



# P 生产设备

roduction equipment



第1图：法国箔式绕线机

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华翔电气  
HXElectricity

服务中国电力



产品图片

product pictures



KBSG-100~3150/10 (6)  
矿用隔爆型干式变压器 (带小车)



KBSG-100~3150/10 (6)  
矿用隔爆型干式变压器 (不带小车)



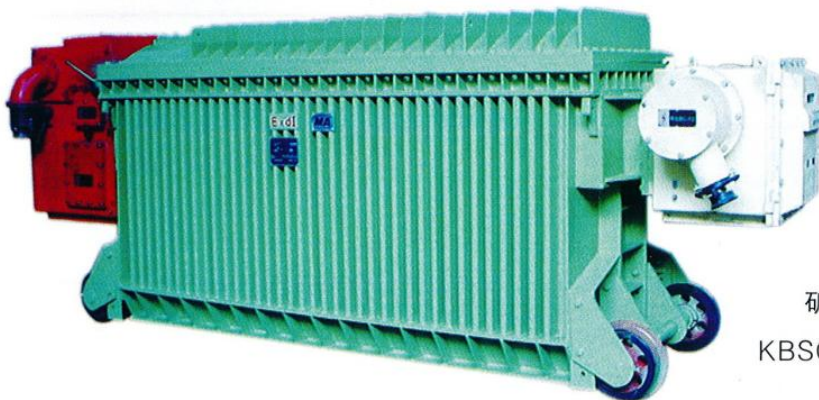
KBSG-100~3150/10 (6)  
矿用隔爆型干式变压器器身



KS9-50~630/(10)6  
矿用油浸变压器



矿用隔爆型移动负荷中心



矿用隔爆型移动变电站  
KBSGZY-100~3150/10 (6)



矿用隔爆型移动变电站  
KBSGZY-100~3150/10 (6)



矿用隔爆型移动变电站器身  
KBSGZY-3150/10 (6)



## 产品特点

### Features

公司注重科研投入，与沈阳变压器研究所、湖南大学、上海煤炭研究所等高校、科研单位密切合作，研发出新型矿用隔爆型移动变电站。移动变电站箱体采用4mm以上钢板制成，具有优良的隔爆性能，变压器线圈采用NOMEX绝缘材料经VPI真空压力浸漆，增强耐潮性能，局部放电小。铁心采用优质高导磁率冷轧硅钢片，多级步进式全斜接缝，上、下铁轭用拉带紧固，结构先进、紧凑、可靠。本产品具有机械强度高、抗短路能力强、承受热冲击能力强、难燃、防火性能高、不产生有害气体、噪声低、绝缘性能好、节能、过载能力强、维护简便等特点，适合于煤矿井下使用。

Company pays attention to scientific research, and Shenyang Transformer Research Institute, Hunan University, Shanghai University Coal Research Institute, in close cooperation with research institutes, developed a new mobile substation explosion proof. Mobile substation steel box made by more than 4mm, with flameproof excellent performance, transformer coil insulation material by using NOMEX VPI Vacuum Pressure Impregnation, resistant to moisture enhanced the performance of a small amount of partial discharge. Core of high quality cold-rolled silicon steel permeability, multi-level step-wide oblique joints, upper and lower pull belt fastened with iron yoke, advanced structure, compact and reliable. This product has high mechanical strength, resistance to short-circuit ability to withstand thermal shock capability, flame, high fire resistance, does not produce harmful gases, low noise, good insulation, energy saving, strong overload Yong, easy to maintain and is suitable to underground coal mine use.

## 订货须知 Trade Notice

选用我厂产品时，请提供下列数据，以便更好地为您服务；

Please supply the following data when choose our products, So that we can supply finer serve

- 变压器型号 type of transformer
- 额定容量 Rated Capacity
- 相数与频率 Phase and frequency
- 额定电压 Rated voltage
- 使用条件 Conditions of Use
- 出线电缆外径 Cable outer diameter outlet
- 轨距或安装尺寸 Gauge or install size
- 开关要求 Switch requirements
- 其他要求 Other Requirements



变压器待检区  
Transformer waiting area



## 矿用隔爆型移动变电站和矿用隔爆型干式变压器

### Mining Flameproof movable substation and Dry-Type Transformer

#### 使用环境条件

- 1、海拔不超过4000m;
  - 2、环境温度：最高气温40℃；最高日平均气温30℃  
最高年平均气温20℃ 最低气温-5℃
  - 3、空气相对湿度不超过95%（25℃时）
  - 4、在有甲烷混合气体和煤尘，且有爆炸危险的矿井中；
  - 5、无强烈颠簸、震动和与垂直面的倾斜度不超过15°的环境
  - 6、无腐蚀金属和破坏绝缘的气体与蒸汽；
  - 7、无滴水的地方
  - 8、电源的波形近似于正弦波；
  - 9、三相电源电压近似对称。
- 注：超出本条件的规定时，请与本厂协商。

#### Using conditions

- 1、Sea level not higher than 4000m
  - 2、Ambient temperature: maximum temperature 40℃  
maximum average temperature in any one day 30℃  
maximum average temperature in any one year 20℃  
minimum temperature -5℃
  - 3、Atmosphere relative humidity not more than 95% (at 25℃)
  - 4、In the mines having methane gaseous and coal dust with danger of explosion
  - 5、In an environment without strong shaking and jolt, and the perpendicular slope not exceeding 15°
  - 6、No gas and steam corroding metal and impairing the insulation
  - 7、Place without water dropping.
  - 8、The shape of power supply wave is approximately sinusoidal
  - 9、Voltage of three-phase power supply is approximately symmetrical
- Attention: please consult with us when exceeding

#### 型号及含义 Type and meaning

K B S G Z Y [ ] [ ] / [ ]

- 电压等级(kv) Voltage grade of H.V. side (KV)
- 额定容量(KVA) Rated capacity (kva)
- 设计序号 Design serial number
- 移动变电站 Movable substation
- 组合式 Assembly
- 干式 Dry-type
- 三相 Three-phase
- 隔爆 Flameproof
- 矿用 Mining

#### 产品特点 Feature

1、KBSGZY-50-3150/6-10移动变电站符合新GB8286-2005《矿用隔爆型移动变电站》要求。变压器6KV系列空载损耗比原标准平均降低14%，负载损耗平均降低9%，10KV系列空载损耗比原标准平均降低14%，负载损耗平均降低11%，空载电流、短路阻抗都有所下降。

KBSGZY-50-3150/6-10 mobile substation to meet the new GB8286-2005 "mobile substation explosion proof" requirement. 6KV series transformer load loss standard average lower than the original 14%, the average load loss reduction 9%; 10KV series of no-load loss average lower than the original standard of 14%; load loss average reduction of 11%, no load current, short circuit impedance are the decline.

2、矿用隔爆型移动变电站由干式变压器、高压负荷开关或高压真空开关和低压馈电开关或低压保护箱组成。开关的组合方式有高压负荷开关+低压馈电开关、高压真空开关+低压馈电开关、高压真空开关+低压保护箱。高压负荷开关与低压保护箱不能配套使用。

Flameproof mobile substation from the dry type transformers, high voltage switches or high-voltage vacuum switches and low voltage feed switch box or low voltage protection component. Switch combinations are high voltage switches + low voltage feed switch, high voltage vacuum switch + low voltage feed switch, high voltage vacuum switch + voltage protection box. High voltage switches and boxes can not be supporting the use of low-voltage protection.

3、相数、频率、冷却方式：3相、50Hz、ANAN；Phase, frequency and cooling method: 3-phase, 50Hz and ANAN





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## —— 矿用隔爆型移动负荷中心 ——

### *Mobil Load Center of Explosion Proof Type for Mine*

该负荷中心把智能型高压真空配电装置、多路输出干式变压器、低压组合开关集成为一体，向井下多台设备直接供电，缩小了体积，节省了空间，降低了电缆故障率，同时有利于井下设备自动化控制和标准化管理。

This load center combines intellectual high voltage vacuum power distribution armament with dry type transformer of multi output and low voltage combination switch .It can directly provide electricity for several sets or facilities in mine so the space and area are reduced and saved at the same time the fault rate of cable is .cutdownand it is good for facilities to be auto controlled and get standard management.

#### 参数如下

高压侧额定电压：6kV或10kV

低压侧额定电压：3450V、1200V、693V

额定频率：50Hz

高压侧开关：6kV或10kV智能型高压真空配电装置

低压侧组合开关；

组合方式：10路输出、8路供电、双速、2路照明（127V （不同电压任意组合）

真空交流接触器：3.6kV/400A、1.14kV/400A

保护方式：过流、短路、漏电闭锁、漏电保护、绝缘检测、过压、断相

智能化控制：可实现工作状态及故障显示及远程控制标准化接口，数字化传输信号、中英文菜单显示。

#### Parameters are as follows

High side rated voltage: 6kV or 10kV

Low side rated voltage: 3450V, 1200V, 693V

Rated frequency: 50Hz

High Side Switch: 6kV or 10kV high-voltage vacuum distribution equipment smart

Combination of low-voltage side switches;

Combinations: 10 output, 8 power supply, two-speed, 2-way lighting (127V) (any combination of different voltages)

Vacuum Contactors: 3.6kV/400A, 1.14kV/400A

Protection mode: current, short circuit,

Leakage latch, leakage protection, insulation testing, over-voltage, phase

Intelligent Control: can achieve working status and fault display and remote control of standardized interfaces, digital transmission signal, in English and Chinese menu display.

#### 线缆挤压生产线

Cable extrusion production line





## 矿用油浸式变压器

### Mining Oil-immersed Power Transformers

#### 使用环境条件

#### Using conditions

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1、海拔不超过4000m;</li> <li>2、环境温度：最高气温40℃；<br/>最高日平均气温25℃<br/>最高年平均气温20℃<br/>最低气温-20℃</li> <li>3、空气相对湿度不超过95%（25℃时）</li> <li>4、有有甲烷混合气体和煤尘，但无爆炸危险的矿井中；</li> <li>5、无强烈颠簸、震动的环境；</li> <li>6、无腐蚀金属和破坏绝缘的气体 and 蒸汽；</li> <li>7、电源的波形近似于正弦波；</li> <li>8、三相电源电压近似对称。</li> </ol> <p>注：超出本条件的规定时，请与本厂协商。</p> | <ol style="list-style-type: none"> <li>1、Sea level not higher than 4000m</li> <li>2、Ambient temperature: maximum temperature 40℃<br/>maximum average temperature in any one day 25℃<br/>maximum average temperature in any one year 20℃<br/>mimumm temperaturc -20℃</li> <li>3、Atmosphere relativc humidity not more than 95%(at 25℃)</li> <li>4、In the mines having methane gaseous and coal dust without danger of explosion</li> <li>5、In an environment without strong shaking and jolt</li> <li>6、No gas and steam corrodng metal and imjuring the insulation</li> <li>7、The shape of power supply wave is approximately sinusoidal</li> <li>8、Voltage of three-phase power supply is approximately symmetncal.</li> </ol> <p>Attention: please consult with us when exceeding</p> |
|---|---|

#### 型号及含义

#### Type and meaning

K S 9 — □ / □





## 产品特点

## Feature

1、矿用油浸变压器符合JB/T3955-2006《矿用一般型电力变压器》要求，空载损耗、负载损耗比该标准平均降低10%；  
Mining Oil-Immersed Power Transformers comply with Chinese Standard JB/T3955-2006 "Mining Common Power Transformers" The iron loss and copper loss decrease 10% averagely than the standard

2、相数、频率、冷却方式：3相、50Hz、ONAN；

Phases frequency and cooling method: 3phases, 50Hz and ONAN

3、矿用变压器电压及联接组标号 Voltages and connection symbol of mining power transformers

3.1一次电压 (V) : 6000 ± 5% 或 10000 ± 5% ; Primary voltage (V) : 6000 ± 5% or 10000 ± 5%.

3.2二次电压 (V) : 693/400 或 1200/693 ; Secondary voltage (V) : 693/400 or 1200/693.

3.2联接组标号: Yy0(d11); Connection symbol: Yy0(d11).

注：可按用户特殊要求设计，请在订货时注明。

Attention: We can design according to especial request of user. Please give indication in contract.

## 矿用油浸变压器参数

## Parameters of Mining Oil-immersed Power Transformers

容量KVA	空载损耗W	负载损耗W	短路阻抗%	空载电流%	外形尺寸mm	器身重	油重	总重	器身重	油重	总重
Capa-	Iron	Copper	Impe-	No-load	L×W×H	6kV	Weights	Kg	10kV	Weights	Kg
City	Loss	Loss	Dance	Current	Dimensios	Reality	Oil	Total	Reality	Oil	Total
50	170	870	4.0	2.0	1180/750/1064	203	110	420	210	110	480
100	290	1500	4.0	1.6	1265/780/1106	337	141	610	340	140	620
200	480	2600	4.0	1.3	1445/890/1176	500	202	960	500	202	960
250	560	3050	4.0	1.2	1495/935/1265	700	220	1120	700	220	1120
315	670	3650	4.0	1.1	1640/1020/1330	760	282	1450	760	282	1450
400	800	4300	4.0	1.0	1780/1100/1434	900	392	1660	920	392	1680
500	960	5150	4.0	1.0	1780/1100/1410	1026	420	1890	1029	420	1900
630	1200	6200	4.5	0.9	1870/1111/1425	1255	496	2248	1255	496	2248





# 一次额定电压6kV矿用隔爆型移动变电站（含干式变压器）主要技术参数

A rated voltage of 6kV flameproof mobile substation (including dry-type transformer) Main technical

额定容量KVA	电压组合		联结组标号	空载损耗W	负载损耗W	短路阻抗%	空载电流 %
	一次电压V	二次电压V					
100	6000±5%	693/400	Yy0 (d11)	520	920	4	2.5
200				820	1550	4	2
315		1200/693		1100	2150	4	1.8
400				1300	2600	4	1.8
500				1500	3100	4	1.5
630				1800	3680	4	1.5
800		1200/693, 3450	Yy0 (d11) , Yyn0	2050	4500	4	1.0
1000				2350	5400	4	1.0
1250		1200, 3450	Yy0, Yyn0	2750	6500	4	1.0
1600				3350	8000	4	0.8
2000		3450	Yyn0	3800	9500	4.5	0.6
2500				4500	10600	5	0.6
3150			Yyn0	5300	12500	5.5	0.6
4000				6100	14000	6	0.6

注：负载损耗为145℃（绝缘耐热等级为H时的参考温度）时之值。

注：移动变电站的尺寸和重量根据开关的不同而不同，以上数据仅供参考。

Attention: The dimensions and weights of movable substation are different according as different switches. The above data just can be referenced



## 一次额定电压6kV的移动变电站和干式变压器外形尺寸及重量

### A rated voltage of 6kV mobile substation and dry type transformer dimensions and weight

容量KVA	移动变电站				干式变压器			
	长L mm	宽W mm	高H mm	重量 kg	长L mm	宽W mm	高H mm	重量 kg
100	3195	1100	1190	2060	2585	1100	1190	1560
200	3335	1100	1340	2480	2730	1100	1340	1980
315	3405	1100	1425	2880	2800	1100	1425	2380
400	3405	1100	1425	3360	2800	1100	1425	2760
500	3545	1100	1510	3700	2935	1100	1510	3200
630	3545	1100	1510	4300	2935	1100	1510	3800
800	4270	1235	1460	5060	3340	1120	1460	4560
1000	4270	1235	1460	6150	3340	1120	1460	5650
1250	4270	1235	1560	6650	3340	1120	1560	6150
1600	4480	1235	1640	9100	2550	1120	1640	9600
2000	4695	1235	1735	9800				
2500	4695	1235	1835	12400				

注：移动变电站的尺寸和重量根据开关的不同而不同，以上数据仅供参考。

Attention: The dimensions and weights of movable substation are different according as different switches. The above data just can be referenced



# 一次额定电压10kV矿用隔爆型移动变电站（含干式变压器）主要技术参数

A rated voltage of 10kV substation Flameproof mobile (including dry-type transformer) Main technical parameters

额定容量KVA	电压组合		联结组标号	空载损耗W	负载损耗(145℃)W	短路阻抗%	空载电流 %
	一次电压V	二次电压V					
100	10000±5%	693/400	Yy0 ( d11 )	560	1050	4	2.5
200				950	1800	4	2
315				1300	2500	4	1.8
400				1500	3000	4	1.8
500				1750	3500	4	1.5
630				2000	4100	4	1.5
800		1200/693, 3450	Yy0 ( d11 ) , Yyn0	2300	5100	4	1.2
1000				2600	6100	4.5	1.2
1250		1200, 3450	Yy0, Yyn0	3100	7400	4.5	1.0
1600				3800	8500	5	1.0
2000		3450	Yyn0	4500	9700	5	0.7
2500			Yyn0	5200	10800	5.5	0.7
3150				6100	12800	5.5	0.7
4000				7000	15000	6	0.7

注：负载损耗为145℃（绝缘耐热等级为H时的参考温度）时之值。

注：移动变电站的尺寸和重量根据开关的不同而不同，以上数据仅供参考。

Attention:The dimensions and weights of movable subsatation are different according as different switches . The above date just can be referenced



## 一次额定电压10kV的移动变电站和干式变压器外形尺寸及重量

A rated voltage of 10kV substation and the movement of dry-type transformer dimensions and weight

容量 KVA	移动变电站				干式变压器			
	长L mm	宽W mm	高H mm	重量 kg	长L mm	宽W mm	高H mm	重量 kg
100	3210	1100	1325	2300	2670	1100	1325	1700
200	3350	1100	1420	2600	2810	1100	1420	2100
315	3560	1100	1545	3280	3015	1100	1545	2780
400	3560	1100	1545	3430	3015	1100	1545	2930
500	3630	1100	1645	3880	3085	1100	1645	3380
630	3630	1100	1645	4600	3085	1100	1645	4100
800	4350	1235	1560	6800	3420	1120	1560	5800
1000	4350	1235	1560	7200	3420	1120	1560	6000
1250	4560	1235	1665	8900	3640	1120	1665	7500
1600	4700	1235	1715	9840	3780	1120	1715	9340
2000	4775	1235	1835	11000				
2500	5280	1270	1835	14200				
3150	5480	1310	1835	18000				

注：移动变电站的尺寸和重量根据开关的不同而不同，以上数据仅供参考。

Attention: The dimensions and weights of movable substation are different according as different switches. The above data just can be referenced