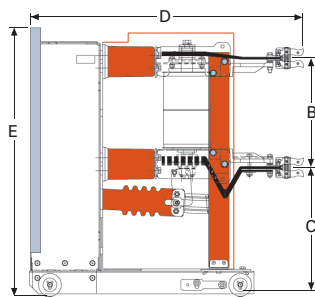
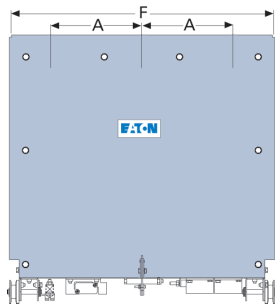
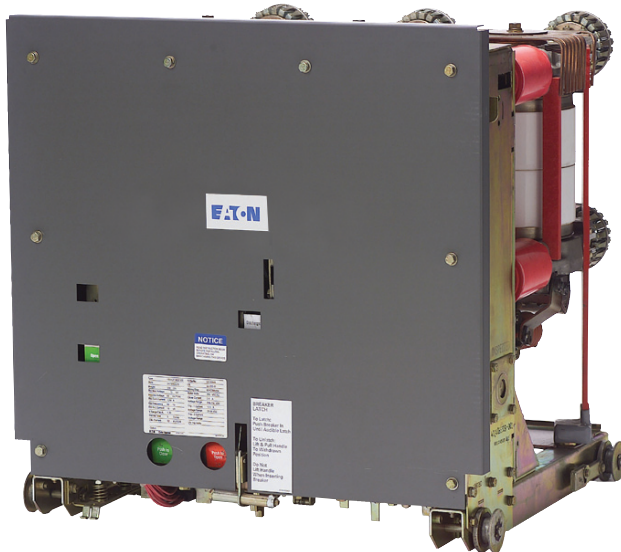


# Extra capability breakers



VCP-WC (5–38 kV) Dimensions in inches (mm)

Breaker Identification	A	B	C	D	E	F
<b>50/75/150 VCP-WC (1200/2000/3000A)</b>	10.00 (254.0)	12.00 (304.8)	13.63 (346.2)	29.94 (760.5)	31.44 <sup>1</sup> (798.6)	29.13 (740.0)
<b>270 VCP-WC</b>	10.00 (254.0)	14.00 (355.6)	16.25 (412.8)	34.80 (883.9)	35.22 (894.6)	29.13 (740.0)
<b>380 VCP-WC</b>	11.80 (299.7)	21.00 (533.4)	34.70 (881.4)	47.30 (1201.4)	64.30 (1633.2)	35.70 (906.8)

<sup>1</sup> E = 29.44 (747.8) for 150 VCP-W 25C and 50 VCP-W 25C, 1200A.

Introducing the VCP-WC extra capability medium voltage drawout circuit breaker. Designed to provide all the industry-leading features of the VCP-W, plus extra capabilities for those application requirements that go beyond. The performance-enhancing features of the VCP-WC make it an ideal choice for capacitor switching duty, high-altitude applications, transformer secondary fault protection and locations with concentrations of rotating machinery or high-operating endurance requirements, to mention a few.

Consider these capability enhancements:

- Definite-purpose capacitor switching
- Higher close and latch
- Higher transient recovery voltage rate
- Higher short-circuit current
- Higher mechanical endurance
- Higher dielectric withstand level
- Higher voltage rating with K = 1
- Three-cycle interrupting time
- Higher switching life
- Designed and tested to ANSI standards
- 29 WR fixed/retrofit configurations available
- Direct roll-in available (5, 15, 38 kV)

## Vacuum circuit breaker design leadership

Eaton's electrical business, a world leader in vacuum interrupter and vacuum circuit breaker technology, offers VCP-WC with extra capabilities without sacrificing the proven features already standard with other VCP-W circuit breakers.

## VCP-WC Features

- Enhanced performance ratings
- Copper primary conductors
- Silver-plated primary joints
- Glass polyester (5/15 kV) or epoxy insulation (27–38 kV)
- Front-mounted stored energy mechanism
- Manual emergency charging
- AC or DC control
- MOC and TOC switch operators
- Two-high, drawout design
- Drawout on extension rails
- Integrally mounted wheels
- Vacuum interrupters
- Copper-chrome VI contacts
- Patented V-Flex non-sliding current transfer
- Visible contact erosion indicator
- Visible contact wipe indicator
- Manual trip and close buttons
- Open-closed indicators
- Springs charged/discharged indicators
- Mechanical operations counter
- Open–close–open duty cycle



**VCP-WC RATINGS (SYMMETRICAL CURRENT BASIS)**

Identification	Rated Values		Current										Capacitor Switching Ratings							
	Voltage		Insulation Level		Short-Circuit Current										General Purpose		Definite Purpose			
	Max. Voltage	Voltage Range Factor	Withstand Test		Power Frequency (1 Min.)	Lightening Impulse 1.2 x 50 us	Continuous Current at 60 Hz	Sym. Interrupting at V (Isc)	% dc Component (Idc)	Asym. Interrupting (It)	Closing & Latching Capability	Short-Time Current for 3 Sec. ①	Interrupting Time ②	Maximum Permissible Tripping Delay	Transient Recovery Voltage (RRRV) ③	Isolated Shunt Capacitor Bank Current	Back-to-Back Capacitor Bank Current	Capacitor Switching		Mechanical Endurance
			Inrush Current	Inrush Frequency																
Circuit Breaker Type	kV Rms	k	kV Rms	kV Peak	A Rms	kA Rms	%	kA Rms	kA Peak	kA Rms	ms	Seconds	kV/us	A Rms	A Rms	kA Peak	kHz	No-Load Operations		
50 VCP-W 25C	5.95	1	24	75	1200 2000 3000	25	50 75 75	31 36 36	97	25	50	2.0	0.9 0.9 0.8	400 & 630 1000 250	400 & 630 1000 —	20 & 20 18 —	6.5 & 5.5 2.7 —	10,000 10,000 5,000		
50 VCP-W 40C	5.95	1	24	75	1200 2000 3000	40	75	58	139	40	50	2.0	0.9 0.9 0.8	630 1000 250	630 1000 —	15 18 —	3.5 2.7 —	10,000 10,000 5,000		
50 VCP-W 50C	5.95	1	24	75	1200 2000 3000	50	57 57 52	64 64 62	139	50	50	2.0	0.9 0.9 0.8	630 1000 250	630 1000 —	15 18 —	3.5 2.7 —	10,000 10,000 5,000		
50 VCP-W 63C	5.95	1	24	75	1200 2000 3000	63	62	83	175	63	50	2.0	1.1	250	200 & 1600 ⑬	7.7	465	10,000		
75 VCP-W 50C	10.3	1	42	95	1200 2000 3000	50	57 57 52	64 64 62	139	50	50	2.0	0.9 0.9 0.8	630 1000 250	630 1000 —	15 18 —	3.5 2.7 —	10,000 10,000 5,000		
150 VCP-W 25C	17.5	1	42	95	1200 2000 3000	25	50 75 75	31 36 36	97 ⑥	25	50	2.0	0.9 0.9 0.8	400 & 600 1000 250	400 & 600 1000 —	20 & 20 18 —	6.5 & 5.5 2.7 —	10,000 10,000 5,000		
150 VCP-W 40C	17.5	1	42	95	1200 2000 3000	40	75	58	139	40	50	2.0	0.9 0.9 0.8	630 1000 250	630 1000 —	15 18 —	3.5 2.7 —	10,000 10,000 5,000		
150 VCP-W 50C	17.5	1	42	95	1200 2000 3000	50	57 57 52	64 64 62	139	50	50	2.0	0.9 0.9 0.8	630 1000 250	630 1000 —	15 18 —	3.5 2.7 —	10,000 10,000 5,000		
150 VCP-W 63C	15	1	42	95	1200 2000 3000	63	62	83	175	63	50	2.0	1.1	250	200 & 1600 ⑬	7.7	465	10,000		
270 VCP-W 25C	27	1	60	125	1200 1600	25	75	36	85	25 ⑧	50	2.0	1.1	400	400	20	4.2	5,000		
270 VCP-W 32C	27	1	60	125	1200 1600	31.5	55	40	100	31.5 ⑨	50	1.6	1.1	400	400	20	4.2	5,000		
270 VCP-W 40C	27	1	60	125	1200 1600	40	50	49	112	40 ⑩	50	1.0	1.1	400	400	20	4.2	5,000		
380 VCP-W 16C	38	1	80	170	600 1200 1600 2000	16	75	23.3	50	16	50	2.0	0.7 0.7 0.7 1.3	250 250 250 250 & 1000	250 250 250 250 & 1000	20 20 20 20 & 20	4.4 4.4 4.4 5 & 5	10,000		
380 VCP-W 25C	38	1	80	170	600 1200 1600 2000	25	65	34.0	75	25	50	2.0	0.7 0.7 0.7 1.3	250 250 250 250 & 1000	250 250 250 250 & 1000	20 20 20 20 & 20	4.4 4.4 4.4 5 & 5	10,000		
380 VCP-W 32C	38	1	80	170	600 1200 1600 2000 2500 3000FC ⑪	33.1	57	42.5	91	31.5	50	2.0	0.7 0.7 0.7 1.3 0.7 1.3	250 250 250 250 & 1000 — 250 & 1000	250 250 250 250 & 1000 — 250 & 1000	20 20 20 20 & 20 — 20 & 20	4.4 4.4 4.4 5 & 5 — 5 & 5	10,000		
380 VCP-W 40C	38	1	80	170	1200 2000 2500 3000FC ⑫	40	63	53.5	107	40	50	2.0	0.7	—	—	—	—	10,000		

- ① Except as noted.
  - ② Three cycles.
  - ③ Contact Eaton for higher RRRV or for more information.
  - ④ Breaker tested to 2700A single bank switching for momentary load (thermal de-rating must consider harmonic content of current waveform).
  - ⑤ Breaker tested to 1270A back-to-back switching for momentary load (thermal de-rating must consider harmonic content of current waveform).
  - ⑥ Close and latch current for 1200A Type 150 VCP-W 25C is proven at 15 kV. For sealed interrupters at high altitudes, switching voltage is not de-rated.
  - ⑦ Capacitor switching ratings are proven at 15 kV. For sealed interrupters at high altitudes, switching voltage is not de-rated.
  - ⑧ 2.5 seconds.
  - ⑨ 1.6 seconds.
  - ⑩ 1 second.
  - ⑪ 2000A FC to 3000A.
  - ⑫ 2500A FC to 3000A.
  - ⑬ C37.04a–2003 class C2 @ 15 kV.
- Note:** With addition of 38 kV, need to clarify which breakers are rated for rapid reclosing (all but 250A and 40 kA 3000A FC).

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