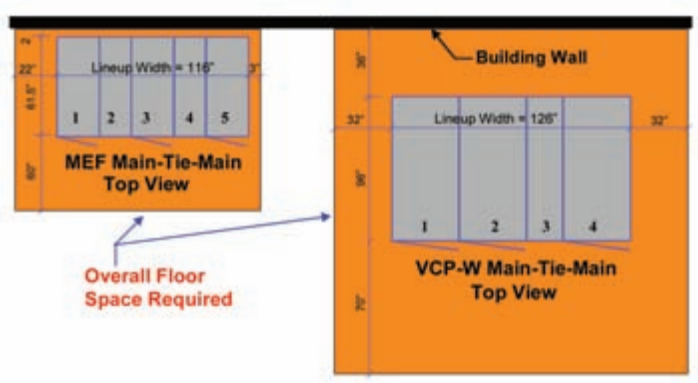
Medium voltage front-accessible switchgear (MEF)



Space requirements

MEF = 120.93 ft² and standard metal-clad = 266.53 ft² space savings = 55%

Powering Business Worldwide

The world's most agile, cost-effective and space-efficient medium voltage switchgear

With ratings of 5 and 15 kV with 600, 1200, and 2000A breakers, Eaton's Cutler-Hammer® medium voltage front-accessible switchgear (MEF) is the world's most flexible and cost-effective high-performance switchgear available. Through a wide variety of configurations, standard drawing packages, intelligent integrated trip units, and reduced clearance installation, Eaton's MEF design can significantly reduce a project's overall cost.

Eaton's portable and space-optimized design allows for space savings of over 50% and can be transported using a fork truck or pallet jack, eliminating the need for cranes and additional construction in retrofit applications.

Eaton's VCP-T breaker's available integral self-powering trip unit eliminates the need for an external power source. In addition, Eaton's suite of predictive diagnostic and management accessories can be integrated to maximize mean time to repair.

Further reducing your overall cost of ownership, Eaton's VCP-TL breaker is available with a linear actuator-powered operator mechanism in some ratings, boosting the mechanical endurance of the operating mechanism from 10,000 to 100,000 close-open operations.

Features

- Front-accessible construction
- Flexible dispositions and configurations, scalable for expansion
- Flexible applications—main switch, transformer primary and secondary switching
- General purpose feeder circuit, bus-tie-circuit, generator main
- Utility metering
- Direct online starting of medium voltage motors
- Automatic transfer switching
- Harmonic filter bank switching
- Main breaker Ampgard® front and rear alignment
- Sized to ship—conveniently fits into standard shipping container
- Maintenance-free hardware
- Integrated trip unit options eliminate need for external power source/short circuit protection
- Independent protection device available with metering and diagnostics
- Rated for 5 and 15 kV, 1200 and 2000A, 25 and 40 kA
- UL® listed per ANSI C37.20.3
- Device compartments design per ANSI C37.20.2

Eaton switchgear: safety is integral

Predictive diagnostics or Eaton's InsulGard™ relay can be integrated into the assembly, allowing remote monitoring of partial discharge and insulation breakdown—the root cause of arc-flash events. Also available is a universal remote racking device and pushbutton operator assembly for remote opening/closing of the circuit breakers.

Eaton designs and manufactures the structure and all the components that compromise the medium voltage assembly—from the steel housing and breaker compartments, to vacuum interrupters, circuit breakers, bus system and fuses, providing a single point of contact and the peace of mind that comes from having direct access to design and manufacturing resources for every component in your switchgear assembly.

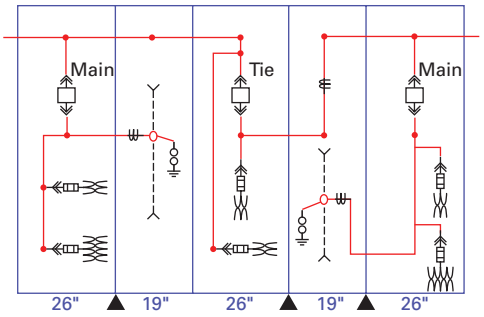
For over 40 years, Eaton has been the world leader in the design and manufacture of Cutler-Hammer medium voltage vacuum circuit breakers. Eaton provides the industry's most complete family of technologically advanced vacuum circuit breakers at 5, 15, 27A and 38 kV. At the core of our breaker design is the Eaton vacuum interrupter, utilized by leading vacuum breaker manufacturers worldwide.

VPT-TL Breaker Ratings for use with MEF ANSI C37.04 and C37.09, UL-Recognized Component

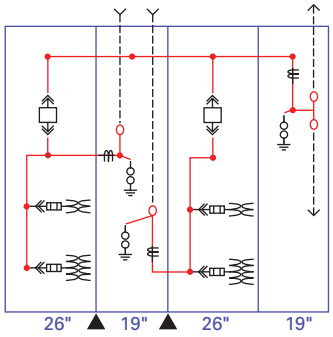
Identification	Rated values							
Circuit breaker type	Rated maximum voltage (V)	1-minute power freq. withstand voltage	Impulse withstand voltage (BIL)	Rated continuous current	Rated short circuit current at rated max. voltage (i)	Maximum sym. interrupting and 2-second short-time current carrying capability (K*I)	Close and latch	Mechanical endurance C-O ❶
	kV Rms	kV Rms	kV Peak	Amperes	kA Rms Sym.	kA Rms Sym.	kA Peak	Operations
50 VCP-T25	4.76	19	60	600, 1200, 2000	25	25	65	30,000
50 VCP-T40	4.76	19	60	600, 1200, 2000	40	40	104	30,000
150 VCP-T25	15	36	95	600, 1200, 2000	25	25	65	30,000
150 VCP-T40	15	36	95	600, 1200, 2000	40	40	104	30,000
50VCP-TL25	4.76	19	60	600, 1200	25	25	65	100,000
150VCP-TL25	15	36	95	600, 1200	25	25	65	100,000

❶ Operating mechanism up to 100,000 operations, vacuum interrupter 30,000 operations.

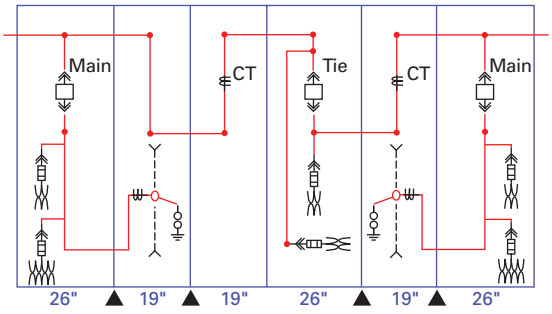
Main-tie-main
Incoming cables from top or bottom



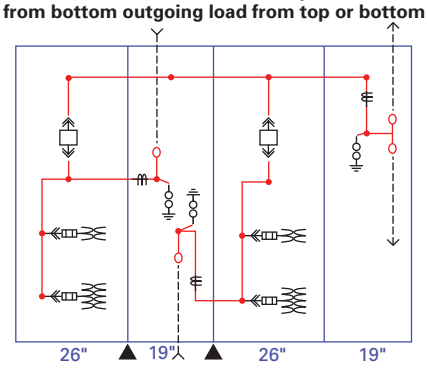
Medium-voltage automatic transfer switch—two mains—IQ transfer (no bus voltage transformers) both sources from top, outgoing load top or bottom



Main-tie-main with current transformers on both sides of tie breaker for bus differential incoming cables from top or bottom



Medium-voltage automatic transfer switch—two mains—IQ transfer (no bus voltage transformers) one source from top, one source from bottom outgoing load from top or bottom



1. Shipping groups maximum length = 104.00 in (2641.6 mm)
2. All units are 92.00 in (2336.8 mm) height and 61.50 in (1562.1 mm) depth
3. Main bus—1200 and 2000A
4. 600 and 1200A breakers can be stacked two high
5. Auxiliary shown can be either voltage transformers (2/3) or single-phase control power transformers (3 or 5 kVA maximum)
6. Current transformers shown can be either one or two sets, or one set of current transformers plus one set of current sensors
7. BYZ and surge arresters shown are optional

Notes: No shipping splits at positions indicated by triangle. A more complete layout guide can be found in Eaton's *Consulting Application Guide.*

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