



DiamondVac Model # 27DV-25-12/20

Mitsubishi Electric Experience

First Generation Bottle Introduced in 1965...

- ❖ Over 2,625,000 *Mitsubishi* Vacuum Bottles installed world-wide in Mitsubishi Circuit Breakers
- ❖ 100,000+ OEM Vacuum Bottles sold annually
- ❖ 19,725,000 Years of Equivalent-Service with 0.00018% Bottle failures per year

...for every 185,000 Mitsubishi Vacuum Breakers in Service, only one will have a bottle fail in a given year!



- ❖ Welded-on 11 gauge Roof and Stainless Steel Lifting Lugs
- ❖ 11 Gauge Carbon-Steel Enclosure
- ❖ Two Through-wall SST Ground Pads
- ❖ Galvanized Legs, 2 inch Incremer
- ❖ 49" x 48" Footprint

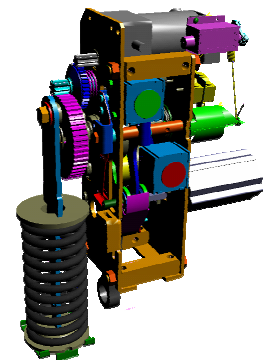
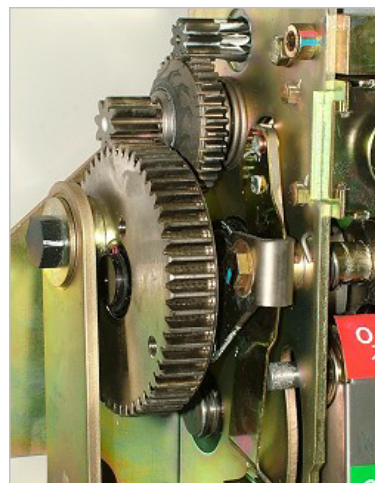


The Breaker

- ❖ 27kV-1,200A/2,000A, 150 BIL
- ❖ **25kAIC @ X/R = 30 (Tested)**
- ❖ True 3 Cycle Operation
- ❖ 10,000+ Mechanical Operations 100- 25kA Fault Interruptions before Bottle Replacement
- ❖ 30 Year Design Life
- ❖ >1000% Contact Service Ability vs. ANSI 800% (Tested)
- ❖ Axial Magnetic Field Copper-Chromium Contacts
- ❖ Designed and Tested to ANSI and IEC Standards

The BH-2 Mechanism

- ❖ **Simple Spring/Spring stored energy operation**
- ❖ **One O-CO if motor power is lost**
- ❖ **< 50 moving parts in entire Breaker Module**
- ❖ Six-second Motor Charge Time
- ❖ Universal Motor Voltages (1.5A Running Current; 6.9A Locked Rotor @ 125VDC)
- ❖ Single or Dual Trip Coils (< 6A current)
- ❖ Up to 10a, 10b fixed Auxiliary Contacts
- ❖ Greaseless Gears utilizing low-friction plating
- ❖ Routine Maintenance every Seven Years





Quality

Reliability

Value

DiamondVac Ratings (Tested to ANSI/IEEE & IEC Standards or Higher)

Breaker Type	27DV-25-12 or -20
Maximum Voltage	27kV
Nominal Voltage	2.4kV to 27kV
Full Load Current	1,200A or 2,000A
Short Circuit Current	25kA Interrupting, X/R = 30
Interrupting Time	True 3 Cycles
Frequency	60Hz
Full Wave Withstand	150kV BIL
Low Frequency Withstand	60kV
Permissible Trip Delay	2 seconds
Close & Latch Capabilities	25kA RMS; 65kA Crest

Rapid Duty Cycle	0-0.3s-CO-15sec-CO-50sec-CO
Opening Time	30 ms (1.8 cycles)
Closing Time	60 ms (3.6 cycles)
Minimum Reclosing Time	50 ms (3.0 cycles)
Range of Reclosing Times	3-120 Cycles
Back-to-Back Capacitor Switching	500A
Reactor Switching	1,600A
Maximum Rated Altitude	5,500ft. (1,500 m)
Temperature Range (Standard)	122°F to -40°F (+50°C to -40°C)
Min. Temperature w/extra Heater	-58°F (-58°C)
Seismic Qualification Level	IEEE 693 (1997) Highest Level

Total Weight.....TBD
 Bushings
 Type.....Porcelain
 Standard Creep26.52 in. (673.6mm)
 Standard Strike.....10.8 in. (286mm)

Housing.....11 ga. Steel painted ANSI No. 70 (SST Option)
 Roof & Lifting EyesWelded-on, painted Stainless Steel
 Legs.....Hot Dip Galvanized, adjustable in 2 in. increments
 BCTs.....Two-1,200A C200 per Bushing
 ...Two-2,000A C400 per Bushing

