

## YB-12 Prefabricated Substation: Scenery Type

### Summary

The covering material are: colored steel plate, cold rolled plate, stainless steel, glass-fabric special cement, aluminum alloy and copper aluminum zinc plate. The insulating medium of medium voltage switch device: SF6, atmosphere and vacuum. transformer: oil and dry mode. Low voltage power device-main switch: universal breaker, intelligent breaker and outgoing switch. No flashover plastic switch, auto mastic reactive capacity. capacity with no touched point and connector can be throw in and throw out.



### Product Feature

1. There are automatic temperature controlling device, exhaust blower, heating and dew against device in the substation.
2. Characteristic: Fastness, heat insulation, ventilation, good performance, guards against the micro-organism, moisture proof, nice looking, convenient maintenance, occupies little ground and so on.
3. At the high voltage side, use breaking switch and current limited fuse as the protector for the transformer. When the current limited fuse was fused, the three-phase load breaking switch will cut off. The high voltage side also can adopt the vacuum breaker as the protector.
4. At the bottom of the transformer, the pony truck can be installed, which can pass in and out freely for the inspection.
5. The wiring and arrangement are various; In terms of different environment and condition, it can adopt different structures and covering material.

### Ambient Condition

1. Ambient temperature: -25°C ~+40°C ;
2. Altitude: ≤1000m;
3. Wind pressure: ≤700Pa;
4. Humidity: daily average ≤95%, monthly average ≤90%;
5. Pollution degree: IV ;
6. Earthquake intensity: 8 degree;
7. Occasions without fiercely shake and corrosiveness, as well as without flaming and explosive matter, the verticality is no more than 3 degree.



### Technical Specification

No.	Item	Unit	High voltage unit	Transformer	Low voltage unit
1	Rated voltage	kV	12	12/0.4	0.4
2	Rated capacity	kVA		30~1600	
3	Rated current	A	630		100~2500
4	Rated cutting current	kA	50		105~63
5	Rated short time withstand current	kA	20/3		
6	Rated peak value withstand current	kV(peak)	50		30/1
7	Rated closing current	kA	50		63
8	Power frequency withstand voltage	kA/min	Phase-earth and phase-phase:42/1	35/1	2.5/1
			Across open contacts:48/1		
			10kV Cable AC withstand voltage phase-earth:25/15		
9	Lightning impulse withstand voltage	kV(peak)	Phase-earth and phase-phase 75	75	
			Across open contacts:85		
10	Protection degree		IP33		
11	Noise level	dB		≤55	

It adopt the S9(11)-M fully sealing transformer and SC9 solid-cast transformer, the capacity is: 30, 50, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600kVA.

## YB-12 Prefabricated Substation: American Type

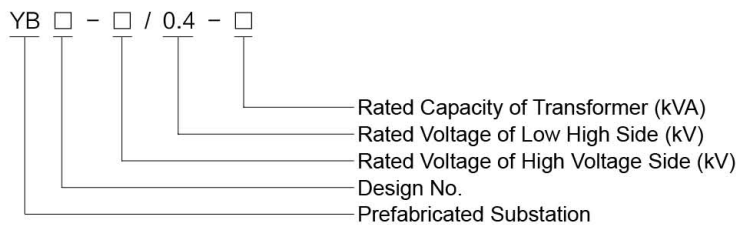
### Summary

The YB□ prefabricated substation is an important unit of the power supply network. It has the features of controlling, protecting, power transforming and power distributing for high voltage. The high voltage load break switch and fuse

are put into the transformer oil. So it has two kind structures that are: single and sharing substation with transformer. There are the oil thermometer, pressure gauge, pressure release valve, oil drain valve monitors in the fully sealing oil box. The way of power supply is ring main unit mode, terminal mode and bi-power mode. For the fact of the domestic power supply network, our company produces the insert type dry fuse, if the fuse fused, it won't affect to the transformer oil. There are three kind of YB substation: standard model, strengthen model, integrated model.



### Product Model and Implication



### Ambient Condition

1. Ambient temperature: -15°C ~+40°C ;
2. Attitude: ≤1000m;
3. Wind speed: 34m/s(Wind pressure: ≤700Pa);
4. Humidity: Daily average ≤95%, monthly average ≤90%;
5. Shake-proof: Level acceleration ≤0.4m/s, and the vertical acceleration ≤0.15m/s;
6. Gradient of installation place: ≤3 degree;
7. Occasions without fiercely shake and corrosiveness, as well as without flaming and explosive matter;
8. If you have other requirement not on the list, warmly welcome to contact us.

### Product Feature

1. Compact structure, the volume is the same as 1/3~1/5 of European substation;
2. Fully sealing and fully insulated, needn't insulated gap;
3. The wiring management can be used in the ring main unit and terminal;
4. Low wastage, noise and temperature rise;
5. It has the strong capability of anti over load, short circuit and impulse;
6. Conforms to the various requirements of low voltage outgoing;
7. There are two kinds of cable, 200A elbow plug and 600A "T" the stationary electric cable, which can match to the fully sealing device;
8. Zinc oxides arresters, 200A electric with load insert which can be used as disconnecting switch.

### Technical Specification

#### 1. Performance parameter of load break switch

Rated current (A)	Rated voltage (kV)	Impulse withstand voltage (kV)	Power frequency withstand voltage (1min.kV)	Rated short time withstand voltage (kA/s)	Short circuit closing current (kA)	Rated peak withstand voltage (kA)	Load operation times	Mechanical operation times
315	12	75	42	12.5/2	31.5	31.5	100	2000
630	12	75	42	16/4	40	40	100	3000

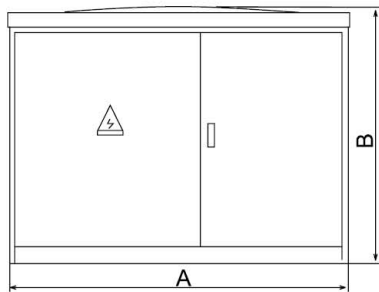
## YB-12 Prefabricated Substation: American Type

### 2. 12KV prefabricate substation S9, S10, S11 series oil transformer performance level

No.	Rated capacity (kV)	Rated voltage		Voltage adjustment scope (%)	Connecting group No.	No load current (%)		Consumption			(W)		Assistance voltage	Noise (dB)	Temperature rising
		High voltage (kV)	Low voltage (kV)			No load			Load						
						S9	S10/S11	S9	S10	S11	S9	S10/S11			
1	30					2.2	2.0		130		600				
2	50					2.0	1.8		170		870				
3	63					1.9	1.5		200		1040				
4	80					1.7	1.2		250		1250				
5	100					1.6	1.1		290		1500				
6	125					1.5	1.0	340	270		1800				
7	160	6	0.4	±5	Yyn0	1.4	1.0	400	310		2200	4			
8	200					1.4	0.8	480	375		1600				
9	250					1.2	0.8	560	455	400	3050		55	Top Oil Temperature 60°C Winding 65°C	
10	315	6.3				1.1	0.7	670	540	475	3650				
11	400					1.0	0.7	800	650	570	4300				
12	500	10	(0.69)	(±2X25)	Dyn11	1.0	0.6	960	775	680	5100				
13	630					0.9	0.6	1200	920	800	6200				
14	800					0.8	0.6	1400	1120	980	7500				
15	1000					0.7	0.5	1700	1320	1150	10300	4.5			
16	1250					0.6	0.5	1950	1560	1360	12800				
17	1600					0.6	0.5	2400	1880	1640	14500				

Note: a. The high voltage tap scope of transformer is 2 2.5%, b. The low voltage of transformer is 0.69kV.

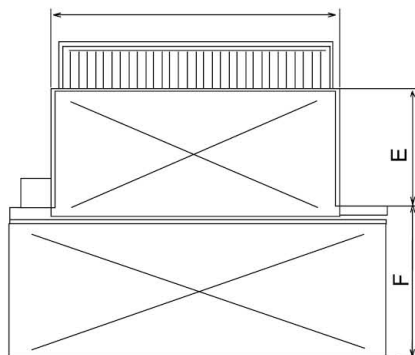
### Outline Dimension



Standard type / integrated type front view

#### YB Standard type outline dimension

	Capacity(kVA)	A	B	C	D	E	F	G
Standard	100-250	1900	1650	1250	650/800	600	1410/1560	1450
	315	1900	1650	1350	650/800	650	1460/1610	1450
	400-500	1900	1750	1450	650/800	650	1490/1640	1550
	630	1900	1750	1550	650/800	700	1580/1730	1550
	800	1900	1850	1550	650/800	700	1640/1790	1650
	100	1900	1850	1650	650/800	700	1640/1790	1650

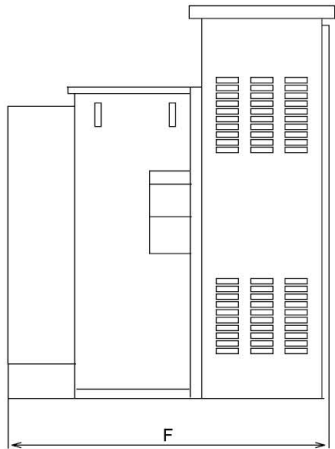


Standard type / strength type side view

#### YB Strength type outline dimension

	Capacity(kVA)	A	B	C	D	E	F	G
Strength	100-250	2400	1650	1250	800	600	1560	1450
	315	2400	1650	1350	800	650	1610	1450
	400-500	2400	1750	1450	800	650	1640	1550
	630	2400	1750	1550	800	700	1730	1550
	800	2400	1850	1550	800	700	1790	1650
	100	2400	1850	1650	800	700	1790	1650

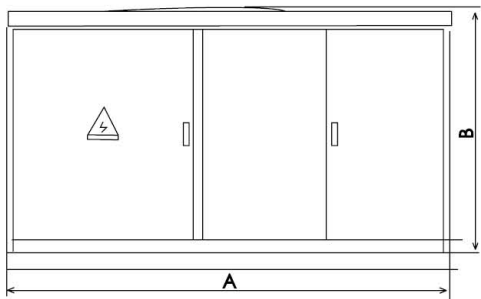
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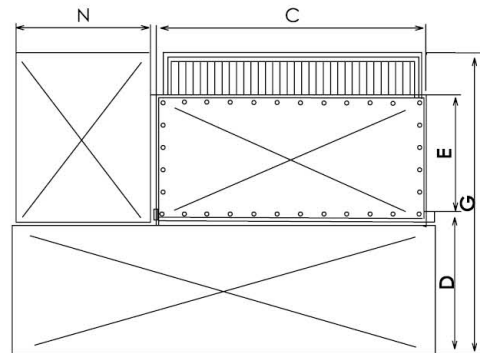
Standard type / strength type side view

YB Integrated type outline dimension

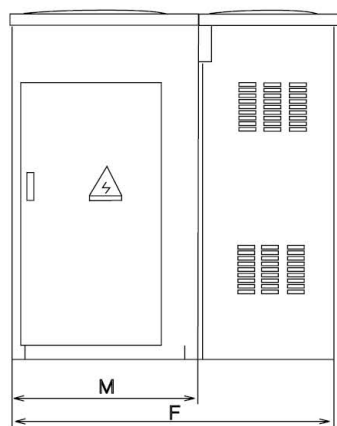
	Capacity(kVA)	A	B	C	D	E	F	G	M	N
Strength	100-250	2400	1750	1250	800	600	1750	1450	950	550
	315	2400	1750	1350	800	650	1750	1450	950	550
	400-500	2400	1850	1450	800	650	1750	1550	950	550
	630	2400	1850	1550	800	650	1750	1550	950	550
	800	2400	1950	1550	800	650	1750	1650	950	550
	100	2400	1950	1650	800	700	1750	1650	950	550



Strength type front view



Integrated type planform



Integrated type side view

To be Leading in the Field  
 To be First Class in the World