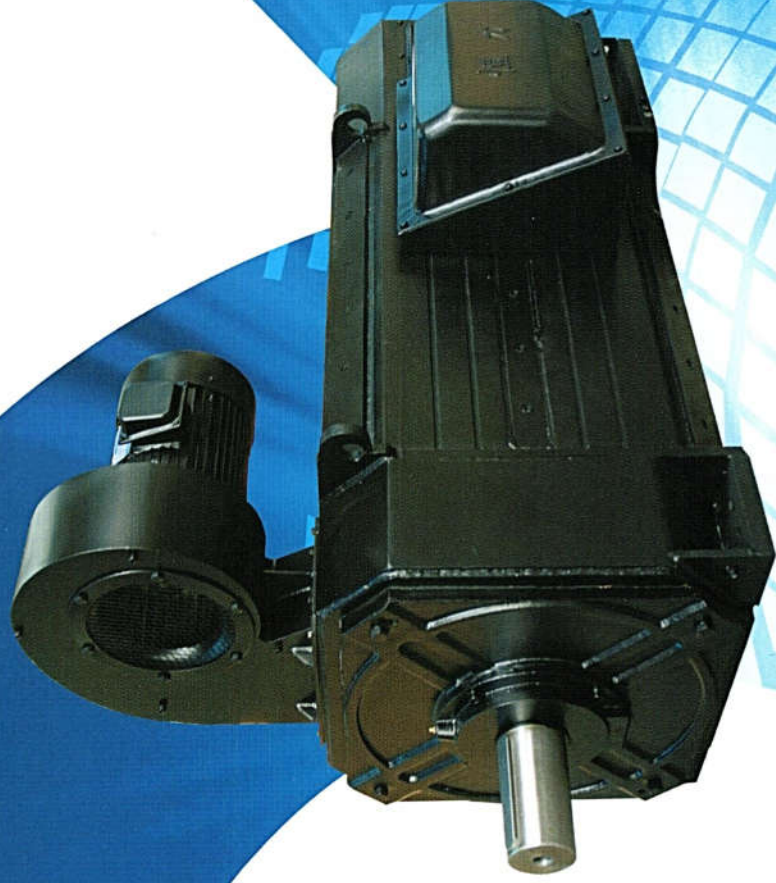




ZFQZ系列

频繁起制动直流电动机

ZFQZ SERIES START—STOP SHARE D.C MOTOR

杭州新恒力电机制造有限公司
Hangzhou New Hengli Electric Machine MFG. Co., Ltd.



国家二级企业
ISO9001:2000质量认证
国家CQC产品认证
CE产品认证



恒乾三力

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公司简介

杭州新恒力电机制造有限公司（原杭州直流电机厂）始建于一九五四年，积累近五十年设计与生产直流电机的专业经验，成为部、省定点生产中大型及小型交、直流电机的专业制造厂家，并于一九八八年晋升“国家二级企业”，一九九八年八月通过ISO9002质量体系认证，二〇〇一年十二月转版，获得ISO9001 2000版证书，05年获得德国莱茵公司的CE认证。

公司专业生产Z系列、Z4系列、ZZJ800轧机辅助用直流电机、ZSN4水泥回转窑主传动系列、ZYZJ榨糖专用系列、ZFQZ频繁起制动用直流电机；2001年又引进国内一流专业人才，并与上海电器科学研究所、浙江大学、中科院电工所横向协作，开发了YVF2、YJP交流变频电机、Y、YR、YKK、YKS、YRKK、YRKS系列交流高低压中型异步电机，可根据用户需求设计、制造各种派生系列交直流电机，最大制造功率交流10000KW，直流3500KW，最大中心高度为1120mm，具备年产200万千瓦各类中大型交直流及小型直流电机的能力。主要电机系列符合国际IEC标准，广泛应用于冶金、橡塑机械、电工、水泥、石化、供水、橡塑机械、矿山机械、造船、军工等行业，产品畅销全国各地，并部分出口到东南亚、欧美等国家和地区，在大客户中享有很高的信誉和威望。

公司共有三个厂区——富阳东坞山新恒力总部、富阳高桥区和转塘工业园厂区，总占地面积165333.4m²，建筑面积965200m²，现有职工620人，其中工程技术人员63人，中高级职称的有22人，现有各类设备207台，具有对电机进行完整型式试验的能力，并具备包括特殊环境实验室在内的完备的检测手段。公司设有技术中心，专门从事产品的引进开发、科研和新工艺开发工作，计算机辅助设计、管理技术在科研、设计、经营管理中得到了广泛的应用并已于2000年年底实现计算机网络化。

公司本着‘起步晚，起点高’的精神，在吸收国内外先进电机制造工艺和绝缘技术的基础上，于2000年成功开发的Z系列直流电机，由于与哈尔滨电机研究所进行横向协作，并采用了高等级的绝缘材料和特殊的换向工艺，使Z系列直流电机的技术水平和品质居于国内领先，产品在橡胶行业、冶金行业得到广泛应用，截止2011年6月，累计已生产单台功率500KW以上直流电机8600台、430万千瓦，在业界享有很高的美誉度。

在“拼搏”的企业精神，“求是”的工作作风激励下，经过全体员工努力，企业荣获“浙江省先进工业企业”、“浙江省重合同、守信用企业”、“中国电器工业协会推介产品证书”、“中国技术监督情报会放心品牌称号”，05年获得中国电力设备管理协会推荐品牌证书，并被上海电器科学研究所（集团）有限公司指定为特种电机生产基地

我们的宗旨是质量第一，顾客至上。我们随时根据顾客的要求及时提供优质的产品和完善的售后服务，竭诚为中外顾客服务。

选择‘恒力’就是选择了优秀的品质和完善的售后服务！



Company Profile

Hangzhou New Hengli Electric Machine MFG. Co., Ltd. (Originally Hangzhou DC Motor Factory) was founded in 1954, which has more than 50 years designing and manufacturing experiences for DC motor, our company becomes a expert manufacturer base for ministry and province projects, in which large, medium and small size AC and DC motors are produced. In 1988, it has been promoted to national second level enterprise and acquired the quality certificate of ISO9002 and its ISO9001 2000 verse in 2001, and passed CE Certificate of Lai Yin TUV company in Germany.

Our products includes Z series、Z4 series、ZZJ800 series for mill auxiliary DC motor 、ZSN4 series for cement rotary kiln, ZYZJ series for sugar cane mill、ZFQZ type automatic DC motor; High level domestic specialists are introduced to our company in 2001. With technology cooperating with Shanghai Electrical Science Researching Institute, Zhejiang University and Institute of Electrical Engineering Chinese Academy of Sciences, YVF2 series Inverter-fed induction AC motor, and high or low voltage AC induction motor, such as Y, YR, YKK, YKS, YRKK, YRKS, etc. are developed. All kinds of deriving motor series AC and DC motors are designed according to the request of customers, including D.C. Motor with max-power 3500kw and A.C.motor with max-power 10000kw. The max-center-height of the motor reaches 1120mm. Our annual capacity reaches more than 20000mkw. Our products comply with international IEC standard, and widely used in metallurgy, electricity power, cement making, petroleum and chemical industry, water supply, rubber and plastic industry, mining, paper-making, ordnance-making, etc. Our products are widely sold all over the country, and part ones are exported to Southeast Asia , Europe and America, enjoying high reputations among high-level customers.

There are three manufacturing zones——New Hengli Industrial Zone in Dongwu Hill in Fuyang; Gaoqiao manufacturing Zone in Fuyang, Zhuantang Industrial Park, which covers total area of 165333.4m², construction area of 965200m². 620 employees including 63 engineers are working here, among of whom 22 engineers have middle or high level professional job title. We possesses 207 sets of different kinds of equipment, and have the ability of testing the whole function and technology parameters of the motor with complete set of checking instruments for the motor. The technology center specializes in production introduction and development, new technology designing, management control and computer assistant design system which are widely used in scientific research, design and management. In 2002, computer net and office system have been built.

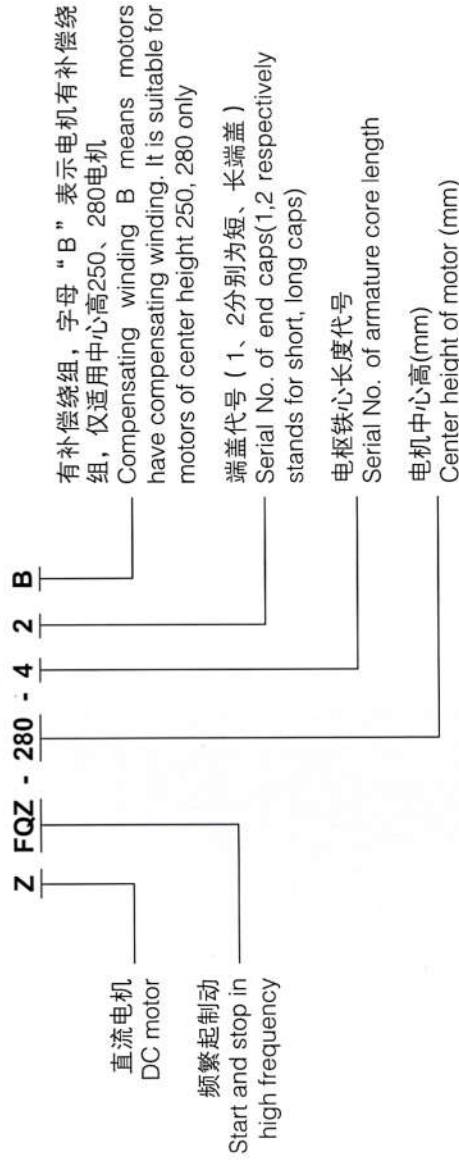
The spirit of 'later start, higher start' in the absorption on the basis of domestic and foreign advanced motor manufacturing process and insulation techniques, we successfully developed Z series D.C. motor. Collaboratiing with Harbin Institute of Large Electrical Machinery, using higher degree of insulation materials and special commutation manufacturing process, we have the leading technical and quality of manufacturing Z series D.C. motors which are widely used in the rubber industry, metallurgy industry. To end of June 2011, we have produced 8600 sets of DC motors with output larger than 500KW, totally 4.3 million kilowatts, enjoyed a high reputation in the industry fields.

Inspired with company spirits of "Exert Ourselves" and working style of "Pursue the Truth", through great effort of all personnels, we acquired "Zhejiang Advanced Industrial Enterprises"; "Zhejiang Province Trustworthiness Enterprise"; "Certificate for China Electric Industry Commission Recommend Products"; "Reassurance Brand" title from China Association for Technical Supervision Information(CATSII); Recommend Brand Certificate by China Association of Electricity Supply in 2005; and to be titled "Manufacturing Base for Special Motors" by Shanghai Electrical Science Research Institute.

Provide with the best quality and serving customers with real heart is the purpose we pursue, we are supplying the best quality products and good after-sales service according to customers' requests, try our best to serve customers in domestic and foreign market.

Choose "Hengli" is to choose an excellent quality and perfect service.

型号说明 / Explanations for Type



结构特点 / Structure Features

1. 电动机的机座为八角形薄钢板迭片结构, 具有定子空间利用率高, 内部结构紧凑、转动惯量小、重量轻、适应可控硅供电等优点。
2. 电动机全部带补偿绕组, 使电机有优良的换向性能和过载能力。
3. 电动机的绝缘等级为F级, 并经无溶剂真空压力浸漆 (VPI) 处理。绕组绝缘具有良好绝缘性能和机械强度。
4. 换向片为竖板式整体结构, 竖板与电枢线圈连接采用钎焊惰性气体保护焊 (TIG)。
5. 电枢铁心采用斜槽结构, 能有效减小振动和噪音。
6. 电动机采用滚动轴承及不停机加油结构。

1. The motor baseplate is of octagon laminated thin steel plate structure. Therefore, it has many advantages such as high utilization of stator room, tight inner structure, small rotating inertia, lighter weight and suitable for supplying electricity by controllable silicon.
2. All the motors have compensating winding, which makes motors have a good ability of commutation and overload function.
3. The insulating level of motors is Level F. The insulation of motors is handled by Vacuum Impregnation (VPI). The winding has a good insulation and mechanical intensity.
4. The commutator segment is of vertical plate and integral structure. The connection with the vertical plate and armature coil adopts Tungsten insert gas shielded arc welding (TIG).
5. The armature core is of skewed slot structure, which is able to decrease vibration and noise effectively.
6. The motors structure is of rolling bearing and oil-filling without stopping.

产品性能 / Products Specification

1. 电动机的额定电压有220V、440V两种。根据需要也可以派生出其他等级电压。

2. 电动机的励磁方式为他励，励磁电压为180V或310V。根据需要也可派生出其他等级电压。

3. 电动机基速时允许按技术数据表规定的最大运行转矩运行，历时60s。

4. 额定电压为220V的电机，可以提高外施电压，使转速增加到额定转速的2倍。此时允许最大运行转矩为额定转矩的1.8倍，历时15s。

5. 额定电压220V的电动机按技术数据表规定的弱磁转速运行时最大运行转矩为额定转矩的0.6倍，历时15s。

6. 电动机的电流变化率（ di/dt ）可达到200—250倍额定电流/秒。若 $di/dt > 250$ ，可以协商解决。

7. 电动机的出线盒标准位置从传动端视在机座右侧。根据需要，也可装于机座左侧，但需在订货时注明。

1. There are 2 kinds of rated voltage of motors: 220V, 440V. As required, the motors with other voltage level can be produced.

2. The mode of excitation of motors is shunt type. The voltage of excitation is 180V or 310V. As required, the motors with other voltage level can be produced.

3. The motors could be operated for 60s under Max. Torque listed the Technical Data Table.

4. For the motors of rated voltage 220V, the rotating speed can reach as 2 times as the rated rotating speed through increasing the applied voltage. At this time, the allowable max. rotating moment is as 1.8 times as the rated rotating moment. It will last 15s.

5. For the motors of rated voltage 220V, the max. rotating moment is as 0.6 times as the rated rotating moment when the motors are running with field rotation regulated in the Technical Data Table. It will last 15s.

6. The electric current changing rate (di/dt) of the motors can reach as 200-250 times as the rated electric current changing rate. It can be discussed if $di/dt > 250$ is required.

7. The standard position of wire outlet box of the motors is on the right of the machine baseplate seen from the drive end. If required, it can be mounted on the left of the machine baseplate. If so, this requirement should be stated in the order.



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说明

General

ZFQZ系列直流电动机是在Z4系列直流电动机的基础上, 借鉴ZZJ-800系列直流电动机的主要工艺而开发的系列产品。电机的传动惯量分别为ZZJ-800系列和ZZJ-900系列的45%和65%, 适应频繁正逆转和频繁起制动的恶劣工况。电机具有优良的过载特性, 其最大转矩和起动转矩分别是ZZJ-800系列和ZZJ-900系列的112%和117%。电机重量仅为ZZJ-800系列的65%。电机功率等级符合IEC3413《起重、冶金用辅机电机技术规范》的国际标准。电机外形尺寸除了两底脚孔间轴向尺寸“B”之外, 均符合IEC72国际标准。电机通过带底板可达到ZZJ-800到ZZJ-900系列相一致的主要安装尺寸, 并可通过协商制成ZZJ-800和ZZJ-900系列相应的轴伸尺寸, 因而可替换ZZJ-800和ZZJ-900系列产品。

Series ZFQZ DC motors are developed on the basis of Z4 Series and ZZJ-800 Series DC motors. The rotating inertia of the motors is 45% and 65% of the motors of Series ZZJ-800 and ZZJ-900 respectively. The motors are suitable for direct and reversal rotation and start and stop in high frequency in a bad working circumstance. The motors are good-overloading. The max. rotating moment and the starting moment are 112% and 117% of the moments of Series ZZJ-800 and Series ZZJ-900 motors respectively. The weight of the motors is just 65% of the Series ZZJ-800 motors. The class of the motor power is in accordance with the international standard IEC34-13 “Technical Criteria of Auxiliary Machine and Hoisting and Metallurgy”. Outline mounting dimensions of the motors comply with IEC 72 Standard, except for the axial distance between the mounting holes (dimension B). The mounting dimension of the motors with bottom plates is able to be in compliance with the dimension of Series ZZJ-800 and Series ZZJ-900 motors. Also, the shaft extension dimension of the motors can be customized into the corresponding dimension of Series ZZJ-800 and Series ZZJ-900 motors after discussion with customers. Therefore, Series ZFQZ DC motors can substitute for Series ZZJ-800 and Series ZZJ-900 motors.

使用条件

Requirements for Use

1. 电动机使用于环境空气温度为 -30°C 到 $+40^{\circ}\text{C}$, 海拔不超过1000米的场所。
2. 电动机的供电电源采用静止整流电源或直流发电机电源。当采用三相全控桥式整流电源时, 可不外接平波电抗器而长期工作。

1. The allowable ambient temperature for the operation of the motors is $-30^{\circ}\text{C} \sim +40^{\circ}\text{C}$ and the allowable sea level is not higher than 1000m.
2. The supplying electric source of the motors adopts rectified electric source or DC generator electric source. When adopting 3-phase, fully controllable bridge rectified electric source, the motors can work for a long period without outer smoothing reactor.

工作制、防护等级、冷却方法和安装形式 working system, Protection Level, Cooling Mode and Mounting Type

- 电机为连续工作制 (S1)，其他工作制可按表1对技术数据表中的值进行折算。
The motors adopt continuous working system. Other working systems can convert the data in the Technical Data Table according to the Table 1.

表1 (Table 1)

工作制 Duty	负载增加 overload increasing
S2-30min	107%
S2-60min	100%
S3-40%	120%
S3-60%	110%

- 电机冷却方式均为他冷、强迫通风，即电机自带径向骑式鼓风机或管道通风或带空/水冷却器。其防护等级和冷却方式的对应关系见表2。所需要的冷却风量、风压及风机电动机的功率见表3，空/水冷却器循环风机功率冷却水流量见表4。

All the cooling modes of the motors are of separately-cooling and forced ventilation type. It means the motors are equipped with radial ride type air blower, duct ventilation cooler or air/water cooler. The corresponding relations between the protection level and the cooling mode are shown in Table 2. The ventilation quantity, ventilation pressure and the air blower power of the cooler are shown in Table 3. The recycling air power power and cooling water discharge of the air/water cooler shown in Table 4.

表2 (Table 2)

	防护等级 Protection Level	冷却方式 Cooling Mode
径向骑式鼓风机冷却 Radial Ride Type Air Blower Cooling	IP21S	IC06
单管风 Single-duct Ventilation	IP23S	IC17
双管风 Double-duct Ventilation	IP44	IC37
带空/水冷却器 With Air/Water Cooler	IP44	ICW86

表3 (Table 3)

机座号 Model	风量(m ³ /hr) Air Volumn	静压(Pa) Static Pressure	电动机功率(kw) Blower Motor Power	重量(kg) Weight
ZFQZ-250	3000	1400	3.0	70
ZFQZ-280	4000	1600	4.0	80
ZFQZ-315	4860	1600	5.5	90
ZFQZ-355	5200	1600	5.5	120
ZFQZ-400	7200	1800	5.5	180
ZFQZ-450	9000	1800	7.5	250

★ 注：风机电动机为三相二极380V

★ Note: The motors of air blower adopt 3-phase, 2-electrode and 380V

表4 (Table 4)

冷却器型号 Cooler Type	风机电动机 Blower Motor	冷却水流量(m ³ /h) Cooling Water Discharge	重量(kg) Weight
KSL-250	4.0 kw	11	400
KSL-280	5.5 kw	12	500
KSL-315	5.5 kw	13	600
KSL-355	7.5 kw	15	750
KSL-400	7.5 kw	18	850
KSL-450	11 kw	19.5	950

★ 注：风机电动机为三相二极380V

★ Note: The motors of air blower adopt 3-phase, 2-electrode and 380V

• 用户如需要其它类型工作制、防护等级、冷却方式和安装形式可另行协商。

If other working system, protection level, cooling mode and mounting type are required, it should be discussed separately.

附件 / Attachments

根据用户需求，本系列电动机可配套供应测速元件、过速保护装置、加热器和测温、限温保护元件等。

As required, this series of motors can be equipped with tacho-components, over-speed protection device heater and temperature-measurement, temperature-limit components.

Technical Data Table (A) (Specifications corresponding to Series ZZJ-800 and ZZJ-900)													
技术数据表(A) (与ZZJ-800和ZZJ-900系列相对应规格)										重量 Weight			
型号 Type	额定 功率 Rated Power	额定 电压 Rated Voltage	额定 转速 Rated Speed	励磁 转速 Field Speed	额定 电流 Rated Current	额定 转矩 Rated Torque	最大运 行转矩 Max. Torque	启动 转矩 Starting Torque	电枢回 路电阻 Armature Circuit Resistance	电枢回 路电感 Armature Circuit Inductance	励磁 功率 Field Power	转动 惯量 Moment of Inertia	重量 Weight
	kW	V	r/min		A		kNm		20℃ mΩ	mH	kW	kgm ²	kg
ZFQZ-250-081B	37.3	220	575	1725	220	0.62	1.86	2.17	130.7	0.93	2.10	0.95	710
		440	575	1150	112				541.4	3.7			
ZFQZ-250-21B	52	220	550	1650	288	0.91	2.73	3.19	77.1	0.62	2.75	1.4	900
		440	550	1100	144				329.5	3.4			
ZFQZ-280-12B	75	220	515	1300	415	1.39	4.17	4.87	54.8	0.51	3.10	2.5	1170
		440	515	1050	202				208.6	2.3			
ZFQZ-315-082	112	220	500	1250	614	2.14	6.42	7.49	34.4	0.48	4.50	4.1	1720
		440	500	1000	300				134.9	2.0			
ZFQZ-315-22	150	220	480	1200	795	2.99	8.97	10.5	22.5	0.39	4.35	6.0	1960
		440	480	960	393				89.5	1.4			
ZFQZ-315-21	186	220	435	1100	982	4.09	12.3	14.3	17.7	0.34	4.20	9.2	2520
		440	435	870	488				73.8	1.3			
ZFQZ-355-091	280	220	390	780	720	6.86	20.6	24.0	42.3	0.90	6.50	15	3720
		440	390	780	720				42.3	0.90			

技术数据表(B)
(部分已生产过的规格)

Technical Data Table (B)
(Specifications of Partial Produced Motors)

型号 Type	额定 功率 Rated Power	额定 电压 Rated Voltage	额定 转速 Rated Speed	额定 电流 Rated Current	额定 转矩 Rated Torque	最大运 行转矩 Max. Torque	起动 转矩 Starting Torque	电枢回 路电阻 Armature Circuit Resistance	20℃ mΩ	电枢回 路电感 Armature Circuit Inductance	励磁 功率 Field Power	转动 惯量 Moment of Inertia	重量 Weight
	kW	V	r/min	A		kNm		mH			kW	kgm ²	kg
ZFQZ-450-42	600	725	600	880	9.55	28.7	33.4	23.9	0.7	0.7	7.5	43.5	6700
ZFQZ-450-42	500	660	500	810	9.55	28.7	33.4	27.8	0.8	0.8	7.5	43.5	6700
ZFQZ-450-31	420	660	430	700	9.33	28.0	32.6	47.2	1.0	1.0	7.1	39	6000
ZFQZ-450-31	220	370	180	730	11.6	35.0	40.0	58.1	1.1	1.1	7.1	39	6000
ZFQZ-400-42	418	725	530	635	7.53	22.6	26.4	54.1	1.5	1.5	7.1	23.5	5200
ZFQZ-400-42	400	440	410	1020	9.32	28.0	32.6	29.0	0.8	0.8	7.1	23.5	5200
ZFQZ-400-42	205	420	280	570	6.99	21.0	24.5	57.7	1.3	1.3	7.1	23.5	5200
ZFQZ-400-42	500	660	708	810	6.74	20.2	23.6	26.0	0.6	0.6	7.1	23.5	5200
ZFQZ-400-32	440	660	600	725	7.0	21.0	22.5	37.8	1.0	1.0	6.4	21	4900
ZFQZ-400-41	55	400	80	208	6565	19695	22978	0.459	0.0189	0.0189	7100	23.5	5200
ZFQZ-355-42	418	725	600	630	6.65	20	23.3	51.5	1.2	1.2	6.5	15	3750
ZFQZ-355-42	355	440	500	895	6.78	20.3	23.7	26.8	0.74	0.74	6.5	15	3750
ZFQZ-355-42	361	600	550	665	6.27	18.8	22	45.1	1.1	1.1	6.5	15	3750
ZFQZ-355-32	450	725	750	670	5.73	17.2	20.0	41.1	1.0	1.0	6.0	13	3400
ZFQZ-355-32	315	440	500	800	6.02	18.1	21.0	30.4	0.88	0.88	6.0	13	3400
ZFQZ-355-22	450	660	900	735	4.78	14.3	16.7	64.2	1.0	1.0	5.6	11.5	3200
ZFQZ-355-22	370	440	650	930	5.44	16.3	19.0	25.3	0.6	0.6	5.6	11.5	3200
ZFQZ-355-12	315	660	880	510	3.42	10.3	12.0	42.0	0.7	0.7	4.7	10.5	2900
ZFQZ-355-092	293	440	700	736	3.997	11.991	13.990	0.0146	0.0006	0.0006	4200	9.2	2520
ZFQZ-355-41	45	400	80	172	5371	16113	18799	0.562	0.0208	0.0208	6500	15	3750
ZFQZ-355-22	250	440	530	622	4.504	13.512	15.764	0.0342	0.001	0.001	5600	11.5	3200
ZFQZ-355-41	200	660	300	347	6366	19098	22281	0.152	0.0045	0.0045	6500	15	3750
ZFQZ-315-42	315	600	800	570	3.76	11.3	13.2	44.0	0.8	0.8	5.2	7.7	2450
ZFQZ-315-42	315	440	750	780	4.0	12.0	13.5	23.9	0.51	0.51	5.2	7.7	2450
ZFQZ-315-42	284	400	680	785	4.0	12.0	13.5	25.6	0.52	0.52	5.2	7.7	2450
ZFQZ-315-32	280	660	750	465	3.56	10.7	12.5	68.4	1.3	1.3	4.6	7.0	2300
ZFQZ-315-32	320	440	900	785	3.4	10.2	11.9	21.1	0.6	0.6	4.6	7.0	2300
ZFQZ-315-22	230	220	705	1175	3.12	9.35	11.0	10.5	1.0	1.0	4.3	6.0	2100
ZFQZ-315-21	150	660	480	260	2.98	8.95	10.4	199	3.3	3.3	4.35	6.0	1950
ZFQZ-315-12	160	440	600	410	2.55	7.65	8.93	69.8	1.0	1.0	3.85	5.3	1800
ZFQZ-315-42	250	440	600	628	3.979	11.937	13.927	0.032	0.0008	0.0008	5200	7.7	2450
ZFQZ-315-42	200	400	530	551	3.603	10.809	12.611	0.0351	0.001	0.001	4300	6	2100
ZFQZ-315-32	200	400	600	522	3.183	9.549	11.141	0.0368	0.0009	0.0009	4600	7	2300
ZFQZ-315-12	150	440	680	374	2.106	6.318	7.371	0.055	0.0012	0.0012	3850	5.3	1800
ZFQZ-280-32B	170	440	900	430	1.8	5.41	6.31	53.4	1.5	1.5	3.4	3.0	1600
ZFQZ-280-31B	110	400	600	312	1.750	5.250	6.125	0.0928	0.0015	0.0015	3400	3	1600
ZFQZ-280-31B	110	440	600	282	1.750	5.250	6.125	0.109	0.0018	0.0018	3400	3	1600
ZFQZ-280-21B	112	440	750	282	1.426	4.278	4.991	0.0828	0.0015	0.0015	3200	2.8	1300
ZFQZ-250-31B	92	400	880	260	1.0	3.0	3.5	96.1	0.99	0.99	2.85	1.55	1000

★ 说明: 技术数据表(A)和技术数据表(B)列出了ZZJ-800和ZZJ-900系列相对应的规格和部分已生产制造过的规格, 仅供设计选型时参考。如果所需产品的型号与表有出入或有特殊要求, 请与我厂有关部门联系, 经确认后签订技术协议和合同。

★ Note: The specifications corresponding to Series ZZJ-800 and Series ZZJ-900 and the specifications of partial produced motors are listed in Technical Data Table (A) and Technical Data Table (B) respectively. All these specifications are for design and type choice only. If the required specifications of the motors are not in accordance with those in the Technical Data Tables or some special requirements are offered, please contact us. After confirmation, the technical agreement can be made.

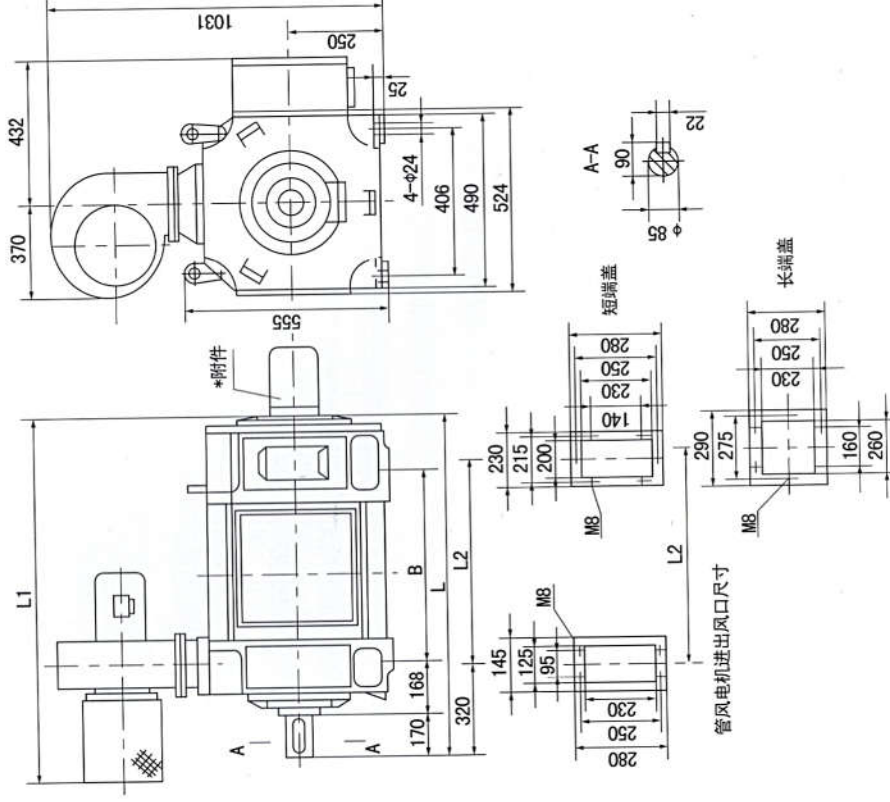


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电机安装外型图

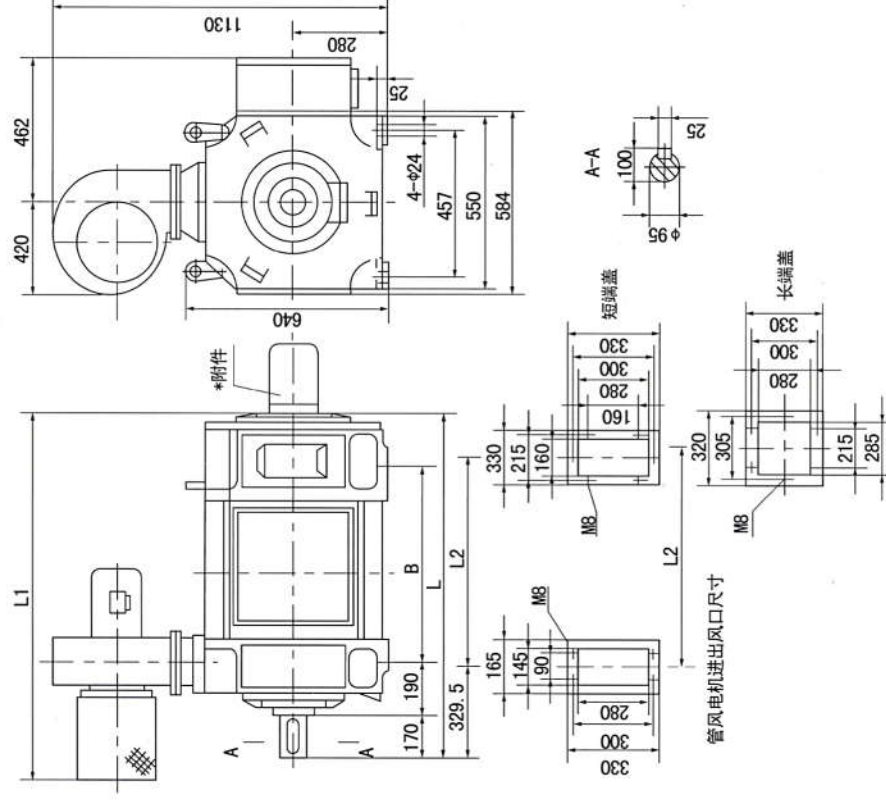
Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸 Mounting Dimension		外型尺寸 Outline Dimension	
	B	L2	L	L1
ZFQZ-250-081	635	614.5	1145	1580
ZFQZ-250-082	695	644.5	1205	1640
ZFQZ-250-091	675	654.5	1185	1620
ZFQZ-250-092	735	684.5	1245	1680
ZFQZ-250-11	715	694.5	1225	1660
ZFQZ-250-12	775	724.5	1285	1720
ZFQZ-250-21	765	744.5	1275	1710
ZFQZ-250-22	825	774.5	1335	1770
ZFQZ-250-31	825	804.5	1335	1770
ZFQZ-250-32	885	834.5	1395	1830
ZFQZ-250-41	895	874.5	1405	1840
ZFQZ-250-42	955	904.5	1465	1900

电机安装外型图

Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸 Mounting Dimension		外型尺寸 Outline Dimension	
	B	L2	L	L1
ZFQZ-280-11	762	777.5	1315	1750
ZFQZ-280-12	852	822.5	1405	1840
ZFQZ-280-21	822	837.5	1375	1810
ZFQZ-280-22	912	822.5	1465	1900
ZFQZ-280-31	892	907.5	1445	1880
ZFQZ-280-32	982	952.5	1535	1970
ZFQZ-280-41	972	987.5	1525	1960
ZFQZ-280-42	1062	1032.5	1615	2050

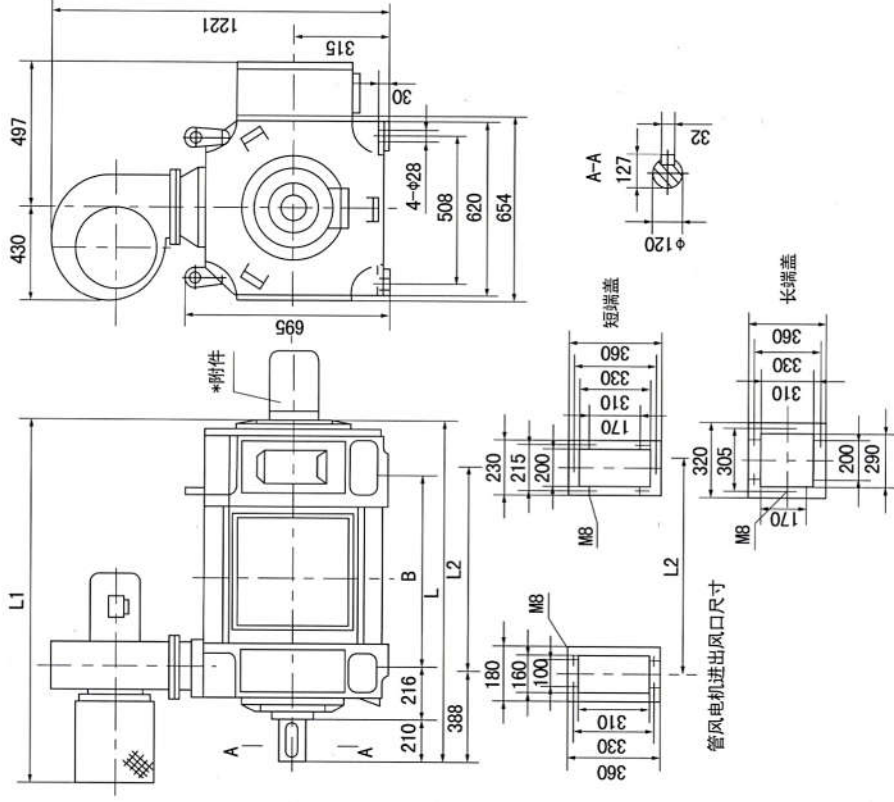


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电机安装外型图

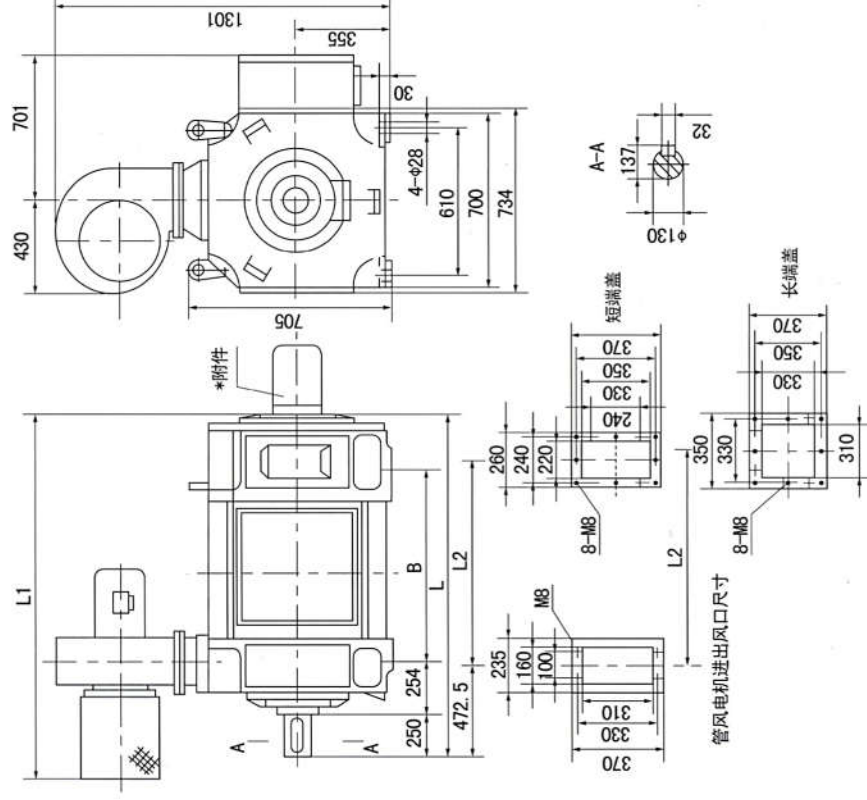
Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸 Mounting Dimension		外型尺寸 Outline Dimension	
	B	L2	L	L1
ZFQZ-315-081	757	810	1405	1770
ZFQZ-315-082	847	855	1495	1860
ZFQZ-315-091	817	870	1465	1830
ZFQZ-315-092	907	915	1555	1920
ZFQZ-315-11	887	940	1535	1900
ZFQZ-315-12	977	985	1625	1990
ZFQZ-315-21	967	1020	1615	1980
ZFQZ-315-22	1057	1065	1705	2070
ZFQZ-315-31	1057	1110	1705	2070
ZFQZ-315-32	1147	1150	1795	2160
ZFQZ-315-41	1157	1210	1805	2170
ZFQZ-315-42	1247	1255	1895	2260

电机安装外型图

Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸 Mounting Dimension		外型尺寸 Outline Dimension	
	B	L2	L	L1
ZFQZ-355-091	888	936.5	1650	1930
ZFQZ-355-092	978	981.5	1740	2020
ZFQZ-355-11	968	1016.5	1730	2010
ZFQZ-355-12	1058	1061.5	1820	2100
ZFQZ-355-21	1058	1106.5	1820	2100
ZFQZ-355-22	1148	1151.5	1910	2190
ZFQZ-355-31	1158	1206.5	1920	2200
ZFQZ-355-32	1248	1251.5	2010	2290
ZFQZ-355-41	1268	1316.5	2030	2310
ZFQZ-355-42	1358	1361.5	2120	2400

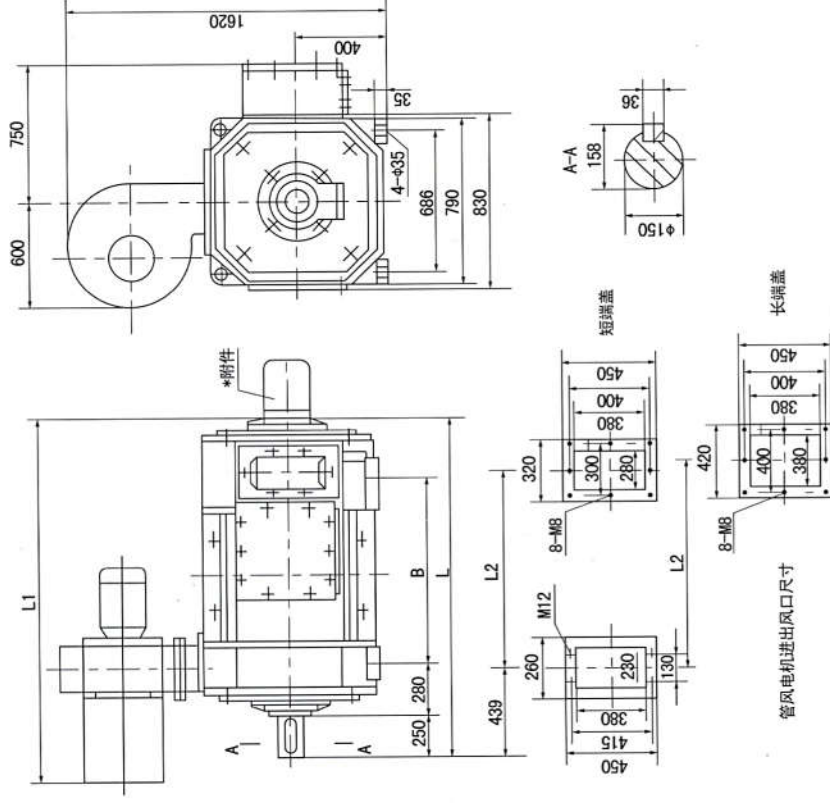


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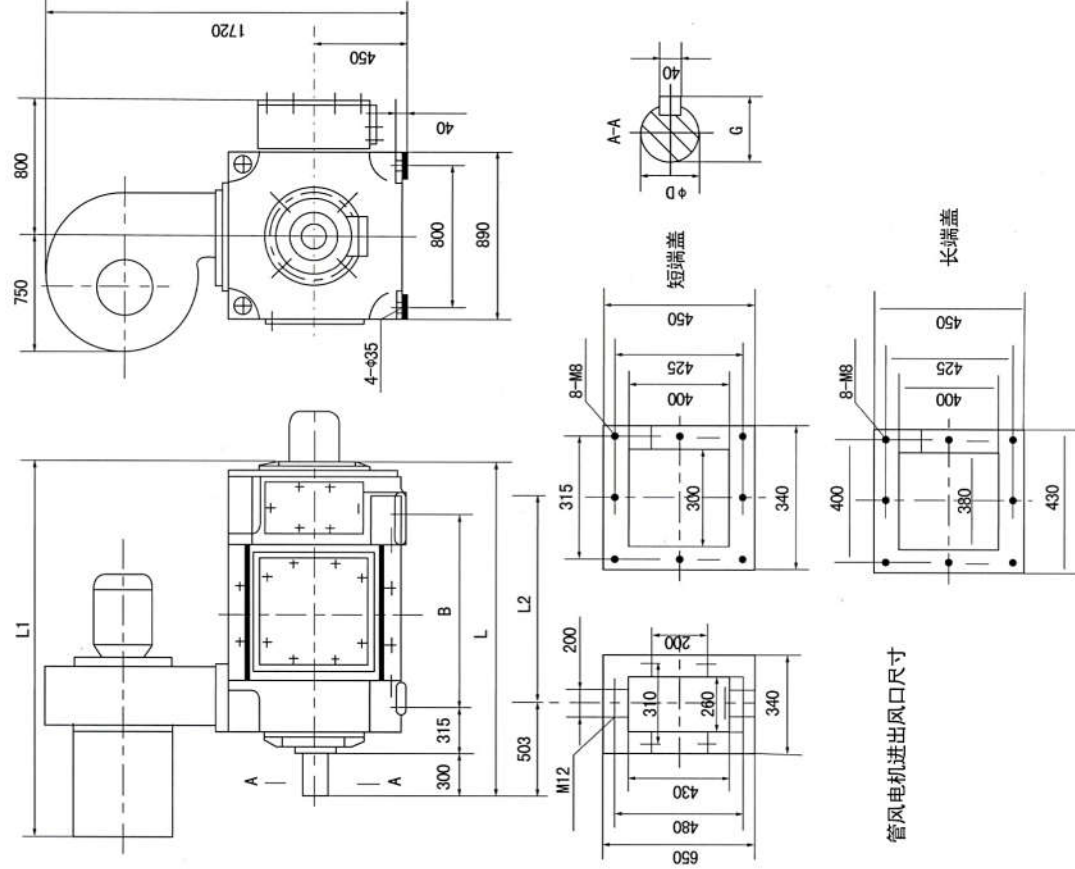
电机安装外型图

Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸 Mounting Dimension		外型尺寸 Outline Dimension	
	B	L2	L	L1
ZFQZ-400-11	959	1003	1770	1820
ZFQZ-400-12	1079	1063	1890	1940
ZFQZ-400-21	1039	1083	1850	1900
ZFQZ-400-22	1159	1143	1970	2020
ZFQZ-400-31	1129	1173	1940	1990
ZFQZ-400-32	1249	1233	2060	2110
ZFQZ-400-41	1229	1273	2040	2090
ZFQZ-400-42	1349	1333	2160	2210

Mounting Outline Drawing of Motors



电机型号 Motors Type	安装尺寸			Mounting Dimension			外型尺寸			Outline Dimension	
	B	D		G	L2		L		L1		
ZFQZ-450-12	1181				1147		2120		2070		
ZFQZ-450-21	1151				1197		2085		2140		
ZFQZ-450-22	1271	160		169	1237		2205		2260		
ZFQZ-450-31	1251				1297		2185		2240		
ZFQZ-450-32	1371				1337		2305		2360		
ZFQZ-450-41	1361				1407		2300		2350		
ZFQZ-450-42	1481	170		179	1447		2415		2470		
ZFQZ-450-51	1482				1527		2415		2470		

今天要比昨天做的更好！

杭州新恒力电机制造有限公司

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