

Timetric



Vcb Circuit Breaker

Wenzhou Shuyi Import and Export Co., Ltd. is a well-known manufacturer of Timetric Vcb Circuit Breaker in China. It has an excellent management team and dedicated staff. Timetric is committed to realizing its own ideals and values, pursuing the development and expansion of the enterprise, striving to achieve social harmony and prosperity, and looking forward to the future.

Product Description

Timetric Vcb Circuit Breaker Formation and extinction of electric arc in vacuum

Wenzhou Shuyi Import and Export Co., Ltd. is a well-known manufacturer of Timetric Vcb Circuit Breaker in China. The vacuum arc is very different from the gas arc discharge phenomenon we have learned before. The dissociation of gas is not the main factor to produce arc. The vacuum arc discharge is formed in the metal vapor evaporated from the contact electrode. At the same time, the characteristics of arc performance are different with different breaking current. We generally divide it into low current vacuum arc and high current vacuum arc.

Small current vacuum arc

When the contact is broken in vacuum, a cathode spot with concentrated current and energy is generated, and a large amount of metal steam is evaporated from the cathode spot. The density of metal atoms and charged particles is very high, and the arc is burned in it. At the same time, the metal vapor and charged particles in the arc column are constantly diffused outwards, and the electrode constantly evaporates new particles to replace them. When the current is zero, the energy of the arc decreases, the temperature of the electrode decreases, the evaporation decreases, and the particle density in the arc column decreases. Finally, the cathode spot disappears and the arc is extinguished when the current is zero.

Sometimes, the evaporation can not maintain the diffusion speed of arc column, the arc suddenly extinguished, and the phenomenon of cut-off occurs.



High current vacuum arc

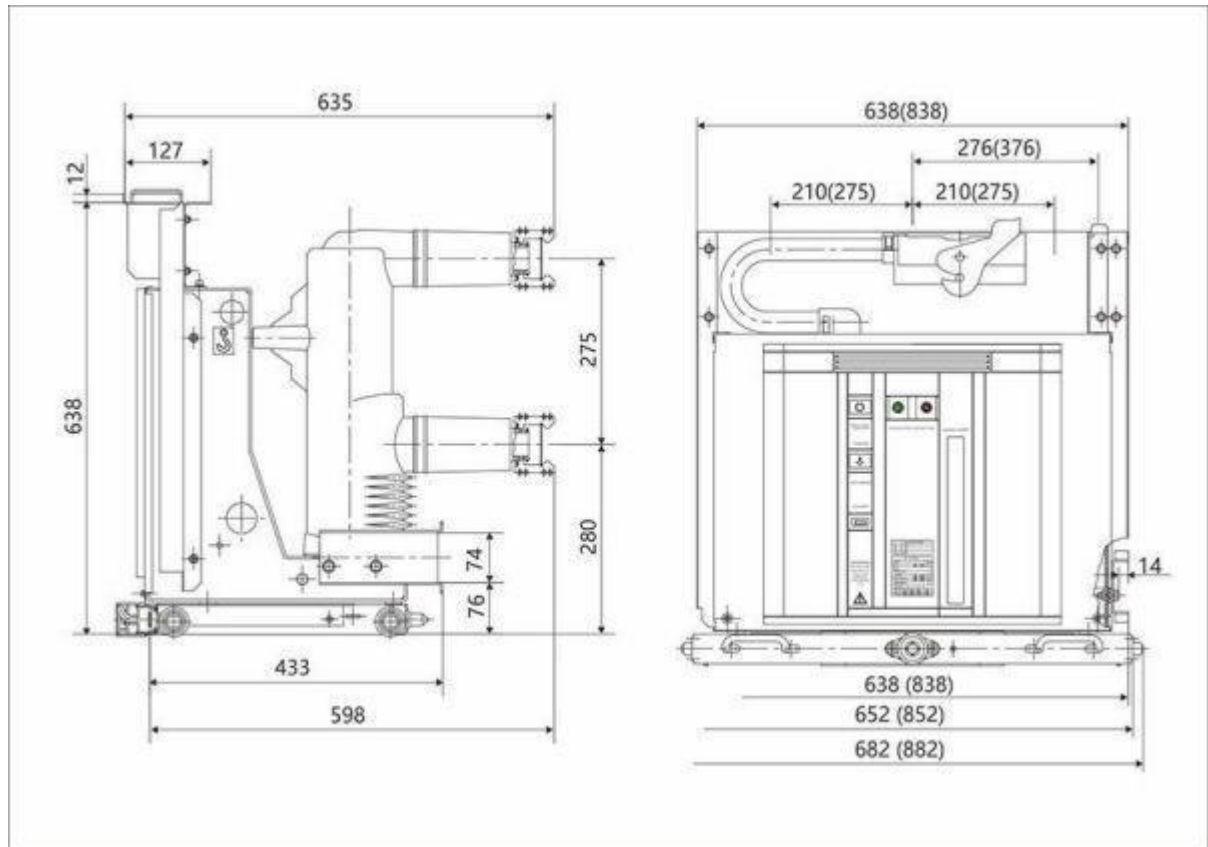
When the contact disconnects a large current, the energy of the arc increases, and the anode also heats seriously, forming a strong concentrated arc column. At the same time, the effect of electric force is also obvious. Therefore, for high-current vacuum arc, the magnetic field distribution between the contacts has a decisive influence on the stability and arc extinguishing performance of the arc. If the current is too large, exceeding the limit breaking current, it will cause breaking failure. At this time, the hair contact heat is serious, the current after zero still evaporation, medium recovery is difficult, can not disconnect the current.



Timetric Vcb Circuit Breaker Parameter (Specification)

model number	VS1-12/24
Rated voltage	12KV 24KV
Rated frequency	50Hz
Rated current	630A
Rated short-circuit breaking current	20KA
Rated peak withstand current (peak)	50KA
Rated short-time withstand current	20KA
Rated short-circuit making current (peak value)	50KA

Mechanical life	10000 time
Rated short-circuit breaking current breaking times	30 time
Rated short-circuit duration (rated thermal stabilization time)	42/48KV
Lightning impulse withstand voltage (peak value) phase-to-phase, to ground/ to fracture	75/85KV
Secondary circuit 1min power frequency withstand voltage	2KV



Timetric Vcb Circuit Breaker I. Environmental conditions of use:

1. Altitude: 2000m and below.
2. Ambient temperature: Upper limit +40°C, lower limit -15°C.
3. Relative humidity: daily average is not more than 95%, monthly average is not more than 90%; The average daily water vapor pressure is no more than 2.2kPa; The monthly mean water vapor pressure is less than 1.8kPa, and may condense when the temperature drops sharply during high temperature period.
4. The surrounding air is not significantly contaminated by dust, smoke, corrosive and flammable gases, vapors or salt spray.
5. The intensity of the earthquake does not exceed 8°.
6. Places free from fire, explosion, serious pollution and violent vibration.

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