

**HVD11-1.14 户内真空断路器  
INDOOR VACUUM CIRCUIT BREAKER****概述****General:**

本产品主要用于1.14KV或660V三相电网中，用于分配电能，保护线路及电源设备，广泛用于铁路，矿山，电力部门。产品主体结构为立式设计，开关管与电磁铁，锁扣机构按上下结构，调整，维修很方便，分断能力强，可靠性高，使用寿命长。其进出母线排在断路器后侧，为插接式设计，可方便地组成隔爆型馈电开关。本断路器应与电子脱扣器配合使用。

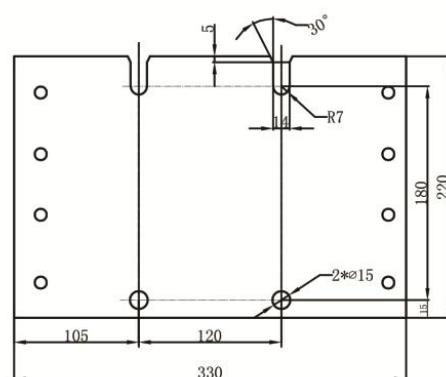
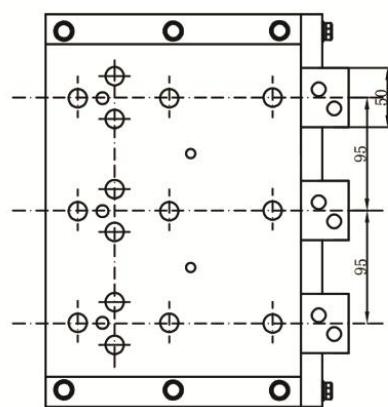
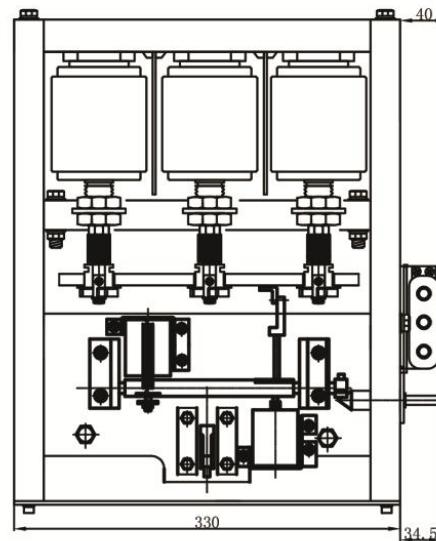
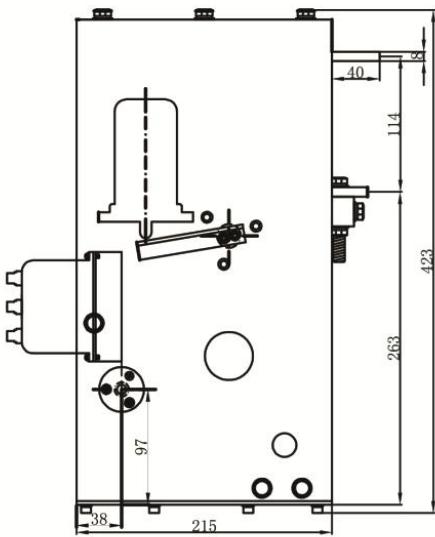
HVD11-1.14 Vacuum Circuit Breaker is mainly used in 1140v or 660v three phases electrical distribution system. It is used for distribution power, circuit protection and power equipment. It is also popular in railway, mine, electricity and so on. The product structure is vertical design. Vacuum chamber, electromagnet and latched device is up-down structure. Adjustment and maintenance are easy. It has high breaking ability, high reliability and long working life. It is in and out bus bar is at the back of the circuit breaker. And the bus bar is plug-in type, can be installed as explosion-proof feed switch easily. This circuit breaker should be used together with electronic tripper.

**产品参数****Main technical parameters**

No.	项目 Item	参数 Data
1	额定电压 Rated voltage	1140v AC
2	额定电流 Rated current	630A
3	额定发热电流 Convention thermal current	630A
4	短路分断电流 Rated short circuit breaking current	12.5KA(1140V, COS φ=0.3)
5	额定短路开断次数 Rated short circuit breaking times	16times(Closing-Opening 10 times, Opening 6 times)
6	额定频率 Rated frequency	50HZ
7	电寿命 Electrical life	≥3000times AC-2
8	机械寿命 Mechanical life	≥10000times AC-2
9	固有合闸时间 Inherent closing time	≤100ms
10	固有分闸时间 Inherent opening time	≤30ms
11	三相不同期时间 Three phases unsynchronized time	< 1.5ms
12	电磁铁通电时间 Electromagnet power on time	120~200ms
13	单极合闸回路电阻 Resistance of single phase closing circuit	≤100 μ Ω
14	开距 Opening distance	3.0~4.0mm
15	超程 Over travel distance	1.8~2.2mm
16	辅助触头 Auxiliary contacts	3NO+3NC

## HVD11-1.14 户内真空断路器 INDOOR VACUUM CIRCUIT BREAKER

### 外形及安装尺寸 Overall and installation dimensions



**HVD11Y-1.14 永磁真空断路器**  
**PERMANENT MAGNETIC VACUUM CIRCUIT BREAKER****概述****General:**

HVD11Y-630/1.14-15型永磁机构低压真空断路器主要用于1.14KV或660V三相电网中，用于分配电能，保护线路及电源设备，并可在额定电流范围内进行频繁操作或多次开断短路电流，更适于在煤矿馈电系统中使用，组成矿用一般型及高压隔爆型配电，也可以用作大容量电动机的不频繁启动之用。

该产品采用双稳态永磁机构+磁短路手动分闸，结构简单，工作稳定可靠。由于没有了半轴，搭钩等机械零件，使得因机械零件磨损造成的故障大大降低，提高了寿命。

HVD11Y-1.14 is mainly used in 1140v or 660v three phases electrical distribution system. It is equipped with permanent magnetic operation device. It is used for distribution power, circuit protection and power equipment. It is also popular in railway, mine, electricity and so on. The product structure is vertical design. Vacuum chamber and Permanent magnetic operation device is up-down structure. Adjustment and maintenance are easy. It has long mechanical life. And it has high breaking ability, high reliability. It's in and out bus bar are at the back of the circuit breaker. It can be installed as explosion-proof feed switch easily.

**产品参数****Main technical parameters**

No.	项目 Item	参数 Data
1	额定电压 Rated voltage	1.14KV
2	额定电流 Rated current	630A
3	额定频率 Rated frequency	50HZ
4	额定绝缘水平 (工频耐压1min) Rated insulation level(Power frequency withstand voltage 1 min)	4.2KV
5	额定短路分断电流 Rated short-circuit breaking current	12.5KA
6	触头允许磨损厚度 Contact-wear allowance thickness	1.5mm
7	额定短路开断电流下的开断次数 Breaking times under rated short-circuit breaking current	16times
8	电寿命 Electric life	3000times
9	回路电阻 Electric resistance of main circuit	$\leq 100 \mu \Omega$
10	触头开距 Contacts clearance	3.5~4.5mm
11	触头超程 Contacts over travel	1.5~2mm
12	母排间距 Bus bar distance	$\geq 20mm$
13	母排和壳体之间的间距 Distance between bus bar and housing	$\geq 20mm$
14	触头合闸弹跳时间 Contacts closing bouncing time	$\leq 2ms$

## HVD11Y-1.14 真空断路器 VACUUM CIRCUIT BREAKER

15	三相不同期时间 Three phases unsynchronized time	$\leq 2\text{ms}$
16	固有合闸时间 Inherent closing time	$\leq 100\text{ms}$
17	固有分闸时间 Inherent tripping time	$\leq 30\text{ms}$
18	触头工作压力 Contacts working pressure	$350 \pm 50\text{N}$
19	机械寿命 Mechanical life	50000times

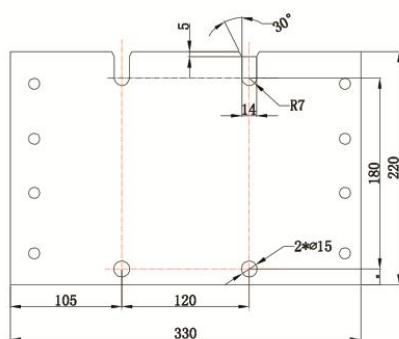
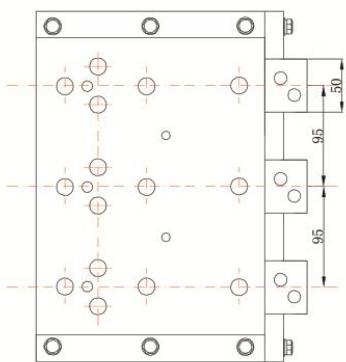
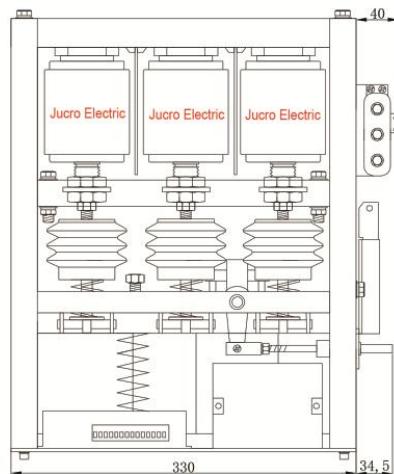
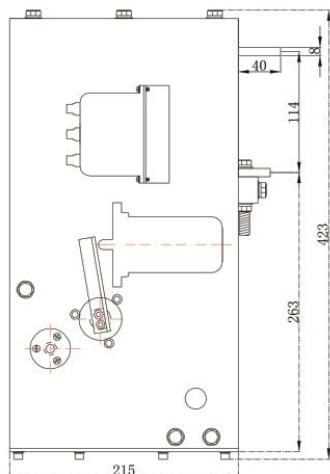
### 永磁机构主要参数表

### Main parameters of permanent magnetic mechanism

NO.	项目 Item	单位 Unit	参数 Data
1	控制电路额定电压 Rated control voltage	V	AC110~AC380
2	控制电路总功率 Control circuit total power	W	$\leq 200$
3	操作机构最大操作频率 Operating mechanism maximum operating frequency	Times/H	300
4	合闸最小间隔时间 Minimum closing interval time	S	$\geq 2$

### 外形及安装尺寸

### Overall and installation dimensions



## HVD1-12 户内高压真空断路器 INDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER



### 概述

### General:

HVD1-12型户内交流高压真空断路器是用于12kV空气绝缘的户内开关设备，作为电网设备、工矿企业动力设备的保护和控制单元。由于真空断路器的优越性，尤其适用于要求额定工作电流下的频繁操作，或多次开断短路电流的场所。该断路器采用操作机构与断路器本体的一体式设计，即可以作为固定安装单元，也可以配用专用推进机构，组成手车单元使用。手车式型号为HVD1-12D，固定式型号为HVD1-12F。行间距为：150mm, 210mm和275mm。

HVD1-12 series indoor high voltage vacuum circuit breaker is suitable for 12kV air-insulated indoor switchgear, used as protection and control unit of power equipment of industrial & mining enterprise. Due to the super excellence, it is especially suitable for locations where requires the frequent operation under rated working current or multiple breaking under short circuit breaking current. The circuit breaker adopts the integrated design on operating mechanism and circuit breaker body, servers as not only fixed installation, but also draw-out type equipped with a special propelling mechanism. Draw-out type is HVD1-12D. Fixed type is HVD1-12F. Phase distance could be 150mm, 210mm and 275mm. All above choices could be solid embedded pole type.

### 产品参数

### Main technical parameters

NO.	项目 Item	单位 Unit	参数 Parameter					
1	额定电压 Rated voltage	kV	12					
2	额定频率 Rate frequency	Hz	50					
3	额定雷电冲击耐受电压(1分钟) Rated lightning impulse withstand voltage(1min)	kV	75					
4	额定工频耐受电压(1分钟) Rated short-time power frequency withstand voltage (1min)	kV	42					
5	额定短路开断电流 Rated short-circuit breaking current	KA	20	25	31.5	40		
6	额定电流 Rated current	A	630 1000 1250	630 1000 1250 1600	1250 1600 2000 2500	1600 2000 2500 3150		
7	额定峰值耐受电流 Rated peak withstand current	KA	50	63	80	100		
8	额定短时耐受电流4S Rated short time withstand current	KA	20	25	31.5	40		
9	二次回路工频耐受电压(1分钟) Power frequency withstand voltage of secondary circuit (1min)	V	2000					
10	额定操作顺序 Rated operation sequence		O-0.3s-CO-180s-CO O-180s-CO-180s-CO*					
11	额定单个/背对背电容器组开断电流 Rated breaking current of capacitor bank	A	630/400		800/400			
12	分闸时间(额定电压) Opening time(rated voltage)	ms	20~50					
13	合闸时间(额定电压) Closing time(rated voltage)	ms	30~70					
14	额定短路电流开断次数 Rated short-circuit current breaking times	times	50		30			
15	机械寿命 Mechanical life	times	30000					
16	额定分闸合闸操作电压 Rated opening/closing voltage	V	AC110, 220; DC110, 220					
17	储能电机额定电压 Rated voltage of energy-storage motor	V	AC110, 220; DC100, 220					

\*代表短路开断电流40KA

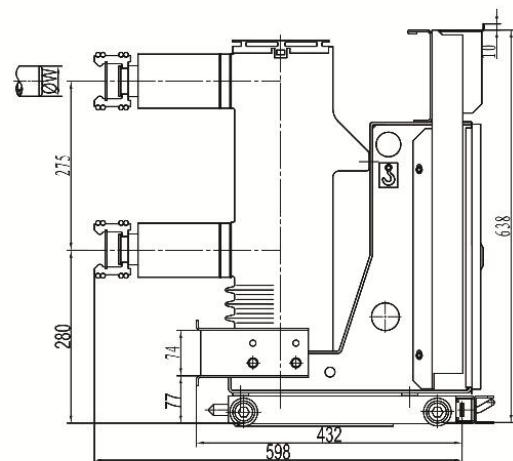
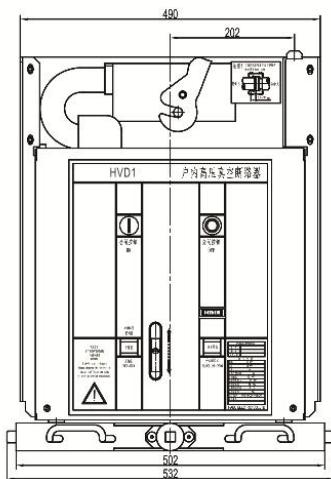
\*Means the short-circuit breaking current is 40KA

## HVD1-12 户内高压真空断路器 INDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER

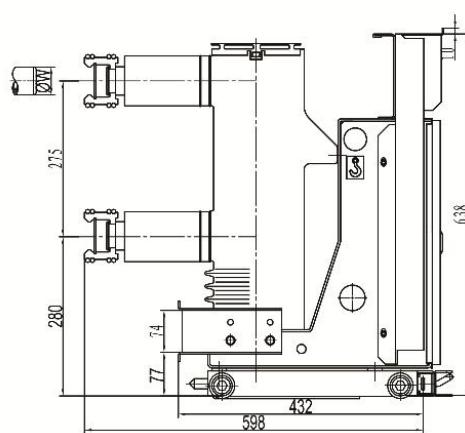
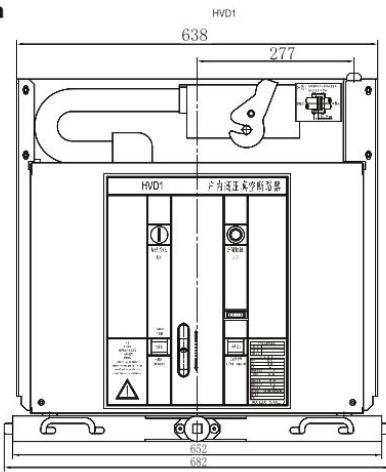
### 外形及安装尺寸

### Overall and installation dimensions

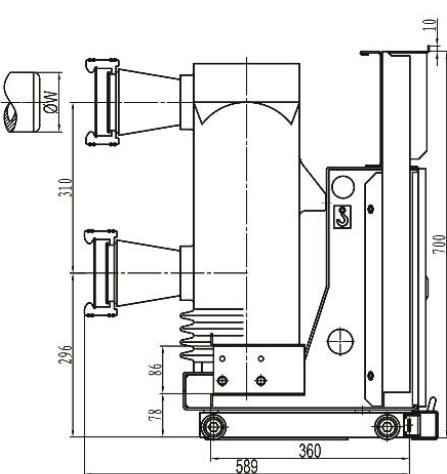
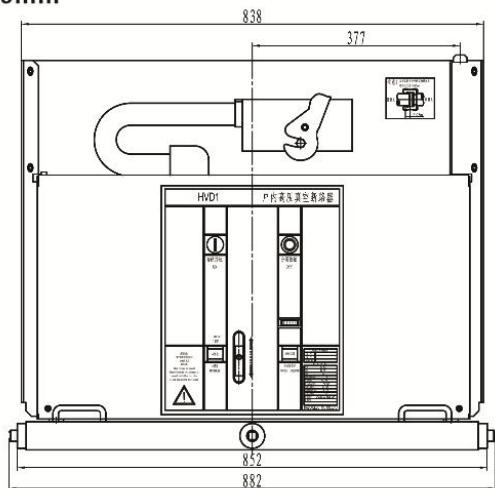
相间距: 150mm  
Pole distance: 150mm



相间距: 210mm  
Pole distance: 210mm



相间距: 275mm  
Pole distance: 275mm



## VED-12 户内高压真空断路器 INDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER



### 概述

#### General:

VED-12型户内交流高压真空断路器是用于12kV空气绝缘的户内开关设备，作为电网设备、工矿企业动力设备的保护和控制单元。由于真空断路器的优越性，尤其适用于要求额定工作电流下的频繁操作，或多次开断短路电流的场所。该断路器采用操作机构与断路器本体的一体式设计，即可以作为固定安装单元，也可以配用专用推进机构，组成手车单元使用。手车式型号为VED-12D，固定式型号为VED-12F。行间距为：150mm, 210mm和275mm。

VED-12 series indoor high voltage vacuum circuit breaker is suitable for 12kV air-insulated indoor switchgear, used as protection and control unit of power equipment of industrial & mining enterprise. Due to the super excellence, it is especially suitable for locations where requires the frequent operation under rated working current or multiple breaking under short circuit breaking current. The circuit breaker adopts the integrated design on operating mechanism and circuit breaker body, servers as not only fixed installation, but also draw-out type equipped with a special propelling mechanism. Draw-out type is VED-12D. Fixed type is VED-12F. Phase distance could be 150mm, 210mm and 275mm. All above choices could be solid embedded pole type.

### 产品参数

#### Main technical parameters

NO.	项目 Item	单位 Unit	参数 Parameter					
1	额定电压 Rated voltage	kV	12					
2	额定频率 Rate frequency	Hz	50					
3	额定雷电冲击耐受电压(1分钟) Rated lightning impulse withstand voltage(1min)	kV	75					
4	额定工频耐受电压(1分钟) Rated short-time power frequency withstand voltage (1min)	kV	42					
5	额定短路开断电流 Rated short-circuit breaking current	KA	20	25	31.5	40		
6	额定电流 Rated current	A	630 1000 1250	630 1000 1250 1600	1250 1600 2000 2500	1600 2500 3150 4000		
7	额定峰值耐受电流 Rated peak withstand current	KA	50	63	80	100		
8	额定短时耐受电流4S Rated short time withstand current	KA	20	25	31.5	40		
9	二次回路工频耐受电压(1分钟) Power frequency withstand voltage of secondary circuit (1min)	V	2000					
10	额定操作顺序 Rated operation sequence		O-0.3s-CO-180s-CO O-180s-CO-180s-CO*					
11	额定单个/背对背电容器组开断电流 Rated breaking current of capacitor bank	A	630/400		800/400			
12	分闸时间(额定电压) Opening time(rated voltage)	ms	20~50					
13	合闸时间(额定电压) Closing time(rated voltage)	ms	30~70					
14	额定短路电流开断次数 Rated short-circuit current breaking times	times	50		30			
15	机械寿命 Mechanical life	times	30000					
16	额定分闸合闸操作电压 Rated opening/closing voltage	V	AC110, 220; DC110, 220					
17	储能电机额定电压 Rated voltage of energy-storage motor	V	AC110, 220; DC100, 220					

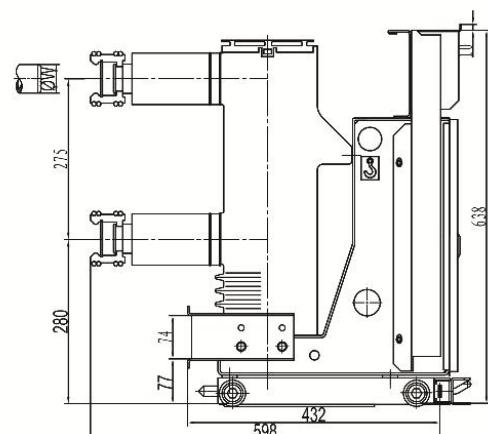
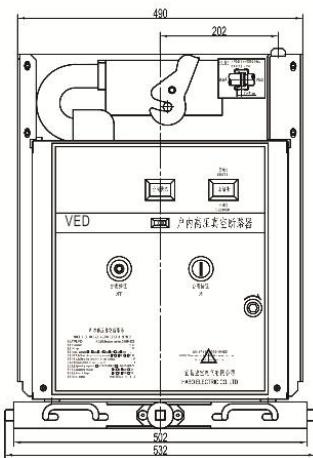
\*代表短路开断电流40KA

\*Means the short-circuit breaking current is 40KA

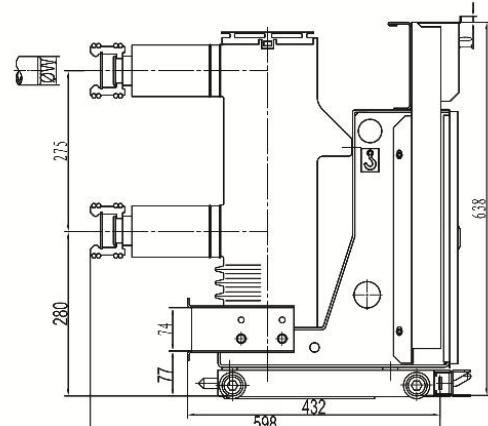
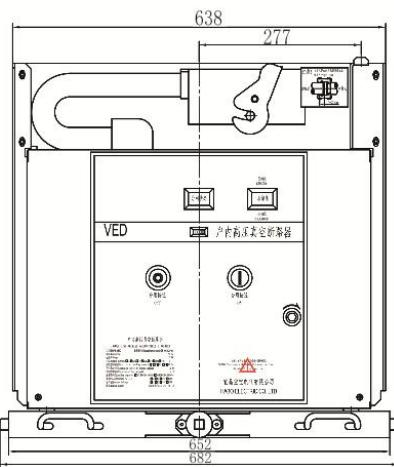
## VED-12 户内高压真空断路器 INDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER

### 外形及安装尺寸 Overall and installation dimensions

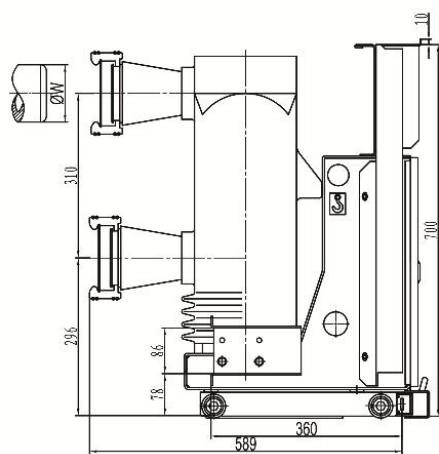
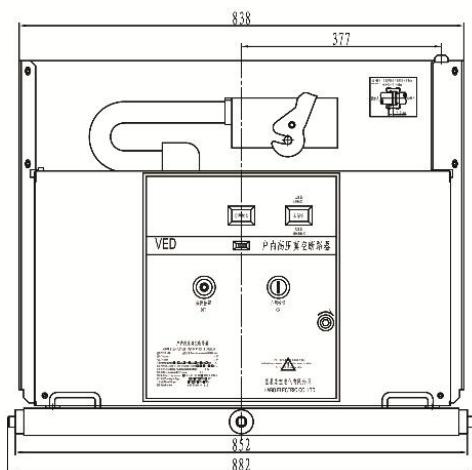
相间距: 150mm  
Pole distance: 150mm



相间距: 210mm  
Pole distance: 210mm



相间距: 275mm  
Pole distance: 275mm



## HVD32-12 户外高压真空断路器 HVD32-12G OUTDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER



### 概述

#### General:

HVD32-12及HVD32-12G系列户外柱上真空断路器(ZW32-12) (以下简称断路器)为额定电压12kV, 三相交流50Hz的户外配电设备。主要用于开断, 关合电力系统中负荷电流, 过载电流和短路电流。适用于城市和农村电网中作保护和控制之用, 更适用于频繁操作场所。

This vacuum circuit breaker(VCB) is three-phase AC 50Hz, rated voltage 12kV outdoor high-voltage switch equipment. It is mainly used to opening(closing) load current, overload current and short-circuit current. It is suitable to protect or control the city or village electrical power distribution system.

### 产品参数

#### Main technical parameters

##### 断路器的额定参数

##### Circuit breakers rated parameters

No.	名称 Name	单位 Unit	数值 Value		
1	额定电压 Rated voltage	kV	12		
2	1分钟额定工频耐受电压 Rated power frequency withstand voltage(1min)	kV	相间, 对地42, 断口48 Phase to Phase, to Ground 42 / Fracture 48		
3	额定雷电冲击耐受电压(峰值) Rated lightning impulse withstand voltage(peak)	kV	相间, 对地75, 断口85 Phase to Phase, to Ground 75 / Fracture 85		
4	额定电流 Rated current	A	630		1250
5	额定频率 Rated frequency	Hz	50		
6	额定短路开断电流 Rated short circuit breaking current	KA	12.5	16	20
7	额定短路电流(峰值) Rated short-circuit current (peak)	KA	31.5	40	50
8	额定峰值耐受电流 Rated peak withstand current	KA	31.5	40	50
9	额定短时耐受电流 4s rated short time withstand current	KA	12.5	16	20
10	额定操作顺序 Rated operating sequence		O-0.3s-CO-180s-CO(Electric operation)		
11	合闸时间 Closing time	ms	30-60		
12	分闸时间 Opening time	ms	20-40		
13	额定短路开断电流开断次数 Breaking times under rated short circuit breaking current	times	30		
14	机械寿命 Mechanical life	times	10000		
15	二次回路1分钟工频耐压 1min power frequency withstand voltage of secondary circuit	V	2000		
16	储能电机额定功率 Rated power of energy storage motor	W	40		
17	储能电机额定电压 Rated voltage of energy storage motor	V	DC220/110		
18	额定合闸操作电压 Rated voltage of closing operation	V	DC220/110, AC220/110		
19	额定分闸操作电压 Rated voltage of opening operation	V	DC220/110, AC220/110		
20	电机储能时间 Energy storage time of electric motor	S	≤8		

**HVD7-40.5 户外高压真空断路器**  
**OUTDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER****概述**  
**General**

HVD7-40.5户外交流高压真空断路器(ZW7-40.5)，具有设计合理、外形新颖、安全可靠、维护简便、电寿命长等优点。是35KV户外多油断路器更新换代的理想产品。

HVD7型真空断路器用于交流50Hz的三相电力系统中，作为分合负荷电流、过载电流及短路电流之用。

HVD7-40.5 outdoor HV AC vacuum circuit breaker has many visual advantages like reasonable design, fashionable appearance, high safety and reliability, simple maintenance, long electric life. It is the ideal upgraded products of 35KV outdoor oil circuit breakers.

HVD7-40.5 vacuum circuit breaker is applicable for three-phase power system of AC 50HZ. It is used to make and break the load current, overload current and short-circuit current.

**工作条件:**

- 1、周围空气温度不高于+40℃，不低于-30℃ (严寒地区-40℃)；
- 2、海拔不超过2000米 (2000米以上为高原型)；
- 3、风压不超过700Pa(相当于风速34m/s)；
- 4、空气污秽程度级III，防污型IV级
- 5、无火灾、爆炸危险、化学腐蚀及剧烈振动的场所。

**Working condition:**

- 1. The ambient temperature should be -30°C ~ +40°C (-40°C in the frosty area);
- 2. Altitude should not exceed 2000m(over 2000m is plateau type);
- 3. The wind pressure should not exceed 700Pa(equal to wind speed 34m/s);
- 4. Air pollution degree: III ,that of antifouling type: VI;
- 5. The installation site should be free from the fire, explosion, chemical corrosion and serious vibration.

**产品参数****Main technical parameters**

No.	项目 Item		单位 Unit	参数 Date		
1	额定电压 Rated voltage			KV 40.5		
2	额定绝缘水平 Rated insulation Level	1分钟工频耐压 1min power frequency withstand voltage	Dry test	KV	95	
		雷电冲击耐受电压(峰值) Lightning impulse withstand voltage ( peak value )	Wet test	KV	80	
3	额定电流 Rated current			A	1600	2000
4	额定短路开断电流 Rated short-circuit breaking current			KA	20	25
5	额定短路关合电流(峰值) Rated short-circuit making current ( peak )			KA	50	63
6	额定操作顺序 Rated operating sequence			O-0.3s-CO-180s-CO		
7	额定短时耐受电流 Rated short-time withstand current			KA	20	25
8	额定峰值耐受电流 Rated peak withstand current			KA	50	63
9	额定短路持续时间 Rated short-circuit duration			S	4	
10	额定控制电压 Rated control voltage			V	AC220,110;DC220,110	
11	额定短路开断电流开断次数 Breaking times under rated short-circuit breaking current			Times	20	
12	全开断时间 Full-break time			ms	≤80	
13	机械寿命 Mechanical life			Times	10000	

## HVD32-12 户外高压真空断路器 HVD32-12G OUTDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER

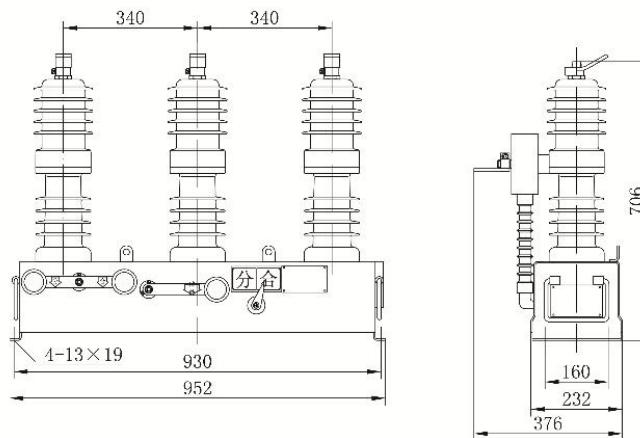
### 隔离开关主要技术参数 The main technical parameters of the isolation switch

No.	项目 Project	单位 Unit	参数 Parameter
1	额定电压 Rated voltage	KV	12
2	额定电流 Rated current	A	630
3	额定频率 Frequency	Hz	50
4	额定短时耐受电流4S(有效值) 4s rated short time withstand current (rms)	KA	16/20
5	额定峰值耐受电流 Rated withstand current(peak)	KA	40/50
6	工频耐压1分钟 1min power frequency withstand voltage	KV	42
	断口 Fracture	KV	48
7	回路电阻(断路器接线板至隔离开关进线板间) Circuit resistance(For circuit breaker main body only)	$\mu\Omega$	$\leq 120$
8	三相刀闸合闸时中心偏摆量 The knife center runout under closing operation of isolation switch	mm	$\leq 2$
9	三相刀闸分、合闸同期性偏差 The synchronism of three phases knife under opening-closing operation	mm	$\leq 2$
10	导电部分对地绝缘隔离 Ground insulation gap of conductive parts	mm	$\geq 160$
11	断口开距 Fracture opening distance	mm	$\geq 200$

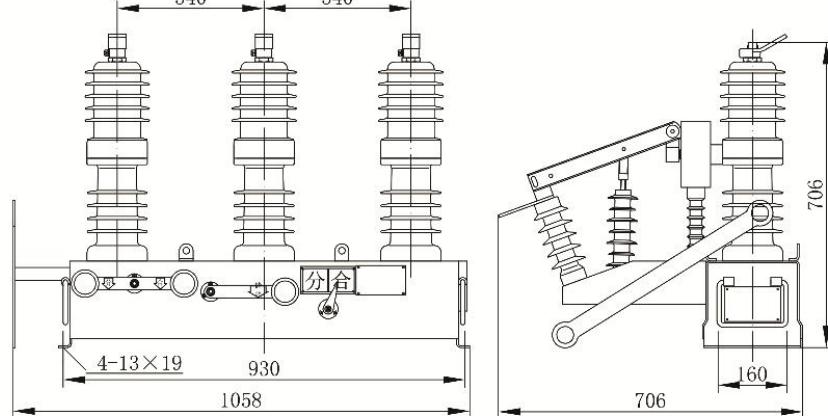
### 外形及安装尺寸

### Overall and installation dimensions

HVD32-12

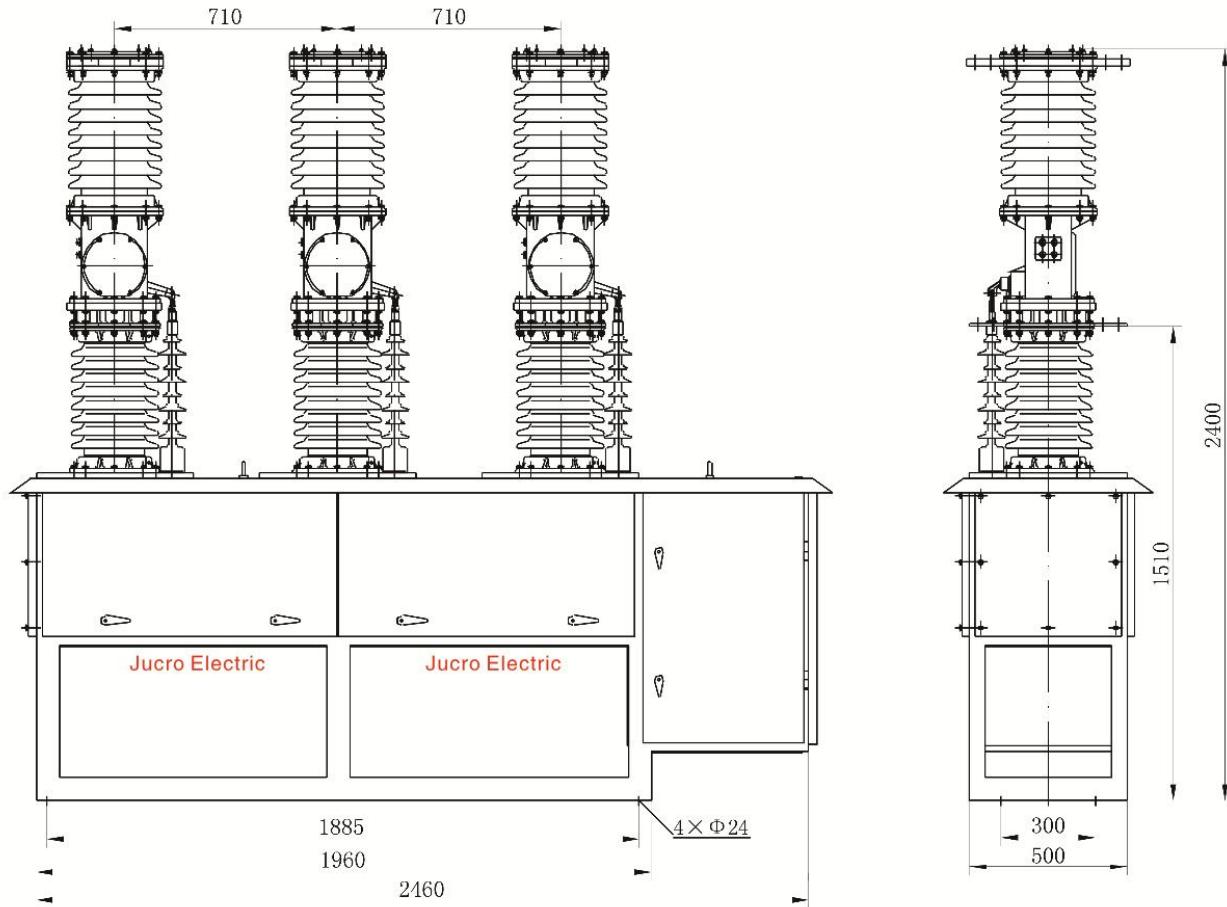


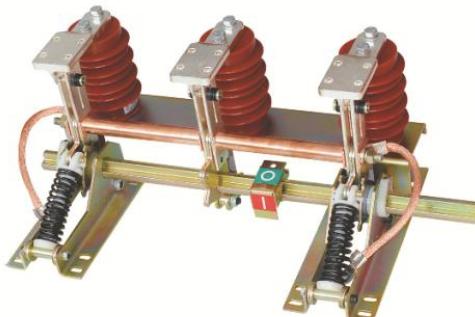
HVD32-12G



## HVD7-40.5 户外高压真空断路器 OUTDOOR HIGH VOLTAGE VACUUM CIRCUIT BREAKER

### 外形及安装尺寸 Overall and installation dimensions



**JN15-12****户内高压接地开关**  
**INDOOR HIGH VOLTAGE EARTHING SWITCH****概述****General**

JN15-12型户内高压接地开关是我公司采用先进工艺开发的一种具有国际先进水平的产品,其结构为组装式。经全面考核,性能符合GB1985-2004<交流高压隔离和接地开关>及IEC62271-102:2002的要求,适用于3-12KV交流50HZ的电力系统中;它具有短路关合能力以保护开关设备内其他电气设备不受损坏,可与各种高压开关柜配套使用,亦可作为高压电器设备检修时接地保护用。

JN15-12 series indoor high voltage earthing switch is a compositional type, and the technical parameters is corresponding to the requirements of IEC62271-102:2002. It is applicable for three-phase power system of 3-12kv, AC 50HZ. It can be used together with many types high voltage switchgear as a earthing protection unit.

**工作条件:**

- 1.海拔高度不超过1000米
- 2.周围空气温度: 上限+40度, 下限-20度
- 3.地震烈度不超过8度
- 4.相对湿度日平均值不大于95%,月平均值不大于90%
- 5.污秽等级: II

**Working condition:**

1. Altitude should not exceed 1000 m
2. The ambient temperature: -20°C ~ +40°C
3. The seismic intensity should not exceed 8 degree.
4. Relative humidity should not exceed 95%, monthly average value should not exceed 90%.
5. Pollution degree: II

**产品参数****Main technical parameters**

项目 Item	单位 Unit	参数 Data
额定电压 Rated voltage	KV	12
额定短时耐受电流 Rated short-time withstand current	KA	31.5
额定短路持续时间 Rated short-circuit duration time	S	4
额定短路关合电流 Rated making current	KA	80
额定峰值耐受电流 Rated withstand current(peak value)	KA	80
相间距 Pole to pole distance	mm	150,210,250,275
额定绝缘水平 Rated insulation level	KV	对地, 相对相 To earth, phase to phase
		42,48
1分钟工频耐压 Power frequency withstand voltage(1 min)		

## JN15-12 户内高压接地开关 SERIES INDOOR HIGH VOLTAGE EARTHING SWITCH

### 尺寸

#### Dimensions

型号 Model No.	L	E	C
JN15-12/31.5-150	535	150	396
JN15-12/31.5-210	655	210	516
JN15-12/31.5-250	735	250	596
JN15-12/31.5-275	785	275	646

### 外形及安装尺寸

#### Overall and installation dimensions

