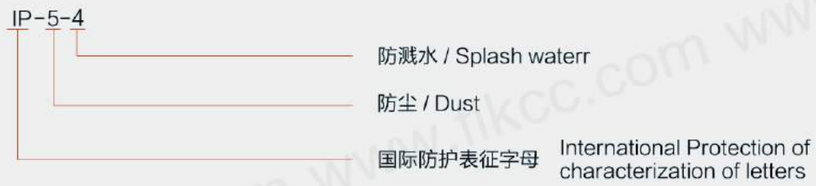
主要产品 / The main products

- YS 、YE2、YE3 系列三相交流异步电动机
  YS , YE2, YE3 series three-phase AC asynchronous motor
- YEJ 系列三相直流制动异步电动机
  YEJ series three-phase DC brake motor
- YVF₂ 系列三相交流变频电动机
  YVF₂ series three-phase AC variable frequency motor

二、代号说明 / Code description

电机代号说明 / Machine code description

防护等级 / Protection grade



冷却方式 / Cooling mode

高效电机的概述 / Overview of high efficient motors

我公司开发的IE2(中国的3级能效)、IE3(中国的2级能效)超高效三相异步电动机是根据IEC60034-30及中国的GB18613-2012标准的能效等级自主设计、生产的节能产品。

IE2标准高效是老版本欧洲分级方案中的EFF1，与美国的EPAct相同(60Hz)。

IE3超高效(与美国的NEMA Premium相同60Hz)

我公司现生产的IE2、IE3高效和超高效三相50Hz、60Hz、2极、4极、6极异步电动机额定输出功率范围0.75Kw-22Kw。工作制为S1,可直接起动。广泛应用于各类传动机械行业。

The company developed the IE2 (Chinese L3 (Level3) energy-efficient), IE3 (Chinese L2 (Level2) energy-efficient) over Efficient three-phase asynchronous motors are noted in the IEC60034 - 30 and Chinese GB18613 - 2012

Standard energy efficiency rating of independent design and production of energy-saving products.

IE2 is an old version of the European standard efficiency classification scheme EFF1, the same as the United States EPAct (60Hz).

IE3 ultra-efficient (the same as the United States NEMAP remium 60H z)

The production of IE2, IE3 efficient and ultra-efficient three-phase 50H z, 60 H z, 2Pole, 4-pole, 6-pole induction motor rated output power range 0 .7 5 K w - 2 2 K w. The work System for the S 1, can directly start. Widely used in various types of transmission machinery industries.

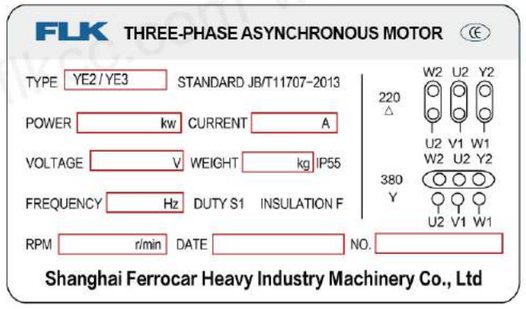
IE2、IE3不包括下列电机：	I E2, I E3 does not include the following motor;
1、YS系列三相电动机。	1.YS series three-phase motors.
2、用变频器操作的三相电动机。	2.Three-phase motor with inverter operation.

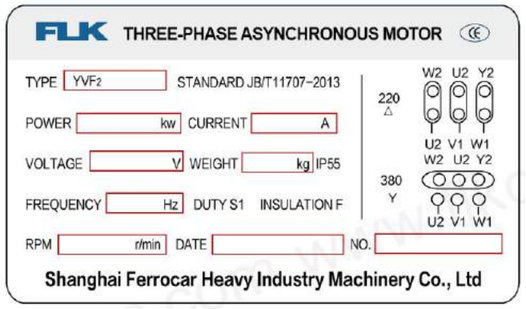
效率值标准 / The efficiency value of standard

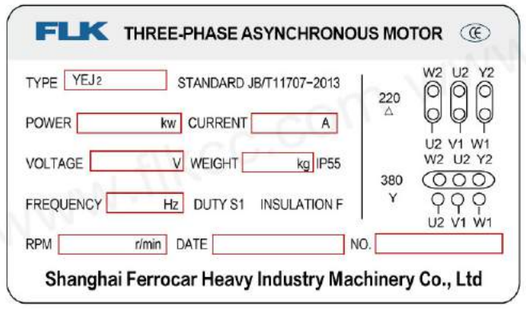
IEC60034-30:2008标准中确定的最低效率值
The lowest efficiency determination in IEC60034-30:2008 standard value

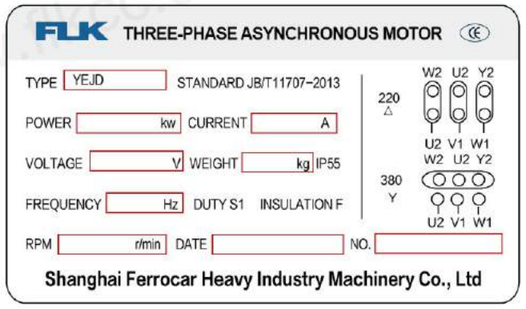
输出功率 Kw	IE2.(GB3级能效) 高效率(%)			IE3.(GB2级能效) 超高效率(%)		
	2级	4级	6级	2级	4级	6级
0.75	77.4	79.5	75.9	80.7	82.5	78.9
1.1	79.6	81.4	78.1	82.7	84.1	81
1.5	81.3	82.8	79.8	84.2	85.3	82.5
2.2	83.2	84.3	81.8	85.9	86.7	84.3
3	84.6	85.5	83.3	87.1	87.7	85.6
4	85.8	86.6	84.6	88.1	88.6	86.8
5.5	87	87.7	86	89.2	89.6	88
7.5	88.1	88.7	87.2	90.1	90.4	89.1
11	89.4	89.8	88.7	91.2	91.4	90.3
15	90.8	90.6	89.7	91.9	92.1	91.2
18.5	90.9	91.2	90.4	92.4	92.6	91.7
22	91.3	91.6	90.9	92.7	93	92.2

铭牌信息 / Brand information









设计特征 / Mechanical design

一、结构特点 / The structural characteristics

从0.06Kw-22Kw的功率等级有12种机座规格。

0.06Kw-7.5Kw接线盒与机座整体铝合金压铸结构，密封性好，完全符合IP56外壳防护等级标准，接线盒每侧均配备有两个出线孔。根据用户的需要出线方向可在现场临时定。

机座配有可拆卸的底脚，电机可旋转90° 安装，整机结构紧凑，外观为方形，改变了市场上传统的圆形外壳。前后端盖固定螺栓采用隐形设计。

采用低噪声静音轴承，使电机运行起来更平稳，噪音更低。

From 0.06Kw power level to 22Kw power level ,we have 12 kinds of frame size .

0.06Kw-7.5Kw junction box and the base structure of the overall aluminum die-casting, sealing, and in full compliance with IP56 enclosure rating standards, junction boxes on each side are equipped with two outlet holes. As noted in the direction needed to qualify the user in the field temporarily fixed.

Base with a removable bottom foot ,motor can be rotated 90 ° to install, compact structure, the appearance of the square, Front cover bolts using stealth design.

Low noise silent bearings, the motor running more smoothly, lower noise.

二、使用的主要原材料 / The main raw material

0.06Kw-7.5Kw电机外壳为压铸铝合金，11Kw-22Kw外壳为高强度铸铁。

轴料为 40Cr钢调质处理。

电磁线采用QZ-2/155、QZY-2/180。

定转子铁芯采用DW470、DW600。

0.06Kw-7.5Kw motor housing is die-cast aluminum, 11Kw-22Kw for high-strength cast iron housings.

40Cr steel shaft material for quenching.

Magnet wire using QZ-2/155, QZY-2/180.

Stator and rotor core using DW470, Dw600.

三、表面防护 / Surface protection

电机外表面均采用喷塑处理。

外露螺栓均采用不锈钢材料制造。

The outer surface of the motor using spray treatment.

Exposed bolts are made of stainless steel.

设计特征 / Mechanical design

四、绝缘 / Insulation

费洛卡电机均采用F级绝缘系统，B级温升，最高允许环境温度为40℃，最低环境温度为-15℃，超过此值范围用户应提出要求。

温升考核限值为电阻法80K。

Ferrocar motors are insulated by F-class insulation system, B-class temperature rise, the maximum allowable ambient temperature is 40℃, and the minimum ambient temperature is – 15℃. Users who exceed this range should request.

The temperature rise limit is 80K.

五、双频电机的说明 / The dual frequency dual pressure motor explain

本公司生产的双频双压电机，频率为50/60HZ，电压为（380V-420V）/(440V-480V)。当频率是50HZ，电机接线方式为“Y”型接法时，则输入电压在380V至420V都可使用。而电机接线方式为“△”型接法时，则输入电压在220V至240V都可使用。当频率是60HZ，电机接线只能为“Y”型接法，则输入电压在440V至480V都可使用。

The company production of the dual frequency dual pressure motor ; frepuency is 50/60Hz,voltage(380～420V)/(440～480V)。when the frequency is 50Hz,the motor wiring for the"Y"type connection,the input voltage connetion,the input voltage can be used in 380V to 420V,and the motor wiring for the "△"connection the input voltage can be used in 220V to 240V when the frequency is 60Hz the motor wiring is connected to"Y",then input voltage can be used in 440V to 480V.

六、统一标准 / standards

所有通用电机执行统一的制作标准。

结构及安装型式GB/T997-2008，对应标准IEC60034-7。

输出功率及安装尺寸公差GB/T4772.1-1999，对应标准IEC60072-1。

电气规范GB/T755-1987对应标准IEC60034-1。

外壳防护等级GB/T4942.1-2008对应标准IEC60034-5。

噪音GB/T10069.1-2006对应标准IEC60034-9。

振动GB/T10068-2008对应标准IEC60034-14。

All general motors implementation of a unified production standards.

Structure and mounting is GB / T997-2008, which corresponds to the standard IEC60034-7.

Output power and install dimensional tolerances is GB / T4772.1-1999, which corresponds to the standard IEC60072-1.

Electrical Code is GB / T755-1987 which corresponds to the standard IEC60034-1.

Enclosure rating is GB / T4942.1-2008 which corresponds to the standard IEC60034-5.

Noise is GB / T10069.1-2008 which corresponds to the standard IEC60034-9.

Vibration is GB / T10068-2008 which corresponds to the standard IEC60034-14.

电机工作原理 / Motor operation

一、工作原理 / Operating Principle

电动机是一种旋转式电动器具，它将电能转变为机械能。利用定子绕组和转子组成一个磁场回路，当定子绕组通过交流电时，转子鼠笼中有电流通过而产生一个旋转磁场使转子以固定的转速转动。这个转速为电机的同步转速n，它的取值与电源的频率(f)及电机绕组的极数(P)有关,即n0=60×f/P(转/分)。当旋转磁场使电机转子产生感应电流时，转子磁场受到电磁力的牵引而转动，因此定子磁场与转子磁场产生了一个转速差异，并且差异越大，转子上产生的电磁转矩也就越大，因此电机的输出转速与同步转速也就存在差异，这个差异以转差率(S)表示S=no-n/no×100%。

一般电机在额定点时转差率S为0.06左右。

The motor is a rotary electric appliance, it is converted to electrical energy to mechanical energy. Use of the stator winding ,The group consisting of a magnetic circuit and the rotor, stator winding through when AC, the rotor cage has Current generating a rotating magnetic field of the rotor is rotated by a fixed speed. The speed of electricity Machine synchronous speed n, its value and power of the frequency (f) and Poles (P) on the motor windings, That n0 = 60 × f / P (r / min). When the rotating magnetic field induced current of the motor rotor, the rotor magnetic

Field by the electromagnetic force and rotates, so the stator and the rotor magnetic field produces a speed Difference, and the greater the difference, the electromagnetic torque on the rotor produced greater, the output of the motor Speed and synchronous speed will differ, this difference in slip (S) said S = no-n/no × 100%.

General Motor slip at the rated point S is about 0.06.

二、电动机的运行特性 / the operating characteristics of the motor

电动机在带负载运行时，其实际输出功率(P)大小的恒功率等于实际负载的需求功率。负载的增加或减少，电机的输出功率随之增加或减少。电机在不同工作点时，转速n、转矩TN、输出功率P、功率因数COSφ、效率η、电流I等将随着负载的变化而变化(如图1)，这种变化是电机的运行特性决定的。

When the motor is running with load, the actual output power (P) is equal to the actual power load demand. Increasing or decreasing the load, the output power of the motor affect accordingly. When Motor work in different working points, the speed n, the torqueTN, the output power P, the power factor COSφ, efficiency η, electric current I, will change as the load changes (Figure 1), this change is to run the motor characteristics decision.

电机工作原理 / Motor operation

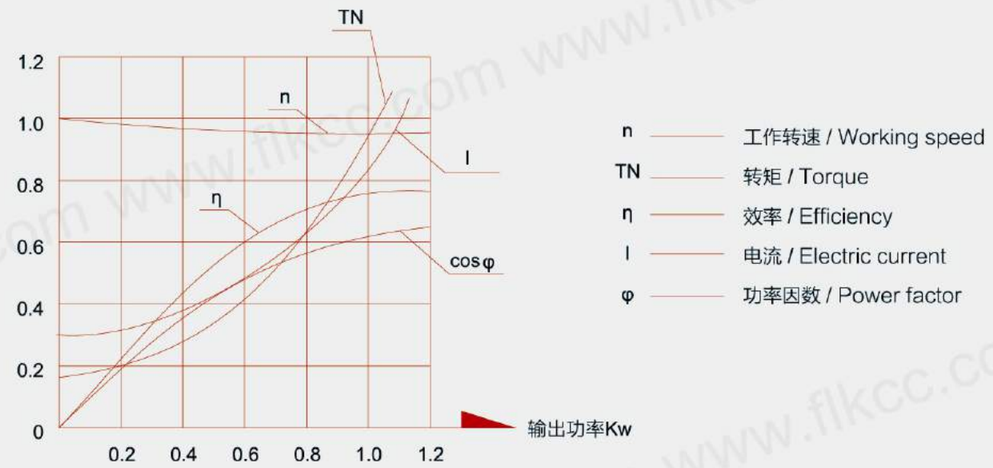


图1/Figure 1

从图1中可看出，从空载到加载，随着电机输出功率的增大，电机转速(n)稍有下降。转矩(M)随着输出功率增大而相对增大。效率(η)、功率因素(COSφ)当输出功率增大到50%额定值以上时保持基本稳定。

As we can be seen from Figure 1, from empty-load to load, the output power increasesing, the motor rotation Speed (n) decreased slightly. Torque (M) increases as the output power is relatively increased. Efficiency (η), the power factors (COSφ) remain stable when the output power is increased to more than 50% of rated value.

三、二个转矩特性 / the two torque characteristics

1、额定转矩TN / The rated torque TN

电机在额定电压下以额定转速(n0)运行，输出额定功率(P)时，电机转轴上输出的

转矩：$TN=\frac{P}{\frac{2\times\pi\times n}{60}}$ 牛顿·米

Motor rated speed (n 0) is running at rated voltage, Rated output power (P), the output of the motor shaft

$TN = P/(2 \times \pi \times n)/60$

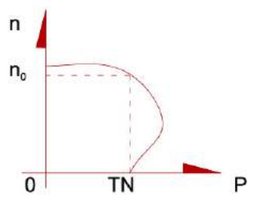


图2 / Figure 2

电机工作原理 / Motor operation

2、最大转矩Tmax / the maximum torque Tmax

电动机带动负载的能力。
如果TL＞Tmax电机将会因带不动负载而停转。TL为负载转矩。$Tmax=KV1^2\frac{1}{2\times20}$

Motor driven load.
IF TL> Tmax motor will not move due to the load with The stall. TL is the load torque.
Tmax = KV1 2/1/2 × 20

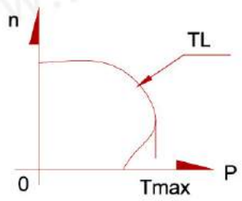


图3 / Figure 3

对于三相电动机，同时按相同倍数提高或降低电动机的额定电压和频率是允许的。需要说明的是:当电动机工作电压偏离额定值时，电动机的起动转矩TN、最小转矩Tn、最大转矩Tmax等将受到影响。力矩大小与电压的平方成正比。

For three-phase motors, while increasing multiples of the same Or reduce the motor's rated voltage and frequency are allowed. It should be noted that: When the motor work

For three-phase motors, while increasing multiples of the same Or reduce the motor's rated voltage and frequency are allowed. It should be noted that: When the motor work

Voltage excursions, the motor starting torque TN, minimum torque Tn, maximum torque Tmax Etc. will be affected.

The size of the torque proportional to the square of the voltage.

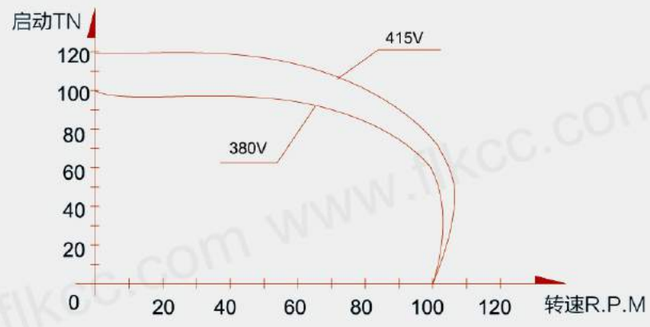


图4 / Figure 3

电机工作原理 / Motor operation

四、运行环境 / The Operating Environment

一般用途的电动机，其定额应为最大连续定额，并能按S1工作制运行。

S1-连续工作制:电动机在恒定负载下运行,运行时间足以达到热稳定。

S2-短时工作制:电动机在恒定的负载下,按给定的时间运行,该时间不足以达到热稳定,随之断电,然后停止转动有足够时间,使电动冷却到环境温度。

在额定电压，额定频率下，使用的环境空气温度不超过－15 ≤Q≤40°

海拔高度不超过1000米。绝缘等级F级，定子绕组温升考核80K。外壳防防:IP54、IP55、IP56。冷却方式:IC411。

本公司生产的电动机均为S1工作制。外壳防护如无特殊要求均按IP54生产。

过载系数: $\lambda=\frac{Tmax}{TN}$

General-purpose motor, the maximum continuous rating should be fixed, and can run in S1 duty.

S1-continuous duty: the motor running at constant load, running time sufficient to achieve thermal stability.

S2-short-time work: the motor at a constant load, running at a given time, the time

Sufficient to achieve thermal stability, along with power, and there is sufficient time to stop the rotation, to the ring of the electric cooling Ambient temperature.

At rated voltage, rated frequency, ambient air temperatures do not exceed -15 ≤ Q ≤ 40 °C Not more than 1000 meters above sea level. Insulation class F, the stator winding temperature rise assessment 80K. Anti shell

Proof: IP54, IP55, IP56. Cooling method: Ic411.

The company produces both S1 motor duty. Enclosure protection according to IP54 if no special requirements Produce.

Overload factor:λ = Tmax /TN

注意 / Note

1、三相电动机的Tmax和电压的平方成正比，所以对电压的波动很敏感，使用时要注意电压的变化。
Three-phase motor is proportional to the square of the voltage and Tmax, it is sensitive to voltage fluctuations, Note the use of the voltage variation.

2、工作时一定使负载的转矩TL < Tmax,否则电机将会停转或过热而烧毁。
Must make the work load torque TL <Tmax, otherwise the motor will stall or overheat.

电机工作原理 / Motor operation

五、电机应用规范 / The motor application specification

一、额定电压和频率 / The rated voltage and frequency

每种型号的电机都规定了额定工作电压及频率。铭牌上有标示。电机在使用时要检查电源电压和频率与电机规定值相符，如果不符将不能保证电机的性能指标有效的发挥，严重时将会造成一定的人身伤害。

Each model provides motors are rated working voltage and frequency. There are marked on the nameplate. Motor When used to check the value of the supply voltage and frequency match the motor provides power if the match can not be guaranteed Performance machine to function effectively, will cause some serious bodily injury.

所有电动机的电源电压，不得超过或降低±5%，频率不得偏离额定的±1%。

All motor supply voltage must not exceed or reduce ± 5%, shall not deviate from the nominal frequency ± 1%.

三相异步电动机在额定频率下可按Δ形接线和Y形接线。电动机在这两种接法的额定值下运行将保持完全相同的运行特性。按照国家电源标准，三相异步电动机3Kw及以下按Y形接线380/50Hz。Δ形接线220/50Hz提供。4Kw及以上按Δ形接线，380/50Hz提供。如果用户有其它特殊要求，订货时可提出。

Three-phase asynchronous motors at rated frequency can be Δ Y-shaped wiring and wiring. Motors which in this ratings run two configurations will remain the same operating characteristics. According to the national power standards, Three-phase asynchronous motor 4Kw and below by a Y-shaped junction 380/50Hz. Δ-shaped wiring 220/50Hz mention Supply. 4Kw and over by Δ-shaped wiring, 380/50Hz available. If you have other special requirements, please let us know when making the order.

通用电机
GENERAL MOTORS

动力传动专业制造商
PROFESSIONAL MANUFACTURER OF POWER TRANSMISSION

YE2系列技术参数(IE2, 3级能效) / YE2 series motor technology parameters (IE2, LEVEL 3)

3000r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE2)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE2－801-2	0.75	1	2875	77.4	0.83	1.77	2.49	2.3	2.3	7.0
YE2－802-2	1.1	1.5	2875	79.6	0.84	2.50	3.65	2.2	2.3	7.3
YE2－90S-2	1.5	2	2890	81.3	0.84	3.32	4.96	2.2	2.3	7.6
YE2－90L-2	2.2	3	2890	83.2	0.85	4.72	7.27	2.2	2.3	7.6
YE2－100L-2	3	4	2890	84.6	0.87	6.17	9.91	2.2	2.3	7.8
YE2－112M-2	4	5.5	2910	85.8	0.88	8.04	13.1	2.2	2.3	8.3
YE2－132S1-2	5.5	7.5	2930	87.0	0.86	11.2	17.9	2.0	2.3	8.3
YE2－132S2-2	7.5	10	2840	88.1	0.88	14.6	25.2	2.0	2.3	7.9
YE2－160M1-2	11	15	2930	89.4	0.89	21.0	35.9	2.0	2.3	8.1
YE2－160M2-2	15	20	2930	90.3	0.89	28.4	48.9	2.0	2.3	8.1
YE2－160L-2	18.5	25	2935	90.9	0.89	34.7	60.2	2.0	2.3	8.2
YE2－180M-2	22	30	2940	91.3	0.88	41.6	71.5	2.0	2.3	8.2

1500r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE2)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE2－802-4	0.75	1	1400	79.6	0.76	1.88	5.12	2.3	2.3	6.6
YE2－90S-4	1.1	1.5	1440	81.4	0.77	2.67	7.30	2.3	2.3	6.8
YE2－90L-4	1.5	2	1440	82.8	0.77	3.57	9.95	2.3	2.3	7.0
YE2－100L1-4	2.2	3	1440	84.3	0.81	4.90	14.6	2.3	2.3	7.6
YE2－100L2-4	3	4	1440	85.5	0.82	6.50	19.9	2.3	2.3	7.6
YE2－112M-4	4	5.5	1440	86.6	0.82	8.56	26.5	2.2	2.3	7.8
YE2－132S-4	5.5	7.5	1450	87.7	0.83	11.5	36.2	2.0	2.3	7.9
YE2－132M-4	7.5	10	1450	88.7	0.84	15.3	49.4	2.0	2.3	7.5
YE2－160M-4	11	15	1460	89.8	0.84	22.2	72.0	2.2	2.3	7.7
YE2－160L-4	15	20	1460	90.6	0.85	29.6	98.1	2.2	2.3	7.8
YE2－180M-4	18.5	25	1470	91.2	0.86	35.8	120.2	2.0	2.3	7.8
YE2－180L-4	22	30	1470	91.6	0.86	42.4	142.9	2.0	2.3	7.8

YE2系列技术参数(IE2, 3级能效) / YE2 series motor technology parameters (IE2, LEVEL 3)

1000r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE2)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE2-90S-6	0.75	1	930	75.9	0.72	2.09	7.7	2.0	2.1	6.0
YE2-90L-6	1.1	1.5	940	78.1	0.72	2.97	11.2	2.0	2.1	6.0
YE2-100L-6	1.5	2	940	79.8	0.75	3.80	15.2	2.0	2.1	6.5
YE2-112M-6	2.2	3	960	81.8	0.76	5.38	21.9	2.0	2.1	6.6
YE2-132S-6	3	4	960	83.3	0.76	7.20	29.8	2.0	2.1	6.8
YE2-132M1-6	4	5.5	960	84.6	0.76	9.45	39.8	2.0	2.1	6.8
YE2-132M2-6	5.5	7.5	960	86.0	0.77	12.6	54.7	2.0	2.1	7.0
YE2-160M-6	7.5	10	970	87.2	0.78	16.8	73.8	2.0	2.1	7.0
YE2-160L-6	11	15	970	88.7	0.78	24.2	108.3	2.0	2.1	7.2
YE2-180L-6	15	20	970	89.7	0.81	31.4	147.7	2.0	2.1	7.3

YE3系列技术参数(IE3, 2级能效) / YE3 series motor technology parameters (IE3, LEVEL 2)

3000r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE3)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE3-801-2	0.75	1	2880	80.7	0.82	1.72	2.49	2.3	2.3	7.0
YE3-802-2	1.1	1.5	2880	82.7	0.83	2.43	3.65	2.2	2.3	7.3
YE3-90S-2	1.5	2	2895	84.2	0.84	3.22	4.95	2.2	2.3	7.6
YE3-90L-2	2.2	3	2895	85.9	0.85	4.58	7.26	2.2	2.3	7.6
YE3-100L-2	3	4	2895	87.1	0.87	6.02	9.90	2.2	2.3	7.8
YE3-112M-2	4	5.5	2905	88.1	0.88	7.84	13.1	2.2	2.3	8.3
YE3-132S1-2	5.5	7.5	2930	89.2	0.88	10.6	17.9	2.0	2.3	8.3
YE3-132S2-2	7.5	10	2830	90.1	0.88	14.4	24.4	2.0	2.3	7.9
YE3-160M1-2	11	15	2945	91.2	0.89	20.6	35.7	2.0	2.3	8.1
YE3-160M2-2	15	20	2945	91.9	0.89	27.9	48.6	2.0	2.3	8.1
YE3-160L-2	18.5	25	2940	92.4	0.89	34.2	60.1	2.0	2.3	8.2
YE3-180M-2	22	30	2955	92.7	0.89	40.5	71.1	2.0	2.3	8.2

1500r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE3)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE3-802-4	0.75	1	1420	82.5	0.75	1.84	5.04	2.3	2.3	6.6
YE3-90S-4	1.1	1.5	1445	84.1	0.76	2.61	7.27	2.3	2.3	6.8
YE3-90L-4	1.5	2	1445	85.3	0.77	3.47	9.91	2.3	2.3	7.0
YE3-100L1-4	2.2	3	1435	86.7	0.81	4.76	14.6	2.3	2.3	7.6
YE3-100L2-4	3	4	1435	87.7	0.82	6.34	20.0	2.3	2.3	7.6
YE3-112M-4	4	5.5	1440	88.6	0.82	8.37	26.5	2.2	2.3	7.8
YE3-132S-4	5.5	7.5	1460	89.6	0.83	11.2	36.0	2.0	2.3	7.9
YE3-132M-4	7.5	10	1460	90.4	0.84	15.0	49.1	2.0	2.3	7.5
YE3-160M-4	11	15	1465	91.4	0.85	21.5	71.7	2.2	2.3	7.7
YE3-160L-4	15	20	1465	92.1	0.86	28.8	97.8	2.2	2.3	7.8
YE3-180M-4	18.5	25	1470	92.6	0.86	35.3	120.2	2.0	2.3	7.8
YE3-180L-4	22	30	1470	93.0	0.86	41.8	142.9	2.0	2.3	7.8

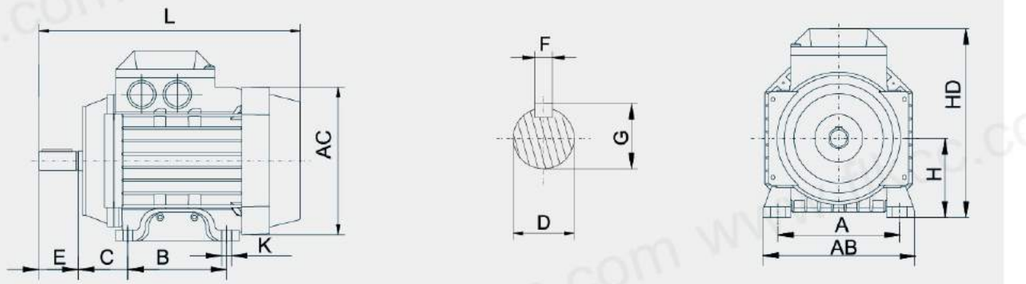
YE3系列技术参数(IE3, 2级能效) / YE3 series motor technology parameters (IE3, LEVEL 2)

1000r/min 380V 50Hz

型号 TYPE	额定功率 RATED OUTPUT		额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	堵转电流 LOCKED ROTOR CURRENT / 额定电流 RATED CURRENT
	Kw	HP	rpm	η%(IE3)	COSφ	A	Nm	Ts/Tn	Tmax/Tn	Is/In
YE3－90S-6	0.75	1	935	78.9	0.71	2.03	7.66	2.0	2.1	6.0
YE3－90L-6	1.1	1.5	945	81.0	0.73	2.83	11.1	2.0	2.1	6.0
YE3－100L-6	1.5	2	949	82.5	0.73	3.78	15.1	2.0	2.1	6.5
YE3－112M-6	2.2	3	955	84.3	0.74	5.36	22.0	2.0	2.1	6.6
YE3－132S-6	3	4	968	85.6	0.74	7.20	29.6	2.0	2.1	6.8
YE3－132M1-6	4	5.5	968	86.8	0.74	9.46	39.5	2.0	2.1	6.8
YE3－132M2-6	5.5	7.5	968	88.0	0.75	12.7	54.3	2.0	2.1	7.0
YE3－160M-6	7.5	10	970	89.1	0.79	16.2	73.8	2.0	2.1	7.0
YE3－160L-6	11	15	970	90.3	0.80	23.1	108.3	2.0	2.1	6.2
YE3－180L-6	15	20	975	91.2	0.81	30.9	146.9	2.0	2.1	7.3

YE2 YE3系列安装尺寸 / YE2 YE3 series installation size

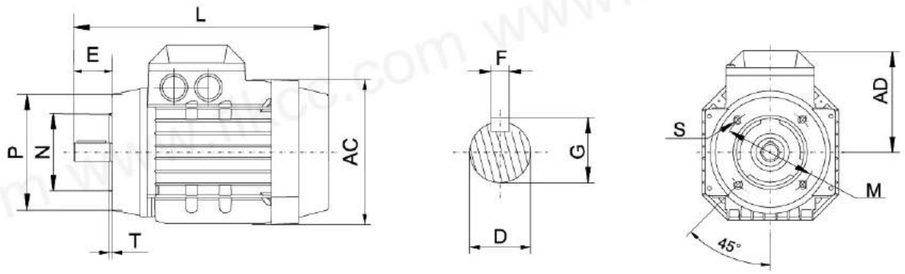
IM B3 H80-132(YE2、 YE3)



机座号 Frame size	外型及安装尺寸 Installation Dimensions												L	L(参考值)
	A	B	C	D	E	F	G	H	K	AB	AC	HD	IE2	IE3
80M	125	100	50	ø19	40	6	21.5	80	ø10	154	145×145	190	270	305
90S	140	100	56	ø24	50	8	27	90	ø10	180	160×160	205	316	340
90L	140	125	56	ø24	50	8	27	90	ø10	180	160×160	205	316	365
100L	160	140	63	ø28	60	8	31	100	ø12	205	185×185	240	360	405
112M	190	140	70	ø28	60	8	31	112	ø12	235	200×200	270	400	455
132S	216	140	89	ø38	80	10	41	132	ø12	261	245×245	310	470	470
132M	216	178	89	ø38	80	10	41	132	ø12	261	245×245	310	470	510
160M	254	210	108	ø42	110	12	45	160	ø14.5	320	320x320	450	640	640
160L	254	254	108	ø42	110	12	45	160	ø14.5	320	320x320	450	680	680
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	355	360x360	500	790	790
180L	279	279	121	ø48	110	14	51.5	180	ø14.5	355	360x360	500	930	930

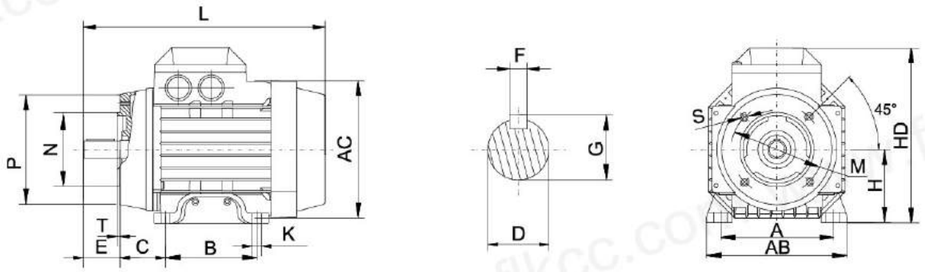
YE2 YE3系列安装尺寸 / YE2 YE3 series installation size

IM B14 H80-112(YE2、 YE3)



机座号 Frame size	外型及安装尺寸 Installation Dimensions											L	L(参考值)
	D	E	F	G	M	N	P	S	T	AC	AD	IE2	IE3
80M	ø19	40	6	21.5	100	80	120	M6	3.0	145×145	115	270	305
90S	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	316	340
90L	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	326	365
100L	ø28	60	8	31	130	110	155	M8	3.5	185×185	137	370	405
112M	ø28	60	8	31	130	110	160	M8	3.5	200×200	155	400	455

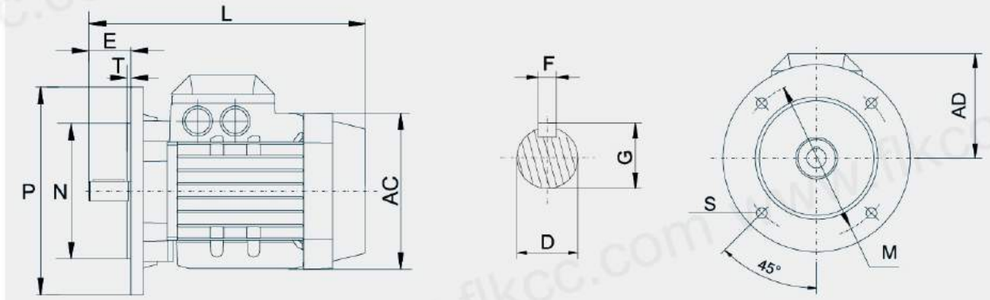
IM B34 H80-132(YE2、 YE3)



机座号 Frame size	外型及安装尺寸 Installation Dimensions																L	L(参考值)
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	IE2	IE3
80M	125	100	50	ø19	40	6	21.5	80	ø10	100	80	120	M6	3.0	154	145×145	190	270	305
90S	140	100	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	180	160×160	205	316	340
90L	140	125	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	180	160×160	205	326	365
100L	160	140	63	ø28	60	8	31	100	ø12	130	110	155	M8	3.5	205	185×185	240	360	405
112M	190	140	70	ø28	60	8	31	112	ø12	130	110	160	M8	3.5	235	200×200	270	400	455

YE2 YE3系列安装尺寸 / YE2 YE3 series installation size

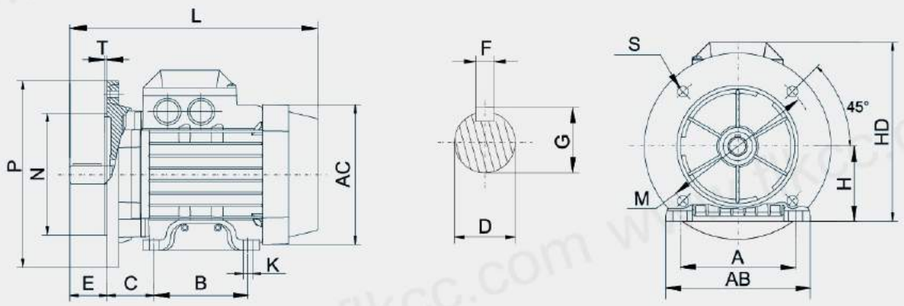
IM B5 H80-180 (YE2、 YE3)



机座号 Frame size	外型及安装尺寸 Installation Dimensions											L	L(参考值)
	D	E	F	G	M	N	P	S	T	AC	AD	IE2	IE3
80M	ø19	40	6	21.5	165	130	200	12	3.5	145×145	115	270	305
90S	ø24	50	8	27	165	130	200	12	3.5	160×160	122	316	340
90L	ø24	50	8	27	165	130	200	12	3.5	160×160	122	326	365
100L	ø28	60	8	31	215	180	250	14.5	4	185×185	137	360	405
112M	ø28	60	8	31	215	180	250	14.5	4	200×200	155	400	455
132S	ø38	80	10	41	265	230	300	14.5	4	245×245	180	470	470
132M	ø38	80	10	41	265	230	300	14.5	4	245×245	180	470	510
160M	ø42	110	12	45	300	250	350	18.5	5	320x320	290	640	640
160L	ø42	110	12	45	300	250	350	18.5	5	320x320	290	680	680
180M	ø48	110	14	51.5	300	250	350	18.5	5	360x360	320	790	790
180L	ø48	110	14	51.5	300	250	350	18.5	5	360x360	320	930	930

YE2 YE3系列安装尺寸 / YE2 YE3 series installation size

IM B35 H80-180 (YE2、 YE3)



机座号 Frame size	外型及安装尺寸 Installation Dimensions																		
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	L IE2	L(参考值) IE3
80M	125	100	50	ø19	40	6	21.5	80	ø10	165	130	200	12	3.5	154	145×145	190	270	305
90S	140	100	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	316	340
90L	140	125	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	326	365
100L	160	140	63	ø28	60	8	31	100	ø12	215	180	250	14.5	4	205	185×185	240	360	405
112M	190	140	70	ø28	60	8	31	112	ø12	215	180	250	14.5	4	235	200×200	270	400	455
132S	216	140	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	470	470
132M	216	178	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	470	510
160M	254	210	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	320X320	450	640	640
160L	254	254	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	320X320	450	680	680
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	300	250	350	18.5	5	355	360X360	500	790	790
180L	279	279	121	ø48	110	14	51.5	180	ø14.4	300	250	350	18.5	5	355	360X360	500	930	930

制动电机
BRAKE MOTOR

动力传动专业制造商
PROFESSIONAL MANUFACTURER OF POWER TRANSMISSION

YEJ制动电机 / YEJ brake motor

制动电机是由三相异步电动机和制动器两部份组成，是三相异步电动机的派生系列。制动器分为手动释放和螺栓释放两种形式。制动器是制动电机的主要部件。其工作电源分为两类；一类是交流制动，另一类是直流制动。目前我公司生产的制动电机均为直流制动电机，其优点是制动力矩大、安装调试方便、制动响应速度快、可靠性高、通用性强等优点。

Brake motor is made of two parts consisting of three-phase asynchronous motors and brakes, its belongs to three-phase asynchronous motor derived series. Manual brake release and bolt release are two forms of brakes. Brakes are the main components of the brake motor. Its working power divided into two categories; One is AC brake, the other is DC braking, my company produces brake motors are DC brake motors, the advantage of the braking torque is below,Easy installation, braking response speed, high reliability, versatility and other advantages.

一、 YEJ制动电机工作原理 / Operating principle

在电机的后端盖装有一个石棉耐磨材料的摩擦盘和励磁线圈。当电机失电后摩擦盘被制动器弹簧通过一块压紧板，紧紧地压在电机后端盖已加工的平面上，从而使制动盘产生强大的摩擦力矩，达到制动的目的。当励磁线圈通电后产生电磁吸力，将弹簧压紧板吸合，压紧板离开摩擦盘。使摩擦盘释放，电动机灵活转动，根据电动机功率不同，线圈电阻在几十至几百欧之间。

After the motor is equipped with a cover asbestos friction disc wear-resistant materials and excitation coil. When the motor is energized by a spring brake friction disc is a pressing plate, pressing firmly on the plane after the motor cover has been processed, so that the brake disc friction torque generated strong achieve braking purposes. When the excitation coil is energized to produce electromagnetic suction, pull the spring-loadedplate, pressed board leave the friction plate. The friction disc is released, the motor flexible rotation, depending on the motor power between tens to hundreds of European coil resistance.

二、 直流制动器不能直接接在交流电源上，在制动吸盘上装有绕组线圈，绕组的额定电压为低压直流电压。工作时必须由单相交流电源经整流后供给吸盘绕组,因此制动电机接线盒内同时装有整流器,接线方法在第25页图5。

The DC brake can not be directly connected to the AC power to the brake coil is provided with suction cups for low-voltage winding rated DC voltage. A single-phase AC power is rectified then supply to a sucker winding to make it work, so the brake motor terminal box fitted with a rectifier, wiring diagram below.

三、制动时间 / the braking time

制动电机的制动时间(t)是从电机和制动器停止供电瞬间开始到轴完全停止时所有用的时间，一般情况下，63～80机座号的电机其制动时间为0.5秒钟，90～132机座号的电机其制动时间为1秒钟，160～180机座号的电机其制动时间为2秒钟。

Brake motor braking time (t) is the time from the motor and brake stopping the power to the shaft completely stopped, under normal circumstances,For 63 to 80 frame size motor, the braking time is 0.5 seconds, For 90 ~ 132 frame size motor ,the braking time is 1 second, For 160 to 180 frame size motor ,the braking time is 2 seconds.

YEJ制动电机 / YEJ brake motor

四、制动电机的调整与维修 / Adjustment and maintenance

在制动电机使用过程中随着制动次数的增加，摩擦盘会有摩损情况存在，因此摩擦盘与电机后盖的间隙也随之增大。对长期运转的电机，间隙的改变直接影响电机的制动力矩。

间隙在调整时不能过小，间隙过小，摩擦盘与电机后盖摩擦平面不能完全分离而烧毁电机，间隙过大，压紧板不能吸合或吸合过程中产生强烈的噪声。制动压紧板与电磁吸盘的间隙按制动器而定，一般63～112机座号的电机其制动器间隙在0.25mm～0.30mm，132～180机座号的电机制动器间隙在0.50mm～0.80mm。

In the course of braking the motor increases the number of brake friction disc wear condition will exist, so a gap of the motor cover plate of the friction increases. Changes to the long-term operation of the motor, the motor directly affects the gap between the braking torque. When adjusting the gap is not too small, the gap is too small, the friction disc friction with the motor cover can not be completely separated from the plane and burned the motor, the gap is too large, pressed board can not pull or pull a strong noise process. Brake pressing plate at the gap magnechuck brakes, generally for 63 to 112 frame size motor, the brake gap between 0.25mm to 0.30mm,for 132 ~ 180 frame size motor, the brake gap between 0.50mm to 0.80mm .

五、制动电机的变频运行 / the inverter runs the motor brake

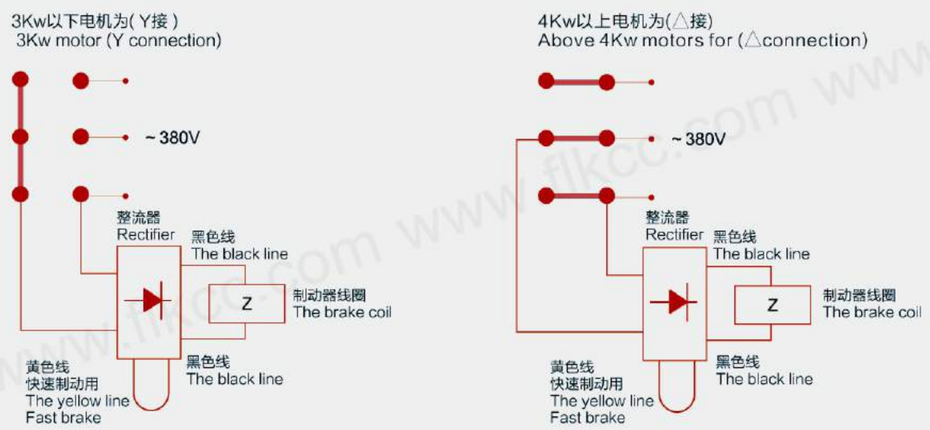
随着社会生产率的不断发展和科学技术的不断提升。制动加变频方式在执行机构中得到了广泛的应用。我公司生产的所有异步电动机都能配置变频器运行。此时，制动器必须单独提供稳定的工作电源，不能与电动机上的电源接线端子并接共用。否则制动器无法正常工作。需要提出的是：制动器电机配变频操作时，要附加一个轴流风扇，此风扇也只能独立控制和供电。

值得注意的是，我公司生产的所有异步电动机最高频率范围在60Hz，如用户有特殊要求可向公司提出。

With the continuous improvement and continuous development of the social productivity of science and technology. Brake plus inverter system has been widely applied in the implementation of the organization. I produced all asynchronous motors can configure the drive to run. At this point the brake must be provided separately stable power supply, and then can not be shared with the power terminals on the motor. Otherwise the brakes do not work properly. Need to make is brake motors with variable frequency operation, an axial flow fan to attach this fan only independent control and power.

Notably, the company produces all kinds of asynchronous motor in the highest frequency range 60Hz, as you may have special requirements please let us know.

YEJ制动电机接线方法 / YEJ wiring brake motor method



客户如有其他要求，可按订单制作

图5 / Figure5

YEJ系列技术参数 / YEJ series of technical parameters

3000r/min 380V 50Hz

型号 Type	额定功率 RATED OUTPUT	额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE 额定转矩 RATED TORQUE	静制动力矩 STATIC BRAKE TORQUE NM 直流 DC	空载制动时间 BRAKE TORQUEDU RING IDIE
	KW	rpm	η%	COSφ	A	Nm	Ts/Tn	Tmax/Tn		s
YEJ－631-2	0.18	2800	65.0	0.80	0.53	0.61	2.2	2.2	3.5	0.10
YEJ－632-2	0.25	2800	68.0	0.81	0.69	0.85	2.2	2.2	3.5	0.10
YEJ－711-2	0.37	2830	70.0	0.81	0.99	1.25	2.2	2.2	4.0	0.10
YEJ－712-2	0.55	2830	73.0	0.82	1.40	1.86	2.2	2.3	4.0	0.10
YEJ－801-2	0.75	2840	75.0	0.83	1.83	2.52	2.2	2.3	7.5	0.10
YEJ－802-2	1.1	2840	77.0	0.84	2.55	3.70	2.2	2.3	7.5	0.10
YEJ－90S-2	1.5	2840	79.0	0.84	3.39	5.04	2.2	2.3	15	0.15
YEJ－90L-2	2.2	2840	81.0	0.85	4.80	7.40	2.2	2.3	15	0.15
YEJ－100L-2	3	2860	83.0	0.87	6.31	10.0	2.2	2.3	30	0.15
YEJ－112M-2	4	2880	85.0	0.88	8.22	13.3	2.2	2.3	40	0.15
YEJ－132S1-2	5.5	2910	86.0	0.88	11.2	18.0	2.2	2.3	80	0.15
YEJ－132S2-2	7.5	2910	87.0	0.88	15.1	24.6	2.2	2.3	80	0.15
YEJ－160M1-2	11	2930	88.0	0.89	21.3	35.9	2.2	2.3	150	0.30
YEJ－160M2-2	15	2930	89.0	0.89	28.8	48.9	2.2	2.3	150	0.30
YEJ－160L-2	18.5	2935	90.0	0.90	34.7	60.2	2.2	2.3	150	0.30
YEJ－180M-2	22	2935	90.0	0.90	41.3	71.6	2.0	2.3	200	0.30

YEJ制动电机代号说明 / YEJ brake motor code description

YEJ系列技术参数 / YEJ series of technical parameters

1500r/min 380V 50Hz

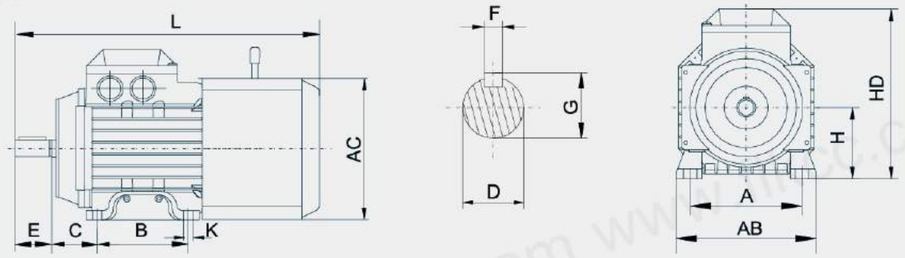
型号 Type	额定功率 RATED OUTPUT	额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE 额定转矩 RATED TORQUE	静制动力矩 STATIC BRAKE TORQUE NM 直流 DC	空载制动时间 BRAKE TORQUEDU RING IDIE
	KW	rpm	η%	COSφ	A	Nm	Ts/Tn	Tmax/Tn		s
YEJ－631-4	0.12	1360	57.0	0.72	0.44	0.84	2.2	2.0	3.5	0.10
YEJ－632-4	0.18	1360	60.0	0.73	0.62	1.26	2.2	2.0	3.5	0.10
YEJ－711-4	0.25	1375	65.0	0.74	0.79	1.74	2.2	2.0	4.0	0.10
YEJ－712-4	0.37	1375	67.0	0.75	1.12	2.57	2.2	2.0	4.0	0.10
YEJ－801-4	0.55	1405	71.0	0.75	1.57	3.74	2.2	2.4	7.5	0.10
YEJ－802-4	0.75	1405	73.0	0.76	2.02	5.10	2.2	2.4	7.5	0.10
YEJ－90S-4	1.1	1445	75.0	0.77	2.82	7.27	2.2	2.3	15	0.15
YEJ－90L-4	1.5	1445	78.0	0.79	3.70	9.91	2.2	2.3	15	0.15
YEJ－100L1-4	2.2	1440	80.0	0.81	5.16	14.6	2.2	2.3	30	0.15
YEJ－100L2-4	3	1440	82.0	0.82	6.78	19.9	2.2	2.3	30	0.15
YEJ－112M-4	4	1440	84.0	0.82	8.82	26.5	2.2	2.3	40	0.15
YEJ－132S1-4	5.5	1440	85.0	0.83	11.7	36.5	2.2	2.3	80	0.15
YEJ－132S2-4	7.5	1440	87.0	0.84	15.6	49.7	2.2	2.3	80	0.15
YEJ－160M1-4	11	1450	88.0	0.85	21.3	72.4	2.2	2.2	150	0.30
YEJ－160M2-4	15	1450	89.0	0.85	30.1	98.8	2.2	2.2	150	0.30
YEJ－180M-4	18.5	1455	90.5	0.86	36.5	121.4	2.2	2.2	150	0.30
YEJ－180L-4	22	1455	91.0	0.86	43.1	144.4	2.0	2.2	200	0.30

1000r/min 380V 50Hz

YEJ－711-6	0.18	900	56.0	0.66	0.71	19.1	1.9	2.0	4.0	0.10
YEJ－712-6	0.25	900	59.0	0.68	0.95	2.65	1.9	2.0	4.0	0.10
YEJ－801-6	0.37	910	62.0	0.70	1.30	3.88	1.9	2.0	7.5	0.10
YEJ－802-6	0.55	910	65.0	0.72	1.79	5.77	1.9	2.1	7.5	0.10
YEJ－90S-6	0.75	930	69.0	0.72	2.26	7.7	2.1	2.1	15	0.15
YEJ－90L-6	1.1	940	72.0	0.73	3.14	11.2	2.1	2.1	15	0.15
YEJ－100L-6	1.5	940	76.0	0.76	3.95	15.2	2.2	2.1	30	0.15
YEJ－112M-6	2.2	960	79.0	0.76	5.57	21.9	2.2	2.1	40	0.15
YEJ－132S-6	3	960	81.0	0.76	7.40	29.8	2.2	2.1	80	0.15
YEJ－132M1-6	4	960	82.0	0.76	9.63	39.8	2.2	2.1	80	0.15
YEJ－132M2-6	5.5	960	84.0	0.77	12.9	54.7	2.2	2.1	150	0.30
YEJ－160M-6	7.5	970	86.0	0.77	17.0	73.8	1.8	2.1	150	0.30
YEJ－160L-6	11	970	87.5	0.78	24.3	108.3	1.9	2.1	150	0.30
YEJ－180L-6	15	970	89.0	0.81	31.6	147.7	2.1	2.1	200	0.30

YEJ系列安装尺寸 / YEJ series installation size

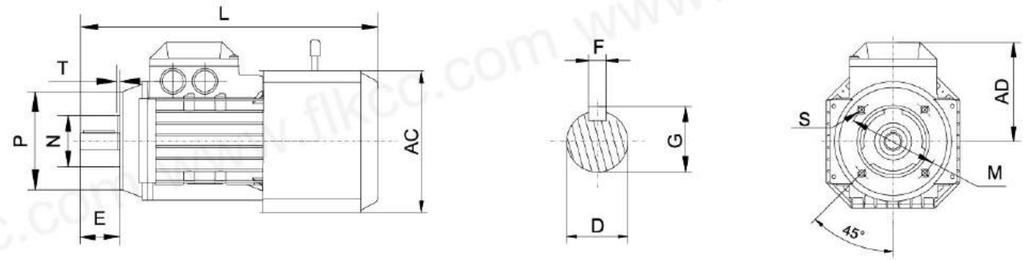
IM B3 H63-180



机座号 Frame size	外型及安装尺寸 Installation Dimensions												
	A	B	C	D	E	F	G	H	K	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	135	120X120	167	270
71	112	90	45	ø14	30	5	16	71	ø7	137	130X130	178	315
80M	125	100	50	ø19	40	6	21.5	80	ø10	155	145X145	190	340
90S	140	100	56	ø24	50	8	27	90	ø10	175	160X160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	175	160X160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	200	185X185	240	440
112M	190	140	70	ø28	60	8	31	112	ø12	230	200X200	270	480
132S	216	140	89	ø38	80	10	41	132	ø12	270	245X245	315	567
132M	216	178	89	ø38	80	10	41	132	ø12	270	245X245	315	567
160M	254	210	108	ø42	110	12	45	160	ø14.5	320	335X335	450	780
160L	254	254	108	ø42	110	12	45	160	ø14.5	320	335X335	450	780
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	355	370X370	500	880
180L	279	279	121	ø48	110	14	51.5	180	ø14.5	355	370X370	500	880

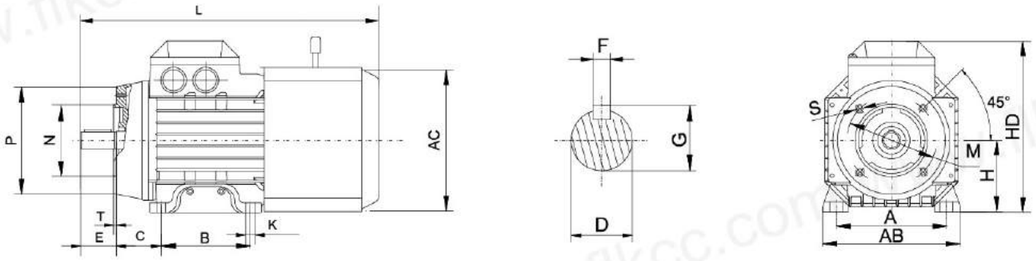
YEJ系列安装尺寸 / YEJ series installation size

IM B14 H63-112



机座号 Frame size	外型及安装尺寸 Installation Dimensions										
	D	E	F	G	M	N	P	S	T	AC	AD	L
63	ø11	23	4	12.5	75	60	90	M5	2.5	120×120	104	270
71	ø14	30	5	16	85	70	105	M6	2.5	130X130	107	315
80	ø19	40	6	21.5	100	80	120	M6	3.0	145×145	115	340
90S	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	400
90L	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	400
100L	ø28	60	8	31	130	110	155	M8	3.5	185X185	137	440
112M	ø28	60	8	31	130	110	160	M8	3.5	200X200	155	480

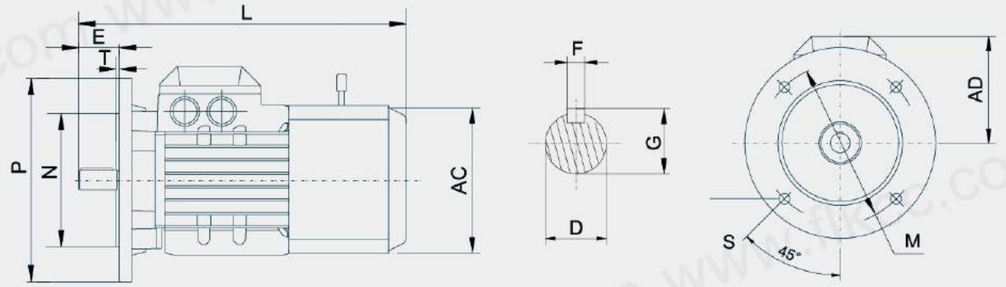
IM B34 H63-112



机座号 Frame size	外型及安装尺寸 Installation Dimensions																	
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	75	60	90	M5	2.5	135	120×120	167	270
71	112	90	45	ø14	30	5	16	71	ø7	85	70	105	M6	2.5	137	130X130	180	315
80	125	100	50	ø19	40	6	21.5	80	ø10	100	80	120	M6	3.0	155	145×145	190	340
90S	140	100	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	175	160×160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	175	160×160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	130	110	155	M8	3.5	200	185X185	240	440
112M	190	140	70	ø28	60	8	31	112	ø12	130	110	160	M8	3.5	230	200X200	270	480

YEJ系列安装尺寸 / YEJ series installation size

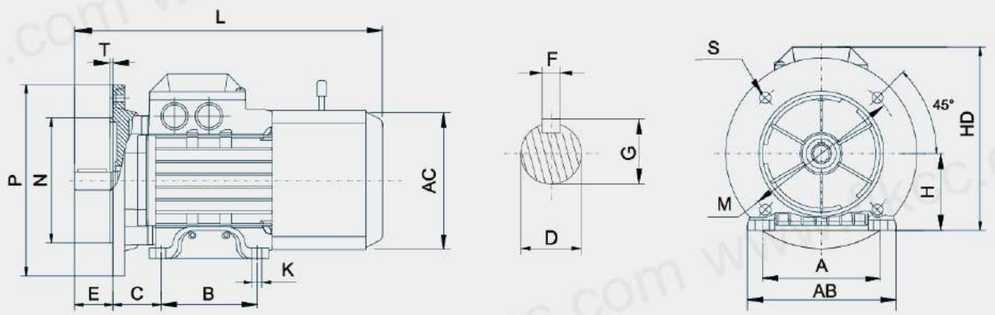
IM B5 H63-180



机座号 Frame size	外型及安装尺寸 Installation Dimensions											
	D	E	F	G	M	N	P	S	T	AC	AD	L
63	ø11	23	4	12.5	115	95	140	10	3.0	120×120	104	280
71	ø14	30	5	16	130	110	160	10	3.0	130×130	107	315
80M	ø19	40	6	21.5	165	130	200	12	3.5	145×145	115	340
90S	ø24	50	8	27	165	130	200	12	3.5	160×160	122	400
90L	ø24	50	8	27	165	130	200	12	3.5	160×160	122	400
100L	ø28	60	8	31	215	180	250	14.5	4	185×185	137	440
112M	ø28	60	8	31	215	180	250	14.5	4	200×200	155	480
132S	ø38	80	10	41	265	230	300	14.5	4	245×245	180	567
132M	ø38	80	10	41	265	230	300	14.5	4	245×245	180	567
160M	ø42	110	12	45	300	250	350	18.5	5	320×320	290	780
160L	ø42	110	12	45	300	250	350	18.5	5	320×320	290	780
180M	ø48	110	14	51.5	300	250	350	18.5	5	360×360	340	880
180L	ø48	110	14	51.5	300	250	350	18.5	5	360×360	340	880

YEJ系列安装尺寸 / YEJ series installation size

IM B35 H63-180



机座号 Frame size	外型及安装尺寸 Installation Dimensions																
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	115	95	140	10	2.5	115	120×120	167	280
71	112	90	45	ø14	30	5	16	71	ø7	130	110	160	10	3.5	136	130×130	178	315
80M	125	100	50	ø19	40	6	21.5	80	ø10	165	130	200	12	3.5	154	145×145	192	340
90S	140	100	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	215	180	250	14.5	4	205	185×185	240	440
112M	190	140	70	ø28	60	8	31	112	ø12	215	180	250	14.5	4	235	200×200	270	480
132S	216	140	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	567
132M	216	178	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	567
160M	254	210	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	335×335	450	780
160L	254	254	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	335×335	450	780
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	300	250	350	18.5	5	355	370×370	500	880
180L	279	279	121	ø48	110	14	51.5	180	ø14.5	300	250	350	18.5	5	355	370×370	500	880

变频电机

FREQUENCY CONVERSION MOTOR

动力传动专业制造商

PROFESSIONAL MANUFACTURER OF POWER TRANSMISSION

三相电机的变频调速概述 / Overview of the three-phase inverter motor

变频调速目前已经成为主流的调速方式，可广泛应用于各行各业无级变速传动。

VF speed has become the popular way, can be widely used in various industries continuously variable transmission.

在变频电机调速控制系统中，采用电力电子变频器作为供电电源，它不可避免的会有高次谐波分量，谐波对电机的影响较大。主要体现在磁路中谐波磁势和电路中的谐波电流上。不同振幅和频率的电流和磁通谐波将引起电动机定子铜耗转子铝耗。这些损耗使电动机效率、功率因数降低，这些损耗绝大部分转变成热能，引起电动机附加发热，导致电动机温升增加，其温升一般要增加10～20%。由于采用变频器供电，传导和辐射的电磁干扰，定子绕组中绝缘老化，共模电压导致加速轴承的恶化和泄漏电流，轴承易坏，同时电动机发出尖叫声。由于谐波磁动势与转子谐波电流合成后产生恒定的谐波电磁转矩和振动的谐波电磁转矩。这些转矩会使电动机发出的转矩产生脉动，从而使电动机转速低时发生振动。

In the variable frequency motor speed control system, using power electronic inverter as a power supply, it is inevitable that there will be high harmonics, harmonic greater impact on the motor. Mainly reflected in the magnetic circuit and the circuit harmonic magnetic potential harmonic currents. Different amplitudes and frequencies of harmonic currents and magnetic flux will cause the motor stator copper loss rotor aluminum consumption. These losses of the motor efficiency and power factor reduction, the majority of these losses into heat, causing additional heating of the motor, causing the motor temperature increases, the increase in temperature generally 10 ~ 20%. As a result of electromagnetic interference power, conduction and radiation, the stator winding insulation aging, resulting in deterioration of the common-mode voltage and leakage current of accelerated bearing, bearing perishable, while the motor screaming. Since harmonic electromagnetic torque constant harmonic electromagnetic torque and vibration harmonic MMFs and rear rotor harmonic current synthesis. The torque of the motor torque will generate pulsating issued, so that the motor speed vibration is low.

通过配置变频器改变三相异步电机的电压及频率，可使三相电机获得一定范围的无级速度调速。理论上电压的频率的变化必须保持一定的关系：

当$f < f_N$时；电机工作于低速区，能获得低于额定转速的各种转速。为保持电机的输出转矩恒定不变，电压必须与频率作同步线性变化，即$U/f=U_N/f_N$=常数。

当$f > f_N$时；电机工作于高速区，能获得高于额定转速的各种转速。在高速区电机将作恒功率驱动，且为保持电机过载能力不变，电压与频率须保持$U/f^{1/2}=U_N/f_N^{1/2}$=常数的变化规律。

Through inverter,we can change the electric voltage and frequency for three phase asynchronous electric motors,which will adjust electric motors speed stepless.

When $f < f_N$:the electric motor operate in low-speed area,and get the various speed will be lower than the rotate speed.to keep the output torque invariable,electric voltage should have synchronous and linear alteration with frequency,that is, $U/f=U_N/f_N$=constant.

When $f > f_N$时：electric motor works in high-speed area,the various speed will be faster than the rotate speed.It drive with constant power in the high-speed area,and the change of electric volatage & frequency should obey the rules of $U/f^{1/2}=U_N/f_N^{1/2}$=constant.

三相电机的变频调速概述 / Overview of the three-phase inverter motor

电机在低频段（f < f_N)工作区时，由于工作电压较低，电机定子绕组本身的电压降落将大大影响电机的输出力矩，有时甚至不能带动负载，因此实际应用中往往根据电机定转子漏阻抗（X）与定子电阻（Rs)的比值（Q=X/Rs)提升电机的输入电压以作补偿。必须指出，电机空载时R_s上负载电流产生的压降较少，过深的电压补偿有可能导致磁路饱和，使励磁电流达到不允许的数值。由于电动机在低频区工作时，因转速降低而使电动机原有设计的通风系统作用降低，电动机温度上升，因此在电动机后端装有一台单相220V或三相380V的独立轴流冷却风机，保障电动机在任何转速下得到有效的散热，可实现电动机在高速或低速下长期运行。

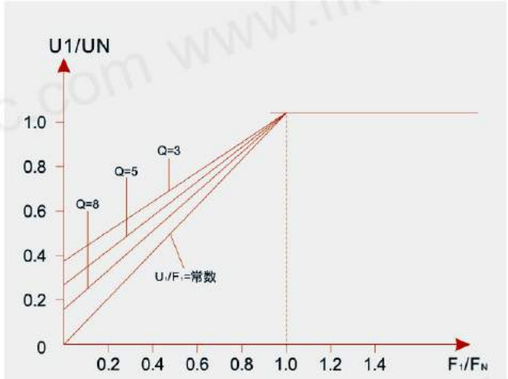
电机在高频段（f > f_N)工作时，由于电机的工作电压超过额定电压是不允许的，因此在实际使用中，随着频率的提高，电机电压往往不会升高，而维持额定电压U_N不变。在高频区工作时，过高的转速将使冷却风扇消耗更多的功率，并且大大增加电机运行噪音.因此我们在变频电机设计时采用更优化的数据和绝缘等级的提升。同时在电机后端盖装有一台单相220V或三相380V的独立轴流冷却风机。

When electric motor work with low frequency (f < f_N),due to the lower voltage,the decreased voltage of rotor winding will reducer the output largeiy.Sometimes it even cannot drive the load.Therefore in practical use,we sometimes raise the input voltage according to the ratio(Q=X/Rs)of motor stator rotor leaking impedance(X) and the stator resistance(Rs)as compensation.We must indicate that the voltage of electric motors without load will decrease slightly.Too much increase of voltage compensation will make magnetism route saturated.And the current may be over the allowed value.Since the motor is in a low frequency region, because the motor speed is reduced leaving the original ventilation system designed to reduce the role of the motor temperature rise, so the rear end of the motor with a single-phase 220V or 380V three-phase individual axial cooling fan, to protect effective cooling of the motor at any speed, the electric motor can run at high speed or low.

When electric motor work in high frequency(f > f_N) ' the work volltage of electric motor is not allowe to over the rated voltage,therefore,in the practical usage,the voltage of electric motor won't rise up with the frequency rising up but keep the rated voltage U_N.When working in high frequency area, high speed will make cooling fans consume more power, and greatly increase the motor running noise. So we in the design of the frequency conversion motor using data from a column optimization and upgrading insulation class.At the same time on the bake cover is equipped with a single-phase 220 v or 380 v three-phase independent axial flow fan cooling.

三相电机的变频调速概述 / Overview of the three-phase inverter motor

-下图表示电机在变频调速时实际的电压和频率关系。
-The foollowing picture shows the relationship of practical voltage and frequency.of electric motor when we adjust the speed by inverter:



U_N:电机额定电压/Rated voltage

f_N:电机额定频率/Rated frequency

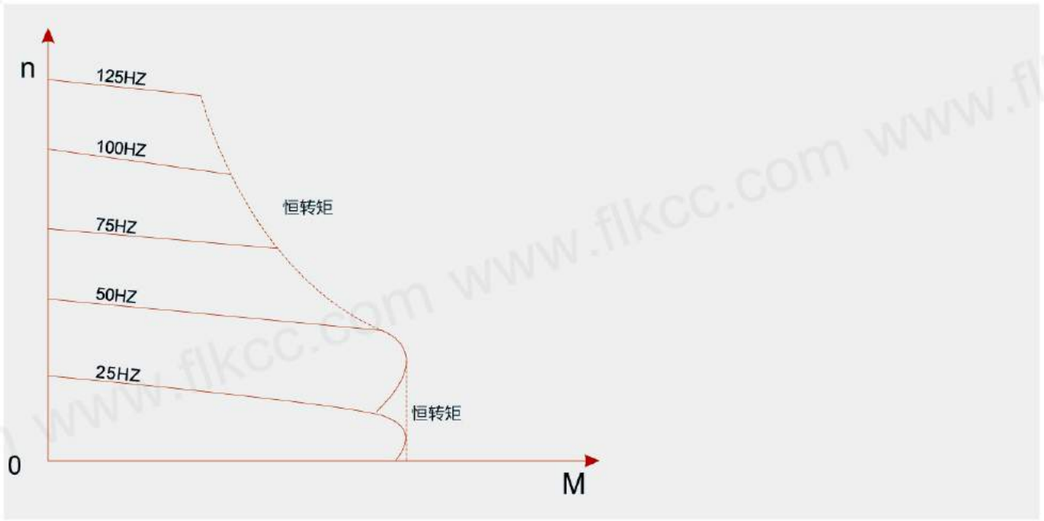
Q=X/Rs

X:电机漏抗总和/Total amount leak resistance of electric motor

Rs:电机电子定阻/Resistance of electric motor stator

-下图曲线表示额定效率为50Hz的电机，在进行变频调速时的输出转矩转速特征

-The following diagram describes the performance of output toque&speed when a electric motor(with rated frequency 50Hz)adjust the speed by inverter.



三相电机的变频调速概述 / Overview of the three-phase inverter motor

本公司生产的YS、IE2、IE3系列通用三相异步电动机在设计上，我们主要考虑的是电动机的过载能力、起动性能、效率和功率因数。另外主要考虑电动机对非正弦电源的适应能力。抑制电流中的高次谐波对电动机的影响。由于电动机在低频区工作时温升的升高，绝缘等级采用F级以上，采用高分子绝缘材料及真空压力浸漆工艺，以及采用特殊的绝缘结构。为了降低电磁转矩的脉动，提高机械零部件的加工精度，提高平恒质量，采用高精度静音轴承。为了消除电机振动，对电动机整体结构进行了加强设计。

The company produces YS, IE2, IE3 Series Universal three-phase asynchronous motor design, our main consideration is the motor overload, starting performance, efficiency and power factor. Another major consideration for non-sinusoidal motor power adaptability. Suppress the influence of higher harmonic current to the motor. Since the motor is increased when the working temperature of the low-frequency region, class F insulation class above, the use of polymer insulation materials and vacuum pressure impregnation process, and the use of special insulation structure. In order to reduce the electromagnetic torque ripple, improve the precision mechanical parts to improve the quality level constant, high-precision bearing mute. In order to eliminate vibration motor, the motor structure to strengthen the overall design.

我公司生产的YVF2三相变频电动机可配制动器，也可以配编码器，实现低速无级调速控制。YVF2三相变频电动机通用性好，其安装尺寸符合IEC标准，与一般标准型电动机具有互换性。

I produced YVF2 brakes can be equipped with three-phase inverter motor can also be equipped with an encoder to achieve low stepless speed control. With the IEC standard flange Installation dimensions, YVF2 three-phase inverter motor keep the good universal,and it can be interchanged with general standard motor.

YVF2系列技术参数 / YVF2 series of technical parameters

3000r/min 380V 50Hz

型号 Type	额定功率 RATED OUTPUT	额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE / 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE / 额定转矩 RATED TORQUE	变频风机 FREQUENCY CONVERSION BLOWER 电压VOLTAGE V 三相 THREE PHASE	变频风机 单相 SINGLE PHASE	变频风机 转速 SPEED
	KW	rpm	η %	COS φ	A	Nm	Ts/Tn	Tmax/Tn			rpm
YVF2－631－2	0.18	2800	65.0	0.80	0.53	0.61	2.2	2.2	380	220	2800
YVF2－632－2	0.25	2800	68.0	0.81	0.69	0.85	2.2	2.2	380	220	2800
YVF2－711－2	0.37	2830	70.0	0.81	0.99	1.25	2.2	2.2	380	220	2800
YVF2－712－2	0.55	2830	73.0	0.82	1.40	1.86	2.2	2.3	380	220	2800
YVF2－801－2	0.75	2840	75.0	0.83	1.83	2.52	2.2	2.3	380	220	2800
YVF2－802－2	1.1	2840	77.0	0.85	2.55	3.70	2.2	2.3	380	220	2800
YVF2－90S－2	1.5	2840	79.0	0.85	3.39	5.04	2.2	2.3	380	220	2800
YVF2－90L－2	2.2	2840	81.0	0.86	4.80	7.40	2.2	2.3	380	220	2800
YVF2－100L－2	3	2860	83.0	0.87	6.31	10.0	2.2	2.3	380	220	2800
YVF2－112M－2	4	2880	84.0	0.88	8.22	13.3	2.2	2.3	380	220	2800
YVF2－132S1－2	5.5	2910	85.0	0.88	11.2	18.0	2.2	2.3	380	220	2800
YVF2－132S2－2	7.5	2910	86.0	0.88	15.1	24.6	2.2	2.3	380	220	2800
YVF2－160M1－2	11	2930	88.0	0.89	21.3	35.9	2.2	2.3	380	220	2800
YVF2－160M2－2	15	2930	89.0	0.89	28.8	48.9	2.2	2.3	380	220	2800
YVF2－160L－2	18.5	2935	90.0	0.90	34.7	60.2	2.2	2.3	380	220	2800
YVF2－180M－2	22	2935	90.0	0.90	41.3	71.6	2.0	2.3	380	220	2800

YVF2变频电机代号说明 / YVF2 frequency conversion motor code description

YVF2系列技术参数 / YVF2 series of technical parameters

1500r/min 380V 50Hz

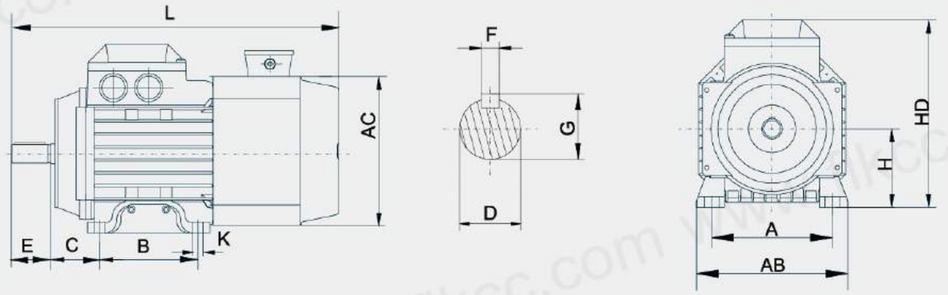
型号 Type	额定功率 RATED OUTPUT	额定转速 RATED SPEED	效率 EFFICENCY	功率因数 POWER FOCTOR	额定电流 RATED CURRENT	额定转矩 RATED TORQUE	堵转转矩 LOCKED ROTOR TORQUE 额定转矩 RATED TORQUE	最大转矩 MAXIMUM TORQUE 额定转矩 RATED TORQUE	变频风机 FREQUENCY CONVERSION BLOWER 电压VOLTAGE V 三相 THREE PHASE	单相 SINGLE PHASE	转速 SPEED
	KW	rpm	η%	COSφ	A	Nm	Ts/Tn	Tmax/Tn			rpm
YVF2－631－4	0.12	1360	57.0	0.72	0.44	0.84	2.2	2.0	380	220	2800
YVF2－632－4	0.18	1360	60.0	0.73	0.62	1.26	2.2	2.0	380	220	2800
YVF2－711－4	0.25	1375	65.0	0.74	0.79	1.74	2.2	2.0	380	220	2800
YVF2－712－4	0.37	1375	67.0	0.75	1.12	2.57	2.2	2.0	380	220	2800
YVF2－801－4	0.55	1405	71.0	0.75	1.57	3.74	2.2	2.4	380	220	2800
YVF2－802－4	0.75	1405	73.0	0.77	2.02	5.10	2.2	2.4	380	220	2800
YVF2－90S－4	1.1	1445	75.0	0.79	2.82	7.27	2.2	2.3	380	220	2800
YVF2－90L－4	1.5	1445	78.0	0.79	3.70	9.91	2.2	2.3	380	220	2800
YVF2－100L1－4	2.2	1440	80.0	0.81	5.16	14.6	2.2	2.3	380	220	2800
YVF2－100L2－4	3	1440	82.0	0.82	6.78	19.9	2.2	2.3	380	220	2800
YVF2－112M－4	4	1440	84.0	0.82	8.82	26.5	2.2	2.3	380	220	2800
YVF2－132S1－4	5.5	1440	85.0	0.84	11.7	36.5	2.2	2.3	380	220	2800
YVF2－132S2－4	7.5	1440	87.0	0.84	15.6	49.7	2.2	2.3	380	220	2800
YVF2－160M－4	11	1450	88.0	0.85	21.3	72.4	2.2	2.2	380	220	2800
YVF2－160L－4	15	1450	89.0	0.85	30.1	98.8	2.2	2.2	380	220	2800
YVF2－180M－4	18.5	1455	90.5	0.86	36.5	121.4	2.2	2.2	380	220	2800
YVF2－180L－4	22	1455	91.0	0.86	43.1	144.4	2.0	2.2	380	220	2800

1000r/min 380V 50Hz

YVF2－711－6	0.18	900	58.0	0.66	0.71	1.91	1.9	2.0	380	220	2800
YVF2－712－6	0.25	900	59.0	0.68	0.95	2.65	1.9	2.0	380	220	2800
YVF2－801－6	0.37	910	62.0	0.70	1.30	3.88	1.9	2.0	380	220	2800
YVF2－802－6	0.55	910	65.0	0.72	1.79	5.77	1.9	2.1	380	220	2800
YVF2－90S－6	0.75	930	70.0	0.72	2.26	7.7	2.1	2.1	380	220	2800
YVF2－90L－6	1.1	940	73.0	0.73	3.14	11.2	2.1	2.1	380	220	2800
YVF2－100L－6	1.5	940	76.0	0.76	3.95	15.2	2.2	2.1	380	220	2800
YVF2－112M－6	2.2	960	79.0	0.76	5.57	21.9	2.2	2.1	380	220	2800
YVF2－132S－6	3	960	81.0	0.76	7.40	29.8	2.2	2.1	380	220	2800
YVF2－132M1－6	4	960	83.0	0.76	9.63	39.8	2.2	2.1	380	220	2800
YVF2－132M2－6	5.5	960	84.0	0.77	12.9	54.7	2.2	2.1	380	220	2800
YVF2－160M－6	7.5	970	86.0	0.78	17.0	73.8	1.8	2.1	380	220	2800
YVF2－160L－6	11	970	87.0	0.79	24.3	108.3	1.9	2.1	380	220	2800
YVF2－180L－6	15	970	89.0	0.81	31.6	147.7	2.1	2.1	380	220	2800

YVF2系列安装尺寸 / YVF2 series installation size

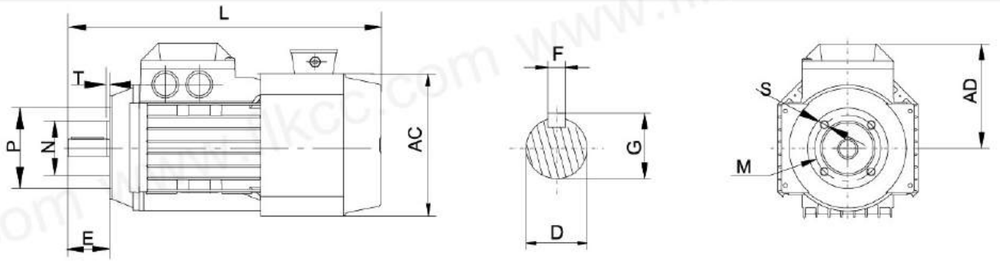
IM B3 H63-180



机座号 FRAME SIZE	外型及安装尺寸 INSTALLATION DIMENSIONS												
	A	B	C	D	E	F	G	H	K	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	135	120×120	167	270
71	112	90	45	ø14	30	5	16	71	ø7	137	130×130	178	315
80	125	100	50	ø19	40	6	21.5	80	ø10	155	145×145	190	340
90S	140	100	56	ø24	50	8	27	90	ø10	175	160×160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	175	160×160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	200	185×185	240	430
112M	190	140	70	ø28	60	8	31	112	ø12	230	200×200	270	480
132S	216	140	89	ø38	80	10	41	132	ø12	270	245×245	315	567
132M	216	178	89	ø38	80	10	41	132	ø12	270	245×245	315	567
160M	254	210	108	ø42	110	12	45	160	ø14.5	320	335×335	450	850
160L	254	254	108	ø42	110	12	45	160	ø14.5	320	335×335	450	870
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	355	370×370	500	880
180L	279	279	121	ø48	110	14	51.5	180	ø14.5	355	370×370	500	980

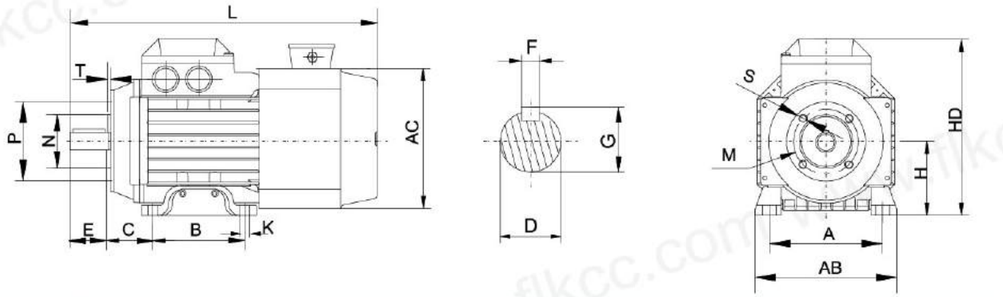
YVF2系列安装尺寸 / YVF2 series installation size

IM B14 H63-112



机座号 FRAME SIZE	外型及安装尺寸 INSTALLATION DIMENSIONS											
	D	E	F	G	M	N	P	S	T	AC	AD	L
63	ø11	23	4	12.5	75	60	90	M5	2.5	120×120	104	270
71	ø14	30	5	16	85	70	105	M6	2.5	130×130	107	315
80	ø19	40	6	21.5	100	80	120	M6	3.0	145×145	115	340
90S	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	400
90L	ø24	50	8	27	115	95	140	M8	3.0	160×160	122	400
100L	ø28	60	8	31	130	110	155	M8	3.5	185×185	137	430
112M	ø28	60	8	31	130	110	160	M8	3.5	200×200	155	480

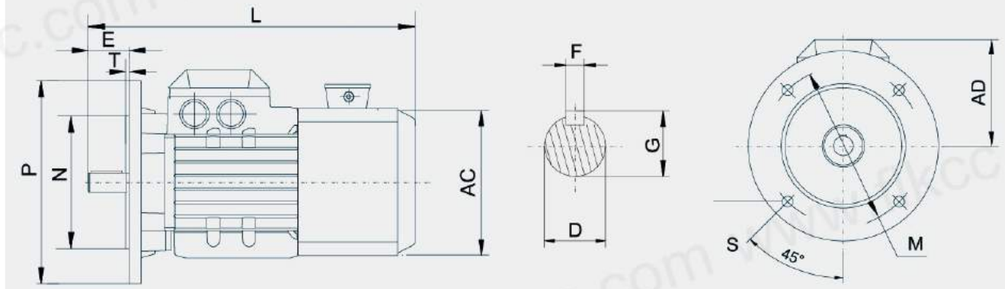
IM B34 H63-112



机座号 FRAME SIZE	外型及安装尺寸 INSTALLATION DIMENSIONS																	
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	75	60	90	M5	2.5	135	120×120	167	270
71	112	90	45	ø14	30	5	16	71	ø7	85	70	105	M6	2.5	137	130×130	178	315
80	125	100	50	ø19	40	6	21.5	80	ø10	100	80	120	M6	3.0	155	145×145	190	340
90S	140	100	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	175	160×160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	115	95	140	M8	3.0	175	160×160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	130	110	155	M8	3.5	200	185×185	240	430
112M	190	140	70	ø28	60	8	31	112	ø12	130	110	160	M8	3.5	230	200×200	270	480

YVF2系列安装尺寸 / YVF2 series installation size

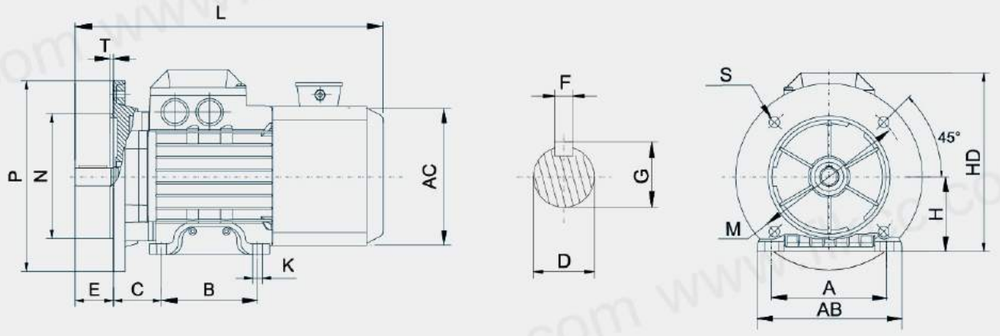
IM B5 H63-180



机座号 FRAME SIZE	外型及安装尺寸 INSTALLATION DIMENSIONS											
	D	E	F	G	M	N	P	S	T	AC	AD	L
63	ø11	23	4	12.5	115	95	140	10	3.0	120×120	104	280
71	ø14	30	5	16	130	110	160	10	3.5	130×130	107	315
80M	ø19	40	6	21.5	165	130	200	12	3.5	145×145	115	340
90S	ø24	50	8	27	165	130	200	12	3.5	160×160	122	400
90L	ø24	50	8	27	165	130	200	12	3.5	160×160	122	400
100L	28	60	8	31	215	180	250	14.5	4	185×185	137	430
112M	28	60	8	31	215	180	250	14.5	4	200×200	155	480
132S	38	80	10	41	265	230	300	14.5	4	245×245	180	567
132M	38	80	10	41	265	230	300	14.5	4	245×245	180	567
160M	42	110	12	45	300	250	350	18.5	5	335×335	290	850
160L	42	110	12	45	300	250	350	18.5	5	335×335	290	870
180M	48	110	14	51.5	300	250	350	18.5	5	370×370	340	880
180L	48	110	14	51.5	300	250	350	18.4	5	370×370	340	980

YVF2系列安装尺寸 / YVF2 series installation size

IM B35 H63-180



机座号 FRAME SIZE	外型及安装尺寸 INSTALLATION DIMENSIONS																	
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	HD	L
63	100	80	40	ø11	23	4	12.5	63	ø7	115	95	140	10	2.5	115	120×120	167	280
71	112	90	45	ø14	30	5	16	71	ø7	130	110	160	10	3.5	136	130×130	178	315
80M	125	100	50	ø19	40	6	21.5	80	ø10	165	130	200	12	3.5	154	145×145	190	340
90S	140	100	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	400
90L	140	125	56	ø24	50	8	27	90	ø10	165	130	200	12	3.5	180	160×160	205	400
100L	160	140	63	ø28	60	8	31	100	ø12	215	180	250	14.5	4	205	185×185	240	430
112M	190	140	70	ø28	60	8	31	112	ø12	215	180	250	14.5	4	235	200×200	270	480
132S	216	140	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	567
132M	216	178	89	ø38	80	10	41	132	ø12	265	230	300	14.5	4	261	245×245	310	567
160M	254	210	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	335×335	450	850
160L	254	254	108	ø42	110	12	45	160	ø14.5	300	250	350	18.5	5	320	335×335	450	870
180M	279	241	121	ø48	110	14	51.5	180	ø14.5	300	250	350	18.5	5	355	370×370	500	880
180L	279	279	121	ø48	110	14	51.5	180	ø14.5	300	250	350	18.5	5	355	370×370	500	980