



## VS1-24 Series

### Indoor High Voltage Vacuum Circuit Breaker

VS1-24 indoor HV vacuum circuit breaker is a 3-phase AC 50Hz 24kV indoor switch equipment.

- ◆ Installation way: withdrawable type, fixed type, side mounted type;
- ◆ Operating mechanism: spring operating mechanism and permanent magnetic operating mechanism;
- ◆ Pole type: assembled pole, embedded pole;
- ◆ Application: switchgear KYN28-24, XGN-24.
- ◆ Secondary plug: 58pins, 64pins.



## ※ Product Standards

- ◆ IEC62271-100 High Voltage Switchgear and Controlgear Part 100: AC Circuit-breakers
- ◆ GB1984 High Voltage AC Circuit-breakers
- ◆ GB/T11022 Common Specifications for High-voltage Switchgear and Controlgear Standards
- ◆ JB/T 3855 High Voltage AC Vacuum Circuit-breakers
- ◆ DL/T402 Specification of High-voltage AC Circuit-breakers

## ※ Environmental Conditions

- ◆ Ambient temperature:  $-15^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ;
- ◆ Altitude:  $\leq 1000\text{m}$ ;
- ◆ Relative humidity: daily average  $\leq 95\%$ , monthly average  $\leq 90\%$ ;
- ◆ Earthquake intensity:  $\leq 8$  level;
- ◆ Places without fire, explosion hazard, serious filthy, chemical corrosion, as well as intense vibration.

## ※ Main Technical Parameters

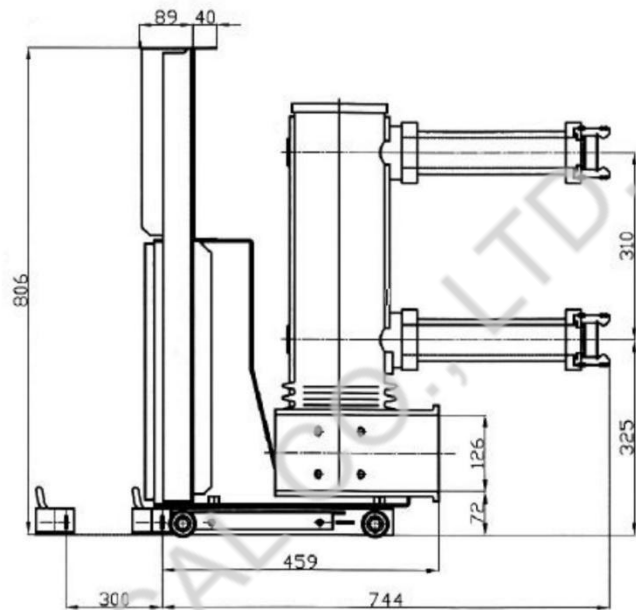
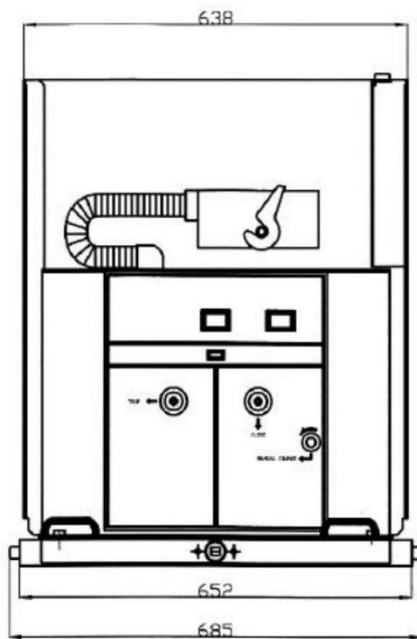
No	Item	Unit	Value
1	Rated voltage	kV	24
2	1 min power frequency withstand voltage		65
3	Rated lightning impulse withstand voltage		125
4	Rated frequency	Hz	50
5	Rated current	A	630, 1250, 1600, 2000, 2500, 3150
6	Rated short circuit breaking current	kA	20, 25, 31.5
7	Rated short circuit making current (peak)		50, 63, 80
8	Rated short time withstand current		20, 25, 31.5
9	Rated peak value withstand current		50, 63, 80
10	Rated short circuit duration	S	4
11	Rated operating sequence		O-0.3s-CO-180s-CO O-180s-CO-180s-CO (50kA)
12	Rated opening closing cable charging current	A	31.5
13	Rated short circuit current breaking number	Times	50 (30 for 40kA, 20 for 50kA)

No	Item	Unit	Value
14	Breaking time	ms	≤80
15	Mechanical life	Times	10000
16	Circuit breaker in accordance with classification of electrical life		E2 class
17	Circuit breaker in accordance with classification of opening and closing capacity current ability		C2 class
18	Allowed cumulative wearing thickness of moving contact and fixed contact	mm	3
19	Clearance between open contacts	mm	14±1
20	Over travel	mm	3.5±1
21	Average closing speed	m/s	0.7±0.2
22	Average opening speed	m/s	1.4±0.2
23	Closing time (rated voltage)	ms	35-70
24	Opening time (rated voltage)	ms	20-50
25	Contact closing bounce time	ms	≤2
26	Three phase opening and closing asynchronism	ms	≤2
27	Each phase conductive circuit resistance	uΩ	≤50 (630A) ≤45(1250A) ≤35(1600~2000A) ≤25(2500~3150A)
28	Phase to phase central distance	mm	210, 275
29	Contacts pressure	N	2400±200 (20kA, 25kA) 3100±200 (31.5kA)
30	Contact opening rebound range	mm	≤2.5
31	Rated operating voltage	V	AC/DC110/220
32	Rated working current	A	1.1 (AC/DC 220V) 3.3 (AC/DC 110V)
33	Power of energy storage motor	W	70
34	Rated voltage of energy storage motor	V	DC 220/DC110
35	Energy storage time	ms	≤10

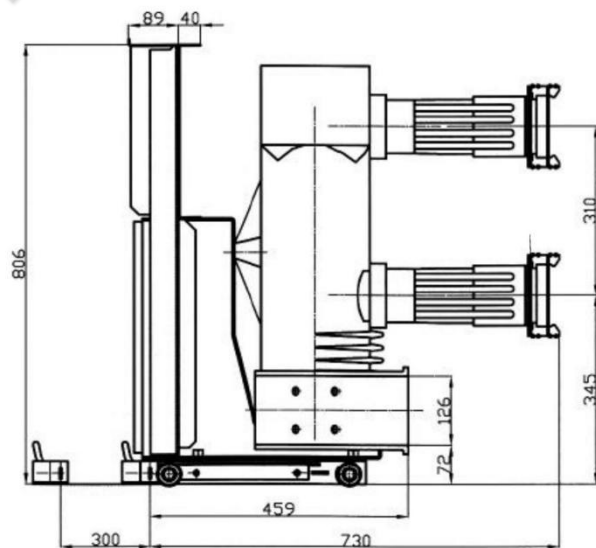
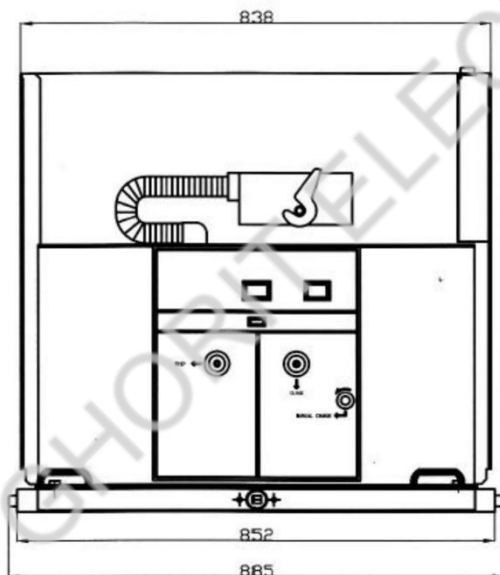
Note: when current is 4000A or 5000A, need forced air cooling.

※ **General Structure Drawing and Installation Size (unit: mm)**

◆ Draw out type

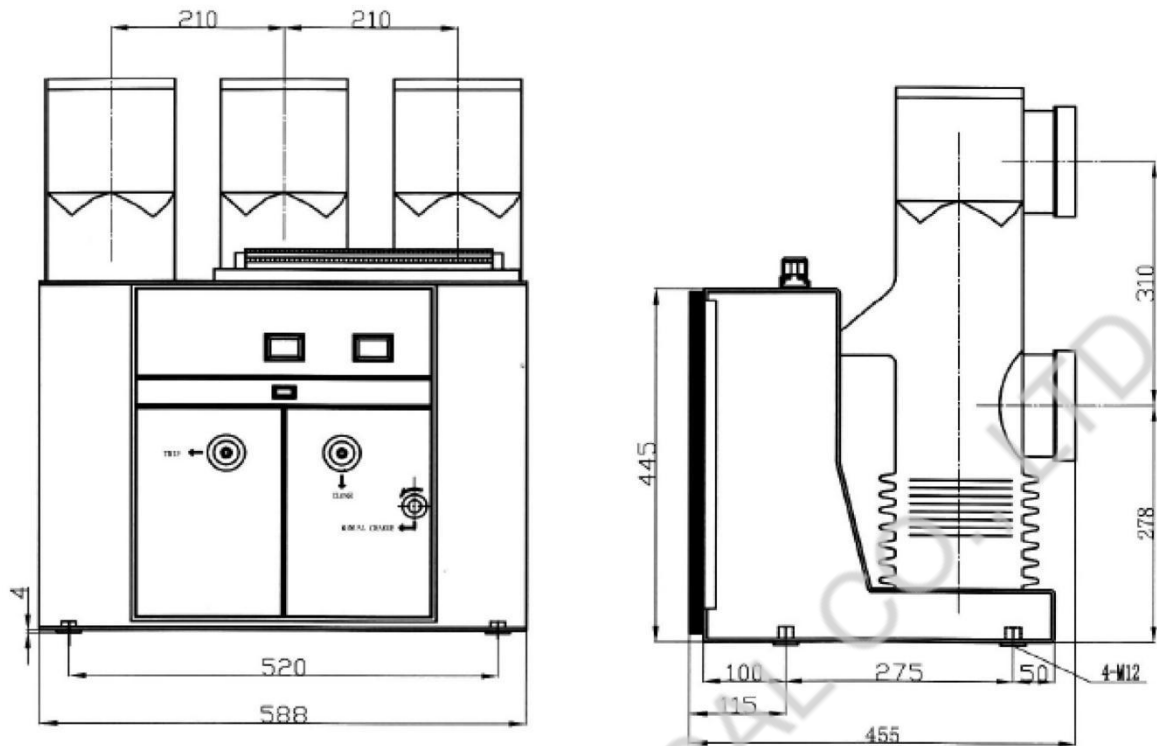


Phase-to-phase distance 210mm.

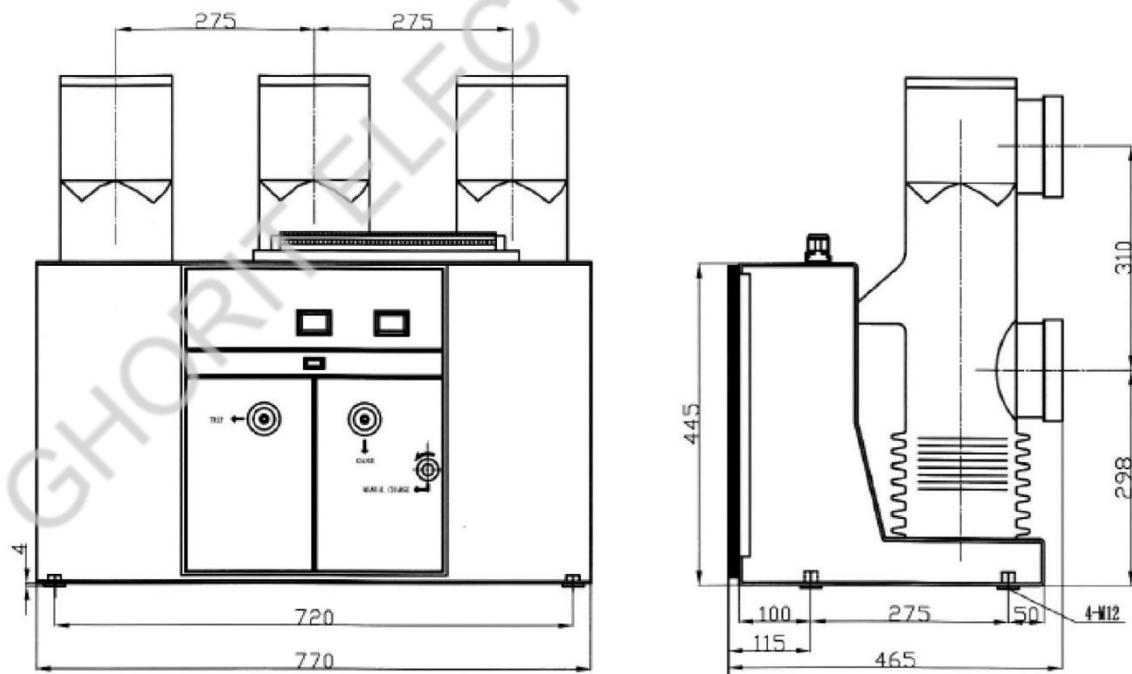


Phase-to-phase distance 275mm.

◆ Fixed type

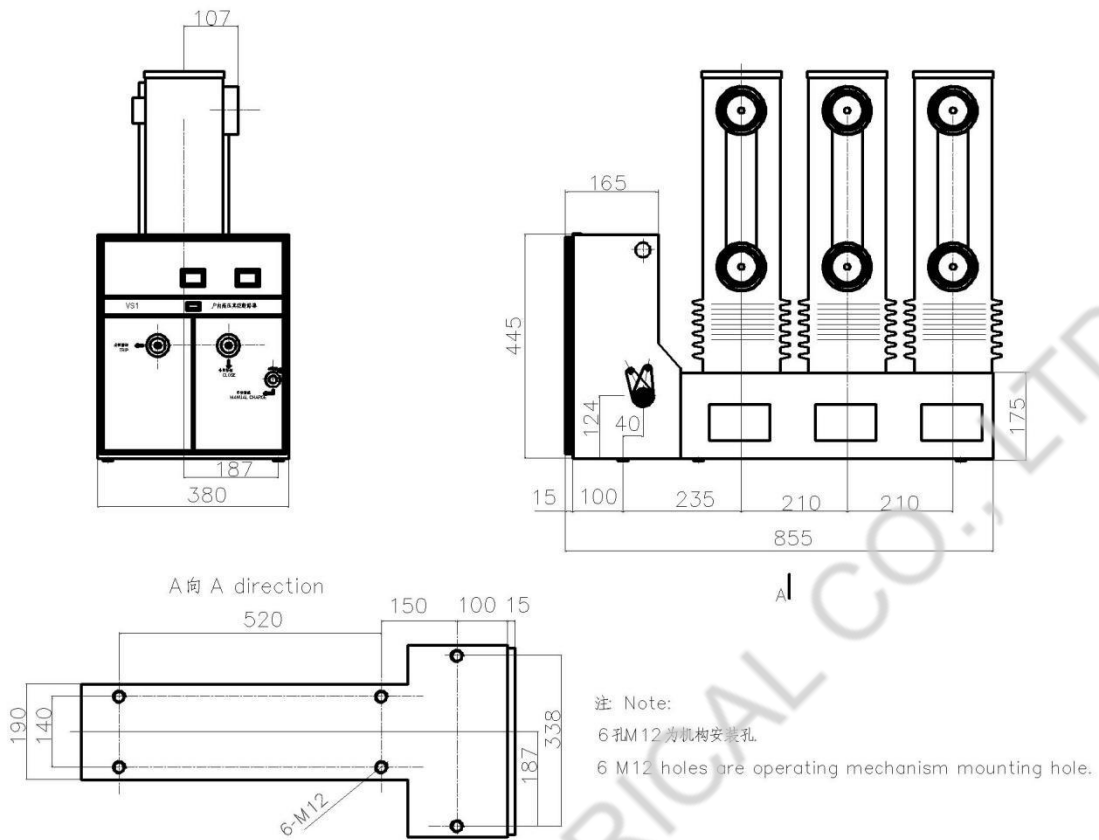


Phase-to-phase distance 210mm.

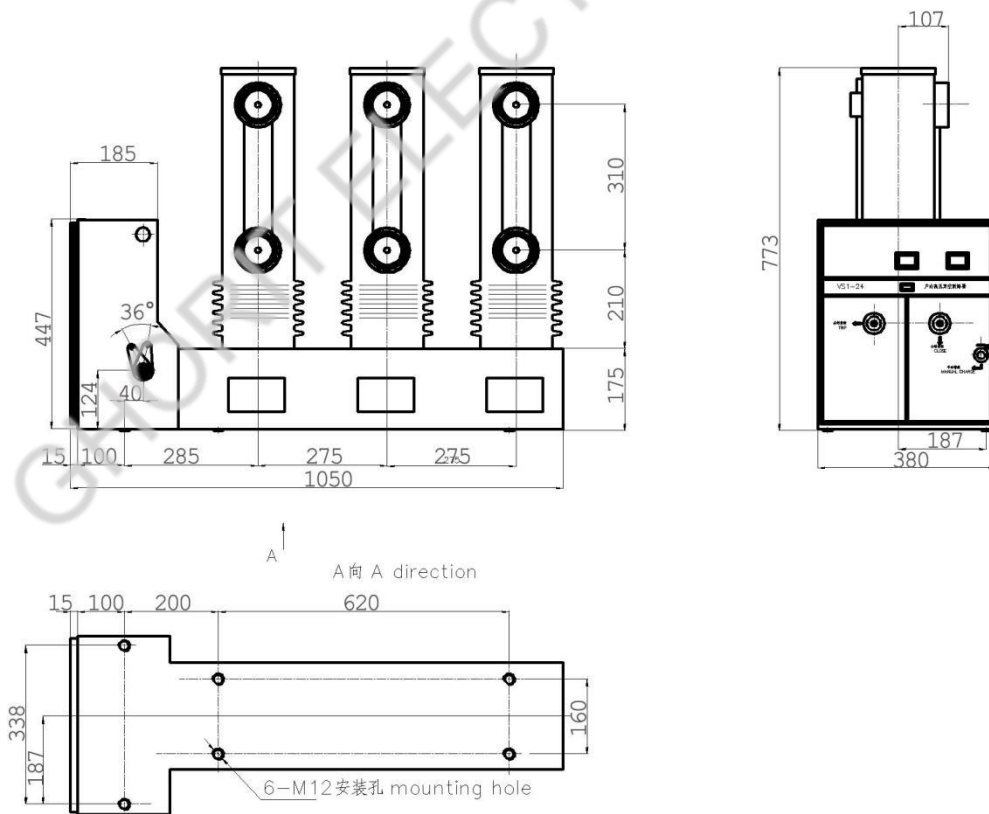


Phase-to-phase distance 275mm.

◆ Side mounted type



Phase-to-phase distance 210mm.



Phase-to-phase distance 275mm.