150DHP-VR750CH 150DHP-VR750CH	13.8	750	750	1200	29WR	\$ 26,400
		13.8	750	750	2000	29WR	\$ 28,600
150DHP1000	150DHP-VR1000 150DHP-VR1000 150DHP-VR1000	13.8	1000	1000	1200	29WR	\$ 28,500
		13.8	1000	1000	2000	29WR	\$ 30,600
		13.8	1000	1000	3000	29WR	\$ 46,100

- ① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.
- ② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.
- ③ All prices are in US Dollars and **INCLUDE Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology (a \$2,400.00 list Value per breaker)**. Contact Cutler-Hammer for price and availability of designs not listed.
- ④ Abbreviated cover.

VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

For Westinghouse Type DH

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
50DH-150/250	50DH-VR-250	4.16	150	250	1200	18WR	\$ 17,250
	50DH-VR-250	4.16	250	250	2000	29WR	\$ 23,695
	50DH-VR-250U	4.16	150-250	350	1200	18WR	\$ 22,850
	50DH-VR-250U	4.16	150-250	350	2000	29WR	\$ 32,450
50DH-350	50DH-VR-350	4.16	350	350	1200	20WR	\$ 22,498
	50DH-VR-350	4.16	350	350	3000	29WR	\$ 45,938
75DH-500	75DH-VR-500	7.2	500	500	1200	29WR	\$ 22,145
	75DH-VR-500	7.2	500	500	2000	29WR	\$ 27,052
150DH-150/250/500	150DH-VR-500	13.8	500	500	1200	29WR	\$ 19,875
	150DH-VR-500	13.8	500	500	2000	29WR	\$ 24,315
	150DH-VR-500U	13.8	500	750	1200	29WR	\$ 22,775
	150DH-VR-500U	13.8	500	750	2000	29WR	\$ 28,285
	150DH-VR-500XU	13.8	500	1000	1200	29WR	\$ 31,375
	150DH-VR-500XU	13.8	500	1000	2000	29WR	\$ 35,525
150DH-750	150DH-VR-750	13.8	750	750	1200	29WR	\$ 22,275
	150DH-VR-750	13.8	750	750	2000	29WR	\$ 27,452
	150DH-VR-750U	13.8	750	1000	1200	29WR	\$ 31,378
	150DH-VR-750U	13.8	750	1000	2000	29WR	\$ 35,518
150DH-1000E	150DH-VR-1000E	13.8	1000	1000	1200	29WR	\$ 31,307
	150DH-VR-1000E	13.8	1000	1000	3000	29WR	\$ 49,970
	150DH-VR-1000EU	13.8	1000	1500	1200	29WR	\$ 68,053
	150DH-VR-1000EU	13.8	1000	1500	3000	29WR	\$ 103,053

① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.

② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.

③ All prices are in US Dollars and **DO NOT INCLUDE MOC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.

For General Electric Type AM

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
AM-2.4/4.16-150/250 ④	AM-2.4/4.16-VR-250-1200A ④⑦	4.16	150/250	250	1200	18WR	\$ 18,017
	AM-2.4/4.16-VR-250-2000A ④⑥⑦	4.16	150/250	250	2000	18WR	\$ 20,565
	AM-2.4/4.16-VR-250U-1200A ④⑦	4.16	150/250	350	1200	18WR	\$ 23,150
	AM-2.4/4.16-VR-250U-2000A ④⑥⑦	4.16	150/250	350	2000	18WR	\$ 25,832
AM-4.16-250	AM-4.16-VR-250-1200A	4.16	250	250	1200	18WR	\$ 17,517
	AM-4.16-VR-250-2000A ⑥	4.16	250	250	2000	18WR	\$ 20,065
	AM-4.16-VR-250U-1200A	4.16	250	350	1200	18WR	\$ 23,002
	AM-4.16-VR-250U-2000A ⑥	4.16	250	350	2000	18WR	\$ 26,140
AM-4.16-350	AM-4.16-VR-350-1200A	4.16	350	350	1200	18WR	\$ 22,823
	AM-4.16-VR-350-2000A ⑥	4.16	350	350	2000	18WR	\$ 25,747
	AM-4.16-VR-350-3000A	4.16	350	350	3000	29WR	\$ 43,635
AM-5-150/250 ④	AM-5-VR-250-1200A ④⑦	4.16	150/250	250	1200	18WR	\$ 18,017
	AM-5-VR-250-2000A ④⑥⑦	4.16	150/250	250	2000	18WR	\$ 20,565
AM-7.2-500	AM-7.2-VR-500-1200A	7.2	500	500	1200	29WR	\$ 23,125
	AM-7.2-VR-500-2000A ⑥	7.2	500	500	2000	29WR	\$ 26,787
AM-7.5-250 ④	AM-7.5-VR-250U-1200A ④⑦	7.2	250	500	1200	18WR	\$ 24,625
	AM-7.5-VR-250U-2000A ④⑥⑦	7.2	250	500	2000	18WR	\$ 29,037
AM-13.8-250/500	AM-13.8-VR-500-1200A	13.8	250/500	500	1200	29WR	\$ 20,858
	AM-13.8-VR-500-2000A ⑥	13.8	250/500	500	2000	29WR	\$ 24,053
	AM-13.8-VR-500U-1200A	13.8	250/500	750	1200	29WR	\$ 24,092
	AM-13.8-VR-500U-2000A ⑥	13.8	250/500	750	2000	29WR	\$ 28,020
	AM-13.8-VR-500XU-1200A	13.8	250/500	1000	1200	29WR	\$ 30,692
	AM-13.8-VR-500XU-2000A ⑥	13.8	250/500	1000	2000	29WR	\$ 34,087
AM-13.8-750-5H ⑤	AM-13.8-VR-750-5H-1200A	13.8	750	750	1200	29WR	\$ 23,715
	AM-13.8-VR-750-5H-2000A ⑥	13.8	750	750	2000	29WR	\$ 27,643
	AM-13.8-VR-750U-5H-1200A	13.8	750	1000	1200	29WR	\$ 30,648
	AM-13.8-VR-750U-5H-2000A ⑥	13.8	750	1000	2000	29WR	\$ 33,710
AM-13.8-750T	AM-13.8-VR-750T-1200A ⑤	13.8	750	750	1200	29WR	\$ 24,862
	AM-13.8-VR-750T-2000A ⑤⑥	13.8	750	750	2000	29WR	\$ 27,793
	AM-13.8-VR-750TU-1200A ⑤	13.8	750	1000	1200	29WR	\$ 30,918
	AM-13.8-VR-750TU-2000A ⑤⑥	13.8	750	1000	2000	29WR	\$ 33,902
AM-13.8-1000	AM-13.8-VR-1000-1200A	13.8	1000	1000	1200	29WR	\$ 30,192
	AM-13.8-VR-1000-2000A ⑥	13.8	1000	1000	2000	29WR	\$ 33,528
	AM-13.8-VR-1000-3000A	13.8	1000	1000	3000	29WR	\$ 46,100
AM-15-250/500 ④	AM-15-VR-500-1200A ④⑦	13.8	250/500	500	1200	18WR	\$ 22,358
	AM-15-VR-500-2000A ④⑥⑦	13.8	250/500	500	2000	18WR	\$ 26,053

- ① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.
- ② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.
- ③ All prices are in US Dollars and **DO NOT INCLUDE MOC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.
- ④ These breakers have dual (round) secondary blocks.
- ⑤ These units are for suffix H and L except 750MVA-5H or later (M36HN M/C). The "T" denotes a Tall Frame and is not a General Electric Co. designation.
- ⑥ Universal 2000/1200A spare breaker designs are available for these ratings. See PL.84B.01.PE (Modifications and Accessories) for pricing.
- ⑦ MOC operator not available on this rating.

VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

For Allis-Chalmers Types AM250, MA, FB, and FC

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
AM100	AM-100U-VR-1200A ④⑤	4.16	100	250	1200	18WR	\$ 18,507
	AM-100U-VR-2000A ④⑤⑥	4.16	100	250	2000	18WR	\$ 24,272
AM150/250	AM-250-VR-1200A ④⑤	4.16	150-250	250	1200	18WR	\$ 18,507
	AM-250-VR-2000A ④⑤⑥	4.16	150-250	250	2000	18WR	\$ 24,272
	AM-250U-VR-1200A ④⑤	4.16	250	350	1200	18WR	\$ 23,307
	AM-250U-VR-2000A ④⑤⑥	4.16	250	350	2000	18WR	\$ 29,205
MA-250	MA-250-VR-1200A ⑥	4.16	250	250	1200	20WR	\$ 18,587
	MA-250-VR-2000A ⑥	4.16	250	250	2000	20WR	\$ 24,315
	MA-250U-VR-1200A ⑥	4.16	350	350	1200	20WR	\$ 23,387
	MA-250U-VR-2000A ⑥	4.16	350	350	2000	20WR	\$ 29,248
MA-350	MA-350-VR-1200A ⑥	4.16	350	350	1200	20WR	\$ 23,387
	MA-350-VR-2000A ⑥	4.16	350	350	2000	20WR	\$ 29,248
FB-500	FB-500-VR-1200A ⑦	7.2	500	500	1200	29WR	\$ 22,663
	FB-500-VR-2000A ⑦	7.2	500	500	2000	29WR	\$ 27,260
FC-500	FC-500-VR-1200A ⑦	13.8	500	500	1200	29WR	\$ 20,397
	FC-500-VR-2000A ⑦	13.8	500	500	2000	29WR	\$ 24,527
	FC-500U-VR-1200A ⑦	13.8	500	750	1200	29WR	\$ 22,797
	FC-500U-VR-1200A ⑦	13.8	500	750	2000	29WR	\$ 27,660
FC-750	FC-750-VR-1200A ⑦	13.8	750	750	1200	29WR	\$ 22,797
	FC-750-VR-2000A ⑦	13.8	750	750	2000	29WR	\$ 27,660
FC-1000	FC-1000-VR-1200A ⑦	13.8	1000	1000	1200	29WR	\$ 27,730
	FC-1000-VR-2000A ⑦	13.8	1000	1000	2000	29WR	\$ 32,393

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- ③ All prices are in US Dollars and **DO NOT INCLUDE MDC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MDC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.
- ④ MOC operator not available on this rating.
- ⑤ Universal 2000/1200A spare breaker designs are available for these ratings. See PL.84B.01.PE (Modifications and Accessories) for pricing.
- ⑥ Factory supplied anti-rotation brackets must be installed in each cell for these designs. One bracket supplied with each breaker as standard.
- ⑦ Manual and/or Power Gear Levering option available. Requires cell modifications which are reversible for insertion of old air magnetic breakers. MOC operator not available when gear levering system is used.
- ⑧ Power operated portable lifting device available for 120 VAC operation at \$5,500.00 List per device.

For Federal Pacific Electric Types DST and DST-2

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
DST-5-250	DST-5-VR-250-1200A ④	4.16	250	250	1200	20WR	\$ 18,392
	DST-5-VR-250U-1200A ④	4.16	250	350	1200	20WR	\$ 23,192
DST-2-5-250	DST-2-5-VR-250-1200A ⑤	4.16	250	250	1200	18WR	\$18,475
	DST-2-5-VR-250-2000A ⑤	4.16	250	250	2000	18WR	\$ 21,450
	DST-2-5-VR-250U-1200A ⑤	4.16	250	350	1200	18WR	\$ 23,275
	DST-2-5-VR-250U-2000A ⑤	4.16	250	350	2000	18WR	\$ 26,250
DST-2-5-350	DST-2-5-VR-350-1200A ⑤	4.16	350	350	1200	18WR	\$ 23,275
	DST-2-5-VR-350-2000A ⑤	4.16	350	350	2000	18WR	\$ 26,450
DST-7.5-500	DST-7.5-VR-500-1200A	7.2	500	500	1200	29WR	\$ 22,450
	DST-7.5-VR-500-2000A	7.2	500	500	2000	29WR	\$ 25,250
DST-2-7.5-500	DST-2-7.5-VR-500-1200A ⑤	7.2	500	500	1200	18WR	\$ 22,750
	DST-2-7.5-VR-500-2000A ⑤	7.2	500	500	2000	18WR	\$ 25,450
DST-15-500	DST-15-VR-500-1200A	13.8	500	500	1200	29WR	\$ 20,150
	DST-15-VR-500-2000A	13.8	500	500	2000	29WR	\$ 22,500
	DST-15-VR-500U-1200A	13.8	500	750	1200	29WR	\$ 22,600
	DST-15-VR-500U-2000A	13.8	500	750	2000	29WR	\$ 25,750
DST-15-750	DST-15-VR-750-1200A	13.8	750	750	1200	29WR	\$ 22,600
	DST-15-VR-750-2000A	13.8	750	750	2000	29WR	\$ 25,750
DST-2-15-500-1200A	DST-2-15-VR-500-1200A ⑤	13.8	500	500	1200	18WR	\$ 20,350
	DST-2-15-VR-500-2000A ⑤	13.8	500	500	2000	18WR	\$ 22,850
	DST-2-15-VR-500U-1200A ⑤	13.8	500	750	1200	18WR	\$ 22,750
	DST-2-15-VR-500U-2000A ⑤	13.8	500	750	2000	18WR	\$ 25,850
DST-2-15-750	DST-2-15-VR-750-1200A ⑤	13.8	750	750	1200	18WR	\$ 22,750
	DST-2-15-VR-750-2000A ⑤	13.8	750	750	2000	18WR	\$ 25,850

- ① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.
- ② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.
- ③ All prices are in US Dollars and **DO NOT INCLUDE MOC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.
- ④ These breakers have two different shutter operating mechanisms based on date of manufacture. One is located midway (vertically) between the bushing centers on the right side. The other is located on the lower right side of the cell. Contact the Switchgear Center for compatibility if in doubt. Specify which type when ordering.
- ⑤ Manual and/or Power Gear Levering option available. Requires cell modifications which are reversible for insertion of old air magnetic breakers. MOC operator not available when Gear Levering system is used. See modification and Accessories section for pricing.

VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

For ITE Types HV and HK

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
5HV-100-600A	5HV-VR-100U-600A ⑤	4.16	100	150	600	20WR	\$ 18,250
5HV-100-1200A	5HV-VR-100U-1200A ⑤	4.16	100	150	1200	20WR	\$ 18,950
5HV-150/250	5HV-VR-250-1200A ⑤	4.16	150/250	250	1200	20WR	\$ 18,750
	5HV-VR-250-2000A ⑤ ⑥	4.16	150/250	250	2000	20WR	\$ 21,750
	5HV-VR-250U-1200A ⑤	4.16	150/250	350	1200	20WR	\$ 23,500
	5HV-VR-250U-2000A ⑤ ⑥	4.16	150/250	350	2000	20WR	\$ 26,850
7.5HK-500	7.5HK-VR-500-1200A ④	7.2	500	500	1200	29WR	\$ 22,500
	7.5HK-VR-500-2000A ④	7.2	500	500	2000	29WR	\$ 25,650
15HK-500	15HK-VR-500-1200A ④	13.8	500	500	1200	29WR	\$ 20,500
	15HK-VR-500-2000A ④	13.8	500	500	2000	29WR	\$ 23,000
	15HK-VR-500U-1200A ④	13.8	500	750	1200	29WR	\$ 23,000
	15HK-VR-500U-2000A ④	13.8	500	750	2000	29WR	\$ 26,000
15HK-750	15HK-VR-750-1200A ④	13.8	750	750	1200	29WR	\$ 23,000
	15HK-VR-750-2000A ④	13.8	750	750	2000	29WR	\$ 26,000
	15HK-VR-750U-1200A ④	13.8	750	1000	1200	29WR	\$ 27,850
	15HK-VR-750U-2000A ④	13.8	750	1000	2000	29WR	\$ 30,900

- ① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.
- ② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.
- ③ All prices are in US Dollars and **DO NOT INCLUDE MOC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.
- ④ Replacements for Model 03 only.
- ⑤ Breakers have both left and right side mounted secondary blocks.
- ⑥ Requires cell shutter mechanism modification. The modification retains compatibility with the original air circuit breaker. One set of shutter modification components supplied for field installation with each breaker ordered. **Installation not included in the price.** Contact Cutler-Hammer if additional sets are required.

For McGraw-Edison Types PSD and WSA

Original Breaker Type ①	VR-Series Vacuum Replacement Breaker ②	kV	MVA		Amps	Vacuum Element	List Price ③
			ORIG	NEW			
PSD-5	PSD-5-VR-250-1200A	4.16	250	250	1200	20WR	\$ 20,050
PSD-15-501	PSD-15-VR-501-1200A	13.8	500	500	1200	18WR	\$ 22,150
	PSD-15-VR-501U-1200A	13.8	500	750	1200	18WR	\$ 24,575
PSD-15-502	PSD-15-VR-502-2000A	13.8	500	500	2000	18WR	\$ 23,750
	PSD-15-VR-502U-2000A	13.8	500	750	2000	18WR	\$ 26,850
WSA-5	WSA-5-VR-250-1200A	4.16	250	250	1200	20WR	\$ 20,000
WSA-15-501	WSA-15-501-VR-1200A	13.8	500	500	1200	29WR	\$ 21,350
	WSA-15-501U-VR-1200A	13.8	500	750	1200	29WR	\$ 23,750
WSA-15-502	WSA-15-502-VR-2000A	13.8	500	500	2000	29WR	\$ 23,700
	WSA-15-502U-VR-2000A	13.8	500	750	2000	29WR	\$ 26,850

- ① Original Breaker Types are for general identification and vary slightly from the original air circuit breaker catalog numbers. Replacement breakers are designed to interchange mechanically and electrically with the original breaker models in most cases. Verify interchangeability with Cutler-Hammer if in doubt.
- ② Replacement Vacuum Circuit Breaker catalog numbers that contain either a "U" or an "XU" designate increased interrupting, close and latch and momentary capabilities. These breakers must never be installed in cubicles that do not have the same or greater short circuit ratings as the breakers. Cubicles must be properly labeled and coded. Contact your local Cutler-Hammer Service office for bus bracing studies and bus bracing upgrades. All replacement vacuum circuit breakers have automatic stored energy discharge.
- ③ All prices are in US Dollars and **DO NOT INCLUDE MOC operators. Add \$2,400.00 list to each breaker to supply Cutler-Hammer's patented SURE CLOSE™ MOC Operator Technology.** Contact Cutler-Hammer for price and availability of designs not listed.

VR-Series Medium Voltage Vacuum Replacement Circuit Breakers

Cutler-Hammer

Modifications and Accessories

List Price Adders for Modifications and
Accessories by Vacuum Element Type ②

Modification or Accessory	18WR	20WR	29WR	Mod Code
3 Cycle Rating	4500	4500	4500	A
5A/5B Auxiliary Switch Kit	300	N/A	300	B
10A/10B Auxiliary Switch Kit	N/A	N/A	600	C
All Cycloaliphatic Element Insulation Components (Except phase Barriers)	N/A	N/A	3000	D
Extra Manual Breaker Charging Tool (8064A02G01)	100	100	100	E
Device and wire markers	500	500	500	F
Special Control Lead Terminals	500	500	500	G
Special Laminated Plastic Nameplates and Markings	150	150	150	H
Special Phase Barrier Materials (Clear Lexan ®)	400	400	400	J
Special Phase Barrier Color (White GPO-3)	300	300	300	K
Surge Arrestors - MOV Type (Breaker Mounted) ⑤	1500	1500	1500	L
Surge Packs - RC Type (Breaker Mounted) ⑤	3000	3000	3000	M
Second Shunt Trip Coil	500	500	500	N
Undervoltage Release (48 Vdc, 125 Vdc, 120 Vac, 240 Vac)	1500	1500	1500	P
24 VDC Shunt Trip Coil	300	300	300	R
Universal 2000A/1200A Spare Breaker (Check individual Price list for availability) ①	3000	3000	3000	S
Manual "through-the-door" gear drive racking system (Some require cell modification) ③	3000	3000	3000	T
Power operated gear drive racking system (Manual Control-Requires cell modifications) ④	6000	6000	6000	U
Customer inspection of product prior to shipment (Without delays or any testing)	N/C	N/C	N/C	V
Customer witness production testing	\$2500 for 1st day. \$2000 each additional day			W
Customer witness design certification testing	\$7500 for 1st day. \$5000 each additional day plus applicable setup costs and test lab fees.			X

① Contact Cutler-Hammer for delivery.

② All prices are in US Dollars. Contact Cutler-Hammer for price and availability of modifications and accessories not listed. Special modifications and accessories may extend normal deliveries.

③ Optional manual racking includes a levering handle for each breaker. Cell door must be modified to allow insertion of the racking/levering handle and cell brackets must be added. Cell modifications are not included in the price.

④ Power Racking requires the addition of cell brackets and control wiring changes. The Optional Power Racking system includes a control station with push buttons, cell limit switches and a 30-ft. umbilical cord. Power Racking is available only for the designs indicated by their respective List Price sheets. Contact Cutler-Hammer for Power Racking Systems not shown.

⑤ Cutler-Hammer does not recommend mounting surge arrestors or surge packs on the circuit breaker.

⑥ Lexan is a registered trademark of the General Electric Company.