



VSG-12 Series

Indoor High Voltage Vacuum Circuit Breaker

VSG-12 indoor HV vacuum circuit breaker is a 3-phase AC 50Hz 12kV indoor switch equipment.

- ◆ Installation way: withdrawable type, fixed type;
 - ◆ Operating mechanism: spring operating mechanism;
 - ◆ Pole type: assembled pole, embedded pole;
 - ◆ Phase-to-phase distance: 150mm, 210mm, 275mm;
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※ 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: ≤ 8 level;
- ◆ Places without fire, explosion hazard, serious filthy, chemical corrosion, as well as intense vibration.

※ Main Technical Parameters

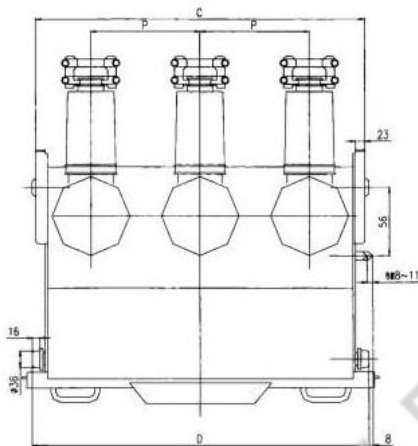
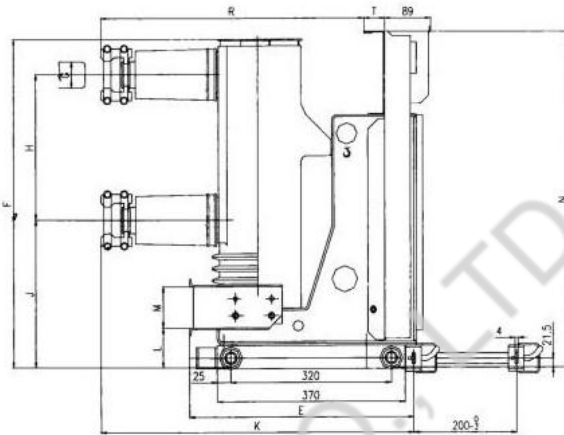
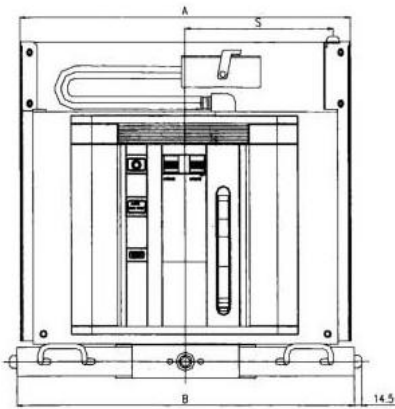
No	Item	Unit	Value
1	Rated voltage	kV	12
2	1 min power frequency withstand voltage		42
3	Rated lightning impulse withstand voltage		75
4	Rated frequency	Hz	50
5	Rated current	A	630, 1250, 1600, 2000, 2500, 3150
6	Rated short circuit breaking current	kA	25, 31.5, 40
7	Rated short time withstand current		25, 31.5, 40
8	Rated short circuit duration	S	4
9	Rated peak value withstand current	kA	63, 80, 100
10	Rated short circuit making current		63, 80, 100
11	Secondary circuit power frequency withstand voltage (1min)	V	2000
12	Rated single / back-to-back capacitor bank breaking current	A	630/400 (800/400 for 40kA)
13	Opening time (rated voltage)	ms	20-50
14	Closing time (rated voltage)	ms	35-70
15	Mechanical life	Times	10000
16	Electrical life		E2 class
17	Moving and fixed contacts cumulative allowed wear thickness	mm	3
18	Rated closing operating voltage	V	AC/DC110/220
19	Rated opening operating voltage		

No	Item	Unit	Value
20	Motor rated power	W	90
21	Charging time	s	≤15
22	Clearance between open contacts	mm	9±1
23	Over travel	mm	3±1
24	Contact closing bounce time	ms	≤2
25	Three phase opening and closing asynchronism	ms	≤2
26	Average opening speed	m/s	0.9~1.7
27	Average closing speed	m/s	0.6~1.0
28	Main conductive circuit resistance	uΩ	≤45 (630A) ≤35(1250~2000A) ≤25(above 2500A)
29	Closing contact pressure of the contacts	N	3100~3700 (25~31.5kA) 4400~4800 (40kA)
30	Rated operating sequence		O-0.3s-CO-180s-CO

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

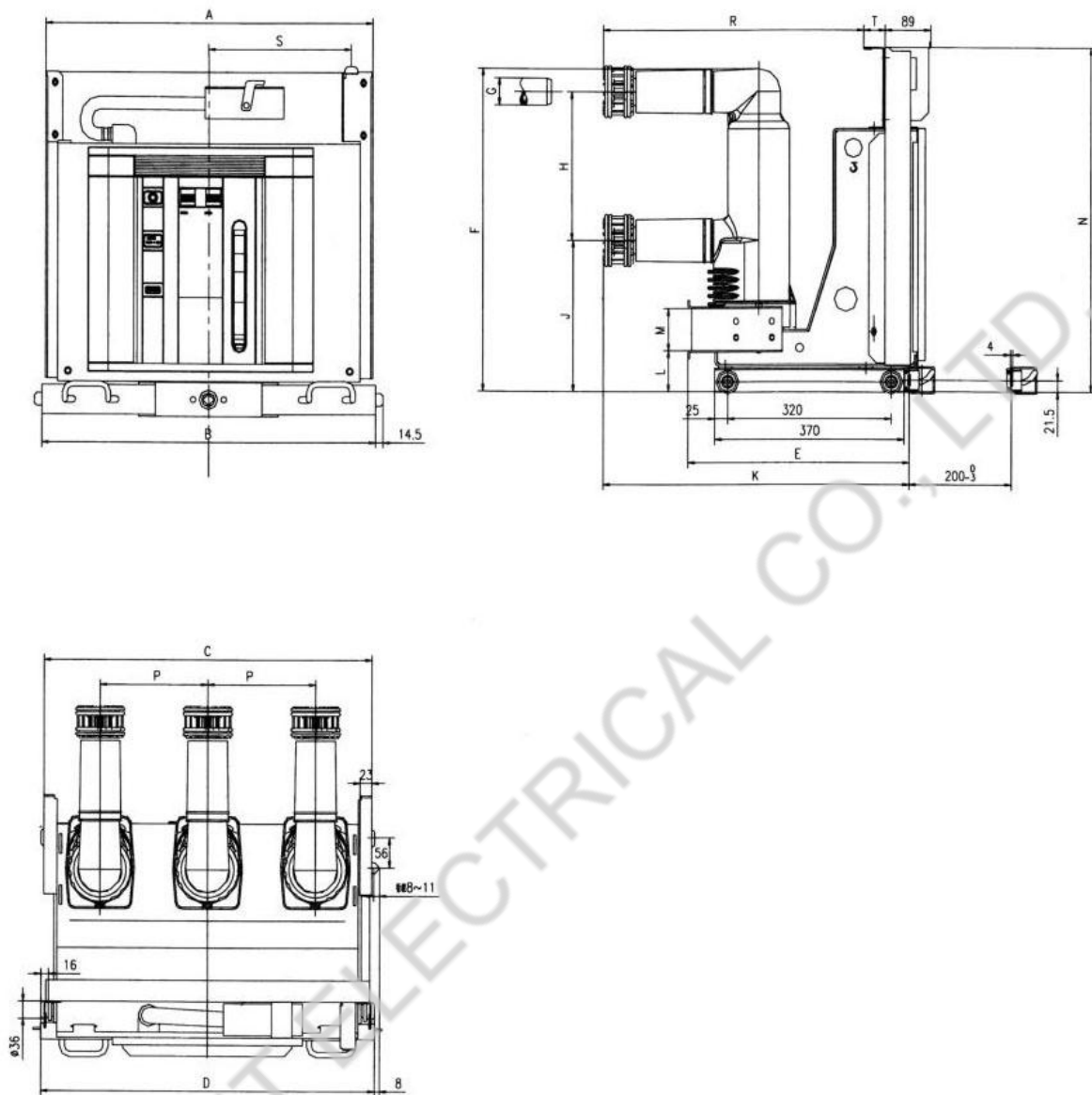
※ **General Structure Drawing and Installation Size (unit: mm)**

◆ Draw out type (assembled pole)



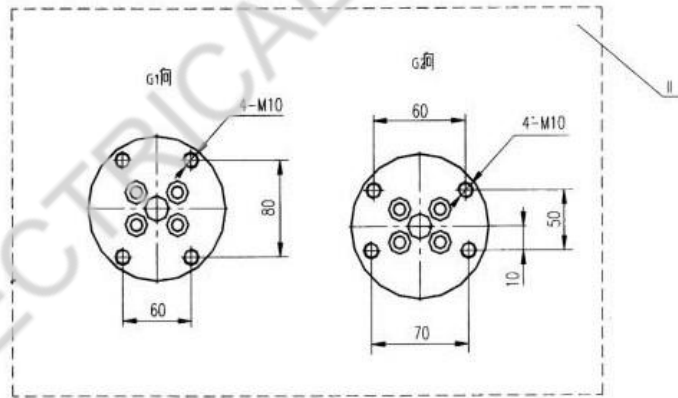
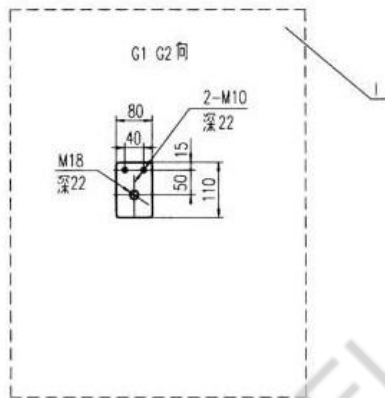
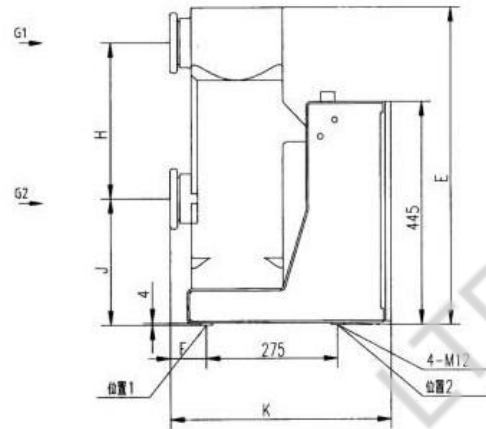
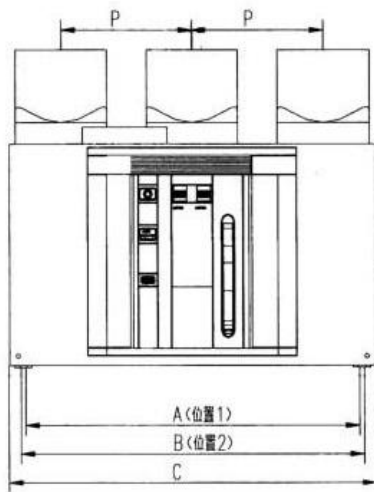
cabinet width	rated current (A)	rated short circuit breaking current (kA)	P	H	A	B	C	D	E	F	G	J	K	L	M	N	R	S	T
650	630	20~31.5	150	275	490	502	492	500	433	626	∅35	280	598	76	78	637	501	202	40
650	1250	20~31.5	150	275	490	502	492	500	433	626	∅49	280	598	76	78	637	501	202	40
800	630	20~31.5	210	275	638	652	640	650	433	626	∅35	280	598	76	78	637	501	277	40
800	1250	20~40	210	275	638	652	640	650	433	626	∅49	280	598	76	78	637	501	277	40
800	1600	31.5~40	210	275	638	652	640	650	433	626	∅55	280	598	76	78	637	501	277	40
1000	630	20~31.5	275	275	838	852	838	850	433	626	∅35	280	598	76	78	637	501	377	40
1000	1250	20~40	275	275	838	852	838	850	433	626	∅49	280	598	76	78	637	501	377	40
1000	1600	31.5~40	275	275	838	852	838	850	433	626	∅55	280	598	76	78	637	501	377	40
1000	1600~2000	31.5~40	310	310	838	852	838	850	361	680	∅79	295	586	77	88	698	529	377	0
1000	2500~4000	31.5~40	310	310	838	852	838	850	361	680	∅109	295	586	77	88	698	529	377	0

◆ Draw out type (embedded pole)



G	J	K	L	M	N	R	S	T
Φ35	280	598	76	78	637	501	202	40
Φ49	280	598	76	78	637	501	202	40
Φ35	280	598	76	78	637	501	277	40
Φ49	280	598	76	78	637	501	277	40
Φ79	295	586	77	88	698	509	377	0
Φ109	295	586	77	88	698	509	377	0

◆ Fixed type (assembled pole)



A	B	C	E	F	G1 G2	J	K
520	520	588	580	72	I	237	462
720	720	770	580	72	I	237	462
650	720	770	632	85	II	252	472

◆ Fixed type (embedded pole)

