

Medium Voltage VR-Series Circuit Breakers



A brand new replacement vacuum circuit breaker

All VR-Series breakers are brand new from the ground up. These breakers are not "retrofits," and do not use any parts from the original air-magnetic circuit breakers. They are designed to replace the existing air-magnetic circuit breakers with little or no cell modifications. If required, cell modifications are kept to a minimum and are reversible. VR-Series breakers allow installation to comply with the customer's schedule, which can save \$1,000 - \$3,000 per breaker on initial installation costs.

Designed and Tested to IEEE/ANSI Standards in an ISO certified facility

All VR-Series circuit breakers are designed and tested in compliance with applicable IEEE/ANSI Standards. Since they modernize and extend the useful life of the existing switchgear, they comply with the testing, interfaces, and compatibility of C37.59-2007 Standards. IEEE/ANSI certificates and certified factory production test reports are available for each design. The final product is assembled in an ISO 9001:2015 certified facility assuring the finest quality.

Reduce maintenance cost and downtime with reliable vacuum technology

Maintenance procedures commonly associated with air-magnetic circuit breakers average 6-10 man-hours per breaker, as compared to Eaton's vacuum technology, which reduces normal maintenance to approximately one hour. Both the mechanism and control components can be easily inspected and maintained with the maintenance free patented current transfer system and contacts. Spare parts inventory is also considerably reduced because VR-Series breakers have 50% fewer parts than air magnetic breakers. This saves \$600-\$2500 per breaker.

Solve parts availability problems for old air-magnetic circuit breakers

Replacement parts for old air-magnetic circuit breakers are becoming harder to find and may not comply with the original manufacturer's specifications. VR-Series mechanism and control components are compatible with Eaton's VCP-W breakers and are current production items, in stock and available on a 24/7 basis. This can save \$2,500 - \$6,000 per design in future spare parts investments.

Increased interrupting capability

Power system changes may have increased your available short current beyond the capabilities of your existing switchgear. VR-Series breakers and bus bracing upgrades can increase your switchgear's capabilities to handle higher short circuit currents in the same space as your original air-magnetic circuit breakers. This provides a possible savings of \$5,000 - \$12,000 per breaker versus the costs of replacing the switchgear.

Patented SURE CLOSE MOC Technology

Eaton's patented **SURE CLOSE** technology for vacuum replacement breakers with de-coupled stored energy is guaranteed not to stall the breaker during closing and prevents damage to the existing cell MOC components. MOC switch replacement costs average \$1,750 - \$4,000 each.

Eliminate arc chutes

Arc chutes degrade with usage and must eventually be replaced. VR-Series breakers use sealed interrupters and do not require arc chutes. Arc chutes raise environmental and legal issues due to asbestos. Eliminating the need to replace the arc chutes could save up to \$3000-\$10,000 each.

EATON

Powering Business Worldwide

Eaton Type DHP-VR Vacuum Replacement Breakers for Westinghouse Type DHP

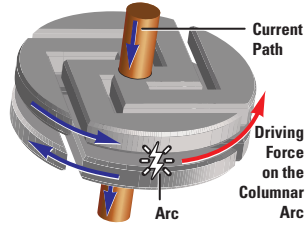
Identification

Rated Values

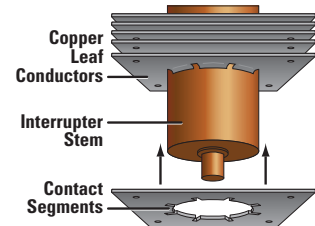
VR-Series Circuit Breaker Type	Nominal 3-Phase Class	Nominal Voltage Class	Max. Voltage	Voltage Range Factor	Impulse Test Voltage	Continuous Current at 60 Hz	Short Circuit Current (at Rated Max. kV)	Interrupting Time	Current Values Max. Sym. Interrupting Capability (K Times Rated Short Circuit Current)	Closing and Latching / Momentary Capabilities (Rated Short Circuit Current)	Nominal Weight
	MVA	kV	E kV rms	K	kV Peak	Amperes	I kA rms	Cycles	kA rms	kA rms / Peak	lbs.
50DHP-VR											
250	250	4.16	4.76	1.24	60	1200 / 2000	29	5	36	58 / 97	450 / 525
250H	250	4.16	4.76	1.24	60	1200 / 2000	29	5	36	78 / 132	450 / 525
250U	350	4.16	4.76	1.19	60	1200 / 2000	41	5	49	78 / 132	475 / 525
350	350	4.16	4.76	1.19	60	1200 / 2000 / 3000	41	5	49	78 / 132	500 / 525 / 900
75DHP-VR											
500	500	7.2	8.25	1.25	95	1200 / 2000 / 3000	33	5	41	66 / 111	525 / 575 / 700
150DHP-VR											
500	500	13.8	15.0	1.30	95	1200 / 2000 / 3000	18	5	23	37 / 62	500 / 575 / 700
500H	500	13.8	15.0	1.30	95	1200 / 2000	18	5	23	58 / 97	500 / 575
500U	750	13.8	15.0	1.30	95	1200 / 2000	28	5	36	58 / 97	500 / 575
500XU	1000	13.8	15.0	1.30	95	1200 / 2000	37	5	48	77 / 130	575 / 600
750	750	13.8	15.0	1.30	95	1200 / 2000 / 3000	28	5	36	58 / 97	500 / 575 / 700
750H	750	13.8	15.0	1.30	95	1200 / 2000	28	5	36	77 / 130	500 / 575
750U	1000	13.8	15.0	1.30	95	1200 / 2000	37	5	48	77 / 130	575 / 600
750C	750	13.8	15.0	1.30	95	1200 / 2000 / 3000	28	5	36	58 / 97	525 / 600 / 725
750CH	750	13.8	15.0	1.30	95	1200 / 2000 / 3000	28	5	36	77 / 130	525 / 600 / 725
750CU	1000	13.8	15.0	1.30	95	1200 / 2000	37	5	48	77 / 130	575 / 600
1000	1000	13.8	15.0	1.30	95	1200 / 2000 / 3000	37	5	48	77 / 130	575 / 600 / 700
150DVP-VR											
500	500	13.8	15.0	1.30	95	1200 / 2000	18	3	23	37 / 62	500 / 575
750	750	13.8	15.0	1.30	95	1200 / 2000	28	3	36	58 / 97	500 / 575



Reliable Vacuum Technology



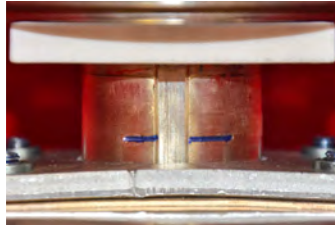
Columnar Arc



Non Sliding Current Transfer



T-Cutout

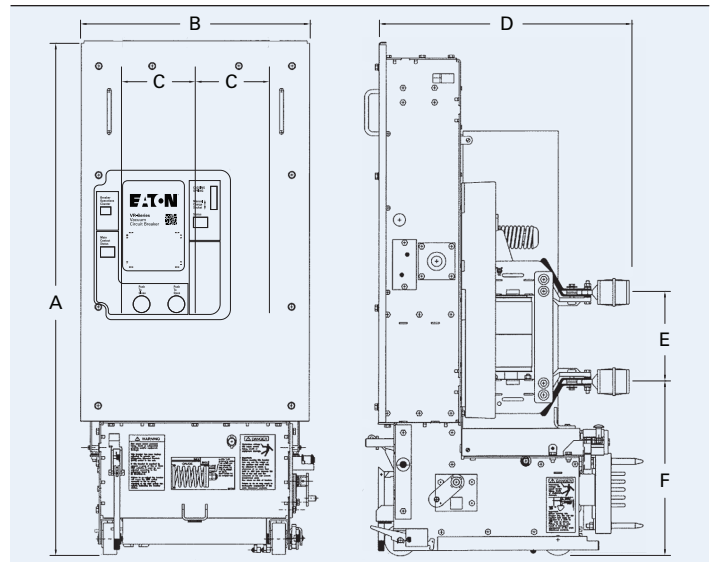


Contact Erosion Indicator



Rotary Racking System

Allows safe insertion/removal with the RPR-2 Remote Racking System.



Dimensional Data In Inches (50DHP-VR Shown)

	50DHP-VR 250, 250U	50DHP-VR 350	75DHP-VR 500	150DHP-VR 500, 750	150DHP-VR 750C, 1000	150DVP-VR 500, 750
A	48.76	57.16	60.75	60.75	73.75	60.75
B	21.88	22.38	31.25	31.25	31.00	31.25
C	7.00	7.00	10.00	10.00	10.00	10.00
D	24.03	29.38	34.81	34.81	38.35	34.81
E	8.50	8.50	10.00	10.00	10.00	10.00
F	16.40	16.40	19.75	19.75	19.75	19.75

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

© 2017 Eaton
All Rights Reserved
Printed in USA
Publication No. PA182017EN
September 2017

Eaton is a registered trademark.

All trademarks are property of their respective owners.