

Medium Voltage Vacuum Circuit Breaker





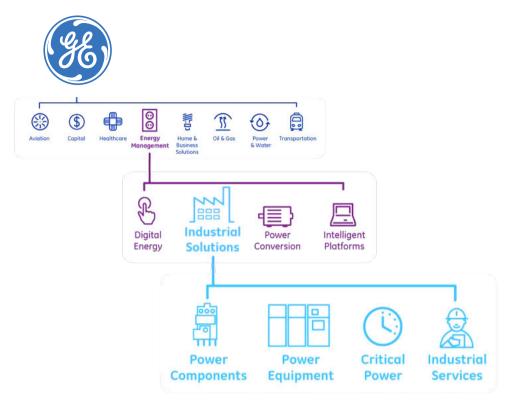
In 1879, Thomas Edison devised THE very first circuit breaker ...

" I find out what the world needs... then I proceed to invent it." Thomas A. Edison

(B)ay

(3

The "GE Businesses" in 2017



The Proven Technology & Product Lines



SecoVac VCB



MLS LV Switchgear



MPACT ACB



SecoGear MV Switchgear



Elfa Series MCB/RCBO



WaveCast Transformer

GEIS-Continue the GE Legacy

- Spun off of **GE Industrial Solutions'** China Business in December 2019
- A key platform for GE's medium and low voltage Electrical distribution & Control (ED&C) product lines: China for China and China for the World
 - Cast Coil Transformers Center of Excellence
 - Global ACB (400-6400A, 100KA), IEC/UL/GB Standard
 - Medium Voltage Equipment and Breaker: IEC, NEMA, GB
 - GE "Global Star Facility"
 - China Technology Center: NPI, Value Engineering
- Leading Technologies
 - Critical Power: ATS, Paralleling Switchgear, APF, SVG
 - New Electrification applications: EV Charging, PCM Energy Storage System
 - Microgrid: Multisource Power Supply, Integrated Energy Center, Ipv6 Compatible Gateway

The Evolution of Business and Brand



North America NEMA/UL IEC Product Line Wiring Devices Corporate Drives Brand Consolidation IEC, GB, UL Continue GE Legacy

Our Products: From Component to System

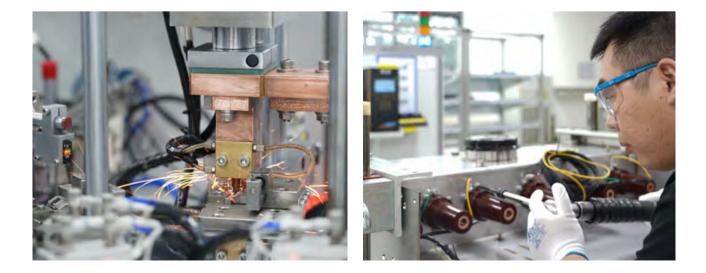
200K+ SKUs & Customized Solution \cdot China, USA, Latin America, SEA, Gulf Region

| Electrical Components | Equipment & System | Critical Power | Energy Decarbonization |
|---|---|---|---|
| Innovative technologies for an energy-efficient electrical infrastructure | End-to-end electrical solutions to meet our customer's needs | Power technologies and network solutions for data center & telecom industries | New Electrification Storage Technology |
| Structured standard products Electrical control & distribution Circuit breakers, modular components, distributor flow goods Plug& Play Upgrade kits | Engineered or configured assemblies Medium- and low-voltage switchgear, MV Breakers & Contactors for Industrial Applications Control equipment, Pwr Transformers, busway & package solutions | Automatic Transfer Switches Power Compensation: Active and Reactive Pallbearing Switchgear, Micro Grid BMS, DC Power Supply | EV Charging technology: Charger, Platform, Optimization Technology Distributed Energy Storage technology: PCM Thermal Bank, Control System |



Our Factory

GEIS headquarter was GE's Shanghai Operation hub, once a GE "Global Star" facility. The factory is upgraded to the latest MES system.



SecoVac VB2 Plus Vacuum Circuit Breaker

Brochure Content

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| Electrical Connection Diagram | | | | | |
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Order Sheet



Product Overview

The VB2 Plus vacuum circuit breaker is an indoor three-phase AC device used within a rated voltage range of 12kV-40.5kV, which can be used for electrical equipment control and protection in industrial and mining enterprises, power plants and substations. The product complies with GB, DL and IEC standards, especially suitable for frequent work. The circuit breakers can be mounted in a fixed or removable switchgear, as the best choice for control and protection of medium voltage distribution systems.

Product Features

• High-performance vacuum arc extinguishing

- The one-time seal-exhaust technology greatly simplifies the manufacturing process and improves the reliability, stability and consistency of the product.
- The longitudinal magnetic field arc extinguishing technology increases the operating life and strengthens the arc extinguishing ability.
- The use of high-quality bellows enhances the air tightness and reliability, and prolongs the performance life.

• Embedded pole by APG casting

- The HV circuit is completely enclosed in solid insulating material with a high tightness and insulation.

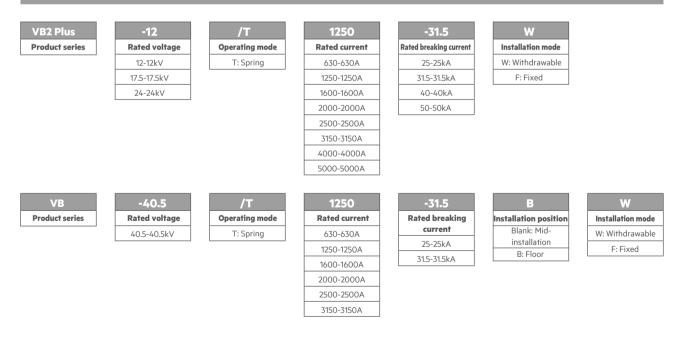
• Modular spring operating mechanism

- The modular spring operating mechanism is simple in concept and easy to use, and its mechanical life can reach up to 30000 operations.
- Excellent surface protection ensuring reliable operation of the mechanism in harsh environments.
- Self-lubricating bearings meeting special requirements, ensuring the long life of the mechanism and achieving maintenance free operation.
- Intelligent configuration
 - Intelligent monitoring, and real-time sensing of temperature changes at key points of the circuit breaker; perfect mechanical characteristics and secondary element monitoring for timely finding out and mastering the circuit breaker performance breaker; provided with a handcart-type motor drive function to achieve remote input and output control under one-click sequential control; provided with digital analysis and complete functions such as predicting possible faults and achieving pre-maintenance.

SecoVac VB2 Plus Vacuum Circuit Breaker



Quick Model Selection



Product Standard

The products fully comply with GB, DL, IEC and VDE standards and are widely used in the protection and control of medium voltage power distribution system in energy, infrastructure, industrial, commercial and civil construction:

| IEC622271-100-2012 | 《High Voltage AC Circuit Breaker》 |
|--------------------|---|
| IEC60694-2002 | $\langle\!\!\!\langle$ Common Specifcation for High Voltage Switchgear and Controlgear Standards $\rangle\!\!\!\rangle$ |
| GB1984-2014 | 《High Voltage AC Circuit Breaker 》 |
| DIN VDE 0671 | 《High-voltage Switchgear and Controlgear 》 |

SecoVac VB2 Plus VCB have passed all kinds of test as below, to make sure the products can work steadily and reliably with correct installation.

• Type test

Temperature rise test, power-frequency withstand test, lighting impulse withstand test, short time/peak withstand test, me chanical endurance test, short circuit breaking test and cable off-load switching capacity test

• Special test

Insulation test and temperature test under the altitude 2500m Capacitor bank breaking test test(630A single capacitor set)

• Outgoing inspection

Mechanical test, power-frequency withstand test, insulation test for control system, resistance test for main loop, mechani cal and electrical operation check

Environmental Data

• The conditions of temperature

- -The ambient air temperature does not exceed 40 $^{\circ}\mathrm{C}$
- -The minimum ambient air temperature is -25 °C

-The average value of ambient air temperature measured over a period of 24 h, does not exceed 35 $^\circ\!C$

• The conditions of humidity (25 °C)

- -the average value of the relative humidity, measured over a period of 24 h, does not exceed 95%
- -the average value of the relative humidity, measured over a period of one month, does not exceed 90%;
- -the average value of the water vapour pressure, over a period of 24h, does not exceed 2.2kPa
- -the average value of the water vapour pressure, over a period of one month, does not exceed 1.8 kPa.

- The conditions of earthquake intensity -no more than 8 degree.
- The conditions of altitude

-The altitude does not exceed 1000m

- -We can also offer the product which can exceed
- -2500m altitude, buyer need to check with the manu facture frstly when placing order

• Others

- -Storing place should be free from condensation, fre, explosion, chemical corrosion, severe dirty and heavy shakes condition.
- -The ambient air is not signifcantly polluted by dust, smoke, corrosive and/or fammable gases, vapors or salt. EMI should not exceed 1.6kV in the secondary system.

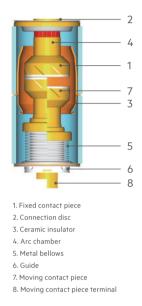
Predominant Vacuum Technology

Vacuum switching technology is nowadays the dominant switching principle in medium voltage. Innovative developments are leading to a continuously increasing market growth, based on the fundamental advantages such as reliability, availability, compactness and, last but not least, the environmental friendliness of the vacuum as a switching medium.

Vacuum Interrupter

The switching element of the vacuum circuit-breaker is the vacuum interrupter. It consists of an arc chamber, which is located between two ceramic insulators, Terminal studs connect the contacts to the externaterminals. One contact is fixed within the housing, the other one is moveable. The metal bellows enable the contact movement and provide a hermetic connection to the interrupter housing. The contact stroke is only a few millimeters. The internal pressure:in the vacuum interrupter is less than 10⁻⁷ bar, The vacuum circuit-breaker has no arc-guenching medium. The properties of the contact material and the contact geometry define the switching behavior and the switching capacity.

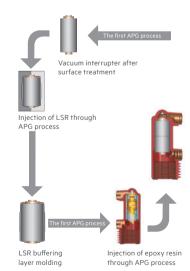
After contact separation.resultant arcevaporates contact materia from the contact surfaces, The arc current thus flows throw a materia vapour plosma until the next current zero. Near the current zero, the arc is extinawished, and the metallooses its conductivitu within a few microsecondsas a consequence of the recombination of the charge carrier ions.in this wau.the contact gap is de-ionized and the dielec tristrenath restored veru fast. The metal vapour condenses on the contact surfaces. Only a very small portion condenses on the arc chamber wall. The arc chamber wall has the function of a vapour shield, to prevent condensation of the metallic vapour onto the insulators.



Automatic Pressure Gelation

A special cushion layer made of high insulation, gas tight and strong elastic material was employed around the surface of the ceramic tube of vacuum interrupter before it was embedded, so the cracking is thoroughly avoided.

VB2 Plus is the first completed series MV embedded pole vacuum circuit breaker in the world which employs the latest and mature technology of Automatic Pressure Gelation (APG) to embed the vacuum interrupter and connection terminals within epoxy resin. Compared with complete air insulated vacuum circuit breaker or assembly pole vacuum circuit composite insulation, VB2 Plus is of solid insulation, on one hand, the risk of insulation fault caused by adverse operating environment such as dust, humidity and small animals are eliminated thoroughly, so VB2 Plus is a vacuum circuit breaker with high environmental resistance. On the other hand, thanks to the embedded pole design, the distribution of electrical field of the pole is much even than that in the assembly pole vacuum circuit breaker, so the insulation strength is improved dramatically.



Embedded poles

Vacuum interrupter has extremely high internal dielectric strength resulting from the UIV while the external dielectric strength is however limited by the insulation capacity of the air, therefore also requires embedding the chamber in a solid material, In such cases, the vacuum interrupter is additionally well protected against external mechanical influences such as impacts.

The main advantages of embedded poles are high dielectric strength without additional external compensation in air, usability in an extremely wide range of climaticof the vacuum protectioninterrupter from dust, mechaninpacts and moisture. On the operating mechanism side. it is equipped with modularized, standardized and simplified spring mechanism, the whole spring mechanism is made up of separated closing and opening modules which can be preassembled andeasily replaced on-site of end-users without any changing of the original dynamic characteristic of the breaker, so the lead time for delivery and down time for maintenance will pe shortened.

Modular Operation Mechanism

VB2 Plus series MV embedded pole vacuum circuit breaker is equipped with modularized, standardized and simplified operating mecha VB2 Plus series MV embedded pole vacuum circuit breaker is equipped with modularized, standardized and simplified operating mecha-nism, the mechanism consists of separated closing and opening modules, all the mechanical parts of the mechanism are integrated into these two modules. The closing and opening modules are universal to whole series of VB2 Pluse mbedded pole vacuum circuit breaker regardless of ratings, it means there is only one kind of closing and opening module for the whole SecoVac products family, thanks to such a design, the maintenance time and cost for the mechanism is low, the replacement of modules can be easily carried out on site. There is no impact on the original dynamic characteristic of the breaker after the replacement of modules, so the retest of the breaker is not required after the replacement of modules.



Modular Operation Mechanism

Another feature of the operating mechanism of VB2 Plus series MV embedded pole vacuum circuit breaker is that the total number of parts of the mechanism is reduced compared with the traditionally designed mechanism, so that the reliability of the mechanism is en-hanced significantly.

The opening damper of the mechanism plays a very important role to ensure reliable performance and high mechanical endurance of VB2 Plus series MV embedded pole vacuum circuit breaker. By adoption of the opening damper, the overtravel and re-bounce of moving contacts of vacuum interrupters during the opening of this VCB is reduced to a minimum. The lower overtravel of the moving contacts means lower mechanical stress to the bellow of the vacuum interrupter, so the designed mechanical endurance of the vacuum interrupter er is quaranteed. The lower re-bounce of the contact ensures low arc re-striking probability during the breaking of capacitive current, so the occurrence rate of operating overvoltage is reduced. By the contribution of the opening damper, VB2 Plus has successfully passed type tested as Class C2 breaker in accordance with IEC standards.

Technical Parameter

Main Technical Parameter

| ltem | Unit | 1 | Valu | e | |
|---|--------|--|--|-------------------------------------|-------------------------------------|
| Rated voltage | kV | 12 | 17.5 | 24 | 40.5 |
| Rated current | A | 630 1250 1600 2000 2500 3150 4000* 5000* | 630 1250 1600 6 2000 2500 3150 4000* 5000* | 530 1250 1600 2000 2500 3150* | 630 1250 1600 2000 2500 3150* |
| Rated power frequency withstand voltage(1min) | kV | 42 | 38 | 65 | 95 |
| Rated lighting impulse withstand voltage | kV | 75 | 95 | 125 | 185 |
| Rated frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 |
| Rated short circuit breaking current | kA | 25 31.5 40 50 | 25 31.5 40 50 | 25 31.5 | 25 31.5 |
| Rated short time withstand current(4s) | kA | 25 31.5 40 50 | 25 31.5 40 50 | 25 31.5 | 25 31.5 |
| Rated peak withstand current | kA | 63 80 100 125 | 63 80 100 125 | 63 80 | 63 80 |
| Rated peak making current | kA | 63 80 100 125 | 63 80 100 125 | 63 80 | 63 80 |
| Operation sequence | kA | O-0.3s-CO-180s-CO (equal or lower than 40kA) | O-0.3s-CO-180s-Co (equal or lower than 40kA) | 0 0-0.3s-CO- 180s-CO | 0-0.3s-CO- 180s-CO |
| operation sequence | | O-180s-CO-180s-CO (50kA) | O-180s-CO-180s-C (50kA) | 0 | |
| Breaker grade | | E2-M2-C2 | E2-M2-C2-S1 | E2-M2-C2 | E2-M2-C2 |
| Mechanical endurance | Cycles | 30000 | 10000 | 30000 | 10000 |
| Short circuit/breaking endurance | Cycles | 50 | E2 class 274 | 30 | 30 |
| | | | | *, | Air cooled cabinet |

Technical Parameter

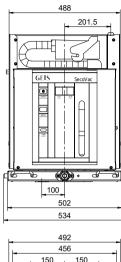
Other Technical Parameter

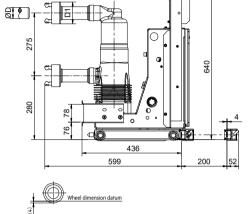
| ltem | Unit | | Valu | le | |
|--|------|-----------|--------------------|------------|--------------------|
| Rated voltage | kV | 12 | 17.5 | 24 | 40.5 |
| Closing time(rated voltage) | ms | | 20~50 |) | |
| Opening time(rated voltage) | ms | | 30~70 |) | |
| Clearance between Contact | mm | 9±1 | 9±1 | 13±1 | 18±1 |
| Overtravel | mm | 3.5±0.5 | 3.5±0.5 | 4±1 | 4±1 |
| Contact closing tripping time | ms | ≤2 | ≤2 | ≤2 | ≤3 |
| Synchronization of 3-phase contact closing and opening | ms | ≤2 | ≤2 | ≤2 | ≤3 |
| Average opening speed | m/s | 0.9 ~ 1.3 | 0.9 ~ 1.3 | 1.1 ~ 1.6 | 1.3 ~ 1.9 |
| Average closing speed | m/s | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.6 ~ 1.0 | 0.5 ~ 1.0 |
| Loop resistance | μΩ | ≤50(630A) | ≤45 (1250A) ≤40 (1 | 600~2000A) | ≤35 (over 2500A) |
| Rated operation voltage for mechanism | V | | AC:110,220 DC:1 | 10,220 | |
| Rated voltage for energy storing motor | V | | AC:110,220 DC:1 | 10,220 | |
| Energy storing period | S | | ≤10 | | |

Mechanism and electromagnetic coils

| Rated operation voltage(V) | Energy storing motor(A) | Closing electromagnetic coil(A) | Opening electromagnetic coil(A) | Blocking magnet(mA) |
|-------------------------------|----------------------------|---------------------------------|------------------------------------|------------------------|
| 110 DC | 2.0 | 2.2 | 2.2 | 35 |
| 220 DC | 1.0 | 1.3 | 1.3 | 20 |

12kV and 17.5kV Withdrawable Embedded Pole - P=150mm

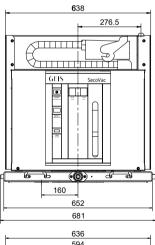


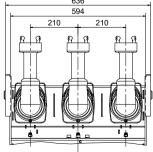


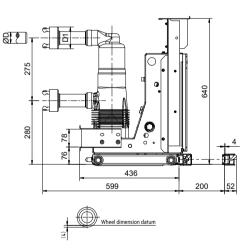
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| | 8 8 8 8 | 8 8 |
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| Туре | D |
|-----------------|-----|
| 630A/25~31.5kA | φ35 |
| 1250A/25~31.5kA | φ49 |

12kV and 17.5kV Withdrawable Embedded Pole - P=210mm

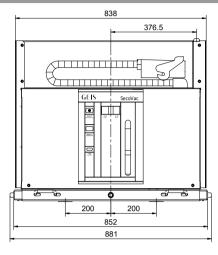


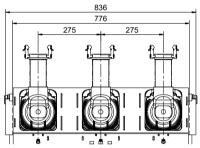


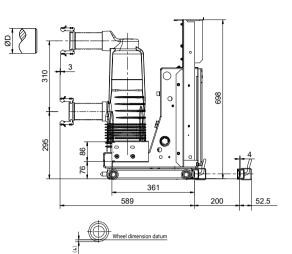


| Туре | D |
|-----------------|-----|
| 630A/25~31.5kA | φ35 |
| 1250A/25~31.5kA | φ49 |
| 1250A/40kA | φ49 |
| 1600A/31.5~40kA | φ55 |

12kV and 17.5kV Withdrawable Embedded Pole - P=275mm

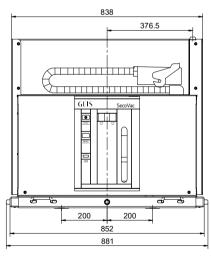


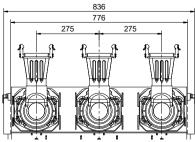


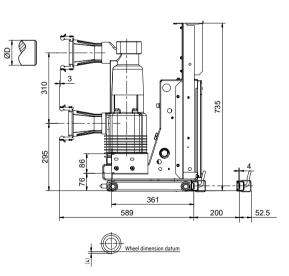


| Туре | D |
|-----------------|-----|
| 1600A/31.5~40kA | φ79 |
| 2000A/31.5~40kA | φ79 |

12kV and 17.5kV Withdrawable Embedded Pole - P=275mm

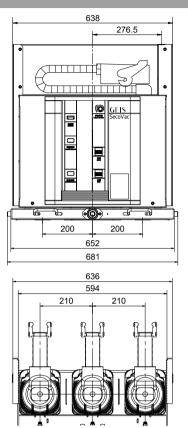


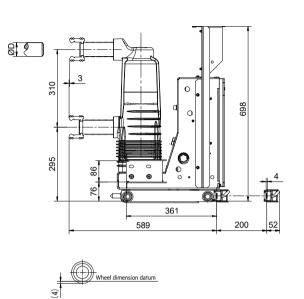




| Туре | D |
|-----------------|------|
| 2500A/31.5~40kA | φ109 |
| 3150A/31.5~40kA | φ109 |
| 4000A/40~40kA | φ109 |

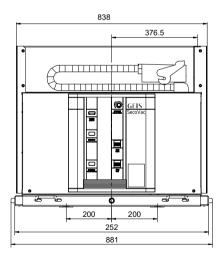
12kV and 17.5kV Withdrawable Embedded Pole - P=210mm (50kA)

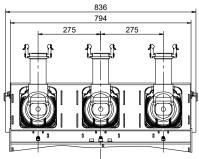


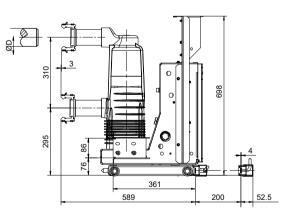


| Туре | D |
|-----------------|-----|
| 1250~1600A/50kA | φ55 |
| 2000A/50kA | φ55 |

12kV and 17.5kV Withdrawable Embedded Pole - P=275mm (50kA)



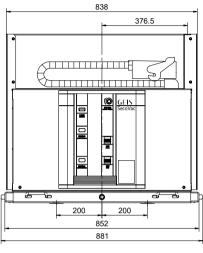


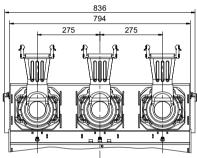


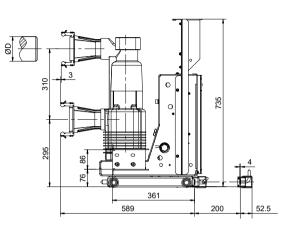


| Туре | D |
|-----------------|-----|
| 1250~1600A/50kA | φ79 |
| 2000A/50kA | φ79 |

12kV and 17.5kV Withdrawable Embedded Pole - P=275mm (50kA)



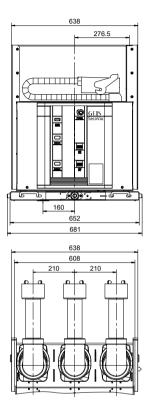


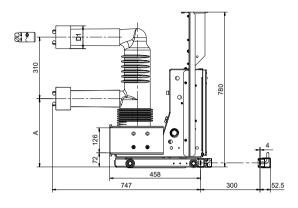




| Туре | D |
|------------|------|
| 2500A/50kA | φ109 |
| 3150A/50kA | φ109 |
| 4000A/50kA | φ109 |
| 5000A/50kA | φ109 |

24kV Withdrawable Embedded Pole - P=210mm

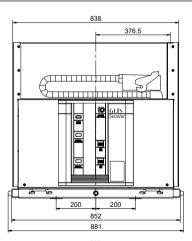


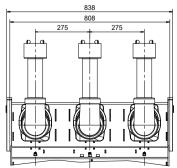


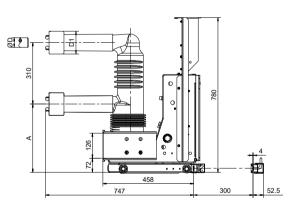


| Туре | D | D1 |
|-----------------|-----|------|
| 630A/25~31.5kA | φ35 | φ114 |
| 1250A/25~31.5kA | φ49 | φ114 |
| 1600A/31.5kA | φ55 | φ114 |

24kV Withdrawable Embedded Pole - P=275mm



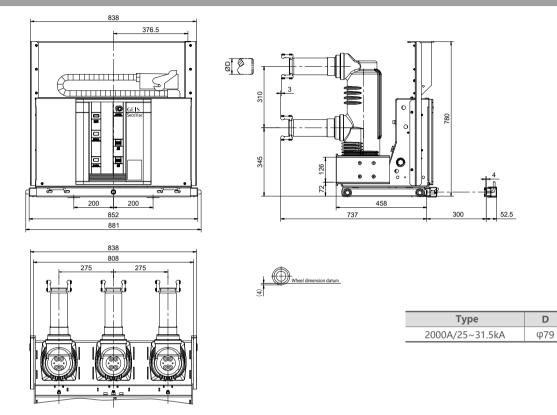




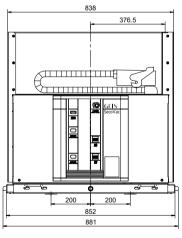


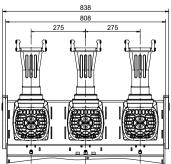
| Туре | D | D1 |
|-----------------|-----|------|
| 630A/25~31.5kA | φ35 | φ114 |
| 1250A/25~31.5kA | φ49 | φ114 |
| 1600A/31.5kA | φ55 | φ114 |

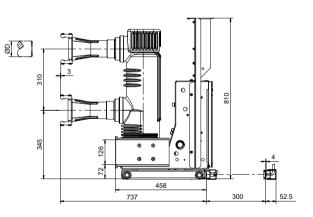
24kV Withdrawable Embedded Pole - P=275mm



24kV Withdrawable Embedded Pole - P=275mm



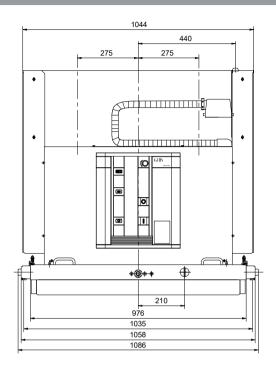


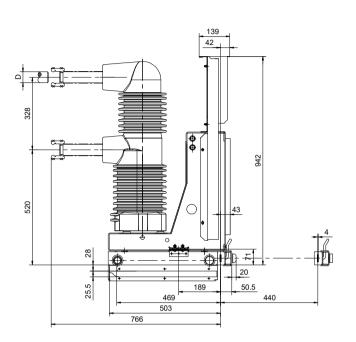




| Туре | D |
|-----------------|------|
| 2500A/25~31.5kA | φ109 |
| 3150A/25~31.5kA | φ109 |



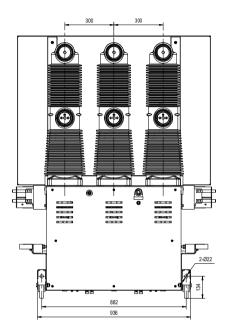


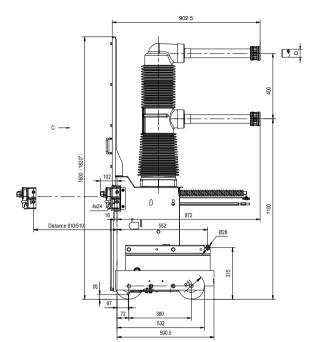


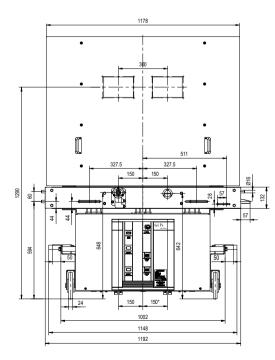


| Туре | D |
|---------------------|------|
| 630~1250A/25~31.5kA | φ49 |
| 1600A/25~31.5kA | Φ55 |
| 2000A/25~31.5kA | φ79 |
| 2500A/25~31.5kA | ф109 |

40.5kv VCB on truck Embedded Pole

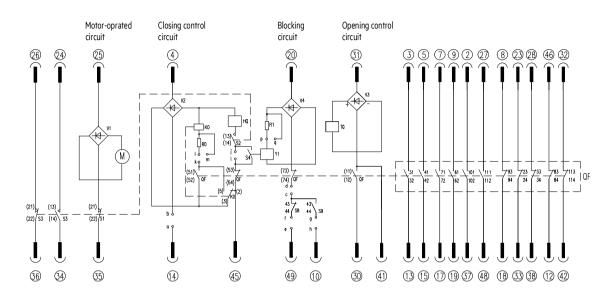


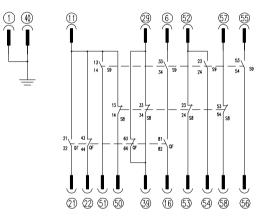




| Туре | D |
|---------------------|------|
| 630~1250A/25~31.5kA | ф49 |
| 1600A/25~31.5kA | φ55 |
| 2000A/25~31.5kA | ф79 |
| 2500A/25~31.5kA | φ109 |

Withdrawable (58Pin)





Remarks: 1.Shown with the stored-energy spring in the discharged, the breaker in open and test pasition;

Operating power selection:

| Jumper wire Option | p-q | m-l |
|-----------------------|-----|--------------|
| AC/DC 220V | > | 1 |
| AC/DC 110V | ~ | \checkmark |

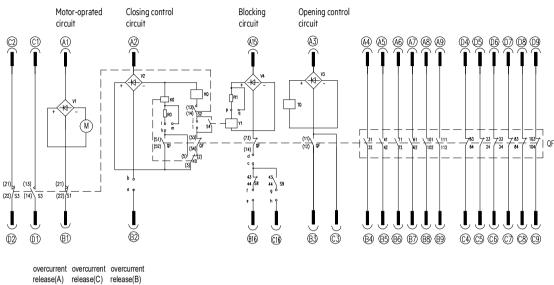
Note: " / " indicates disconnection; " \checkmark " indicates connect

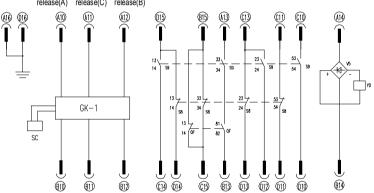
Optional wiring setting:

| Option | Jumper wire | a-b | c-d | e-f | g-h | a-f | a-g | b-c | i-j | l-k |
|----------------|----------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|-----|--------------|
| Anti-pumping | Blocking coil | \checkmark | \checkmark | ~ | \checkmark | 1 | 1 | 1 | 1 | \checkmark |
| relay | Blocking coil | 1 | 1 | 1 | 1 | \checkmark | ~ | \checkmark | ~ | \checkmark |
| □ Anti-pumping | Blocking coil | ~ | \checkmark | \checkmark | \checkmark | 1 | 1 | 1 | 1 | 1 |
| relay | □Blocking coil | 1 | 1 | 1 | 1 | \checkmark | v | \checkmark | ✓ | 1 |

| S9: | Limit switch | HQ: | Closing coil | V1~V4: | Rectifier |
|----------|------------------------------------|--------|----------------------|--------|------------------------------|
| S8: | Limit switch | TQ: | Opening coil | K0: | Anti-pumping relay(Optional) |
| \$4: | Auxiliary switch for blocking coil | R0~R1: | Resistance | Y1: | Blocking coil(Optional) |
| \$1~\$3: | Energy storage position switch | a~q: | Jumper terminal | | |
| QF: | Auxiliary switch | M: | Energy-storage motor | | |

Withdrawable (64Pin)





Remarks: 1.Shown with the stored-energy spring in the discharged,the breaker in open and test pasition;

Operating power selection:

| Jumper wire Option | p-q | m-l |
|-----------------------|--------------|--------------|
| AC/DC 220V | ~ | 1 |
| AC/DC 110V | \checkmark | \checkmark |

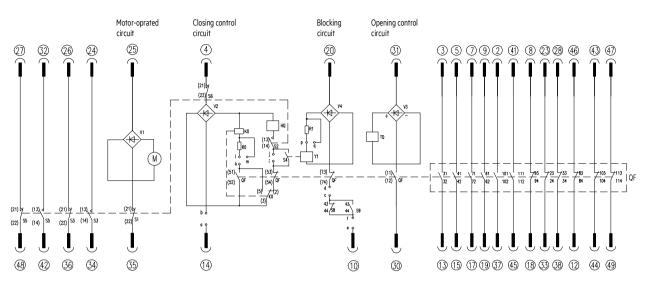
Note: " / " indicates disconnection; " \checkmark " indicates connect

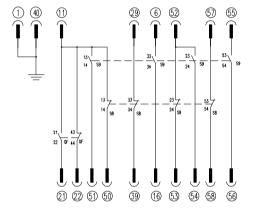
Optional wiring setting:

| Option | Jumper wire | a-b | c-d | e-f | g-h | a-f | a-g | b-c | i-j | l-k |
|--|---------------|--------------|--------------|--------------|--------------|--------------|-----|--------------|-----|--------------|
| Anti-pumping | Blocking coil | \checkmark | \checkmark | \checkmark | \checkmark | 1 | / | 1 | / | \checkmark |
| relay | Blocking coil | 1 | 1 | 1 | 1 | \checkmark | > | \checkmark | > | \checkmark |
| Anti-pumping relay | Blocking coil | \checkmark | \checkmark | \checkmark | \checkmark | 1 | 1 | 1 | 1 | 1 |
| | Blocking coil | 1 | 1 | 1 | 1 | \checkmark | ~ | ~ | > | 1 |

| S9 : | Limit switch | HQ: | Closing coil | V1~V4: | Rectifier |
|-------------|------------------------------------|--------|----------------------|--------|---------------------------------|
| S8 : | Limit switch | TQ: | Opening coil | K0: | Anti-pumping relay(Optional) |
| \$4: | Auxiliary switch for blocking coil | R0~R1: | Resistance | Y1: | Blocking coil(Optional) |
| \$1~\$3: | Energy storage position switch | a~q: | Jumper terminal | GK-1: | Controller |
| QF: | Auxiliary switch | M: | Energy-storage motor | SC: | Overcurrent trip coil(Optional) |

VCB on truck (64Pin)





Remarks: 1.Shown with the stored-energy spring in the discharged, the reaker in open and test pasition;

| Optional wiring | setting: | | | | | | | | Operating power selection: |
|-----------------|---------------|--------------|--------------|--------------|--------------|----------|-----|-----|------------------------------------|
| Option | Jumper wire | a-b | c-d | e-f | a-f | b-c | i-j | l-k | Option p-q m-l |
| Anti-pumping | Blocking coil | \checkmark | \checkmark | \checkmark | 1 | 1 | 1 | ~ | AC/DC 220V 🗸 🖊 |
| relay | Blocking coil | 1 | 1 | 1 | ~ | v | ~ | ~ | AC/DC 110V 🗸 🗸 |
| Anti-pumping | Blocking coil | √ | ~ | ~ | 1 | 1 | 1 | 1 | |
| relay | Blocking coil | 1 | 1 | 1 | \checkmark | ~ | ~ | 1 | Note: " / " indicates disconnectio |

| II I ANTI- | pumping | | - | - | - | - | - | | - | | |
|------------|---|-----------------|---|------------------|---------------------------------|--------------|----------------|----------|-----------|-----------------------|------------|
| relay | | □ Blocking coil | 1 | 1 | 1 | \checkmark | v | √ | 1 | Note: " / " indicate | |
| | | | | | | | | | | ' " indicate | es connect |
| <u></u> | 1.1 | 5b. | | 110. | Charles | | | V1~V4: | D | | |
| S9: | Limit sw | ITCN | | HQ: | Closing | COII | | VI V4. | Rectifier | | |
| S8: | Limit sw | itch | | TQ: Opening coil | | | | K0: | Anti-pun | nping relay(Optional) | |
| \$4: | S4: Auxiliary switch for blocking coil R0 [~] R1: Resistance | | | | Y1 : | Blocking | coil(Optional) | | | | |
| \$1~\$3: | 3: Energy storage position switch a q: Jumper terminal S6: Position locki | | | | locking of propulsion mechanism | | | | | | |
| QF: | Auxiliary | y switch | | M: | Energy | -storage m | notor | | | | |

SecoVac 12kV/17.5kV Ordering check list

| Project | | | | Product | | |
|--|------------|---|-----------------------|---|-----------------------------|---|
| Order Quantity | | | | | | |
| Rated voltage: | 0 1 | 2kV () | 17.5kV | Installation Mode: | O Withdrawable | O Fixed |
| Pole type | | | | O Embedded | d Pole | |
| Phase Distance | | O 150mm | 1 | O 210mm | | O 275mm |
| Rated current | | 630A1250A | | 630A 1250A 1600A 2000A | 0 | 1600A O 2000A 2500A O 3150A 4000A O 5000A |
| Rated short circuit breaking current | | O 25kAO 31.5kA | | 25kA 31.5kA 40kA 50kA | | 31.5kA 40kA 50kA |
| Remark: Configuratio | on of rela | ted current and s | hort circuit breaking | current please refer to | o the table of installation | dimension |
| Earthing mode: | 0 | Earthing with | copper bar at the l | bottom of truck | O Earthing with co | onnecter on the sides of truck |
| Rated operation voltage for mechanis | O | DC110V | O DC220V | O AC110V | O AC220V | |

| Rated voltage for energy storing motor: | O DC110V O DC220V O | AC110V | O AC220V | |
|--|--|------------------|---|----------------|
| Secondary wiring: | O Withdrawable Method(64Pin) | | O Fixed Method | |
| | O Withdrawable Method(58Pin) | | O Other Method | |
| * Function optional: | O Closing latching electromagnet (| O DC110V | O DC220V O AC110V C |) AC220V |
| | O Position latching electromagnet | O DC110V | O DC220V O AC110V C |) AC220V |
| | O Anti-pump relay | | | |
| * Over current release: | O without over current release O 10ve | er current relea | se O 20ver current release O 30ver cu | urrent release |
| Standard accessory: | O Energy-stroing handle(2pcs for each s breakers as standard offer) | 5 | O Rocking handle of chassis(2pcs breakers as standard offer) | for each 5 |
| Special Request: | | | | |
| Signature of buyer | | Date _ | / / | |
| | | | | |

*It will have additional cost if not a standard product(except anti-pump relay).

| Secoval 24KV | Ordering check list |
|--|---|
| Project | Product |
| Order Quantity | |
| Rated voltage: | 24kV Installation Mode: Withdrawable |
| Pole type | Embedded Pole |
| Phase Distance | • 275mm |
| Rated current | O 630A O 1250A O 1600A O 2000A O 2500A O 3150A |
| Rated short circuit breaking current | O 25kA O 31.5kA |
| | related current and short circuit breaking current please refer to the table of installation dimension |
| Earthing mode: | O Earthing with copper bar at the bottom of truck O Earthing with connecter on the sides of truck |
| Rated operation voltage for mechanism: | O DC110V O DC220V O AC110V O AC220V |
| Rated voltage for energy storing motor: | O DC110V O DC220V O AC110V O AC220V |
| Secondary wiring: | O withdrawable method(64Pin) O Fixed Method |
| | O Withdrawable method(58Pin) O Other Method |
| Function optional: | O Closing latching electromagnet O DC110V O DC220V O AC110V O AC220V |
| | O Position latching electromagnet O DC110V O DC220V O AC110V O AC220V |
| | O Anti-pump relay |
| * Over current release: | O without over current release O 10ver current release O 20ver current release O 30ver current release |
| Standard accessory: | O Energy-stroing handle(2pcs for each 5 breakers as standard offer) O Rocking handle of chassis(2pcs for each 5 breakers as standard offer) |
| Special Request: | |
| Signature of buyer | Date / / |

*It will have additional cost if not a standard product(except anti-pump relay).

| SecoVac 40.5k | V Ordering check list |
|--|--|
| Project | Product |
| Order Quantity | |
| Rated voltage: | 40.5kV Installation Mode: O Withdrawable |
| Pole type | Embedded Pole |
| Phase Distance | • 275mm |
| Rated current | O 630A O 1250A O 1600A O 2000A O 2500A |
| Rated short circuit breaking current | O 25kA O 31.5kA |
| Remark: Configuration of | related current and short circuit breaking current please refer to the table of installation dimension |
| Earthing mode: | Earthing with connecter on the sides of truck |
| Rated operation voltage for mechanism: | O DC110V O DC220V O AC110V O AC220V |
| Rated voltage for energy storing motor: | O DC110V O DC220V O AC110V O AC220V |
| Secondary wiring: | O withdrawable method(64Pin) O Fixed Method |
| | O withdrawable method(58Pin) O other method |
| * Function optional: | O Closing latching electromagnet O DC110V O DC220V O AC110V O AC220V |
| | O Position latching electromagnet O DC110V O DC220V O AC110V O AC220V |
| | O Anti-pump relay |
| * Over current release: | O without over current release O 10ver current release O 20ver current release O 30ver current release |
| Standard accessory: | Energy-stroing handle(2pcs for each 5 breakers as standard offer) Rocking handle of chassis(2pcs for each 5 breakers as standard offer) |
| Special Request: | |
| Signature of buyer | Date / / |

*It will have additional cost if not a standard product(except anti-pump relay).

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| SecoVac 40.5k | V (VCB on truck) Ordering check list |
|--|---|
| Project | Product |
| Order Quantity | |
| Rated voltage: | 40.5kV Installation Mode: O Withdrawable |
| Pole type | Embedded Pole |
| Phase Distance | • 300mm |
| Rated current | O 630A O 1250A O 1600A O 2000A O 2500A O 3150A |
| Rated short circuit breaking current | O 25kA O 31.5kA |
| Remark: Configuration o | f related current and short circuit breaking current please refer to the table of installation dimension |
| Earthing mode: | Earthing with copper bar at the bottom of truck |
| Rated operation voltage for mechanism | O DC110V O DC220V O AC110V O AC220V |
| Rated voltage for energy storing motor: | O DC110V O DC220V O AC110V O AC220V |
| Secondary wiring: | O withdrawable method(64Pin) O Other method |
| * Function optional: | O Closing latching electromagnet O DC110V O DC220V O AC110V O AC220V |
| | O Anti-pump relay |
| * Over current release: | O without over current release O 10ver current release O 20ver current release O 30ver current release |
| Standard accessory: | O Energy-stroing handle(2pcs for each 5 breakers as standard offer) O Rocking handle of chassis(2pcs for each 5 breakers as standard offer) |
| Special Request: _ | |
| Signature of buyer | Date / / |
| *It will have addition | al cost if not a standard product(except anti-pump relay). |

Note:



Note:





Website: www.geis.tech Hotline: 400-820-5234

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