

Table 2 S20 Oil-Immersed High-Overload Distribution Transformer

Rated capacity (kVA)	Voltage combination and tapping range			Vector Group Symbol	Load loss(w)	No-load current(%)	Short circuit impedance (%)
	High voltage (kv)	High voltage tapping range(%)	Low voltage (kv)				
50	10	±5% or ±2×2.5%	0.4	Dyn11 Yyn0	80	655/625	4.0
100					120	1140/1080	
200					190	1970/1870	

### Product Dimensions

Table 1 S13 Oil-Immersed High-Overload Distribution Transformer

Rated Capacity (kVA)	Length × Width × Height (mm)	Total Weight (kg)
50	970×1040×1200	550
100	1450×1070×1290	815
200	1600×1190×1370	1250

Table 2 S20 Oil-Immersed High-Overload Distribution Transformer

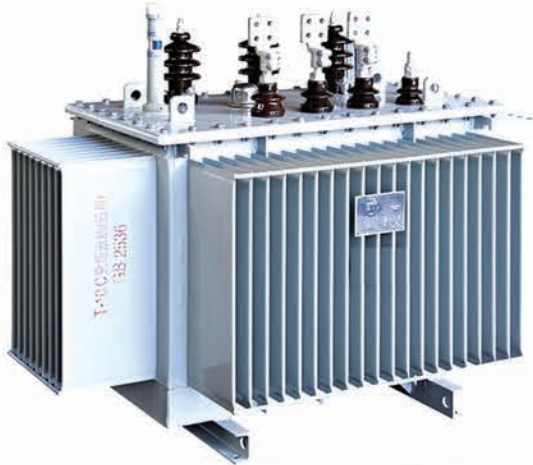
Rated Capacity (kVA)	Length × Width × Height (mm)	Total Weight (kg)
50	1120×1130×1380	700
100	1600×1160×1470	965
200	1750×1280×1550	1400

Table 3 S22 Oil-Immersed High-Overload Distribution Transformer

Rated Capacity (kVA)	Length × Width × Height (mm)	Total Weight (kg)
50	1240×1200×1490	750
100	1720×1230×1580	1015
200	1870×1350×1660	1550

### Application Areas

High overload distribution transformer is developed for short-term and rapid increase of electric load. The short term and rapid increase of electric load refers to: During most of the year, it is in light load, but the load increases rapidly in ten days or half a month which exceeding the rated load 15 times or even 2 times, and the load is concentrated in 2-3 hours, such as the Spring Festival load and busy farming load in the rural grid.



## 35kV Oil-Immersed Power Transformer

### Product Description

The 35kV three-phase oil-immersed power transformer adopts high-quality cold-rolled silicon steel sheet, uses the three-step seam and the surface is coated with curing paint which effectively reduces the loss and the noise. The coil adopts high-quality oxygen-free copper wire to wrap and the heat dissipation adopts new oil duct structure, the design is reasonable and the insulation process is optimized which improves the mechanical strength and short-circuit resistance and with nice appearance and reliable operation.



### Product Features

The 35kV oil-immersed power transformers produced by our company boast the characteristics of "four lows and one high": low loss, low noise, low temperature rise, low partial discharge, and high reliability. Additionally, they feature core-lifting exemption and leakage-free performance. Advanced design software is utilized for electromagnetic calculations. Through computer-based calculations and analyses of the transformer's main and longitudinal insulation, impulse voltage gradient distribution, end electric field distribution, short-circuit thermal stability, and dynamic stability strength, the design margin of the transformers is ensured, thus guaranteeing their safe and reliable operation. Our company has successfully manufactured multiple 35kV high-capacity 25,000kVA power transformers, enjoying a high market share and excellent customer satisfaction.

#### a. Low loss, low noise:

The core adopts high performance cold-rolled oriented silicon steel sheet and fully automatic transverse shearing machine, it is with small shearing burr and low lamination coefficient which effectively reduces no-load loss, no-load current and noise of the transformer.

#### b. Safe and reliable operation:

The insulation design of transformer has enough margin and the local discharge is ≤100pC. The selection of winding current density is reasonable, the wire tolerance stress margin is appropriate and the transformer oil surface temperature rise is lower than the national standard.

#### c. Advanced structure and convenient maintenance:

①The inner part of the coil is supported by high quality insulating framework. All coils adopt internal and external bracing, all bracings and pads are chamfered, electric field is uniform and the reliability is enhanced. All the fasteners on the axial body of the coil are self-locking locknut, so that the product can withstand the long-distance transportation and without loosening, it is without lifting core;

②The oil tank wall adopts wide-width steel plate to reduce the joint and adopts unique welding technology to ensure the welding quality and without leakage;

③All sealing flanges adopt groove structure to ensure sealing performance. All oil discharge valves are copper valves and vacuum butterfly valves are used for radiators to reduce the probability of leakage;

④The transformer is equipped with oil surface thermometer and pressure release valve with contact is installed on the top of the oil tank. The oil level indicator with contact is adopted on the oil level mark of the oil storage tank and the anti-pollution reinforced pure porcelain oil casing is adopted in the high and low pressure casing which can be used in the environment of heavy pollution grade.

Technical Parameters

Table 1 Double winding non-excitation voltage regulating distribution transformer

Rated Capacity (kVA)	Voltage combination (kv)			Vector Group Sym-bol	No-load loss (W)	Load loss (W) (75°C)	Short circuit impedance (%)	No-load current (%)
	High voltage (kv)	Tapping (%)	Low voltage (kv)					
50	35	±5 ±2×2.5	0.4 3.15 6.3 10.5	Yyn0 Dyn11 Yd11 YNd11	170	1150	6.5	1.6
100					230	1920		1.4
125					270	2260		1.4
160					290	2690		1.3
200					340	3160		1.2
250					410	3750		1.1
315					490	4530		1.1
400					580	5470		1
500					690	6580		1
630					830	7880		0.9
800					980	9410		0.8
1000					1150	11540		0.8
1250					1410	13940		0.72
1600					1700	16670		0.64
2000					2180	18380		0.56
2500					2560	19670		0.48
3150					3040	23080	7	0.45
4000					3620	27360		0.45
5000					4320	31350	7.5	0.38
6300					5250	35060		0.38
8000					7200	38480		0.34
10000					8700	45320	8	0.34
12500					10080	53870		0.32
16000					12160	65840		0.32
20000					14400	79520		0.32
25000					17020	94050		0.26
31500					20220	11286		0.26

Table 2 Double-winding on-load voltage regulating transformer

Rated Capacity (kVA)	Voltage combination (kv)			Vector Group Symbol	No-load loss (W)	Load loss (W) (75°C)	Short circuit impedance (%)	No-load current (%)
	High voltage (kv)	Tapping (%)	Low voltage (kv)					
2000	35	±5 ±2×2.5 ±3×2.5	3.15 6.3 10.5	Yd11 YNd11	2300	19240	6.5	0.64
2500					2720	20640		0.64
3150					3230	24710		0.58
4000					3870	29160	7	0.58
5000					4640	34200		0.54
6300					5630	36770	7.5	0.54
8000					7870	40610		0.48
10000					9280	48050		0.48
12500					10940	56860	8	0.45
16000					13170	70320		0.43
20000					15570	82780		0.43
25000					17880	99750		0.4
31500					21300	11970		0.37

Product Dimensions

Table 1 Double winding non-excitation voltage regulating distribution transformer

Rated Capacity (kVA)	Length × Width × Height (mm)	Total Weight (kg)
50	1150×720×1200	680
100	1200×740×1300	980
125	1250×780×1380	1100
160	1300×800×1400	1200
200	1400×840×1500	1400
250	1530×860×1580	1500
315	1600×890×1630	1680
400	1730×950×1700	1950
500	1800×980×1800	2300
630	1900×1000×1850	2650
800	2020×1360×2400	3250
1000	2180×1380×2550	3780
1250	2220×1300×2520	3890
1600	2270×1340×2450	4450
2000	2250×1380×2210	5670
2500	2300×1400×2300	6100
3150	2520×2720×2550	7100
4000	2800×2250×2500	8250
5000	3000×2370×2800	9120
6300	2830×3020×2920	11200
8000	3300×2970×3050	15200
10000	3250×2850×3000	17000
12500	3500×2930×3500	18800
16000	3620×3040×3600	22200
20000	3900×3650×3540	26750
25000	4250×3900×3750	29500
31500	4540×3900×3970	32535

## YB-12 Prefabricated Box-type Substation

Table 2 Double-winding on-load voltage regulating transformer

Rated Capacity (kVA)	Length × Width × Height (mm)	Total Weight (kg)
2000	2600 × 1800 × 2785	6100
2500	2700 × 1900 × 2970	7000
3150	3390 × 2170 × 3040	8850
4000	3100 × 3000 × 3150	9250
5000	3100 × 3000 × 3450	10800
6300	3320 × 3350 × 2980	12300
8000	3470 × 3130 × 3550	14720
10000	4596 × 3670 × 3735	20655
12500	4945 × 3550 × 3720	24185
16000	4940 × 3550 × 4457	27835
20000	4950 × 3945 × 4025	31325
25000	5100 × 3640 × 4220	36510
31500	5350 × 4450 × 4700	39535

### Product Description

The YBM(P) series of prefabricated substations feature strong completeness, small size, compact structure, safe and reliable operation, convenient maintenance, and mobility. Compared with conventional civil-constructed substations, the footprint of box-type substations of the same capacity is typically only 1/10 to 1/5 of that of conventional substations, significantly reducing the workload for design and construction, as well as construction costs. In power distribution systems, they can be used in ring main unit (RMU) distribution systems, dual power supply systems, or radial end-feed distribution systems. They are currently the primary packaged equipment for the construction and renovation of substations in both urban and rural areas.

The YBM(P) series of prefabricated substations comply with the standards of SD320 "Technical Specifications for Box-type Substations" and GB/T 17467 "High-voltage/Low-voltage Prefabricated Substations".



### Application Areas

The product is characterized by high efficiency and low loss, which can significantly reduce electricity consumption and operational costs, resulting in notable social benefits. It is a high-tech product promoted by the nation and has been widely applied in various main transformer equipment, substations, and urban and rural power grids.

### Product Features

- With a compact structure, small size, and minimal footprint, these prefabricated substations are convenient for transportation and installation. The structural forms of the box-type substations include "horizontal bar" (目-shaped), "three vertical bars" (品-shaped), and separate-box types, among others.
- The enclosure is designed and produced using advanced domestic technology and new materials. It is sturdy, thermally insulated, dust-proof, moisture-proof, and resistant to small animals. The enclosure can be made of various materials such as steel plate, composite board, and non-metal.
- The labyrinth plate structure not only gives it an aesthetically pleasing appearance and easy disassembly but also provides excellent ventilation and heat dissipation performance. It adopts a fully insulated and fully protected design.
- The skeleton structure of the box body is made of channel steel and angle steel, providing sufficient mechanical strength. The inner and outer surfaces of each component of the box body have undergone anti corrosive coating treatment to ensure long-term rust resistance. It has a durable protective layer. The top cover of the box body is of double-layer structure to prevent heat radiation from increasing the indoor temperature.