

ABOUT US

关于我们



我们一直努力超越 · · · · ·

We always try to surpass

江苏东元围绕着一个梦想，不断努力，不断创新。为了广阔的环保领域，为了创造更有活力的江苏东元，我们一直超越。今天，江苏东元将以一流的品质，诚信的态度，为您提供更可信赖的产品。未来，从现在开始，江苏东元将为您诠释一个更新的理念。

江苏东元电机电控有限公司是国家高新科技企业。成立于2000年，位于扬州市宝应经济技术开发区，交通便利，紧邻宝应高速出口及火车站。占地面积38000平方米，现有员工人数120余人。公司于2005年通过ISO9001质量管理体系认证。

公司专业从事直流电机、特种电机的开发与制造。经过十几年的持续发展。公司产品不断完善。主要产品：Z系列中型直流电机、Z4系列直流电机、ZZJ-800系列轧机辅传动直流电机、ZSN4系列水泥回转窑用直流电机等一系列电机品种。为冶金、线缆、橡塑、造纸、化工、采矿、纺织、军工等行业提供优质可靠的动力源及令客户满意的售后服务。获得广大用户的一致好评。

公司通过与国际知名工控厂商合作，代理经销其工控产品，主要有：西门子交流数字传动产品及美国派克590直流数字传动产品。并为客户提供自动化控制系统工程的设计与成套。

公司坚持“诚信为本，质量上乘”的宗旨，满足用户要求。我们愿与有识之士携手合作，共创辉煌未来。

Jiangsu Dongyuan Motors & Electrical Control Co., Ltd. is a national new & hi-tech business. Founded in 2000 and located in Baoying Economic Development Zone of Yangzhou City and immediately close to the exit of Baoying Highway and the railway station, Dongyuan enjoys highly efficiency communications. It covers a land area of 38000m² and currently has over 120 employees. It became certified with ISO9001 in 2005.

The company is specialized in the development and manufacture of DC motors and specialty motors. After sustained development for over a dozen years, its products keep improving. The main products include: Z series DC motors, Z4 series DC motors, ZZJ-800 series auxiliary transmission DC motors, ZSN4 series DC motors for cement rotary kiln, etc. It provides reliable sources of power supply for metallurgical industry, cables industry, plastics & rubber, paper-making, chemical industry, mining, textiles and military industry, etc. and provide the after-sales services that make the customers feel satisfied. These products are well received by the users.

Dongyuan has set up cooperation relations with internationally well-known businesses for the sales of their industrial products, which mainly include Siemens AC & DC digital transmission products and American Pike 590 DC digital products. Dongyuan also provides design and integration of automation control systems for customers.

In the principle of stressing good faith and quality" in business, Dongyuan works hard to meet customers' requirements, and is ready to work with you for a more splendid future.

企业精神

诚信 开拓 进取 卓越

质量方针

优选料 精加工 诚服务 质取胜

主要产品

- 电机** ● Z系列直流电机、Z4系列直流电机、ZZJ-800系列直流电机、ZSN4系列直流电机、直流防爆电机、BPY系列变频电机、ZYS系列测速发电机。
- 电控** ● 单轧、可逆轧、连轧、拉矫机、镀锌线、酸洗线、方管线、纵剪机、平整机、成缆机、铝铜连铸连轧、热磨机、缠丝机、钢管拉伸机、塑料挤出机、造纸机、拉丝机、离心机等自动化生产线的设计生产。
- 电抗器** ● 直流调速器配套用电抗器、变频器配套用电抗器、进线电抗器、出线电抗器、平波电抗器。



权威认证 卓越品质 Certifications and Excellent Quality

荣誉带来的鲜花和掌声，只能见证昨天的历史。

我们更关注未来的辉煌

AAA级重合同守信用企业

质量管理体系认证证书

国家高新技术企业证书

江苏省民营科技企业

企业资质证书 Qualifications & Certificates

特点和用途

Z4系列直流电机广泛用作各类机械的传动源，诸如冶金工业轧机传动，金属切削机床、造纸、印刷、纺织、印染、水泥、塑料挤出机械等等。

本系列电机的外形安装尺寸除了两底脚孔间轴向尺寸‘B’之外，符合IEC72国际标准。

本系列电机的性能及技术要求可按照国际电工委员会标准，IEC34-1或西德国家标准DIN57530的要求考核。

本系列电机采用多角形结构，空间利用率高。定子磁轭为叠片式，适用整流器供电，能承受脉动电流与电流急剧变化(负载变化)之工况，磁极安装有精确定位，因而换向良好。

电机绝缘等级为F级，采用可靠绝缘结构及浸渍工序，保证绝缘性能稳定和良好散热。

本系列电机具有体积小、性能好、重量轻、输出功率大、效率高及可靠性高的特点，可以与当今国际先进水平的电机较量。

电动机可用三相全控桥式整流电源以及不外接平波电抗器而长期工作。额定电压为160V的电机由单相桥式电源供电，此时电枢回路须接入电抗器以抑制脉动电流。其电感值如表中所示。

Features and Uses

Series Z4 d-c machines are found wide use for prime mover in various machinery, such as mill auxiliary in metallurgical industry, metal cutting machine-tool, paper making, print, textile, printing and dyeing, cement-making, plastic extruding machine, etc.

Outline and mounting dimensions of the motors comply with IEC72 Standard, except for the axial distance between the mounting holes (dimension B).

Performance and technical requirements of the motors can be checked in accordance with IEC34-1 Standard of the International Electro technical Commission, or DIN57530 Norm of the Deutsche Industries-Norm.

The motors are class F insulated, with reliable insulating construction and impregnating process, ensuring stable dielectric performance and excellent heat dissipation.

The motors possess the features of small size, good performance, light weight, large output, high efficiency and reliability, being able to match the current international advanced level.

The motors can be lastingly operated from fully controlled three-phase bridge without a smoothing reactor. Motors for 160V may be operated on singlephase bridge thyristor, in that case, a smoothing reactor, whose inductance is specified in the relevant technical date, should be inserted in the armature circuit to suppress ripple current.

电机性能

1. 技术数据表中的数据应按下列使用条件工作

- 海拔不超过1000m;
- 周围空气温度不大于40°C;
- 工作环境不应含有酸性、碱性或其他对绝缘有腐蚀作用的气体;
- 电机为连续工作制(S1);
- 电动机电枢回路和励磁回路可由静止整流电源供电，也适应由直流发电机供电;
- 本系列电机性能均符合国标GB/T755《旋转电机基本技术要求》

2. 电动机标准额定电压为160V、440V。也可根据具体情况派生出220V、400V和660V或其他电压。

3. 电动机额定转速有3000、1500、1000、750、600、500、400、300、200r/min共九档。

减小电枢电压为恒转矩调速，减小励磁电压为恒功率调速，调速范围见技术数据表(表2)。不同调速范围时的负载倍数见附录1。

在额定电压以下用调压调速时为恒转矩。其最低转速均规定为不低于20r/min，此时仍能维持额定转矩，转速平稳。

4. 电动机的基本励磁方式为他励，标准励磁电压为180V，其他励磁电压亦可协商。

电动机允许强行励磁。强励电压不得超过500V。电动机正常运行时励磁电流不得超过额定励磁电流。

为确保励磁系统绝缘的可靠性，在断开励磁回路时，需在励磁绕组两端并联一个释放电阻以防止自感电势。在标准励磁电压时其值约为七倍励磁绕组电阻(冷态)。励磁电压高于标准电压时，并接释放电阻值可小于七倍，反之大于七倍。

5. Z4-315、Z4-355、Z4-400、和Z4-450四个机座带有补偿绕组。在Z4-250和Z4-280两个机座号中派生带有补偿绕组的电机也是可能的。

6. 电机提供有接地标注的接线柱。

7. 技术数据表内的效率值为额定功率，额定电压和转速时的效率，它包括励磁损耗，不包括鼓风机损耗。

Electrical Performance

1. Data listed in the technical data sheet should be employed under the following conditions;

- Altitude above sea level maximal 1,000m;
 - Cooling air temperature maximal 40°C;
 - Ambient conditions for motors should be free from acidic, alkali fumes or other aggressive gases which corrode insulation.
 - Duty: Continuous (S1);
 - Armature and field circuits for motors may be either operated on static thyristor controlled supplies, or from d-c generator;
 - Performances of motors all comply with State Standard GB/T755. <<Fundamental technical rules for electrical machines>>.
2. Standard rated voltage: 160V or 440V, Values for 220V, 400V, and 660V or other voltage may be derived on request.
3. Rated speed: 3000, 1500, 1000, 750, 600, 500, 400, 300 and 200 r/min, totally nine grades.

Decrease armature voltage to make speed regulating under constant torque, lowering down field voltage to make speed regulating at constant output. Speed regulating range: see technical data (Table 2). The given multiple of load to rated load of different speed range; see Appendix 1.

The torque can be remained constant by reducing speed via armature voltage weakening below rated value. It is stipulated that armature speed range can be down to the lowest 20r/min at constant torque and stable running.

4. Separate excitation is the basic excitation type of the motors. Nominal field voltage: 180V. Other excitation voltages are also acceptable on request. Forced excitation is allowed with the voltage of less than 500V. When a motor is normally running, its excitation current must not be higher than rated excitation current.

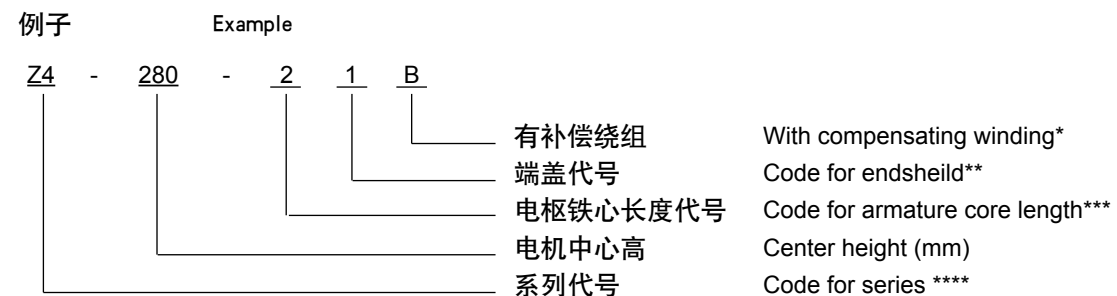
To assure the reliability of insulation of excitation system, the motor must be protected against self induced voltages by a release resistor connected in parallel with the excitation circuit of the motor is interrupted. At rated field voltage the value of shunt resistor is about seven times field winding resistance (cold state). While the field voltage is higher than nominal voltage, the value of shunt resistance may be lower than seven times field resistance, otherwise higher than seven times.

5. For frame size Z4-315, Z4-355, Z4-400 and Z4-450, compensating windings are provided. For frame size Z4-250 and Z4-280 the motors are feasible with a compensating winding too.

6. A marked earthing terminal is provided for motors.

7. The efficiencies listed in the data sheet are for rated output, voltage and speed, and include excitation loss, excluding that of separate ventilating fans.

型号说明 Type Designation



注：* 字母‘B’表示电机有补偿绕组，仅适用于Z4-250和Z4-280这二个机座号。

** 数字1、2表示短、长端盖。

*** 就Z4-112机座而言，第一数字代表极数，第二数字为铁心长。

**** 字母‘z’意思是直流电机，数字‘4’为第四次系列设计序号。

* The letter 'B' stands for motor with compensating winding, only applicable to Z4-250 and Z4-280.

** The digit 1,2 for shod, and long endshield.

*** As regards frame size-II2, the first digit means NO. of poles, the second digit for core length.

**** The letter 'z' for d-c machine, the digit '4' for ordinal number of the fourth series design. The digit 1,2 for short, and long endshield.

结构简介 Construction

1. 电机的防护及安装结构型式

a. 整个系列防护型式均为IP21S。

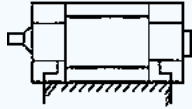
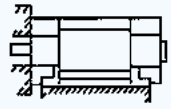
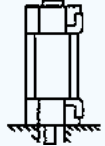
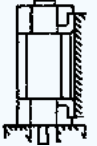
b. 安装方式符合国标GB/T997规定，

本系列具有下列安装方式：

1. Protection, mounting and type of construction:

a. Type of protection of the whole series: IP21S

b. Mounting modes comply with the State Standard GB/T997 stipulated as follows:

安装型式 Mounting Type				
	IMB-3	IMB-35	IMV-1	IMV-15
使用范围 For Use in	Z4-100~Z4-450	Z4-100~Z4-315	Z4-100~Z4-225 (电机带有不作安装用的底脚) The machine are always delivered with feet, even when they are fiang-mounted)	Z4-100~Z4-315

2. 冷却方式

整个系列电机的冷却方式均为他冷，强迫通风，在径向配有骑式鼓风机，独立供电，并附空气过滤器。电机可制成IC06，IC17，IC37三种冷却方式。

a. Z4-100~Z4-160，其鼓风机装于非传动侧。

b. Z4-180~Z4-450，其鼓风机装于传动侧。

c. 各机座号所需的冷却风量，风压及风机电动机功率为：(见表1)

2.Methods of Cooling:

Modes of cooling for all the motors are separate cooling, force ventilated. Cooling by frame radially mounted, separately powered ventilating fan, and attached with an air filter. Modes of cooling for motors may be made into three types, namely IC06, IC17 and IC37.

a. For Z4-100~Z4-160, the blower is mounted on the non-drive side.

b. For Z4-180~Z4-450, the blower is mounted on the drive side.

c. The required cooling air volume, air pressure and fan motor capacity are shown below: (Table 1)

表1 (Table 1)

机座号 Frame Size	风量 Air Volume	静压 Static Pressure	*电动机功率 *Motor Output
	m ³ /h	Pa	kW
Z4-100	160	200	0.04
Z4-112	360	450	0.18
Z4-132	360	450	0.18
Z4-160	790	600	0.37
Z4-180	1200	940	1.1
Z4-200	1600	800	1.1
Z4-225	2880	1400	3.0
Z4-250	3000	1400	3.0
Z4-280	4000	1600	4.0
Z4-315	5200	1800	5.5
Z4-355	6000	2050	7.5
Z4-400	7200	2150	7.5
Z4-450	9000	2200	7.5

* 风机电动机均为三相二极380V。

* All the ventilating fan motors are of three phase, twopole, 380V.

以下五种冷却方式也可接受定货，但先要咨询。

- 中心高100至180机座可制成IC410全封闭自冷式电机。
 - 中心高160至250机座可制成IC05鼓风机装在电机非传动侧的他冷式电机。
 - 中心高100至180机座可制成IC01电机轴上自带风扇的自冷式电机。
 - 中心高160至355机座可制成IC666电机带有独立空/空冷却器的全封闭冷却空气内循环的电机。
 - 中心高160至450机座可制成IC86W电机带有独立空/水冷却器的全封闭电机。
- 出线盒的位置，从传动侧视之，在机座右侧。根据需要也可装于机座左侧或上方。
 - 电机可配带测速发电机等附件于非传动端。
 - 电机的传动方式为弹性联轴器联接。机组配合须小心对准。

对于有径向力的传动方式(皮带或齿轮传动)，其允许承受的径向力不应大于下列曲线上的数值(见附录2)。

电机造型紧凑、美观。出线盒宽敞，接线和维修方便。

备注：

技术数据表中的规格、功率和弱磁调速范围等仅供参考，为了不断采用新技术，表中的数据会有变动。

Motors with the following five methods of cooling can also be ordered, but prior consultations are needed.

- Frame size 100 up to 180 may be made into the totally enclosed, frame cooled motor (IC410).
- Frame size 160 up to 250 may be made into the separately ventilated motor with blower mounted on its non-drive side (IC05).
- Frame size 100 up to 180 may be made into the self cooled open motor with its own fan mounted on the shaft (IC01).
- Frame size 160 up to 355 may be made into totally enclosed motor with internal cooling air circulation by independent air-air heat exchanger mounted on it (IC666).
- Frame size 160 up to 450 may be made into totally enclosed motor with independent air-water heat exchanger mounted on it (IC86W).

3. Standard terminal box mounting is the right hand side seen from the drive end of the motor. As an alternative, mounting at the top or on the lefthand side is possible on request.

4. Motors if needed, can be fitted with tachogenerator or other accessories at the non-drive end.

5. Motors, when directly coupled, must use elastic or flexible couplings. The drive and driven units must be aligned with the utmost care.

Radial forces acting on the shaft-extensions (belt or pinion drive) must not exceed the values given in the diagrams in the following pages (see Appendix2).

Motors are of compact structure, elegant appearance, spacious terminal box, easy wiring, servicing and maintenance.

Remarks:

The ratings, output and speed range through field weakening etc. Listed below are merely for reference. For purposes of incessantly adopting up-to-date technology, the data listed in the following table are subject to relevant change.

产品样本函索即寄

Catalogues will be sent on application

订货说明

1. 订货前，请先查阅产品目录，明确所需产品的型号规格等数据。如所需品种、规格与目录中有出入，请立即与我公司联系。如有特殊要求，请事先提出具体而明确的要求，与我公司有关部门协商，经同意后签订合同或试制协议。

2. 订货时请注明电机型号、功率、电压、转速、工作制、结构类型，励磁方式。励磁电压、出轴数、出线盒位置、旋转方向以及所需附件、备品名称等。

Notice on order

1. Please refer to our catalogue before ordering. If the types, ratings you need are not covered by our booklet please contact us. Should you have particular needs, please offer us specific proposal in advance. A contract or pilot production agreement may be made when the requirements are fixed by common consent.

2. Please write clearly the type, output, voltage, speed, duty, type of construction, excitation, field voltage, No. of shaftend, location of terminal box, necessary accessories and spare parts etc.

3. If the humid-tropical type required, please mark "TH" behind the original type number.

主要产品

Z系列直流电动机

Z4系列直流电动机

ZBL4系列全封闭直流电动机

ZKKL系列带空/空冷却器直流电动机

ZKSL系列带空/水冷却器直流电动机

ZYZL系列制糖压榨机用直流电动机

ZSN4系列水泥回转窑主传动用直流电动机

ZZJ-800系列轧机辅传动直流电动机

Z2系列直流电动机

Z2C系列船用直流电动机

ZXO型蓄电池供电串励直流电动机

ZYSA型永磁直流测速发电机

ZKK系列电机扩大机

YTD系列电梯用三相异步电动机

BPY系列变频调速三相异步电动机

YSG系列辊道用变频调速三相异步电动机

KZ01型可控硅直流调速装置

Main products

Series Z DC Motors

Series Z4 DC Motors

Series ZBL4 Totally Enclosed DC Motors

Series ZKKL DC Motors With Air/Air Heat Exchanger

ZKSL DC Motors With Air/Water Heat Exchanger

Series ZYZL DC Motors For Sugar Cane Mills

Series ZSN4 DC Motors For Cement Rotating Kilns

Series ZZJ-800 DC Motors For Mill Auxiliary

Series Z2 DC Motors

Series Z2C Marine DC Machines

Type ZXQ DC Series Motors For Battery Operated Vehcles

Type ZYS-A Permanent Magnet DC Tacho Generators

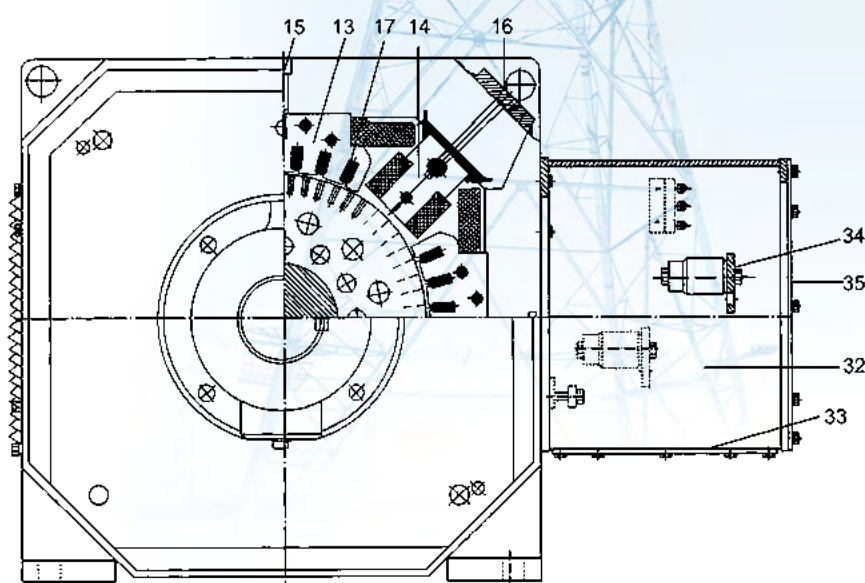
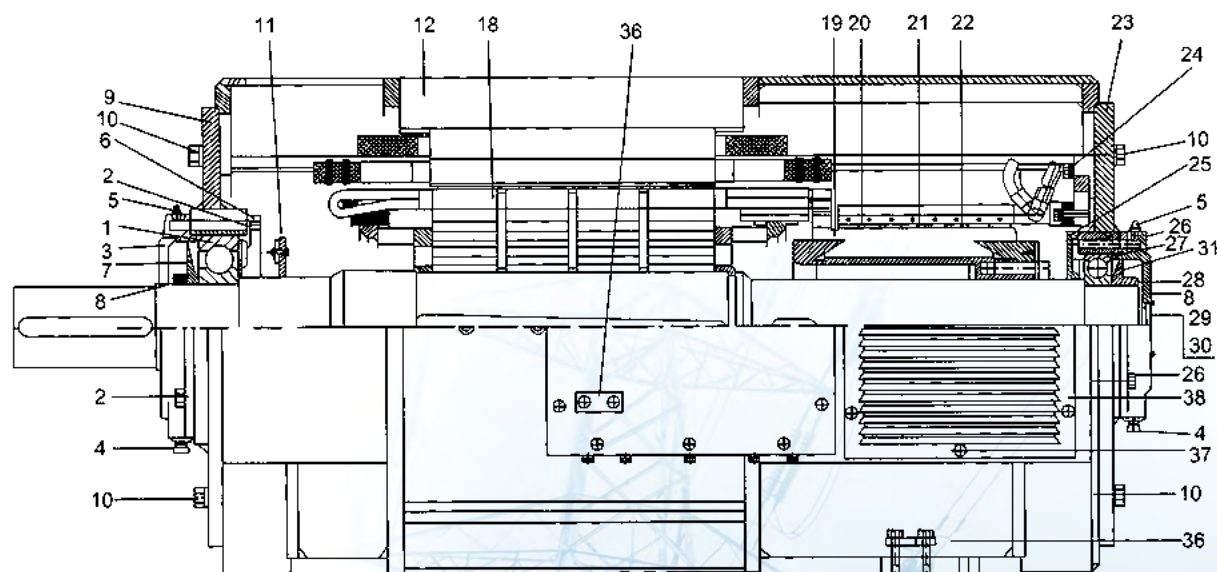
Series ZKK Rotary Amplifiers

Series YTD Three-Phase induction Motors For Elevators

Series BPY Inverter-Fed Three-Phase Induction Motors

Series YSG Inverter-Fed Three-Phase Induction Motors For Roller Tables

Type KZ01 SCR DC Drive Cabinets



- | | |
|--------------------|------------------------------------------------|
| 1. 传动侧球轴承 | 1. Ball bearing AS * |
| 2. 传动侧轴承盖螺钉 | 2. Screw of bearing cover AS |
| 3. 传动侧外轴承盖 | 3. Bearing cover AS outer |
| 4. 传动侧和非传动侧轴承盖出油盖板 | 4. Oil-cap of ball bearing AS & NS** |
| 5. 传动侧和非传动侧油嘴 | 5. Oil nipple AS & NS |
| 6. 传动侧内轴承盖 | 6. Bearing cover AS inner |
| 7. 传动侧轴套(甩油圈) | 7. Centrifugal disc AS |
| 8. 传动侧和非传动侧轴套的止动螺钉 | 8. Headless screw for centrifugal disc AS & NS |
| 9. 传动侧端盖 | 9. Endshield AS |
| 10. 传动侧和非传动侧端盖紧固螺钉 | 10. Fastening screw of endshield AS & NS |
| 11. 传动侧平衡盘 | 11. Balancing disc AS |
| 12. 机座 | 12. Frame |
| 13. 主极 | 13. Main pole |
| 14. 换向极 | 14. Compole |
| 15. 主极螺钉 | 15. Screw of main pole |
| 16. 换向极螺钉 | 16. Screw of compole |
| 17. 补偿绕组 | 17. Compensating winding |
| 18. 电枢 | 18. Armature |
| 19. 换向器 | 19. Commutator |
| 20. 刷架 | 20. Brush rocker |
| 21. 刷握 | 21. Brush holder |
| 22. 炭刷 | 22. Carbon brush |
| 23. 非传动侧端盖 | 23. Endshield NS |
| 24. 带垫圈的紧固螺钉 | 24. Fastening screw with washer |
| 25. 非传动侧内轴承盖 | 25. Bearing cover NS inner |
| 26. 非传动侧轴承盖螺钉 | 26. Screw of bearing cover NS |
| 27. 非传动侧外轴承盖 | 27. Bearing cover NS outer |
| 28. 非传动侧轴套(甩油圈) | 28. Centrifugal disc NS |
| 29. 轴端盖板 | 29. Endplate |
| 30. 轴端盖板螺钉 | 30. Screw of endplate |
| 31. 非传动侧球轴承 | 31. Ball bearing NS |
| 32. 接线盒 | 32. Terminal box |
| 33. 带封密圈的出线盖板 | 33. Output plate with gasket-sealing |
| 34. 接线排 | 34. Terminal |
| 35. 接线盒盖板 | 35. Terminal box lid |
| 36. 接地螺栓 | 36. Grounding bolt |
| 37. 非传动侧百页窗螺钉 | 37. Screw of louver NS |
| 38. 非传动侧百页窗 | 38. Louver NS |

Notes:
 * AS: Drive side
 ** NS: Non- drive side

直流电动机技术数据表 Technical Data of DC Motor

表2 (Table 2)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed			弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Current	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	外接 电感 Smoothing Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.										
		P _N	160V	400V											440V	n _F	I _N	P _F	R	L _A	L _F	L _R	%	GD ²
		kW	r/min												r/min	A	W	Ω(20°C)	mH	H	mH		kg·m ²	kg
Z4-100-1	2.2	1490			3000	17.9		1.19	11.2	22	15	67.8	0.044	72										
	1.5	955			2000	13.3		2.17	21.4	13	15	58.5												
	4		2630		4000	12		2.82	26	18		78.9												
	4			2960	4000	10.7		9.12	86	18		80.1												
	2		1310		3000	6.6		16.76	163	18		68.4												
	2.2			1480	3000	6.5						70.6												
	1.4		860		2000	5.1						60.3												
	1.5			990	2000	4.77						63.2												
Z4-112/2-1	3	1540			3000	24		0.785	7.1	14	20	69.1	0.072	100										
	2.2	975			2000	19.6		1.498	14.1	13	20	62.1												
	5.5		2630		4000	16.4		1.933	17.9	17		79.9												
	5.5			2940	4000	14.7		6	59	17		81.1												
	2.8		1340		3000	9.1		11.67	110	13		71.2												
	3			1500	3000	8.6						72.8												
	1.9		855		2000	6.9						61.1												
	2.2			965	2000	7.1						63.5												
Z4-112/2-2	4	1450			3000	31.3		0.567	6.2	14	12	72.6	0.088	107										
	3	1070			2000	24.8		0.934	10.3	14	10	66.8												
	7		2660		4000	20.4		1.305	14	19		82.4												
	7.5			2980	4000	19.7		4.24	48.5	19		83.5												
	3.7		1320		3000	11.7		7.62	83	14		74.1												
	4			1500	3000	11.2						76												
	2.6		895		2000	9						65.1												
	3			1010	2000	9.1						67.3												
Z4-112/4-1	5.5	1520			3000	42.5		0.38	3.85	6.8	6.5	73	0.128	106										
	4	990			2000	33.7		0.741	7.7	6.7	4.5	64.9												
	10		2680		3500	29		0.89	9	6.8		82.7												
	11			2950	3500	28.8		3.01	30.5	6.8		83.3												
	5		1340		1800	15.7		5.78	60	6.7		74.3												
	5.5			1480	1800	15.4						75.7												
	3.7		855		1100	13						65.2												
	4			980	1100	12.2						68.7												
Z4-112/4-2	5.5	1090			2000	43.5		0.441	5.1	7.8	6	69.5	0.156	114										
	13		2740		3600	37		0.574	6.4	5.8		84.4												
	15			3035	3600	38.6		2.12	24.1	7.8		85.4												
	6.7		1330		1800	20.6		3.46	40.5	5.8		76.8												
	7.5			1480	1800	20.6						78.4												
	5		955		1200	16.1						71.1												
	5.5			1025	1200	15.7						71.9												

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20°C)	mH	H		kg·m ²	kg
Z4-132-1	18.5	2610		4000	52.2		0.368	5.3	6.5	85	0.32	140									
	18.5		2850	4000	47.1					85.9											
	10	1330		2100	30.1	650	1.309	18.9	8.9	79.4											
	11		1480	2200	29.6					80.9											
	7	865		1600	22.7		2.56	37.5	6.3	71.9											
	7.5		975	1600	21.4					74.5											
	20	2800		3600	55.4		0.226	3.65	10	87.8											
Z4-132-2	22		3090	3600	55.3	730				88.3	0.4	160									
	15	1360		2500	44.5		0.811	13.5	7.7	81.2											
	15		1510	2500	39.5					83.4											
	10	905		1400	31.1		1.565	26	6	75.6											
	11		995	1400	30.5					77.7											
	27	2720		3600	74.5		0.1905	3.4	21	88.2											
Z4-132-3	30		3000	3600	75	800				88.6	0.48	180									
	16.7	1390		2100	53.2		0.531	9.8	6.6	83.6											
	18.5		1540	2200	47.6					84.7											
	13.5	945		1600	40.5		0.976	19.4	6.5	79.4											
	15		1050	1600	40.5					80.5											
Z4-160-11	33	2710		3500	93.4	820	0.1835	3.15	10	87.4	0.64	220									
	37		3000							88.5											
	19.5	1350		3000	58.8		0.593	10.4	7.7	80.4											
	22		1500	3000						82.6											
Z4-160-22	40.5	2710		3500	113	920	0.1426	2.7	10	88.2	0.76	242									
	45		3000							89.1											
Z4-160-21	16.5	900		2000	50.5		0.862	17.7	6	77.9											
	18.5		1000							79.4											
Z4-160-32	49.5	2710		3500	137		0.097	2.07	11	89.1											
	55		3010							90.2											
Z4-160-31	27	1350		3000	77.8	1050	0.376	8.3	10	84.7	0.88	268									
	30		1500							85.7											
	19.5	900		2000	59.1		0.675	15.2	6.3	79.1											
	22		1000							81.7											
Z4-180-11	33	1350		3000	95.4		0.29	5.8	7.1	84.7	1.52	326									
	37		1500							86.5											
	16.5	670		1900	51.4	1200	0.947	17.6	5.6	75.5											
	18.5		750							78.1											
	13	540		1400	42.4		1.264	25	5.6	73											
	15		600							74.1											

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20°C)	mH	H	kg·m ²	kg	
Z4-180-22	67	2710		3400	185		0.0555	1.16	6.9	89.5											
	75		3000							90.7											
Z4-180-21	40.5	1350		2800	115		0.2125	4.65	6.6	85.8	1.72	350									
	45		1500							87											
	27	900		2000	79	1400	0.419	9.3	7.3	82.2											
	30		1000							83.7											
	19.5	670		1400	61		0.756	15.7	7.1	77.3											
	22		750							79.7											
	16.5	540		1600	52		1.003	21.9	5	73.8											
	18.5		600							76.8											
Z4-180-31	33	900		2000	97	1500	0.332	7.7	6.6	82.8	1.92	380									
	37		1000							83.6											
	19.5	540		1250	62		0.801	19	6.6	74.8											
	22		600							76.6											
Z4-180-42	81	2710		3200	221		0.051	1.16	12	91											
	90		3000							91.3											
Z4-180-41	50	1350		3000	139	1700	0.1417	3.2	5.7	87.5	2.2	410									
	55		1500							87.7											
	27	670		2000	80		0.459	10.4	6.3	80.4											
30		750	81.1																		
Z4-200-12	99	2710		3000	271		0.0373	0.83	7.62	90.2											
	110		3000							91.6											
Z4-200-11	40.5	900		2000	118	1400	0.2653	8.4	7.01	83.4	3.68	485									
	45		1000							85.5											
	33	670		1600	99		0.369	10.6	7.77	80.2											
	37		750							82.9											
	19.5	450		1000	64		0.93	21.9	7.3	72.2											
	22		500							77.4											
Z4-200-21	67	1350		3000	188	1500	0.0885	2.8	6.78	88.7	4.2	530									
	75		1500							89.6											
	27	540		1000	82		0.535	14	9.64	78.8											
	30		600							80.4											
Z4-200-32	119	2710		3200	322		0.0266	0.79	10.9	91.7											
	132		3000							92.4											
Z4-200-31	81	1350		2800	224		0.0771	2.6	5.61	88.7	4.8	580									
	90		1500							90											
	49.5	900		2000	141		0.1751	4.8	8.54	85.6											
	55		1000							87.1											
	40.5	670		1400	119	1750	0.283	8.5	8.35	82.5											
	45		750							84.1											
	33	540		1200	101		0.42	12.2	8.42	79.6											
	37		600							82											
	27	450		750	84		0.598	17.1	8.4	77.5											
	30		500							79.5											

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20°C)	mH	H	kg·m ²	kg	
Z4-225-11	99	1360		3000	276		0.0664	2.1	4.45	87.9	5	680									
	110		1500							89.4											
	67	900		2000	193		0.1406	4.9	4.28	84.4											
	75		1000							86.5											
	49	680		1300	146	2300	0.2433	8.7	5.77	81.2											
	55		750							84											
	40	540		1200	123		0.356	9.5	6.38	78.2											
	45		600							80.8											
	33	450		1000	103		0.476	15.2	6.10	76.5											
	37		500							78.8											
Z4-225-21	49	540		1000	148	2470	0.2648	9.5	4.14	79.3	5.6	740									
	55		600							82.4											
	40	450		1000	125		0.397	13.7	5.41	76.6											
	45		500							78.9											
Z4-225-31	119	1360		2400	327		0.0454	1.5	5.33	89.3	6.2	800									
	132		1500							90.5											
	81	900		2000	227	2580	0.093	3.4	5.3	86.9											
	90		1000							88											
	67	680		2250	197		0.167	5.1	5.44	82.5											
75		750	85.1																		
Z4-250-12	144	1360		2100	399	2500	0.0444	1.3	4.29	88.8	8.8	890									
	160		1500							89.9											
Z4-250-11	99	900		2000	281		0.0911	2.4	4.55	86.2											
	110		1000							88.1											
Z4-250-21	167	1360		2200	459	2750	0.0325	0.91	4.28	89.8	10	970									
	185		1500							90.5											
	81	680		2250	234		0.1306	3.9	5.41	83.2											
90		750	85.2																		
Z4-250-31	180	1360		2400	493		0.0281	0.87	5.32	90.4	11.2	1070									
	200		1500							91.5											
	119	900		2000	334	2850	0.0668	1.7	5.46	87.4											
	132		1000							89.1											
	67	540		2000	204		0.202	4.0	4.0	80.8											
	75		600							84.6											
	49	450		1500	152		0.305	7.3	5.1	78.5											
	55		500							82.4											

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20°C)	mH	H	kg·m ²	kg	
Z4-250-41	198	1360		2400	539		0.0237	0.93	6.19	91											
	220		1500										91.7								
Z4-250-42	144	900		2000	401		0.0485	1.9	4.53	88.0											
	160		1000										89.2								
Z4-250-41	99	680		1900	283	3000	0.0102	2.6	5.3	85.8	12.8	1180									
	110		750										87.4								
	81	540		1600	236		0.141	4.7	6.36	83.4											
	90		600										85								
	67	450		1500	201		0.195	5.1	4.97	80											
	75		500										83.4								
Z4-280-11	226	1355		2000	614	3100	0.02134	0.69	4.58	90.9	16.4	1280									
	250		1500										91.6								
Z4-280-22	253	1355		1800	684		0.01796	0.77	5.3	91.5											
	280		1500										92.1								
Z4-280-21	180	900		2000	498	3500	0.0373	1.2	4.46	89.1	18.4	1400									
	200		1000										90.1								
	119	675		1600	333		0.0662	2.3	4.37	87.1											
	132		750										88.6								
	99	540		1500	281		0.093	3.1	4.57	84.7											
	110		600										86								
Z4-280-32	284	1360		1800	768		0.01493	0.59	6.94	91.7											
	315		1500										92.6								
Z4-280-31	198	900		2000	545		0.0314	1.1	5.54	89.7											
	220		1000										90.6								
Z4-280-32	144	675		1700	402	3600	0.0532	2	5.47	87.8	21.2	1550									
	160		750										89.1								
Z4-280-31	118	540		1000	339		0.0839	2.6	5.77	85.4											
	132		600										86.8								
	80	450		1400	234		0.1377	5.3	9.03	84.1											
	90		500										85.4								
Z4-280-42	225	900		1800	616		0.02545	0.96	5.29	90.2											
	250		1000										91.1								
Z4-280-41	166	675		1900	464	4000	0.0457	1.7	5.19	88.1	24	1700									
	185		750										89.4								
	98	450		1000	282		0.0993	3.7	6.86	85.1											
	110		500										86.9								

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20°C)	mH	H	kg·m ²	kg	
Z4-315-12	321	1360		1800	865		0.015	0.39	8.64	92.2											
	355		1500										92.8								
	253	900		1600	690		0.02355	0.46	5.06	90.4											
	280		1000										91.6								
	180	680		1900	500		0.04371	0.83	4.97	88.4	21.2	1890									
200		750	89.4																		
Z4-315-11	144	540		1900	409		0.06919	1.3	7.6	86.4											
	160		600										87.4								
	118	450		1600	344		0.1	2.3	9.43	84.4											
	132		500										86.3								
	98	360		1200	294		0.1415	2.9	9.96	81.7											
	110		400										84.3								
Z4-315-22	284	900		1600	772		0.02034	0.49	5.91	91											
	315		1000										91.5								
	225	680		1600	624		0.03392	0.74	18.8	88.7	24	2080									
	250		750										89.6								
Z4-315-21	166	540		1600	468		0.05382	1.2	25	87.2											
	185		600										88.5								
	143	450		1500	413		0.076	1.5	19	84.7											
	160		500										86								
Z4-315-32	320	900		1600	867		0.01658	0.39	23.1	91.0											
	355		1000										92.0								
	252	680		1600	698		0.03043	0.82	21.5	89.1	27.2	2290									
	280		750										89.8								
	180	540		1500	501		0.04536	0.95	31.6	88.2											
200		600	89.4																		
Z4-315-31	118	360		1200	344		0.1002	2.1	23.3	83.2											
	132		400										85.3								
Z4-315-42	361	900		1400	971		0.01302	0.33	29	92.1											
	400		1000										92.7								
	284	680		1600	778		0.02364	0.67	20.8	90	30.8	2520									
	315		750										90.7								
	225	540		1600	626		0.03554	0.87	21.9	88.3											
	250		600										89								
Z4-315-41	166	450		1500	468		0.055	1.4	37.4	87.3											
	185		500										88.3								
	143	360		1200	416		0.0803	1.8	22.2	84											
	160		400										85.3								

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20℃)	mH	H	%	kg·m ²	kg
Z4-355-12	406	900		1500	1094	4700	0.01259	0.36	37.6	91.8	42	2890									
	450		1000							92.8											
	321	680		1500	877					0.02087			0.59	28.1	90.4						
	355		750												91.2						
Z4-355-11	253	540		1500	697	4700	0.02952	0.91	22		89.2	42			2890						
	280		600								90.2										
	180	450		1500	506					0.0502	1.5		8.91	87.6							
	200		500											88.9							
	166	360		1200	478									0.066		1.8	22.4	84.9			
185		400	85.9																		
Z4-355-22	361	680		1600	978	5600	0.01583	0.44	15.6			90.8			46			3170			
	400		750							91.7											
	284	540		1500	783					0.02676	0.81	34.7	89.5								
	315		600										90.5								
	225	450		1600	624								0.03462	1.0		20.5	88.4				
	250		500														89.5				
Z4-355-21	180	360		1200	511	0.05642	1.6	35.5	86.3						52		3490				
	200		400						87.5												
Z4-355-32	406	680		1100	1098				6000	0.01362	0.39	19						91.3	42	2890	
	450		750															92.1			
	320	540		1600	877								0.02153	0.7		24.3		89.9			
	355		600															91			
	284	450		1500	789	0.0293	0.91	18.5							88.3						
315		500	89.5																		
Z4-355-31	197	360		1200	559				0.04957	1.3	34.6	86.6			60		3840				
	220		400									88.4									
Z4-355-42	361	540		1300	985							6500	0.01836	0.64		29.6		90.5	60	3840	
	400		600			91.2															
	320	450		1200	882	0.02361	0.76	17.7										88.9			
	355		500															89.2			
	225	360		1200	627				0.0358	1.2	17.7				87.5						
	250		400												88.8						

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.									
		P _N	400V										440V	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
		kW	r/min										r/min	A	W	Ω(20℃)	mH	H	%	kg·m ²	kg
Z4-400-22	435	680		1400	1175	5700	0.0139	0.33	7.85	90.8	74	4500									
	480		750							92											
Z4-400-21	235	360		1200	675					5700			0.0497	1	7.3	84.8	74	4500			
	260		400													86.3					
	180	270		900	537	0.0804	1.6	7.44	81.8												
200		300	83.1																		
Z4-400-32	500	680		1400	1340				6400	0.0112	0.3	9.57	91.2	84	4900						
	550		750										92.5								
	400	540		1300	1083	0.0162	0.35	4.51					89.9								
	440		600										91.1								
	344	450		1300	952								0.0248			0.58	6	88.1			
380		500	89.5																		
Z4-400-31	270	360		1200	768				7100	0.03821	0.82	6.11		86	94			5300			
	300		400			87.5															
	208	270		900	611	0.0659	1.5	5.89						82.8							
	230		300										84								
	Z4-400-42	435	540		1300								1175	7100		0.0134	0.32		5.54	90.8	94
480			600	92																	
390		450		1400	1070				0.0201	0.47	6.86	88.6									
430		500	90																		
Z4-400-41	316	360		1200	880	7100	0.0274	0.73				5.41	87.7	94	5300						
	350		400						89												
	235	270		900	676				0.0508	1.2	5.38		84								
	260		300										85.4								
Z4-450-22	472	540		1200	1286	6500	0.0133	0.29				10.2	90.8	138	5600						
	520		600										92.1								
	408	450		1400	1114				0.0159	0.41	7.99		90								
	450		500										91.3								
	362	360		1200	1010								0.0232			0.61	5.79	88.1			
400		400	89.4																		
Z4-450-21	253	270		900	720	6500	0.0415	1				5.82		85.8	138			5600			
	280		300						87.1												

表2 (续) Table 2(Continued)

型号 Type	额定 功率 Rated Output	额定转速 Rated Speed		弱磁 转速 Speed with Field Weaking	电枢 电流 Arm. Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia	重量 Wt.
		400V	440V									
	kW	r/min		r/min	A	W	Ω(20℃)	mH	H	%	kg·m ²	kg
Z4-450-32	500	540		1200	1358	7100	0.0134	0.39	19.6	90.8	156	6000
	550		600							92		
	453	450		1300	1228		0.0145	0.32	7.36	90		
	500		500							91.4		
	408	360		1200	1130		0.0205	0.53	7.17	88.5		
	450		400							89.7		
	309	270		900	875		0.0342	0.83	4.8	85.9		
	340		300							87.1		
Z4-450-31	200	180		600	595	0.0751	1.9	9.09	81.3			
	220		200						82.6			
Z4-450-42	545	540		1100	1492	7800	0.0134	0.51	28.2	90.3	174	6700
	600		600							91.5		
	500	450		1100	1367		0.0145	0.43	18.6	90		
	550		500							91.4		
	453	360		1200	1254		0.0178	0.42	5.85	88.9		
	500		400							90		
	345	270		900	972		0.0275	0.81	5.62	86.8		
	380		300							88.1		
Z4-450-41	235	180		600	698	0.0612	1.7	5.73	81.7			
	260		200						83			

说明 (附录1)

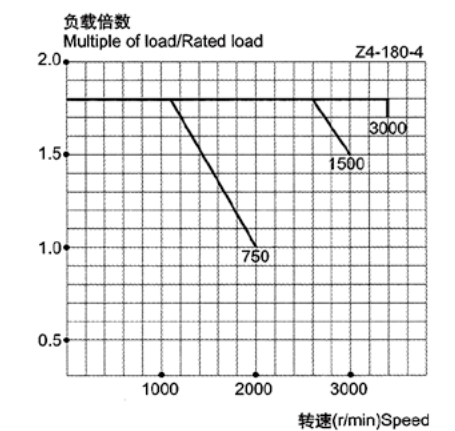
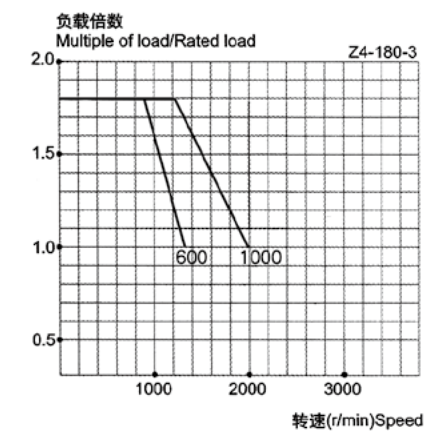
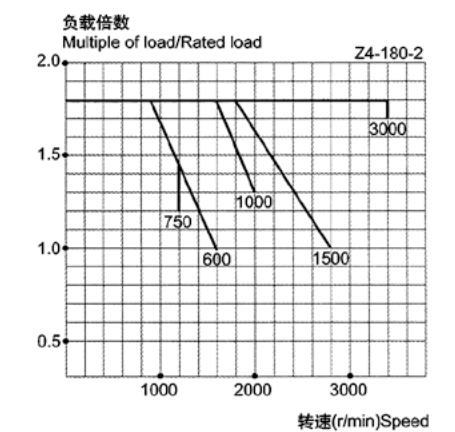
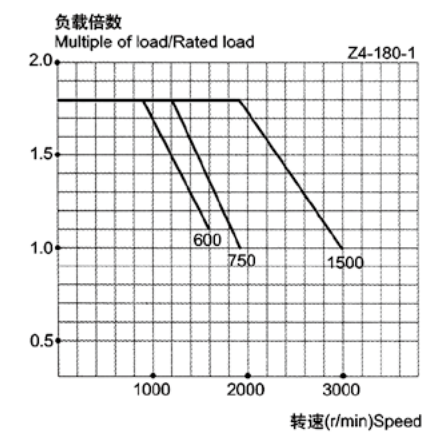
1. 负载倍数是指电枢电流的负载倍数(电枢回路特征系数)。
2. 图表中曲线旁边的数字是电动机的额定转速。
3. Z4—160机座及以下的弱磁调速负载倍数可向制造厂咨询。

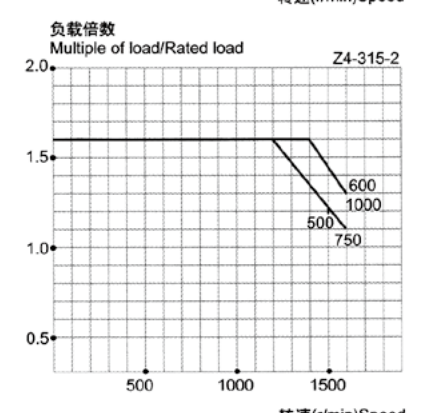
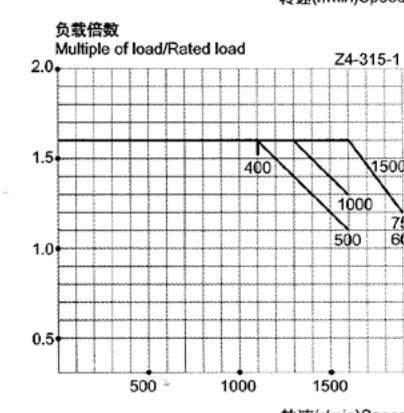
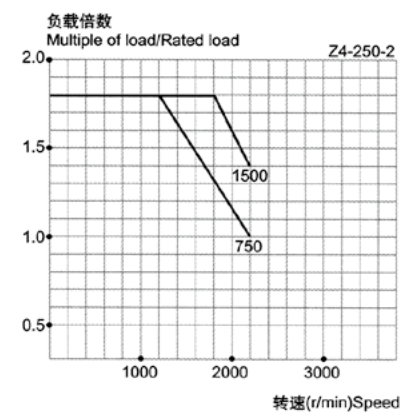
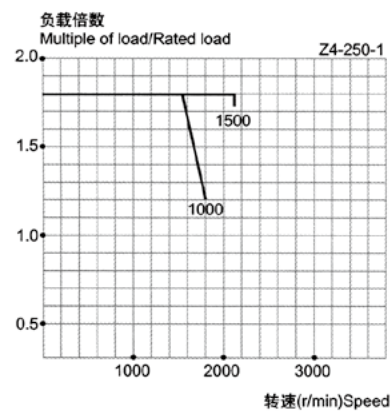
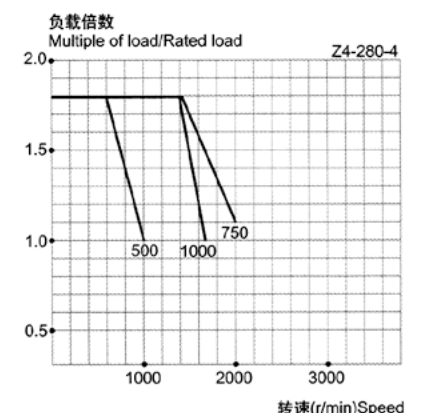
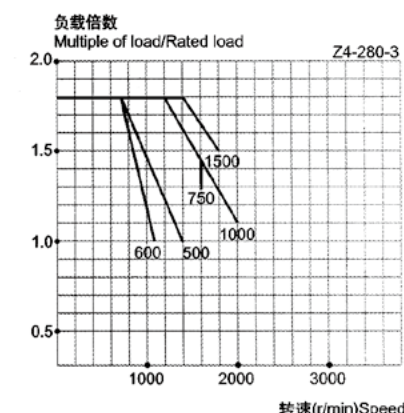
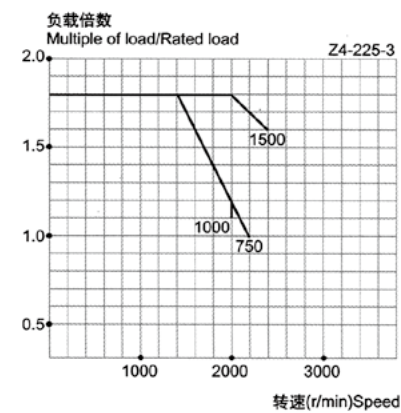
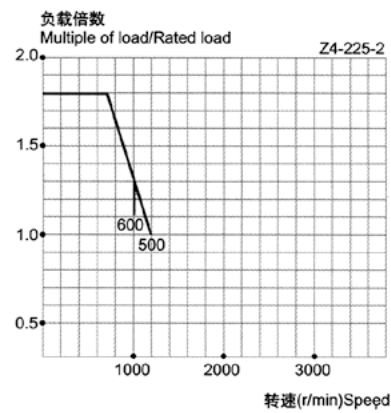
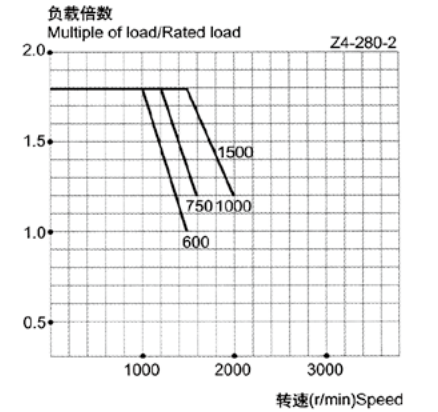
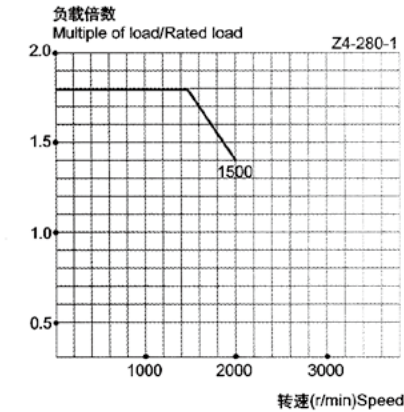
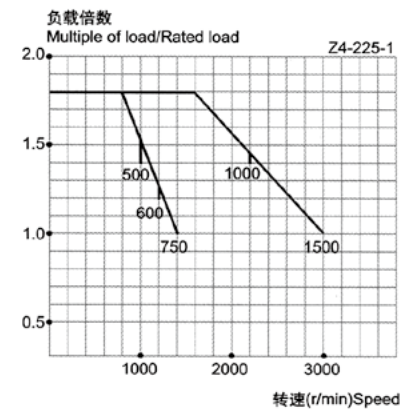
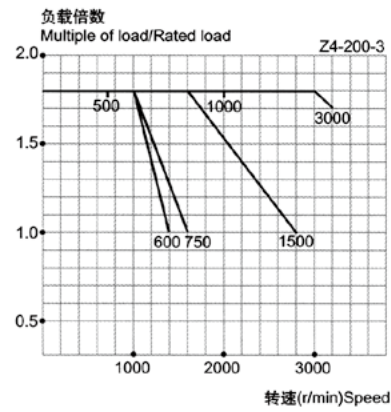
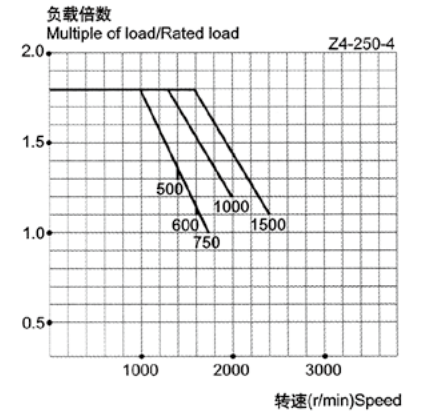
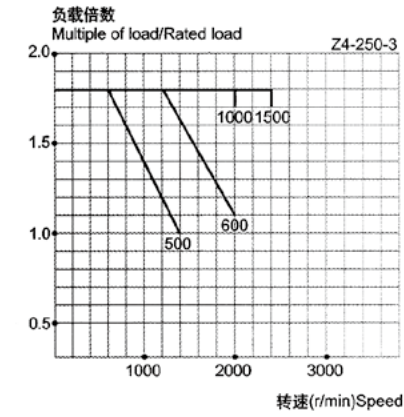
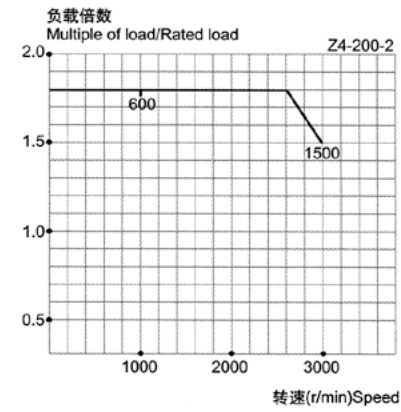
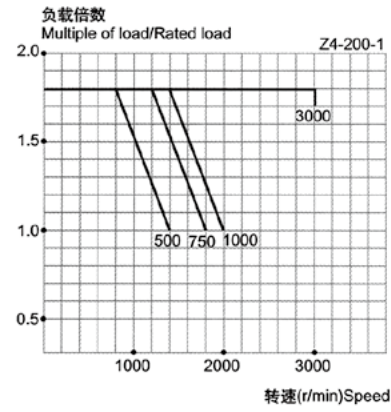
Description(Appendix 1)

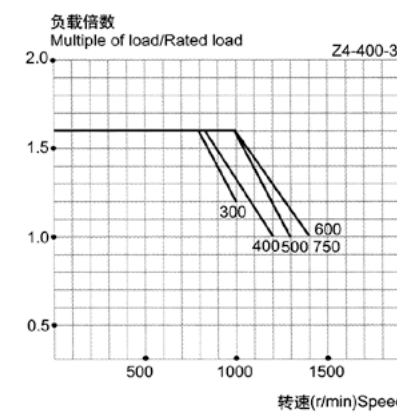
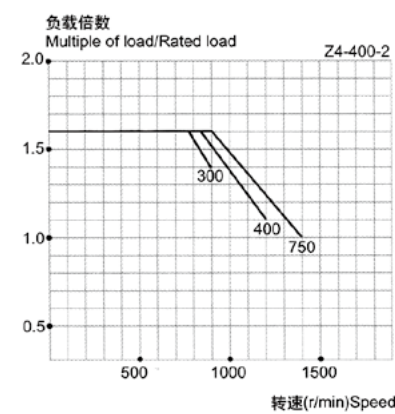
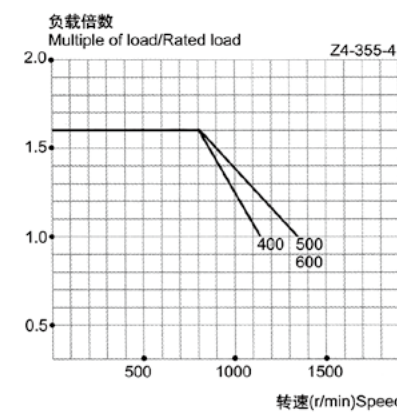
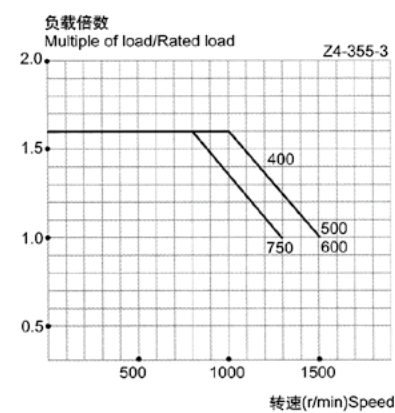
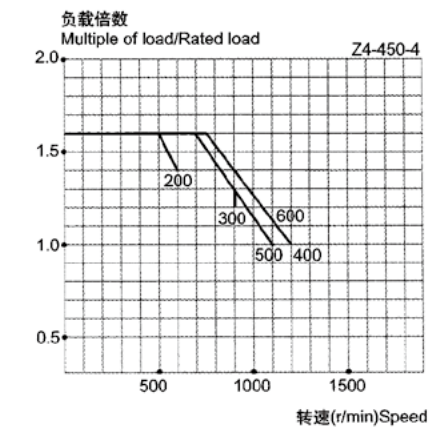
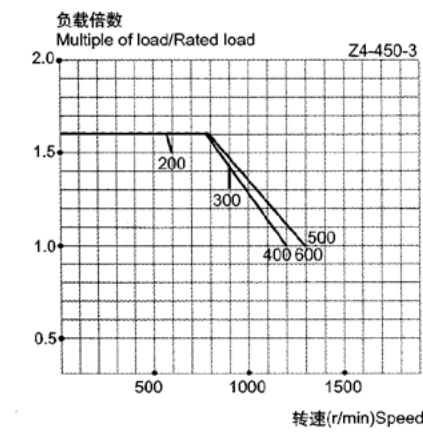
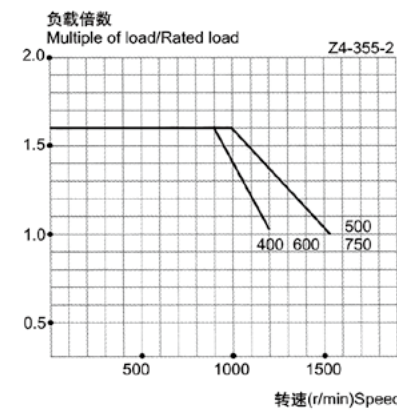
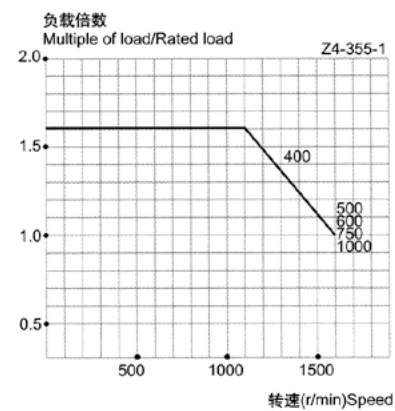
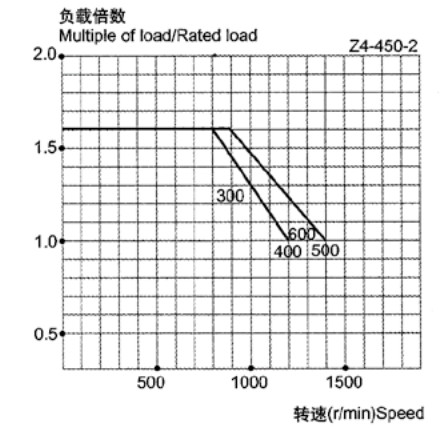
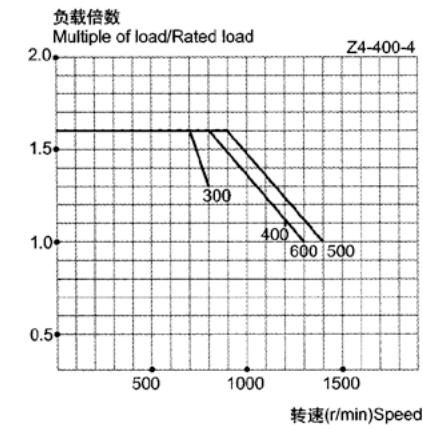
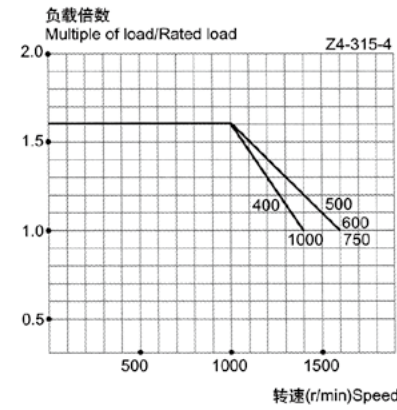
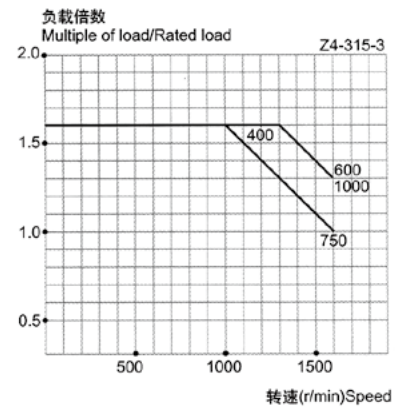
1. Multiple of load implies the multiple of armature current (armature circuit characteristic factor).
2. The figures beside the curves in the drawing are the rated speed of motors,
3. The multiple of load under speed regulation via field weakening for frame size Z4--160 and below may be consulted with the manufacturer.

附录1: 电枢回路特性系数

Appendix1:armature circuit characteristic factor







备注

在启动他励电动机的时候，须在接通电枢回路之前接通磁场线圈至额定电压。停车时，先切断电枢回路，然后断开磁场电路，避免在启动和停车时因弱磁引起过速。

Remarks

During starting a separately excited motor, it needs to turn on the field winding to its rated voltage before switching on the armature circuit. And for stopping, cut off the armature circuit first and then switch off the field circuit, avoiding excessive speed through field weakening when it is starting or stopping.

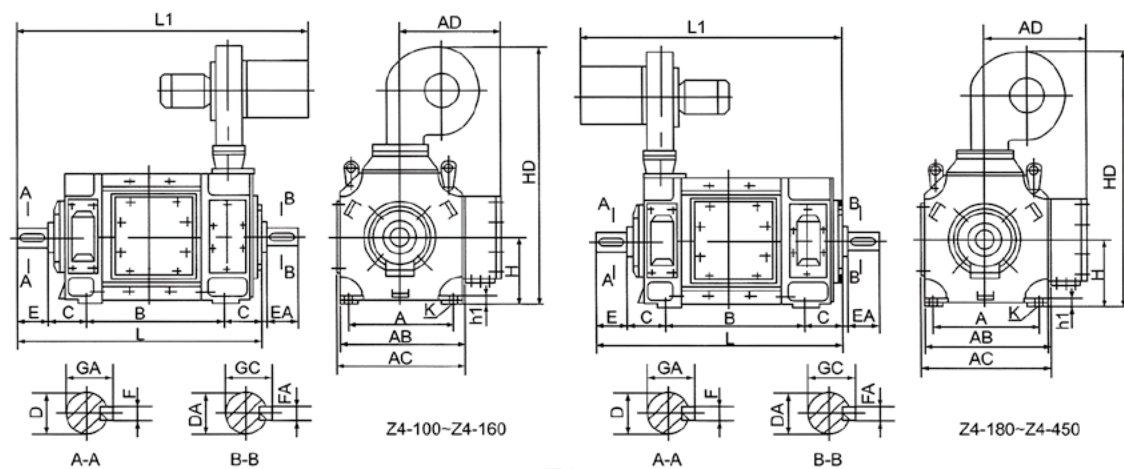


图1
Figure 1

表 3 卧式、机座带底脚

Table 3 Horizontal, foot-mounted

型号 Type	安装尺寸 Mounting Dimensions													外形尺寸 Outline Dimensions																							
	A	B	C	D	E	F	GA	DA	EA	FA	GC	H	K	AB	AC	AD	HD	L	L1	h1																	
Z4-100-1	160	318	63	24	50	8	27	24	50	8	27	100	12	197	234	179	398	500	580	10																	
Z4-100-2		358																540	620																		
Z4-112/2-1	190	337	70	28	60	8	31	28	60	8	31	112	12	221	255	202	452	544	612	10																	
Z4-112/2-2		367																574	642																		
Z4-112/2-3		407																614	682																		
Z4-112/2-4		477																684	752																		
Z4-112/4-1	190	347	70	32	80	10	35	32	80	10	35	112	12	221	255	202	452	573	642	10																	
Z4-112/4-2		387																613	682																		
Z4-112/4-3		437																663	732																		
Z4-112/4-4		497																723	792																		
Z4-132-1	216	355	89	38	80	10	41	38	80	10	41	132	12	260	295	240	527	619	814	12																	
Z4-132-2		405																669	864																		
Z4-132-3		465																729	924																		
Z4-132-4		545																809	1004																		
Z4-160-11	254	411	108	48	110	14	51.5	48	110	14	51.5	160	15	316	346	283	625	744	953	14																	
Z4-160-12		476																809	986																		
Z4-160-21		451																784	993																		
Z4-160-22		516																849	1026																		
Z4-160-31		501																834	1043																		
Z4-160-32		566																899	1076																		
Z4-160-41		561																894	1103																		
Z4-160-42		626																959	1136																		
Z4-160-51		631																964	1173																		
Z4-160-52		696																1029	1206																		
Z4-180-11		279																436	121		55	110	16	59	55	110	16	59	180	15	356	390	305	731	794	1022	16
Z4-180-12																		501																	859	1087	
Z4-180-21	476		834	1062																																	
Z4-180-22	541		899	1127																																	
Z4-180-31	526		884	1112																																	
Z4-180-32	591		949	1177																																	
Z4-180-41	586		944	1172																																	
Z4-180-42	651		1009	1237																																	
Z4-180-51	656		1014	1242																																	
Z4-180-52	721		1079	1307																																	

表 3(续)

Table 3 (Continued)

型号 Type	安装尺寸 Mounting Dimensions													外形尺寸 Outline Dimensions																							
	A	B	C	D	E	F	GA	DA	EA	FA	GC	H	K	AB	AC	AD	HD	L	L1	h1																	
Z4-200-11	318	566	133	65	140	18	69	65	140	18	69	200	19	396	430	355	779	977	1158	18																	
Z4-200-12		614																1025	1206																		
Z4-200-21		606																1017	1198																		
Z4-200-22		654																1065	1246																		
Z4-200-31		686																1097	1278																		
Z4-200-32		734																1145	1326																		
Z4-200-41		756																1167	1348																		
Z4-200-42		804																1215	1396																		
Z4-225-11	356	701	149	75	140	20	79.5	75	140	20	79.5	225	19	440	474	398	981	1140	1605	20																	
Z4-225-12		761																1200	1665																		
Z4-225-21		751																1190	1655																		
Z4-225-22		811																1250	1715																		
Z4-225-31		811																1250	1715																		
Z4-225-32		871																1310	1775																		
Z4-250-11		406																715	168		85	170	22	90	75	140	20	79.5	250	24	490	524	432	1031	1225	1657	25
Z4-250-12																		775																	1285	1717	
Z4-250-21	765		1275	1707																																	
Z4-250-22	825		1335	1767																																	
Z4-250-31	825		1335	1767																																	
Z4-250-32	885		1395	1827																																	
Z4-250-41	895		1405	1837																																	
Z4-250-42	955		1465	1897																																	
Z4-280-11	457	762	190	95	170	25	100	85	170	22	90	280	24	550	584	462	1130	1315	1748	25																	
Z4-280-12		852																1405	1838																		
Z4-280-21		822																1375	1808																		
Z4-280-22		912																1465	1898																		
Z4-280-31		892																1535	1968																		
Z4-280-32		982																1525	1958																		
Z4-280-41		972																1615	2048																		
Z4-280-42		1062																1615	2048																		
Z4-315-091	508	817	216	100	210	28	106	95	170	25	100	315	28	620	654	497	1221	1462	1827	30																	
Z4-315-092		907																1552	1917																		
Z4-315-11		887																1532	1897																		
Z4-315-12		977																1622	1987																		
Z4-315-21		967																1612	1977																		
Z4-315-22		1057																1702	2067																		
Z4-315-31		1057																1702	2067																		
Z4-315-32		1147																1792	2157																		
Z4-315-41		1157																1802	2167																		
Z4-315-42		1247																1892	2257																		

表 3 (完)
Table 3 (END)

型号 Type	安装尺寸 Mounting Dimensions													外形尺寸 Outline Dimensions						
	A	B	C	D	E	F	GA	DA	EA	FA	GC	H	K	AB	AC	AD	HD	L	L1	h1
Z4-355-081		818																1539	1860	
Z4-355-082		908																1629	1950	
Z4-355-091		888																1609	1930	
Z4-355-092		978																1699	2020	
Z4-355-11		968																1689	2010	
Z4-355-12		1058																1779	2100	
Z4-355-21	610	1058	254	110	210	28	116	110	210	28	116	355	28	700	734	701	1301	1779	2100	30
Z4-355-22		1148																1869	2190	
Z4-355-31		1158																1879	2200	
Z4-355-32		1248																1969	2290	
Z4-355-41		1268																1989	2310	
Z4-355-42		1358																2079	2400	
Z4-400-11		959																1732	1817	
Z4-400-12		1079																1852	1937	
Z4-400-21		1039																1812	1897	
Z4-400-22	686	1159	280	120	210	32	127	120	210	32	127	400	35	790	830	750	1620	1932	2017	35
Z4-400-31		1129																1902	1987	
Z4-400-32		1249																2022	2107	
Z4-400-41		1229																2002	2087	
Z4-400-42		1349																2122	2207	
Z4-450-11		1061																1944	2050	
Z4-450-12		1181																2064	2070	
Z4-450-21		1151		140	250	36	148											2034	2140	
Z4-450-22		1271																2154	2260	
Z4-450-31	800	1251	315					140	250	36	148	450	35	890	924	800	1720	2134	2240	40
Z4-450-32		1371																2254	2360	
Z4-450-41		1361																2294	2350	
Z4-450-42		1481		160	300	40	169											2414	2470	
Z4-450-51		1481																2414	2470	
Z4-450-52		1601																2534	2590	

所有型号均可带我厂出品的ZYS-A型直流测速发电机,此时电机长度尺寸L要增300mm

All type can be provided with type ZYS-A d-c tachogenerator made by our factory. In that case, the dimension L of the motor length will increase by 300mm.

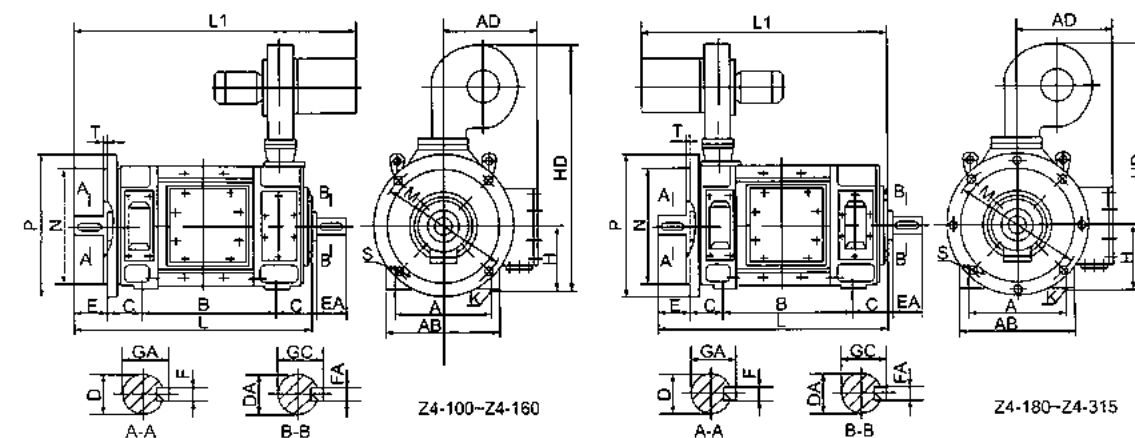


图2
Figure 2

表 4 卧式、机座带底脚、端盖带凸缘

Table 4 Horizontal, flanged foot-mounted

型号 Type	安装尺寸 Mounting Dimensions																	外形尺寸 Outline Dimensions								
	A	B	C	D	E	F	GA	DA	EA	FA	GC	H	K	M	N	S	Holes	T	P	AB	AC	AD	HD	L	L1	
Z4-100-1	160	318																							500	580
Z4-100-2		358	63	24	50	8	27	24	50	8	27	100	12	215	180	15	4	4	250	197	234	179	398	540	620	
Z4-112/2-1		337																							544	612
Z4-112/2-2		367																							574	642
Z4-112/2-3	190	407	70	28	60	8	31	28	60	8	31	112	12	215	180	15	4	4	250	221	255	202	452	614	682	
Z4-112/2-4		477																							684	752
Z4-112/4-1		347																							573	642
Z4-112/4-2		387																							613	682
Z4-112/4-3	190	437	70	32	80	10	35	32	80	10	35	112	12	215	180	15	4	4	250	221	255	202	452	663	732	
Z4-112/4-4		497																							723	792
Z4-132-1		355																							619	814
Z4-132-2		405																							669	864
Z4-132-3	216	465	89	38	80	10	41	38	80	10	41	132	12	265	230	15	4	4	300	260	295	240	527	729	924	
Z4-132-4		545																							809	1004
Z4-160-11		411																							744	953
Z4-160-12		476																							809	986
Z4-160-21		451																							784	993
Z4-160-22		516																							849	1026
Z4-160-31		501																							834	1043
Z4-160-32	254	566	108	48	110	14	51.5	48	110	14	51.5	160	15	300	250	19	4	5	350	316	346	283	625	899	1076	
Z4-160-41		561																							894	1103
Z4-160-42		626																							959	1136
Z4-160-51		631																							964	1173
Z4-160-52		696																							1029	1206
Z4-180-11		436																							794	1022
Z4-180-12		501																							859	1087
Z4-180-21		476																							834	1062
Z4-180-22		541																							899	1127
Z4-180-31		526																							884	1112
Z4-180-32	279	591	121	55	110	16	59	55	110	16	59	180	15	350	300	19	4	5	400	356	390	305	731	949	1177	
Z4-180-41		586																							944	1172
Z4-180-42		651																							1009	1237
Z4-180-51		656																							1014	1242
Z4-180-52		721																							1079	1307

表 4(完)

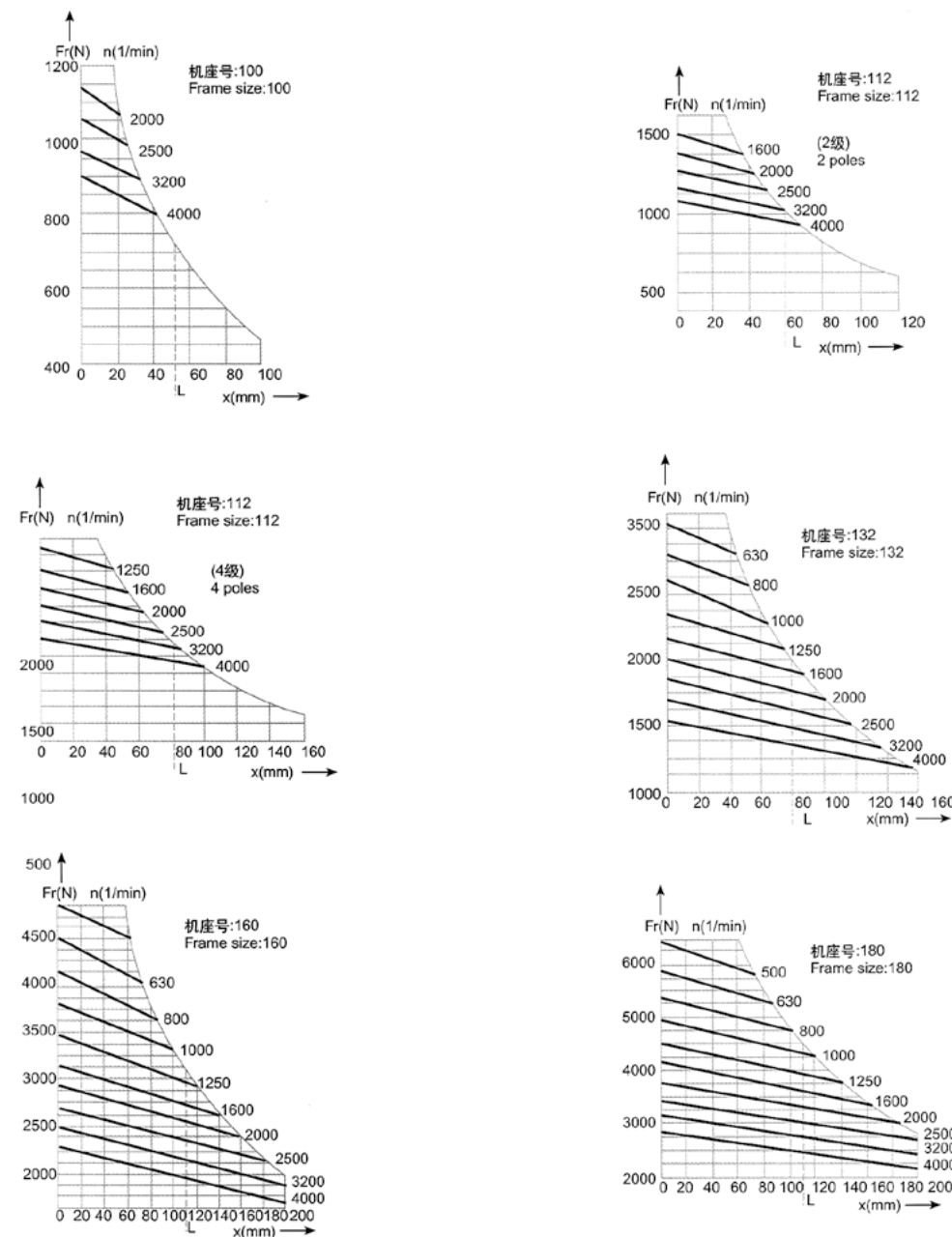
Table 4 (End)

型号 Type	安装尺寸 Mounting Dimensions																外形尺寸 Outline Dimensions								
	A	B	C	D	E	F	GA	DA	EA	FA	GC	H	K	M	N	S	Holes	T	P	AB	AC	AD	HD	L	L1
Z4-200-11		566																						977	1158
Z4-200-12		614																						1025	1206
Z4-200-21		606																						1017	1198
Z4-200-22	318	654	133	65	140	18	69	65	140	18	69	200	19	400	350	19	8	5	450	396	430	355	779	1065	1246
Z4-200-31		686																						1097	1278
Z4-200-32		734																						1145	1326
Z4-200-41		756																						1167	1348
Z4-200-42		804																						1215	1396
Z4-225-11		701																						1140	1605
Z4-225-12		761																						1200	1665
Z4-225-21	356	751	149	75	140	20	79.5	75	140	20	79.5	225	19	500	450	19	8	5	550	440	474	398	981	1190	1655
Z4-225-22		811																						1250	1715
Z4-225-31		811																						1250	1715
Z4-225-32		871																						1310	1775
Z4-250-11		715																						1225	1657
Z4-250-12		775																						1285	1717
Z4-250-21		765																						1275	1707
Z4-250-22	406	825	168	85	170	22	90	75	140	20	79.5	250	24	600	550	24	8	6	660	490	524	432	1031	1335	1767
Z4-250-31		825																						1335	1767
Z4-250-32		885																						1395	1827
Z4-250-41		895																						1405	1837
Z4-250-42		955																						1465	1897
Z4-280-11		762																						1315	1748
Z4-280-12		852																						1405	1838
Z4-280-21		822																						1375	1808
Z4-280-22		912																						1465	1898
Z4-280-31	457	892	190	95	170	25	100	85	170	22	90	280	24	600	550	24	8	6	660	550	584	462	1130	1445	1878
Z4-280-32		982																						1535	1968
Z4-280-41		972																						1525	1958
Z4-280-42		1062																						1615	2048
Z4-280-51		1062																						1615	2048
Z4-280-52		1152																						1705	2138
Z4-315-11		887																						1532	1897
Z4-315-12		977																						1622	1987
Z4-315-21	508	967	216	100	210	28	106	95	170	25	100	315	28	740	680	24	8	6	800	620	654	497	1221	1612	1977
Z4-315-22		1057																						1702	2067
Z4-315-31		1057																						1702	2067
Z4-315-32		1147																						1792	2157
Z4-315-41		1157																						1802	2167
Z4-315-42		1247																						1892	2257

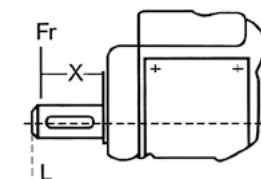
所有型号均可带我公司出品的ZYS-A型直流测速发电机,此时电机长度尺寸L要增加300mm

All type can be provided with type ZYS-A d-c tachogenerator made by our factory. In that case, the dimension L of the motor length will increase by 300mm.

附录2 Appendix 2

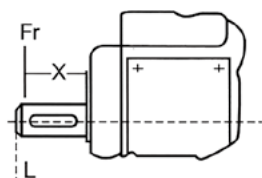
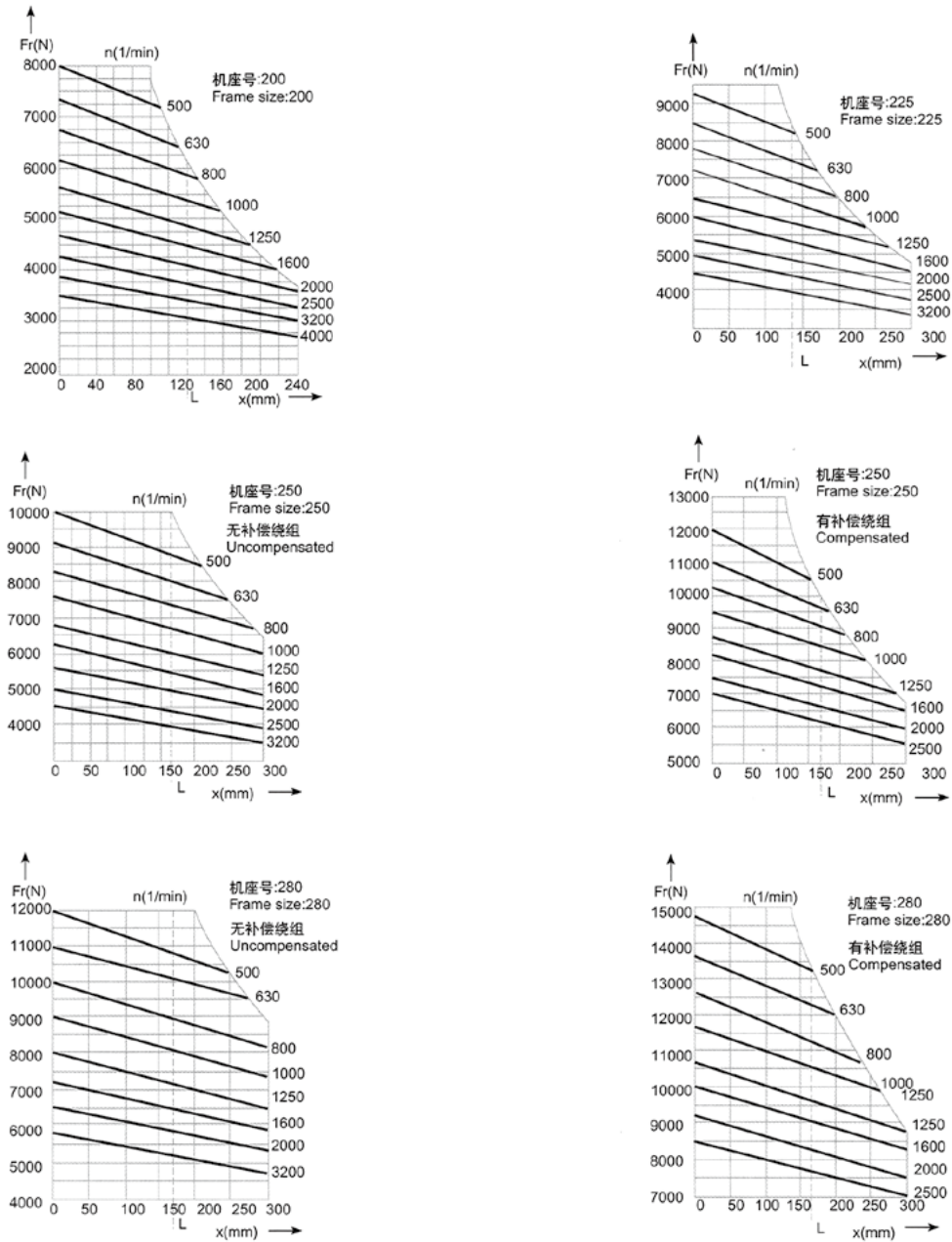


电机传动端能承受的径向力
Addition radial forces sustainable by
the drive of the motors



正常轴伸
Normal shaft end

附录2续 Appendix 2 (Continued)



正常轴伸
Normal shaft end

需要时提供机座号 315-450 的数值
电机传动端能承受的径向力
Addition radial forces sustainable by
the drive of the motors

说明 (附录3) Description(Appendix 3)

本附录列出了部分Z4系列直流电动机和Z4直流发电机特殊规格, 仅供设计选型时参考。
Listed in Appendix 3 are the special specification of some Z4 DC motors and generators, just for reference in type selection.

型号 Type	额定 功率 Rated Output	额定 电压 Rated Voltage	额定 转速 Rated Speed	弱磁 转速 Speed with Field Weakened	电枢 电流 Arm. Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia
	P _N	U _N	n _N	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
	kW	V	r/min	r/min	A	W	Ω(20°C)	mH	H	%	kg·m ²
Z4-250-21B	40	400	500	1500	100	2750	0.65	7.7	5.23	79.6	5.6
Z4-250-41B	25	400	330	2000	36	3000	1.155	19.8	20.5	76.3	7.0
	45	220	400	2000	205	3000	0.1896	2	7.28	77.3	7.0
Z4-280-31B	65	400	400	2000	163	3600	0.3883	4.3	17	76.8	12.8
	78	340	470	2330	230	3600	0.1811	2.1	7.57	80.9	12.8
	90	460	500	1800	196	3600	0.2659	3.9	5.75	81.5	12.8
	100	400	570	2000	250	3600	0.1627	1.8	9.14	82.9	12.8
Z4-280-21	75	400	500	1500	188	3500	0.2127	6.5	5.66	83.5	18.4
Z4-280-32	185	550	1450		336	3600	0.0647	2.5	21.4	92.5	21.2
Z4-315-31	100	400	330	2000	250	4650	0.2092	3.9	7.53	80.8	27.2
Z4-315-41	165	460	400	1800	359	5200	0.1156	3.2	7.81	82.5	30.8
Z4-355-11	132	400	330	2000	330	4700	0.1485	2.5	26.1	81.3	42
Z4-355-12	460	700	1450		657	4700	0.174	0.34	8.41	93.7	42
Z4-355-41	105	400	230	1300	263	6500	0.1779	3.5	14.5	81.2	60
	153	340	385	1280	450	6500	0.0464	0.98	27	88.3	60
Z4-400-42	690	460	750	1500	1500	7100	0.0114	0.34	31.1	93	94
Z4-450-51	800	660	500	1200	1212	9600	0.0240	0.73	5.3	91.7	196

附录3B: 直流发电机技术数据表

Appendix 3B: Technical data of DC motor

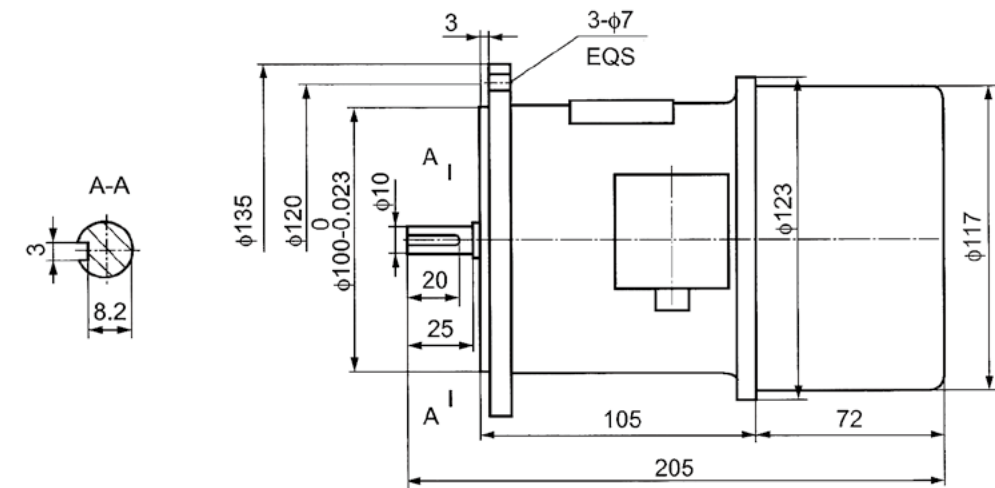
型号 Type	额定 功率 Rated Output	额定 电压 Rated Voltage	额定 转速 Rated Speed	弱磁 转速 Speed with Field Weakened	电枢 电流 Arm. Curr.	励磁 功率 Field Power	电枢 回路 电阻 Arm. Circuit Resistance	电枢 回路 电感 Arm. Circuit Inductance	磁场 电感 Field Inductance	效率 Eff.	惯量矩 Moment of Inertia
	P _N	U _N	n _N	n _F	I _N	P _F	R	L _A	L _F	%	GD ²
	kW	V	r/min	r/min	A	W	Ω(20℃)	mH	H	%	kg·m ²
Z4-250-21B	65	400	500	2000	200	3000	0.2115	2.8	7.02	80.7	7.0
Z4-280-21B	100	400	600	3000	306	3500	0.1156	1.1	5.15	83.7	11.2
Z4-280-41B	110	440	500	2000	295	4000	0.0124	1.6	3.88	83.8	14.4
Z4-315-092	375	500	1750	1900	800	3700	0.0149	0.31	21.2	93.2	18.4
Z4-315-12	444	460	1770	1800	1023	3850	0.0099	0.17	10.6	93.7	21.2
Z4-315-21	150	500	500	1700	343	4350	0.0983	1.7	20.6	87	24
Z4-315-22	230	220	705	1700	1177	4350	0.0105	0.21	1.91	88.3	24
Z4-355-082	500	460	1470	1500	1157	4200	0.0101	0.17	8.56	93.2	37
Z4-355-32	520	520	850	900	1075	6000	0.0159	0.36	7.37	92.4	52
	500	660	1000	1500	810	6000	0.0217	0.49	5.6	92.9	52
Z4-355-42	567	520	825	900	1165	6500	0.0146	0.37	8.37	92.7	60
Z4-400-12	600	500	1150	1600	1281	5200	0.0098	0.17	16.1	93.1	66
Z4-400-22	400	520	660	1300	845	6000	0.0295	0.63	7.1	91.4	74
Z4-400-32	618	550	850	900	1200	6400	0.0128	0.33	18.2	93	84
Z4-400-42	400	520	500	1200	840	7100	0.026	0.77	10.4	92	94
	500	660	600	1200	824	7100	0.0344	0.89	7.73	91.1	94
	700	520	800	900	1445	7100	0.0115	0.29	14.8	92.4	94
Z4-450-12	600	660	750	1000	980	5100	0.020	0.55	9.44	92.5	122
Z4-450-21	326	660	500	1500	545	6500	0.0517	1.1	14.9	91.2	138
Z4-450-22	400	520	400	900	860	6500	0.038	0.98	15	90	138
	500	520	500	1000	1000	6500	0.023	0.64	11.7	91.2	138
	600	520	600	1200	1250	6500	0.016	0.42	12	92.7	138
	700	600	750	1000	1240	6500	0.0133	0.38	8.75	93	138
Z4-450-32	480	520	400	900	1030	7500	0.0305	0.77	10.6	90.1	156
	600	520	500	1000	1255	7500	0.0177	0.55	5.19	92	156
	700	520	600	1000	1460	7500	0.0134	0.33	8.22	92.3	156
Z4-450-42	570	520	400	900	1220	7800	0.022	0.51	4.5	90.1	174
	700	520	500	1000	1450	7800	0.0142	0.44	7.6	92	174
	750	660	600	900	1215	7800	0.0181	0.58	9.37	92.5	174
Z4-450-51	800	660	500	1000	1310	8600	0.0202	0.66	6.99	92	196

ZYS系列直流永磁式测速发电机

技术数据表

Technical data

电机 型号 Motor Type	额定 功率 Rated Output W	额定 电压 Rated Voltage V	额定 电流 Rated Current mA	最大线性 工作转速 Max r/min	纹波 系数 Ku %	线性 误差 ±δ× %	输出电压 不对称度 Kb %	输出 斜率 V/K r/min
ZYS-1A	4.4	55	80	0~2000	1.5	1.5	1.5	
ZYS-3A	22	110	200	0~2000	1.5	1.5	1.5	
ZYS-6A	22	110	200	0~3000	1.5	1.5	1.5	
ZYS-100A	8	100	80	0~1000	1.5	1.5	1.5	
ZYS-120B	10.8		90	2500	1	1	1	120
ZYS-20B	3.6		180	5000	1	1	1	20
ZYS-60B	12		200	5000	1	1	1	60



ZYS电机外形尺寸安装图