

高压、低压大功率三相异步电动机

H355 - 630(6kV) H400 - 630(10kV)

H400 - 500(380V)



西安泰富西玛电机有限公司
XI'AN TECH FULL SIMO MOTOR CO., LTD

销售电话：15902923228
企业网址：www.simo.org.cn
企业邮箱：319642769@qq.com



企业简介

西安泰富西玛电机有限公司是哈尔滨泰富电气有限公司下属的全资子公司，中国机械工业专业生产大中型、高低压、交流电机的骨干企业，是集电机设计制造、机械加工、模具制造等自动化、成套工程为一体的系统化动力系统提供商，质量体系、环境和职业健康认证企业。产量在全国电机行业名列前茅，连年保持高速增长的发展态势。

泰富西玛公司“西玛”牌电机多次被评为省、市、部“优质产品”、“名牌产品”及“国家免检产品”、“中华之光名牌产品”等荣誉称号，1995年在电机行业中率先取得了ISO9001-1994质量体系认证，2005年8月通过了中国质量认证中心（CQC）的ISO9001-2000质量体系认证，2006年5月又通过了ISO14000环境管理体系和OHSAS18000职业健康安全管理体系认证，成为电机行业中首家获得三项认证的企业。同时“西玛”电机又通过了欧盟“CE”、美国“UL”、俄罗斯“GOST”和国家安全强制性“CCC”认证，质量信誉AAA等级企业，中国机械行业500强。2006年西玛电机荣获“产品质量国家免检证书”等中国质量最高荣誉。2009年4月国家工商行政管理总局商标局认定“西玛”电机为“中国驰名商标”。

泰富西玛公司下设17个部室，3个电机制造分厂，4个生产准备、辅助分厂，1个再制造分厂，员工2700人。拥有电机研发、制造、试验等各类工程技术人员500多名，其中高级工程师21名，工程师150名，硕士研究生15人，省、市、局管专家15人。经营范围涉及电机研发、制造、修理、模具制造等诸多领域，年销售额10亿元，形成了以电机生产为主，多种经营，蓬勃发展的多元产业结构的现代化企业。

泰富西玛电机种类齐全，拥有产品31大系列、1800多个品种、19500多个规格，功率范围0.35千瓦至19000千瓦，注册商标“西玛”牌，符合国际、国家、行业和企业标准，广泛应用于电力、煤炭、石油、采矿、冶金、铁路、交通、化工、农业、水利、航空、航海及高科技等领域，是铁道部定点的电机配套厂家。



Xi'an Tech Full Simo Motor Co., Ltd is a wholly owned subsidiary of Harbin Tech Full Electric Co., Ltd , a main enterprise specializing in the manufacturing of large/medium-sized, high/low voltage and AC/DC motors in the Chinese mechanical industry, and the supplier of dynamical systems which integrating the automation and complete-installation engineering of motor design manufacturing, mechanical processing, mold/die making, quality system, ISO14000 Environment Management System and OHSAS18000 Occupational Health&Safety Management System authenticated enterprise. The Company ranks first in China's motor industry an to its scale of production, and has maintained fast-growing development trend for consecutive years.

Xi'an Tech Full Simo Motor Co., Ltd. "SIMO" brand product has been appraised as the provincial, municipal and ministerial "High-quality Product", "Famous-brand Product" and "National Inspection-free Product", Chinese Glory Famous-brand Product" and other honorable titles, in 1995 the Company took the lead in acquiring the ISO9001-1994 Quality System Attestation in the motor industry, in Aug. 2005passed the CQC ISO9001-2000 Quality System Attestation ,in May 2006 again passed the ISO14000 Environment Management System and OHSAS18000 Occupational Health&Safety Management System Attestation, becoming the first enterprise having obtained the three attestations in the motor industry. Meanwhile, "SIMO" motor has also passed the EU "CE", US "UL",RU "GOST" and national safety compulsory "CCC" attestations, and the Company is a quality credit AAA-grade enterprise, and one of the top 500ENTERPRISES IN THE Chinese machinery industry. In 2006 "SIMO" motor was awarded "National Product Quality Inspection-Exempted Certificate" etc the highest honor in quality. In April of 2009, the State Administration for Industry and Commerce to the Trade Mark Office affirmed "SIMO" brand as "China Famous Trade Mark".

The Company has 17 departments and offices, 3 motor manufacturing factory, 4 manufacture preparation, auxiliary factories, 1 remanufacture factory, more the 2700 employees, more than 500 engineering technicians for motor R&D, manufacturing, test etc, of whom 21 are senior engineers, 150engineers, 15 graduates of master's degree, and 15 provincial municipal, ministerial experts. Business scope covering motor R&D, manufacturing, repairing, mold making etc, many other areas, with the annual sales amount of RMB 1billion, and has become a modernized vigorously growing enterprise of a complex industrial structure, primarily engaging in motor manufacturing additionally dealing in manifold businesses.

Tech Full group has several types of motors , covers 31 major series, more than 1,800varieties,and more than 19,500 specifications, the power range from 0.35KW to 19,000KW products. The registered trademark of "SIMO" brand, in conformity with international, national, industrial and corporate standards, and widely applied in electricity, coal, petroleum, mining, metallurgy, railway, transportation, chemical industry, agriculture, water economy, aviation, navigation and high technologies and other areas. The Company is the motor supporting manufacturer specially designated by the Ministry of Railways.



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电动机选型指南 Motor selection guide

1、电压和频率

1. Voltage and Frequency

1.1、国内电压等级为： $6\text{kV} \pm 5\%$ 和 $10\text{kV} \pm 5\%$ ，电源电压在此范围内变化不影响电机的性能参数。当电压在 $\pm 5\% \sim \pm 10\%$ 以内变化时只保证电机的输出功率，其他性能不保证。根据用户要求也可以设计生产其他电压等级，如 3.3kV 、 6.6kV 、 11kV 、 13.8kV 等。

Domestic voltage class is $6\text{kV} \pm 5\%$ and $10\text{kV} \pm 5\%$, the performance parameter doesn't be effected if the supply voltage changed within this range. When the voltage changes within $\pm 10\%$ and beyond $\pm 5\%$, motor's performance can't be guaranteed except output. Other voltage class also can be designed depending on the customer's requirements, such as 3.3kV , 6.6kV , 11kV and 13.8kV etc.

1.2、国内频率等级为： $50\text{Hz} \pm 2\%$ ，电源频率在此范围内变化不影响电机的性能参数。当频率在 $\pm 2\% \sim \pm 5\%$ 以内变化时只保证电机的输出功率，其他性能不保证。根据用户要求也可设计生产频率为 60Hz 的电机。

Domestic frequency class is $50\text{Hz} \pm 2\%$, the performance parameter doesn't be effected if the supply frequency changed within this range. When the frequency changes within $\pm 5\%$ and beyond $\pm 2\%$, motor's performance can't be guaranteed except output. 60Hz motor can also be designed according to customer's request.

2、电机安装地点的海拔高度和温度

2. Altitude and Temperature

2.1、《旋转电机定额与性能》GB/T755中规定了电机的安装地点的海拔为不高于 1000m ，环境温度为不高于 40°C 。当安装地点的海拔和环境温度不超过以上范围时，按照样本的型号选型即可。

"Rating and performance for Rotary Electrical Machines" GB/T755 specifies the altitude of motor shouldn't higher than 1000m , and the ambient temperature should be higher than 40°C . When both altitude and ambient temperature are within above range, motor can be selected according to the catalog.

2.2、当安装地点的海拔和环境温度超过以上范围时，电动机的出力一般要小于样本上的功率，具体情况需与制造厂沟通。

When altitude and ambient temperature are beyond above range, motor's output is small than that on the catalog, detailed situation should be communicate with motor manufacture.

3、根据使用环境合理选用电动机的防护等级。

3. Select the reasonable protection degree according to environment

如果环境较差，像水泥厂、面粉厂、矿山等多粉尘场合应选用IP55或者IP54的产品；环境较好无粉尘场合应选用IP23或者IP44的产品；

户外使用时，要了解有无防护措施如防雨棚等。如电机直接在露天使用，应该选用户外型电机，防护等级为IP54/IP55。同时要根据海拔高度及环境温度确定电机功率，确定时需与制造厂沟通。如有防护措施如防雨棚等可以按普通电机选用，防护等级为IP44/IP54。

If the environment is poor, such as cement plant, powder plant and mine etc dusty place, IP55 or IP54 should be used. Conversely, if the environment is good without dust, IP23 or IP44 should be used.

When motor uses outdoor, customer should inspect whether any preventive measure used such as water-proof shelter. If motor uses directly in the open, outdoor duty motor should be selected, the protection degree is IP54 or IP55. Meanwhile, customer should confirm the motor power according to altitude and ambient temperature with manufacturer before place order. If there equipped with any preventive measure such as water-proof shelter, motor can be selected as normal motor, the protection degree is IP44 or IP54.

4、根据电动机的负载类型合理选用电动机的类型

4. Reasonably select motor type according to load.

4.1、一般情况下风机、水泵、压缩机、机床类负载宜选用鼠笼型电动机；球磨机、破碎机、轧机类负载宜选用绕线型电机。

Generally, squirrel cage motor fits for fan, pump, compressor and machine tool loading; Wound rotor motor fits for ball mill, crusher and rolling mill loading.

4.2、如果设备需要调速，根据调速方式或者范围选用定速或者调速电动机，如内反馈电机、变频电机等。

If the equipments needs speed regulation, constant speed motor or speed regulation motor should be selected according to the speed adjustment mold or rang, such as feedback motor and variable frequency motor.

4.3、根据负载的轻重选用鼠笼型或者绕线型电机，轻载启动如风机泵类负载宜选用鼠笼型电机，重载启动如球磨机轧机磨煤机负载宜选用绕线型电机。

Select squirrel cage motor or wound rotor motor according to loading. Squirrel cage motor fits for fan and pump etc. small load starting equipments. Wound rotor motor fits for ball mill, crusher and rolling mill etc. big load starting equipments.

5、电动机的辅助设备

5. Accessory Equipments

5.1、对于采用IC616（独立风机冷却）的变频电机，应该注意冷却风机电机的电源要求。

For the variable frequency motor which the cooling method is IC616 (separate blower cooling), customer should be attention to the cooling blower' s power supply requirement.

5.2、为了防止电动机受潮后破坏电机的绝缘性能，对于湿度较大的地区所用电机一般应该安装防潮加热器，防潮加热器的电压一般为220伏/380伏。

To prevent insulating property be damaged on account of damp in motor, space heater should be used in the high humidity area, the voltage of space heater is 220V/380V.

5.3、我公司高压电机均配置测温元件，分度号为PT100，定子绕组6支（每组两支），前后轴承各一支。通过外接温度巡检仪（用户自配）可以测量绕组、轴承的实际温度，起到保护电机绕组和轴承的作用。

Our high voltage motors are all equipped with thermometric element, graduation is PT100.6nos. PT100 on stator winding (2 nos. for each phase), each on DE&NDE side bearings. Stator winding and bearing' s temperature can be measured by EXT Temperature XMD (equipped by customer), so that motor winding and bearing can be protected.

5.4、电流互感器（CT）用来测量电机的线路电流，起到保护电动机的作用，做差动保护用。

Current transformer is used to measure motor' s circuit current, so that motor can be protected.

5.5、我公司500机座号以上的2极电机以及710机座号以上的电机基本上采用压力循环油润滑滑动轴承。此类电动机一般情况下要用户配备稀油站，起到润滑和冷却轴承轴瓦的作用。如果需要采用自润滑，需与制造厂沟通。

Our motor which the central height is above 500mm, 2P and central height is above 710mm most use sleeve bearing. Such motors should be equipped with oil pump to grease and cooling bearing and bearing bush. (oil pump is equipped by customer). If customer needs self-lubricating motor, they should communicate with manufacture before place order.

5.6、电动机上可以安装测振元件（用户要求时）用来测量电动机轴承的振动，一般情况下一个轴承安装两个。用户需外接测振仪。

Motor can equipped with polarimetric element to measure the vibration on bearing. Generally each bearing needs two. Customer should equipped vibration meter.

Y2 系列 10kV 三相异步电动机 (中心高 450 ~ 560)

概述 Brief description

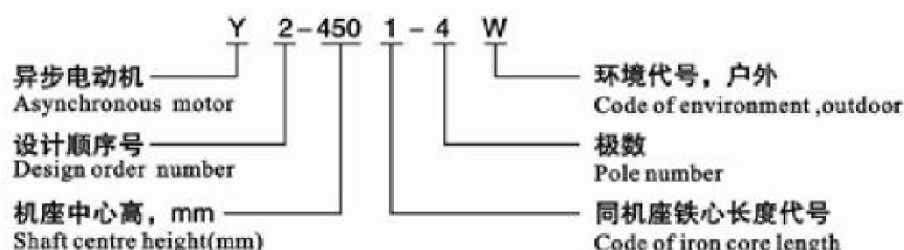
Y2系列10kV三相异步电动机(机座号450~560)为紧凑型封闭式笼型转子三相异步电动机。该电动机的外壳防护等级为IP54,冷却方式为IC411。

该电动机具有体积小、结构紧凑、高效、节能、噪音低、振动小、重量轻、性能可靠、安装维修方便等优点。

本系列电动机可作驱动各种不同机械之用。如通风机、压缩机、水泵、破碎机、切削机床及其它设备,并可供煤矿、机械工业、发电厂及各种工矿企业作原动机之用。

本系列电动机结构及安装型式为IMB3,额定是以连续工作制(S1)为基础的定额,电动机的额定频率为50Hz,额定电压为10kV,其它电压等级或特殊要求,在订货时可与用户共同商讨。

型号含义 The meaning of type



本系列电动机还可以制成Y2-TH湿热带型以及F、F1、F2防腐性。

技术数据见表1

Technical Data see Appendix 1

外形安装尺寸见表2

Mounting and Contour Dimensions see Appendix 2,

定货须知 (用户订货时须注明如下要求)

When ordering, the following requirement should be specified

- 电机型号: Y2-4501-4
- 额定功率: 355kW
- 额定电压: 10kV
- 额定频率: 50Hz
- 同步转速: 1500r/min
- 安装方式: IMB3
- 防护等级: IP54
- 冷却方式: IC411
- 绝缘等级: F 级
- 环境条件: 海拔 ≤ 1000m, 环境温度 -15℃~40℃ (若用户对使用环境有特殊要求时, 请与制造商协商)

Frame size such as: (Y2-4501-4)

Rated power: (355kW)

Rated Voltage: (10kV)

Rated Frequency: (50Hz)

Synchronous Speed: (1500r/min)

Mounting Type: (IMB3)

Protection Degree: (IP54)

Cooling Method: (IC411)

Insulation Class: (Class F)

Ambient Conditions: altitude should not be over 1000 meters above sea level, the vary of ambient temperature should not exceed -15℃~40℃

注: 电机采用联轴器传动; 若需皮带轮传动应与制造商协商。

Note: The motor shaft coupling transmission.

For belt drive should be consultation with the manufacturer.

表1

型号 Type	额 定 功 率 kW Rated Power	额 定 电 流 A Rated Current	转 速 r/min Speed	效 率 % Efficiency	功 率 因 数 COS φ Power Factor	最大转矩 Max torque 额定转矩 Rated torque	堵转转矩 Locked torque 额定转矩 Rated torque	堵转电流 Locked current 额定电流 Rated current	J(电机) kg.m ² J (Load)	J(负载) kg.m ² J (Load)	质 量 kg Mass
Y2-4501-4	355	25.5	1485	93.3	0.86	1.8	0.7	7.0	13	155	3415
Y2-4502-4	400	28.7		93.5					15	170	3480
Y2-4503-4	450	32.2		93.9					17	185	3545
Y2-4504-4	500	35.7		94.0					19	195	3615
Y2-5001-4	560	39.9		94.2					30	285	4795
Y2-5002-4	630	44.8		94.4					32	320	4945
Y2-5003-4	710	49.6		95.0	0.87				34	370	5090
Y2-5004-4	800	55.8		95.1					36	430	5195
Y2-5005-4	900	62.0		95.2	0.88				38	500	5290
Y2-5601-4	1000	68.8		95.3					55	610	6865
Y2-5602-4	1120	77.0		95.4					60	690	7150
Y2-5603-4	1250	84.9		95.5	0.89				65	760	7445
Y2-5604-4	1400	94.9		95.7					70	860	7735
Y2-4501-6	250	19.1	988	92.4	0.82			6.0	15	210	3445
Y2-4502-6	280	21.3		92.6					17	230	3520
Y2-4503-6	315	23.9		92.8					19	250	3665

表1 (续)

型号 Type	额定功率 kW Rated Power	额定电流 A Rated Current	转速 r/min Speed	效率 % Efficiency	功率因数 COS φ Power Factor	最大转矩 Max torque 额定转矩 Rated torque	堵转转矩 Locked torque 额定转矩 Rated torque	堵转电流 Locked current 额定电流 Rated current	J(电机) kg.m ² J (Load)	J(负载) kg.m ² J (Load)	质量 kg Mass
Y2-4504-6	355	26.5	988	93.1	0.83	1.8	0.7	6.0	21	270	3780
Y2-5001-6	400	29.8		93.3					41	500	4740
Y2-5002-6	450	33.5		93.5					43	570	4835
Y2-5003-6	500	37.0		93.9					45	640	5040
Y2-5004-6	560	40.9		94.1	0.84				47	700	5145
Y2-5005-6	630	45.9		94.4					49	780	5225
Y2-5601-6	710	51.6		94.6	0.85				88	980	7410
Y2-5602-6	800	58.1		94.7					92	1100	7675
Y2-5603-6	900	64.4		94.9					96	1250	7915
Y2-5604-6	1000	71.4		95.1					100	1400	8175
Y2-4501-8	220	18.1	743	92.2	0.76	1.8	0.7	6.0	18	390	3615
Y2-4502-8	250	20.6		92.4					20	400	3680
Y2-5001-8	280	23.0		92.6					40	700	4900
Y2-5002-8	315	25.5		92.8	0.77				42	810	5010
Y2-5003-8	355	28.6		93.1					44	865	5125
Y2-5004-8	400	31.8		93.2	0.78				46	920	5245
Y2-5005-8	450	35.7		93.4					48	975	5365
Y2-5601-8	500	39.0		93.8	0.79				112	1200	7045
Y2-5602-8	560	43.6		93.9					118	1340	7580
Y2-5603-8	630	47.0		94.4	0.82				124	1480	7795
Y2-5604-8	710	52.8	94.6	130		1620	8050				

Y2系列10KV三相异步电动机 (机座号450~560) 外形安装尺寸图

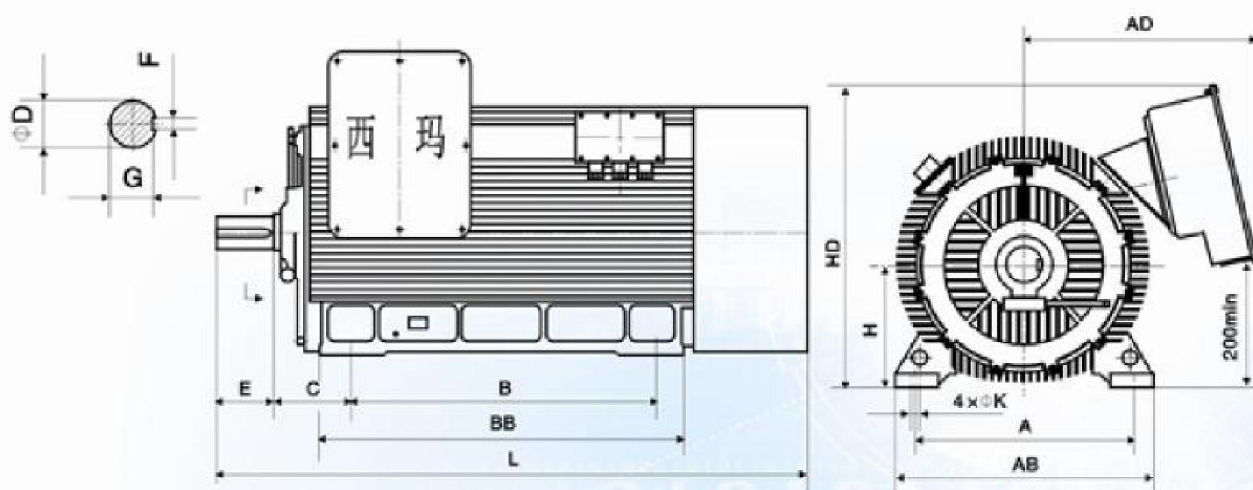


表2

机座号 Framesize	极数 Pole	安装尺寸 Mounting Dimensions (mm)										外形尺寸 Contour Dimensions(mm)				
		A	B	C	D	E	F	G	H	K		AB	BB	AD	HD	L
Y2-450	4	800±1.75	1120±1.75	280±4.0	120 ^{+0.035} _{+0.013}	210±0.57		109 ⁰ _{-0.2}	450 ⁰ _{-1.0}	35 ^{+0.62} ₀		950	1340	980	1330	2310
	6~8				130 ^{+0.040} _{+0.015}		32 ⁰ _{-0.062}	119 ⁰ _{-0.2}								
Y2-500	4	900±2.1	1250±2.1	315±4.0	140 ^{+0.040} _{+0.015}	150±0.57		128 ⁰ _{-0.3}	500 ⁰ _{-1.0}			1080	1490	1030	1450	2610
	6~8						36 ⁰ _{-0.062}			42 ^{+0.62} ₀						
Y2-560	4	1000±2.1	1400±2.1	355±4.0	150 ^{+0.040} _{+0.015}			138 ⁰ _{-0.3}	560 ⁰ _{-1.0}			1180	1680	1100	1520	2900
	6~8				160 ^{+0.040} _{+0.015}	300±0.65	40 ⁰ _{-0.062}	147 ⁰ _{-0.3}								

西安泰富西玛电机系列产品

序号	型号	中心高	额定电压	冷却方式
1	YX、YXKS、YXKK高效率高压异步电动机	400~1000mm	6kV、10kV	IC01、IC81W、IC611
2	YE2系列(IP55)高效率三相异步电动机	80~355mm	380V	IC411
3	YE3系列(IP55)超高效率三相异步电动机	80~355mm	380V	IC411
4	T、TK、TDMK系列大型交流三相同步电动机	定子外圆 990~3250mm	380V、6kV、10kV	IC01
5	KX系列(IP23)压缩机专用高效率三相异步电动机	160~355mm	380V	IC01
6	YKK系列高压电动机	355~1000mm	3、6、10kV	IC611
7	YKS、YRKS空-水冷式三相异步电动机	355~1000mm	6kV、10kV	IC81W
8	YRKK系列高压绕线转子电动机	355~1000mm	3、6、10kV	IC611
9	Y系列高压电动机	355~1000mm	3、6、10kV	IC01
10	YR系列高压绕线转子电机	355~1000mm	3、6、10kV	IC01
11	YTM系列磨机专用电机	355~1000mm	3、6、10kV	IC611 IC01
12	Y2系列紧凑型高压三相异步电动机(YJS)	355~560mm	6、10kV	IC411
13	Y、YR大型卧式三相异步电动机	1180~2150mm	6kV、10kV	IC01、IC611
14	YGM系列(IP44)三相异步电动机	80~400mm	380V, 也可按用户要求制作	IC411
15	Y系列(IP23)三相异步电动机	280~500mm	380V	IC01
16	YR系列(IP44)绕线转子电动机	280~400mm	380V	IC411
17	YR系列(IP23)绕线转子电动机	280~355mm	380V	IC01
18	YGM2系列三相异步电动机	80~355mm	220、230、380、420、440、660V	IC411
19	YJTG/YVF2系列三相交流变频电动机	80~355mm	380V	IC416
20	YD系列变极多速三相电动机	80~280mm	380V	IC411
21	JS、JR系列三相异步电动机	机座号11~15	380V 3、6kV	IC01
22	YLY粮机专用三相异步电动机	200~280mm	380V	IC411
23	NEMA标准高效率三相电动机	143T~447T	230V、460V	IC411
24	Z4系列(IP21S)直流电动机	100~450mm	160、400、440V	IC06
25	Z2系列(IP23)直流电动机	机座1~11#	110、220、230V	IC01、IC06
26	ZTP系列直流铁路机车电动机	62/82/180	24~260V	IC01
27	Z系列中型直流电动机	355~710mm	220、330、440、550、660V	IC06、IC07、IC37等
28	ZDT2系列制糖压榨专用直流电动机	315~560mm	440V、520V	IC06、IC17、IC37
29	ZSN4系列水泥回转窑专用直流电动机	225~355mm	400、440V	IC17、IC37
30	ZSL4系列直流电动机	100~160mm	440V	IC01
31	ZBL4系列直流电动机	100~180mm	440V	IC01
32	YB2系列高压隔爆型三相异步电动机	450~560mm	10kV	IC411
33	YCS系列10kV大功率三相异步电动机	1000~1120mm	10kV	IC81W
34	YTP系列交流铁路机车电动机	90/112/160	240~480V	IC01

※ 本资料仅供用户选型时参考, 不做其他用途。具体数据如有疑问, 请来电来函详细咨询。

西安泰富西玛电机有限公司

XI'AN TECH FULL SIMO MOTOR CO.,LTD

销售电话: 15902923228

企业网址: www.simo.org.cn

企业邮箱: 319642769@qq.com

