Низковольтные электродвигатели переменного тока YBX4, IE3, IE4 B35, YBX3, YVF3, YVF2, IE5 IP65

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YBX4 Series Flameproof Induction Motor

YBX4 series flameproof induction motor, as the main power equipment, are usually used to drive pumps, fans, compressors, and other transmission machinery. In industries such as coal mining, oil and gas, petrochemicals, and chemical industry, flammable and explosive gases, dust, etc. are generated during the production process, which poses a great threat to production and personnel safety. Explosion proof motors have special capabilities to prevent ignition or explosion caused by equipment or operational errors, ensuring safe production.

Send Inquiry

Description

Technical Parameters

Brief Introduction

The working principle of YBX4 series flameproof induction motor mainly relies on their special design structure, namely the explosion-proof shell. This type of casing can separate the electrical parts inside the motor that may generate sparks, arcs, and dangerous temperatures from the surrounding explosive gas mixture.

Although this type of casing is not completely sealed, allowing explosive gas mixtures to enter the interior of the motor through the gaps between the joint surfaces of various parts of the casing, it will not cause an explosion when these mixtures come into contact with sparks, arcs, or dangerous high temperatures generated inside the motor. This is because the explosion-proof shell design of the motor can withstand the explosive pressure generated when the explosive mixture entering the shell is ignited by sparks or arcs generated by electrical equipment inside the shell, and the shell itself will not be damaged. At the same time, this design can also prevent the explosion products inside the shell from propagating to the explosive mixture outside the shell, thereby avoiding the combustion and explosion of the explosive mixture outside the shell.

Temperature group

Explosion proof motors are classified into different temperature groups based on their usage conditions and environmental temperature requirements. The common temperature groups for explosion-proof motors are T1, T2, T3, T4, T5, and T6.

- T1 group: Suitable for places with a maximum surface temperature not exceeding 450 ℃.
- T2 group: Suitable for places with a maximum surface temperature not exceeding 300 ℃.
- T3 group: suitable for places with a maximum surface temperature not exceeding 200 ℃.
- T4 group: Suitable for places with a maximum surface temperature not exceeding 135 ℃.
- T5 group: Suitable for places with a maximum surface temperature not exceeding 100 ℃.
- T6 group: suitable for places with a maximum surface temperature not exceeding 85 ℃.

Based on actual usage and temperature requirements, selecting the appropriate explosion-proof motor temperature group can ensure that YBX4 series flameproof induction motor can operate safely and reliably in harsh environments.

The advantages of YBX4 series flameproof induction motor mainly include high safety, durability and reliability, and the ability to operate stably for a long time in harsh environments.
Explosion proof motors achieve explosion-proof purposes by isolating the explosion source, and their advantages are mainly reflected in the following aspects:

● High safety
Explosion proof motors can effectively isolate the source of explosions, prevent the spread and expansion of explosions, and are suitable for places with high explosion risks. This design enables it to provide high security in environments where explosions may occur.

● Durability and reliability
Explosion proof motors have high durability and reliability, and can operate stably for a long time in harsh environments. This means that even under extreme or harsh working conditions, this type of motor can maintain its performance and functionality, reducing safety issues caused by equipment failures.

● Large volume and heavy weight
Although explosion-proof motors are relatively large and heavy in terms of volume and weight, this is mainly to meet their explosion-proof design and safety requirements. This feature also means that there may be some inconvenience in its movement and installation, requiring professional personnel to maintain and repair it.

YBX4 series flameproof induction motor with high safety and durability have become an indispensable equipment choice in explosive risk environments.





概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL

Ball bearings

The disassembly of ball bearings should use ball bearing pullers. This tool is specifically designed for disassembling ball bearings and can effectively assist in disassembling ball bearings. When using a ball bearing puller, make sure to align the bearings correctly to avoid damaging the bearings or the tool itself.

IP68 Metal gland

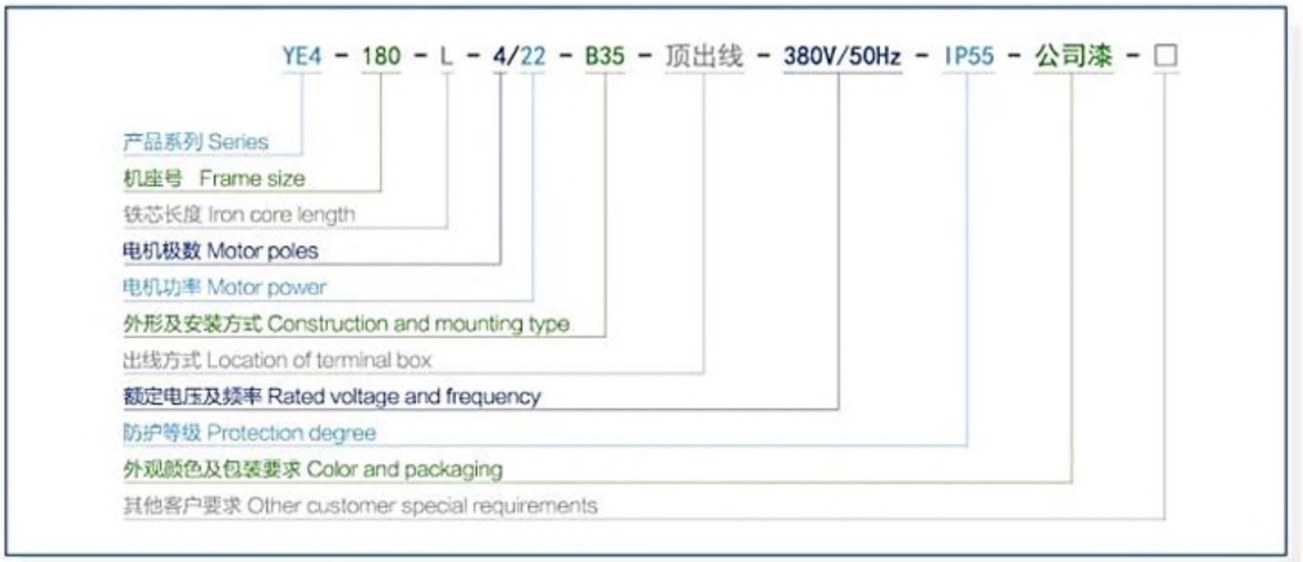
The IP68 metal gland has excellent sealing performance and can achieve an IP68 protection level by tightening the nut with a sealing ring within the specified clamping range. This type of gland head can effectively protect cables from moisture and dust intrusion, ensuring the normal operation and safe use of YBX4 series flameproof induction motor.

Temperature sensor

There are various types of temperature sensors for electric motors, including thermocouples, thermistors, infrared temperature sensors, etc. Each type has its specific advantages and applicable scenarios PT100 is the most commonly used temperature sensor for high voltage motorS and low voltage motors.

Packing box

The packing box of the motor is designed to protect the motor parts from damage caused by collisions during transportation, and to prevent defects in the motor that may affect product quality during transportation. When packaging in the inner box, it is necessary to ensure that the packaging is neat, and each part should be individually packaged to avoid contact and friction with each other. It is important to maintain neatness, which is more convenient for transportation and use.



规格型号 Type	IEC	GB	效率 (%) Eff.	耗电量 (kWh) Power consumption	年节电量 (kWh) Energy saving
Y2-160L-4	IE1		89.4	100671	0
YE2-160L-4	IE2	3 级能效	90.6	99338	1333
YE3-160L-4	IE3	2 级能效	92.1	97720	2951
YE4-160L-4	IE4	1 级能效	93.9	95847	4824

◆ **IEC 标准定义的 50Hz 效率限定值** Minimum efficiency values under50Hz defined in IEC/EN 60034-30-1

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
kW	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole
0.12	53.6	59.1	50.6	39.8	60.8	64.8	57.7	50.7	66.5	69.8	64.9	62.3
0.18	60.4	64.7	56.6	45.9	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.25	64.8	68.5	61.6	50.6	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	69.5	72.7	67.6	56.1	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.55	74.1	77.1	73.1	61.7	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	79.6	81.4	78.1	70.8	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	81.3	82.8	79.8	74.1	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	83.2	84.3	81.8	77.6	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3	84.6	85.5	83.3	80.0	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	85.8	86.6	84.6	81.9	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	87.0	87.7	86.0	83.8	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	88.1	88.7	87.2	85.3	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	89.4	89.8	88.7	86.9	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	90.3	90.6	89.7	88.0	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	90.9	91.2	90.4	88.6	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	91.3	91.6	90.9	89.1	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	92.0	92.3	91.7	89.8	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
37	92.5	92.7	92.2	90.3	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	92.9	93.1	92.7	90.7	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	93.2	93.5	93.1	91.0	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	93.8	94.0	93.7	91.6	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	94.1	94.2	94.0	91.9	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	94.3	94.5	94.3	92.3	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	94.6	94.7	94.6	92.6	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	94.8	94.9	94.8	93.0	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4
250	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.5	95.4
315-1000	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4

※ 测试方法基于 IEC60034-2-1 中规定 B 法，损耗值为实测，不同的测试方法取得的效率值不具有可比性

※ based on test methods specified in IEC 60034-2-1

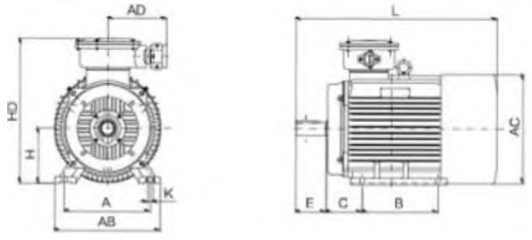
绝缘等级 Insulation class	最高使用温度 Highest temperature	最大温升 Limit of temperature rise
B	130℃	80K
F	155℃	105K
H	180℃	125K

型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩 倍数	最大转矩 倍数	堵转电流 倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
2 极 - 同步转速 3000rpm-50Hz									
YE3-80M1-2	0.75	1.7	2885	80.7	0.82	2.4	2.3	2.3	7.0
YE3-80M2-2	1.1	2.4	2885	82.7	0.83	3.5	2.2	2.3	7.3
YE3-90S-2	1.5	3.2	2905	84.2	0.84	4.8	2.2	2.3	7.6
YE3-90L-2	2.2	4.6	2905	85.9	0.85	7.0	2.2	2.3	7.6
YE3-100L-2	3	6.0	2895	87.1	0.87	9.6	2.2	2.3	7.8
YE3-112M-2	4	7.8	2915	88.1	0.88	12.7	2.2	2.3	8.3
YE3-132S1-2	5.5	10.6	2925	89.2	0.88	17.5	2.0	2.3	8.3
YE3-132S2-2	7.5	14.4	2925	90.1	0.88	23.9	2.0	2.3	7.8
YE3-160M1-2	11	20.6	2950	91.2	0.89	35.0	2.0	2.3	8.1
YE3-160M2-2	15	27.9	2950	91.9	0.89	47.8	2.0	2.3	8.1
YE3-160L-2	18.5	34.2	2950	92.4	0.89	58.9	2.0	2.3	8.2
YE3-180M-2	22	40.5	2960	92.7	0.89	70.0	2.0	2.3	8.2

型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩 倍数	最大转矩 倍数	堵转电流 倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
YE3-200L1-2	30	54.9	2965	93.3	0.89	95.5	2.0	2.3	7.6
YE3-200L2-2	37	67.4	2965	93.7	0.89	118	2.0	2.3	7.6
YE3-225M-2	45	80.8	2965	94.0	0.90	143	2.0	2.3	7.7
YE3-250M-2	55	98.5	2970	94.3	0.90	175	2.0	2.3	7.7
YE3-280S-2	75	134	2975	94.7	0.90	239	1.8	2.3	7.1
YE3-280M-2	90	160	2975	95.0	0.90	287	1.8	2.3	7.1
YE3-315S-2	110	195	2980	95.2	0.90	350	1.8	2.3	7.1
YE3-315M-2	132	234	2980	95.4	0.90	420	1.8	2.3	7.1
YE3-315L1-2	160	279	2980	95.6	0.91	509	1.8	2.3	7.2
YE3-315L2-2	200	349	2980	95.8	0.91	637	1.8	2.2	7.2
YE3-355M-2	250	436	2985	95.8	0.91	796	1.6	2.2	7.2
YE3-355L-2	315	549	2985	95.8	0.91	1003	1.6	2.2	7.2
YE3-3551-2	355	619	2985	95.8	0.91	1130	1.6	2.2	7.2
YE3-3552-2	375	654	2985	95.8	0.91	1194	1.6	2.2	7.2

4 极 - 同步转速 1500rpm-50Hz									
YE3-80M2-4	0.75	1.8	1435	82.5	0.75	4.8	2.3	2.3	6.6
YE3-90S-4	1.1	2.6	1435	84.1	0.76	7.0	2.3	2.3	6.8
YE3-90L-4	1.5	3.5	1435	85.3	0.77	9.6	2.3	2.3	7.0
YE3-100L1-4	2.2	4.8	1450	86.7	0.81	14.0	2.3	2.3	7.6
YE3-100L2-4	3	6.3	1450	87.7	0.82	19.1	2.3	2.3	7.6
YE3-112M-4	4	8.4	1455	88.6	0.82	25.5	2.2	2.3	7.8
YE3-132S-4	5.5	11.2	1465	89.6	0.83	35.0	2.0	2.3	7.9
YE3-132M-4	7.5	15.0	1465	90.4	0.84	47.8	2.0	2.3	7.5
YE3-160M-4	11	21.5	1470	91.4	0.85	70.0	2.2	2.3	7.7
YE3-160L-4	15	28.8	1470	92.1	0.86	95.5	2.2	2.3	7.8
YE3-180M-4	18.5	35.3	1475	92.6	0.86	118	2.0	2.3	7.8
YE3-180L-4	22	41.8	1475	93.0	0.86	140	2.0	2.3	7.8
YE3-200L-4	30	56.6	1475	93.6	0.86	191	2.0	2.3	7.3
YE3-225S-4	37	69.6	1480	93.9	0.86	236	2.0	2.3	7.4
YE3-225M-4	45	84.4	1480	94.2	0.86	287	2.0	2.3	7.4
YE3-250M-4	55	103	1485	94.6	0.86	350	2.2	2.3	7.4
YE3-280S-4	75	136	1485	95.0	0.88	478	2.0	2.3	6.9
YE3-280M-4	90	163	1485	95.2	0.88	573	2.0	2.3	6.9
YE3-315S-4	110	197	1485	95.4	0.89	700	2.0	2.2	7.0
YE3-315M-4	132	236	1485	95.6	0.89	840	2.0	2.2	7.0
YE3-315L1-4	160	285	1485	95.8	0.89	1019	2.0	2.2	7.1
YE3-315L2-4	200	352	1485	96.0	0.90	1273	2.0	2.2	7.1
YE3-355M-4	250	440	1490	96.0	0.90	1592	2.0	2.2	7.1
YE3-355L-4	315	554	1490	96.0	0.90	2006	2.0	2.2	7.1
YE3-3551-4	355	638	1490	96.0	0.88	2260	1.7	2.2	7.0
YE3-3552-4	375	674	1490	96.0	0.88	2388	1.7	2.2	7.0

IM B3



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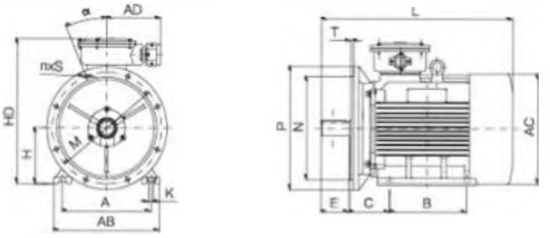

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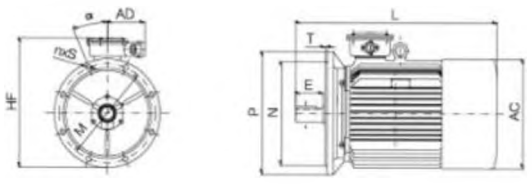
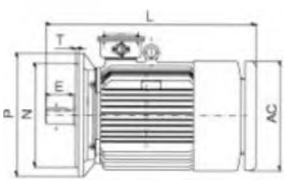


IM V1



mm

mm

机座 Frame	外形安装尺寸 External and mounting dimensions										进线口管螺纹 Pipe thread		L			
													2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	单口	双口	其他	V1	其他	V1
80M	125	100	50	80	10	165	165	180	320	340	M30*2		320	375	320	375
90S	140	100	56	90	10	180	180	180	350	360	M30*2		370	415	370	415
90L	140	125	56	90	10	180	180	180	350	360	M30*2		395	440	395	440
100L	160	140	63	100	12	200	205	180	400	425	M30*2		448	505	448	505
112M	190	140	70	112	12	245	230	200	420	435	M30*2		500	560	500	560
132S	216	140	89	132	12	280	270	200	450	470	M30*2	—	550	630	550	630
132M	216	178	89	132	12	280	270	200	450	470	M30*2		600	680	600	680
160M	254	210	108	160	14.5	330	325	220	520	535	M36*2		720	790	720	790
160L	254	254	108	160	14.5	330	325	220	520	535	M36*2		750	820	750	820
180M	279	241	121	180	14.5	355	360	220	550	545	M36*2		770	840	770	840
180L	279	279	121	180	14.5	355	360	220	550	545	M36*2		790	860	790	860
200L	318	305	133	200	18.5	390	400	250	645	645	M48*2	M48*2	840	910	840	910
225S	356	286	149	225	18.5	435	450	250	690	690	M48*2	M48*2	—		888	935
225M	356	311	149	225	18.5	435	450	250	690	690	M48*2	M48*2	888	950	918	980
250M	406	349	168	250	24	490	500	300	730	775	M64*2	M48*2	965	1055	965	1055
280S	457	368	190	280	24	545	560	300	810	825	M64*2	M48*2	1007	1100	1007	1100
280M	457	419	190	280	24	545	560	300	810	825	M64*2	M48*2	1072	1150	1072	1150
315S	508	406	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1185	1340	1260	1370
315M	508	457	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1420	1380	1450
315L	508	508	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1510	1380	1530
355S	610	500	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1415	1600	1485	1600
355M	610	560	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1495	1600	1565	1600
355L	610	630	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1645	1780	1675	1780

YBX4 Series Explosion Proof Ac Motor

YBX4 series explosion proof ac motor can avoid the generation of sparks and arcs, effectively reducing the incidence of mining accidents and ensuring the safety of miners.Because during the mining production process, it is easy to trigger explosions due to combustible gases in the mine, posing a a huge threat to the lives and property of miners. Explosion proof motors have also been widely used in the mining industry.

Brief Introduction

In the process of mining production, it is easy to trigger explosions due to combustible gases in the mine, which poses a huge threat to the lives and property of miners. YBX4 series explosion proof ac motor can avoid the generation of sparks and arcs, effectively reducing the incidence of mining accidents and ensuring the safety of miners. Explosion proof motors have also been widely used in the mining industry.

The requirements for explosion-proof motors in the mining industry mainly include good sealing, ability to withstand impact forces, adaptability to complex working conditions, and explosion-proof performance.

● Good sealing performance
Due to the humid environment of the mine, with a relative humidity of up to 98% and the possibility of water splashing, equipment lubrication and cooling grease may enter the motor. Therefore, it is required that the motor has good sealing performance to prevent moisture and impurities from entering the interior of the motor, causing winding scaling and moisture.
● Capable of withstanding impact force
In mining operations, electric motors may be hit or bumped by external forces such as coal and rock falling. Therefore, the motor casing and exposed components should be able to withstand the specified impact force to ensure the safe operation of the equipment.
● Adapt to complex working conditions
The mining operation environment is complex, and the electric motor needs to operate under complex working conditions such as frequent starting, jogging, stalling, and overload. Therefore, a large temperature rise margin is left in the design of the motor, and the insulation level is downgraded to improve the reliability of the motor and adapt to frequent starting and overload working environments.
● Having explosion-proof performance
Most mines have the risk of gas and coal dust explosions, so the electric motors used in mining machinery should be explosion-proof for mining to ensure safe operation in flammable and explosive environments. In addition, the selection and management of YBX4 series explosion proof ac motor should be strictly in accordance with explosion-proof requirements, including but not limited to the integrity of the casing, the cleanliness and integrity of the explosion-proof surface, and the tightening of bolts and spring washers.

Level I:

Suitable for places where explosive gas environments exist year-round, such as methane, acetylene, etc.

Level II:

Suitable for places with explosive gases and vapors, such as ethylene, propylene, etc.

Level III:

Suitable for places with flammable dust or fibers, such as sawdust, coal powder, etc.

Precautions for the application of explosion-proof motors

When using YBX4 series explosion proof ac motor, it is necessary to select the appropriate explosion-proof motor according to the specific working environment and usage requirements. In addition, the following points should be noted:

Explosion proof motors must be installed by professionals and undergo testing before use to ensure installation quality and that the motor itself meets the requirements.

Explosion proof motors require regular maintenance and upkeep to ensure their normal operation and long lifespan.

During the use of explosion-proof motors, it is necessary to strictly comply with relevant safety regulations and operating procedures to ensure the safety of personnel and equipment.

概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL

Fan cover

When YBX4 series explosion proof ac motor is working, the airflow driven by the fan will enter the interior of the motor from the air inlet, flow through the copper coils and magnetic poles inside the motor, and take away the generated heat, forming a closed heat dissipation cycle system. In this way, the high-temperature hot air will be discharged from the heat dissipation holes of the motor, thus achieving the purpose of heat dissipation.

IP68 plastic gland

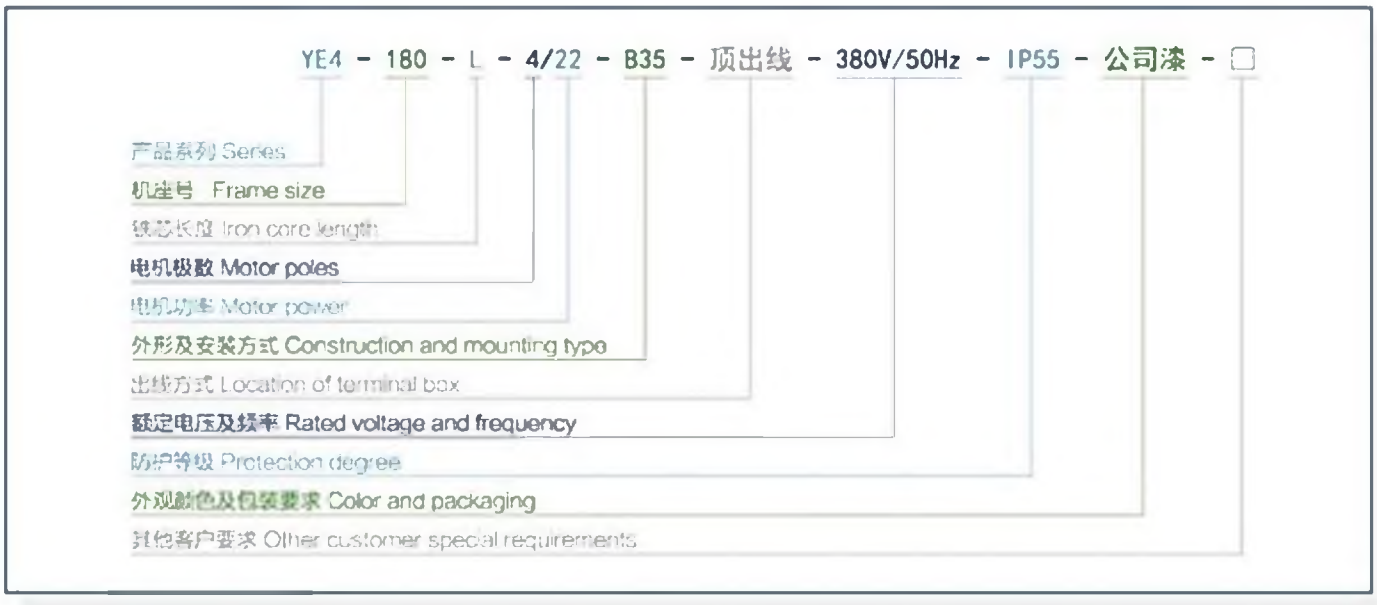
The main features of IP68 plastic gland include waterproof, dustproof, salt resistant, acid and alkali resistant, alcohol, oil, ester and other general solvents. They are suitable for various harsh working environments, such as offshore operations, mining machinery, chemical equipment, etc. They can effectively protect cables from moisture and dust intrusion, ensuring the normal operation and safe use of equipment.

Rolling bearings

The maintenance of rolling bearings is the key to ensuring their long-term effective operation. Regularly disassemble bearings for detailed inspection, including the condition of the raceway surface, rolling surface, and cage. When cleaning bearings, use appropriate cleaning agents and be careful to avoid damaging the rolling surfaces of the bearings.

Wooden box

The outer packaging of YBX4 series explosion proof ac motor is an important part to ensure that the product is not affected by external objects or pressure during transportation. Common packaging materials include cardboard boxes, plywood, and wooden box. Appropriate packaging can reduce the frequency of motor impacts within a certain range and alleviate the impact of external forces.



◆ IP 55

表征字母	第一位数字	第二位数字
IP	5	5

Characteristic letters	First number	Second number
IP	5	5

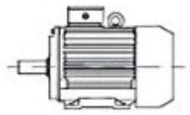
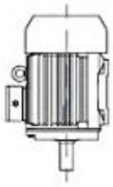
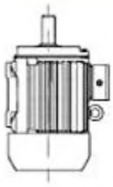
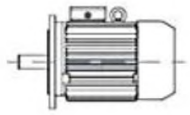
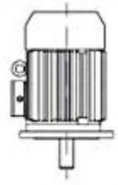
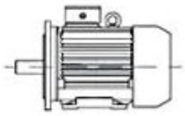
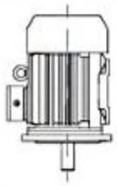
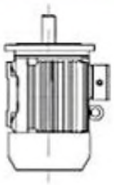
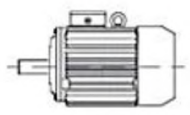
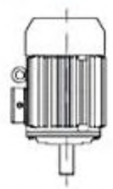
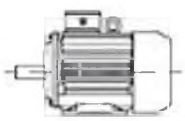
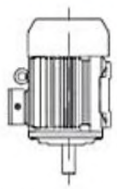
第一位数字	含义
2	防护＞ 12mm 固体异物进入
4	防护＞ 1mm 固体异物进入
5	防尘
6	尘密

1st number	Brief description
2	Against solid objects > 12mm
4	Against solid objects > 1mm
5	Dust-protected
6	Dust-tight

第二位数字	含义
3	防淋水电机
4	防溅水电机
5	防喷水电机
6	防海浪电机

2nd number	Brief description
3	Against spraying water
4	Against splashing water
5	Against water jets
6	Against heavy seas

《GB/T 997-2008 Rotating electrical machine - Classification of types of construction, mounting arrangements and terminal box position》（IEC60034-7:2001）

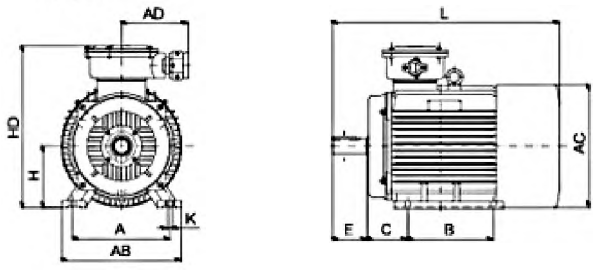
机座带底脚，端盖无法兰 With feet, without flange on the end-shield					
					
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
机座不带底脚，端盖有法兰 Without feet,flange on the end-shield			机座带底脚，端盖有法兰 With feet,flange on the end-shield		
					
IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031
机座不带底脚，端盖有小法兰 Without feet,C-flange on the end-shield			机座带底脚，端盖有小法兰 With feet,C-flange on the end-shield		
					
IM B14	IM V18	IM V19	IM B34	IM V17	IM V37
IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131

4极 - 同步转速 1500rpm-50Hz									
YE3-80M2-4	0.75	1.8	1435	82.5	0.75	4.8	2.3	2.3	6.6
YE3-90S-4	1.1	2.6	1435	84.1	0.76	7.0	2.3	2.3	6.8
YE3-90L-4	1.5	3.5	1435	85.3	0.77	9.6	2.3	2.3	7.0
YE3-100L1-4	2.2	4.8	1450	86.7	0.81	14.0	2.3	2.3	7.6
YE3-100L2-4	3	6.3	1450	87.7	0.82	19.1	2.3	2.3	7.6
YE3-112M-4	4	8.4	1455	88.6	0.82	25.5	2.2	2.3	7.8
YE3-132S-4	5.5	11.2	1465	89.6	0.83	35.0	2.0	2.3	7.9
YE3-132M-4	7.5	15.0	1465	90.4	0.84	47.8	2.0	2.3	7.5
YE3-160M-4	11	21.5	1470	91.4	0.85	70.0	2.2	2.3	7.7
YE3-160L-4	15	28.8	1470	92.1	0.86	95.5	2.2	2.3	7.8
YE3-180M-4	18.5	35.3	1475	92.6	0.86	118	2.0	2.3	7.8
YE3-180L-4	22	41.8	1475	93.0	0.86	140	2.0	2.3	7.8
YE3-200L-4	30	56.6	1475	93.6	0.86	191	2.0	2.3	7.3
YE3-225S-4	37	69.6	1480	93.9	0.86	236	2.0	2.3	7.4
YE3-225M-4	45	84.4	1480	94.2	0.86	287	2.0	2.3	7.4
YE3-250M-4	55	103	1485	94.6	0.86	350	2.2	2.3	7.4
YE3-280S-4	75	136	1485	95.0	0.88	478	2.0	2.3	6.9
YE3-280M-4	90	163	1485	95.2	0.88	573	2.0	2.3	6.9
YE3-315S-4	110	197	1485	95.4	0.89	700	2.0	2.2	7.0
YE3-315M-4	132	236	1485	95.6	0.89	840	2.0	2.2	7.0
YE3-315L1-4	160	285	1485	95.8	0.89	1019	2.0	2.2	7.1
YE3-315L2-4	200	352	1485	96.0	0.90	1273	2.0	2.2	7.1
YE3-355M-4	250	440	1490	96.0	0.90	1592	2.0	2.2	7.1
YE3-355L-4	315	554	1490	96.0	0.90	2006	2.0	2.2	7.1
YE3-3551-4	355	638	1490	96.0	0.88	2260	1.7	2.2	7.0
YE3-3552-4	375	674	1490	96.0	0.88	2388	1.7	2.2	7.0

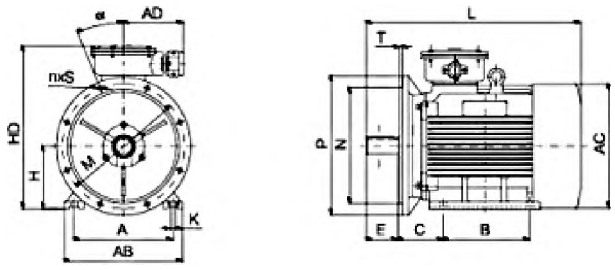
型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩 倍数	最大转矩 倍数	堵转电流 倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
YE3-90L-6	1.1	2.8	950	81.0	0.73	10.5	2.0	2.1	6.0
YE3-100L-6	1.5	3.8	960	82.5	0.73	14.3	2.0	2.1	6.5
YE3-112M-6	2.2	5.4	960	84.3	0.74	21.0	2.0	2.1	6.6
YE3-132S-6	3	7.2	970	85.6	0.74	28.7	2.0	2.1	6.8
YE3-132M1-6	4	9.5	970	86.8	0.74	38.2	2.0	2.1	6.8
YE3-132M1-6	5.5	12.7	970	88.0	0.75	52.5	2.0	2.1	7.0
YE3-160M-6	7.5	16.2	975	89.1	0.79	71.6	2.0	2.1	7.0
YE3-160L-6	11	23.1	975	90.3	0.80	105	2.0	2.1	7.2
YE3-180L-6	15	30.9	980	91.2	0.81	143	2.0	2.1	7.3
YE3-200L1-6	18.5	37.8	980	91.7	0.81	177	2.0	2.1	7.3
YE3-200L2-6	22	44.8	980	92.2	0.81	210	2.0	2.1	7.4
YE3-225M-6	30	59.1	985	92.9	0.83	287	2.0	2.1	6.9
YE3-250M-6	37	71.7	985	93.3	0.84	353	2.0	2.1	7.1
YE3-280S-6	45	85.8	990	93.7	0.85	430	2.0	2.0	7.3
YE3-280M-6	55	103	990	94.1	0.86	525	2.0	2.0	7.3
YE3-315S-6	75	143	990	94.6	0.84	716	2.0	2.0	6.6
YE3-315M-6	90	170	990	94.9	0.85	860	2.0	2.0	6.7
YE3-315L1-6	110	207	990	95.1	0.85	1051	2.0	2.0	6.7
YE3-315L2-6	132	245	990	95.4	0.86	1261	2.0	2.0	6.8
YE3-355M1-6	160	296	990	95.6	0.86	1528	1.8	2.0	6.8
YE3-355M2-6	200	365	990	95.8	0.87	1910	1.8	2.0	6.8
YE3-355L-6	250	456	990	95.8	0.87	2388	1.8	2.0	6.8
YE3-3552-6	315	581	990	95.8	0.86	3008	1.8	2.0	6.8

◆ 外形及安装尺寸 External and mounting dimensions

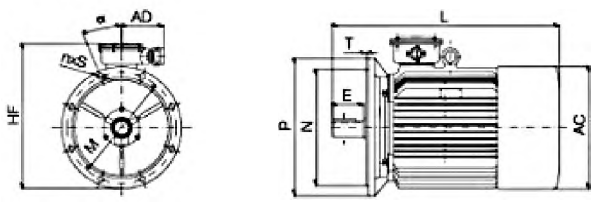
IM B3



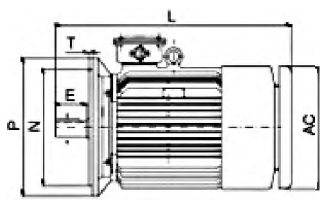
IM B35



IM B5



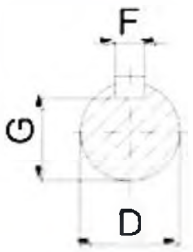
IM V1

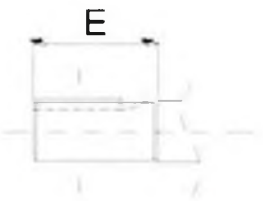


mm

机座 Frame	外形安装尺寸 External and mounting dimensions										进线口管螺纹 Pipe thread		L			
													2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	单口	双口	其他	V1	其他	V1
80M	125	100	50	80	10	165	165	180	320	340	M30*2		320	375	320	375
90S	140	100	56	90	10	180	180	180	350	360	M30*2		370	415	370	415
90L	140	125	56	90	10	180	180	180	350	360	M30*2		395	440	395	440
100L	160	140	63	100	12	200	205	180	400	425	M30*2		448	505	448	505
112M	190	140	70	112	12	245	230	200	420	435	M30*2		500	560	500	560
132S	216	140	89	132	12	280	270	200	450	470	M30*2	—	550	630	550	630
132M	216	178	89	132	12	280	270	200	450	470	M30*2		600	680	600	680
160M	254	210	108	160	14.5	330	325	220	520	535	M36*2		720	790	720	790
160L	254	254	108	160	14.5	330	325	220	520	535	M36*2		750	820	750	820
180M	279	241	121	180	14.5	355	360	220	550	545	M36*2		770	840	770	840

◆ 轴伸尺寸 Shaftdimensions





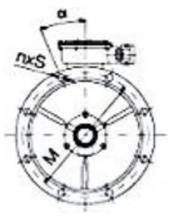
mm

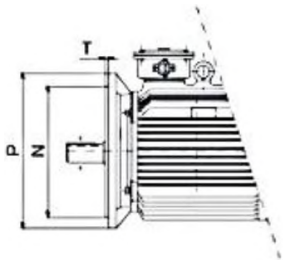
机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37
180	≥ 2	48	110	14	42.5
200	≥ 2	55	110	16	49
225	2	55	110	16	49

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
225	≥ 4	60	140	18	53
250	2	60	140	18	53
	≥ 4	65	140	18	58
280	2	65	140	18	58
	≥ 4	75	140	20	67.5
315	2	65	140	18	58
	≥ 4	80	170	22	71
355	2	75	140	20	67.5
	≥ 4	95	170	25	86

◆ 法兰尺寸 Flange dimensions

IM B5





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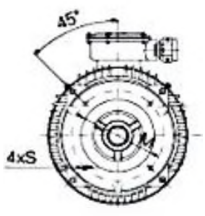
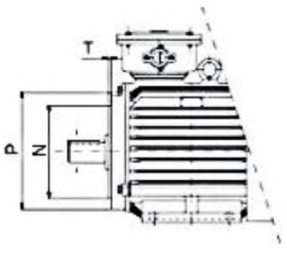




mm

机座 Frame	凸缘号 Flange	B35、B5、V1 法兰					
		M	N	P	T	α	n*ΦS
80、90	FF165	165	130	200	3.5	45	4*12
100、112	FF215	215	180	250	4	45	4*14.5
132	FF265	265	230	300	4	45	4*14.5
160、180	FF300	300	250	350	5	45	4*18.5
200	FF350	350	300	400	5	45	4*18.5
225	FF400	400	350	450	5	22.5	8*18.5
250、280	FF500	500	450	550	5	22.5	8*18.5
315	FF600	600	550	660	6	22.5	8*24
355	FF740	740	680	800	6	22.5	8*24

机座 Frame	凸缘号 Flange	B34、B14 法兰				
		M	N	P	S	T
80	FT100	100	80	120	M6	3
90	FT115	115	95	140	M8	3
100、112	FT130	130	110	160	M8	3.5

YBX4 series non sparking motor

The rated voltage, rated current, power, and speed of explosion-proof motors are the same as those marked on ordinary motors. The difference is that YBX4 series non sparking motor has an explosion-proof mark Ex, which is basically displayed on the main junction box cover. Explosion proof motors use explosion-proof enclosures to separate electrical parts that may generate sparks, arcs, and dangerous temperatures from the surrounding explosive gas mixture. Therefore, in environments where flammable and explosive gases, powders, and water vapor may be generated, reliable and safe explosion-proof motors are definitely the best choice.

Brief Introduction

Explosion proof motors use explosion-proof shells, but these shells are not sealed, and explosive gas mixtures around them can enter the interior of the YBX4 series non sparking motor through the gaps between the joint surfaces of various parts of the shell. When in contact with ignition sources such as sparks, arcs, and dangerous high temperatures inside the casing, an explosion may occur. At this time, the explosion-proof casing of the motor will not be damaged or deformed, and when the explosive flame or hot gas is transmitted through the gap between the joint surfaces, it cannot ignite the surrounding explosive gas mixture.

The main characteristics of explosion-proof non sparking motors are as follows:

● The corresponding relationship between power level, installation size, and speed is consistent with DIN42673, and necessary adjustments have been made to make it more effective and applicable, taking into account the inheritance with YB series and interchangeability with Y2 series.

● The entire series adopts F-level insulation, and the temperature rise is assessed according to B-level.

● The noise limit is lower than that of the YB series, approaching the I-level noise of the YB series, and the vibration limit is comparable to that of the YB series.

● The protection level of the shell has been raised to a minimum of IP55.

● The entire series uses low-noise deep groove ball bearings, and motors with a center height of over 180mm are equipped with oil injection and discharge devices.

● There are two types of motor heat sinks: parallel horizontal distribution and radiation distribution, with parallel horizontal distribution being the main one.

● The main performance indicators have reached the international advanced level in the early 1990s.

Purchasing Guide

Conduct environmental analysis: Understand the nature, level, and temperature requirements of the explosion.

Determine motor type: Select the corresponding explosion type (gas, dust, or coexistence) based on environmental classification.

Choose explosion level: Select based on the nature and level of the explosion present in the actual environment.

Consider temperature rating: Ensure that the temperature rating of the motor meets environmental requirements.

Refer to product certification: Ensure that the selected motor meets the safety standards and certification requirements of the relevant country or region.

Pay attention to the performance of YBX4 series non sparking motor: consider the power, speed, insulation level, and protection level of the motor.
These explosion-proof types are selected according to different usage environments and safety requirements to ensure safe operation in flammable and explosive places.

概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL

Bearings

The maintenance of rolling bearings is the key to ensuring their long-term effective operation. Choose lubricants correctly, considering environmental conditions, temperature, speed, and load, and follow the manufacturer's recommendations.Regularly replenish or replace lubricants to maintain the good operating condition of bearings.

IP68 gland

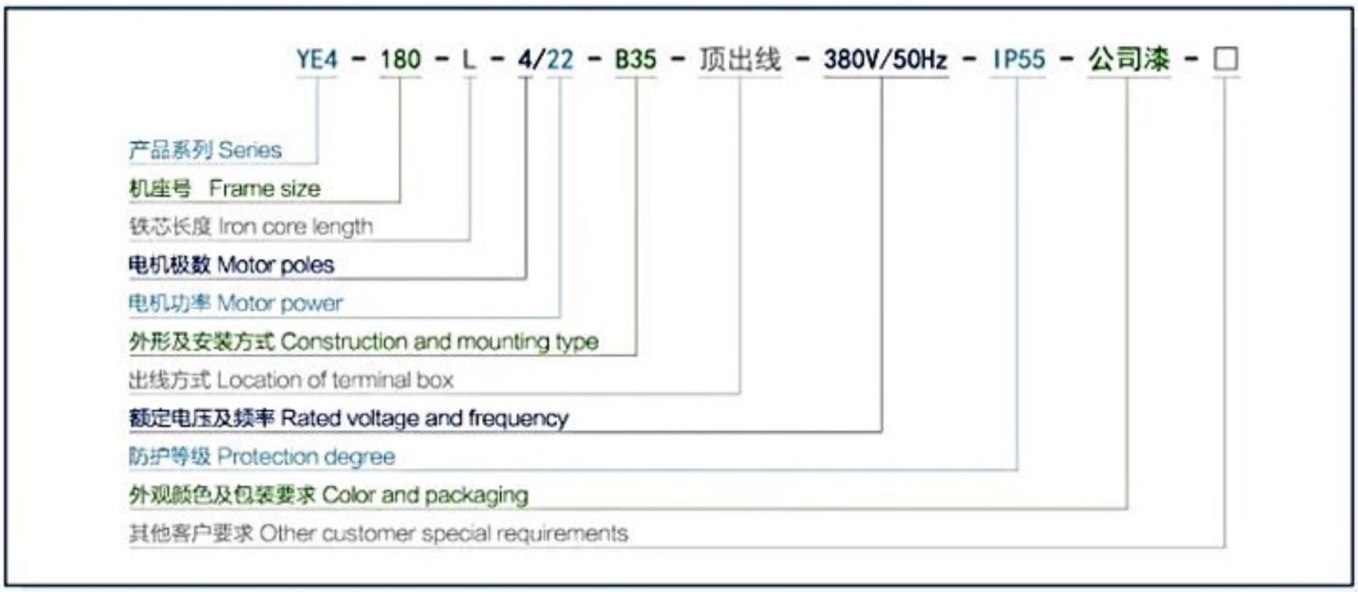
The main features of IP68 waterproof gland include waterproof, dustproof, salt resistant, acid and alkali resistant, alcohol, oil, ester and other general solvents. They also have excellent sealing performance and can achieve an IP68 protection level by tightening the nut with a sealing ring within the specified range of the checkpoint. YBX4 series non sparking motor with IP68 gland will have high protection while producing.

RTD

RTD is a temperature sensor that works based on the resistance value changing with temperature. This type of sensor not only provides good accuracy, but also has excellent stability and repeatability, which is crucial for protecting YBX4 series non sparking motor from overheating damage.

Wooden packaging

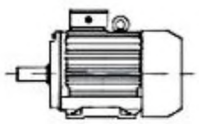
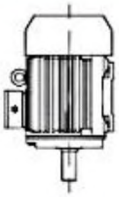
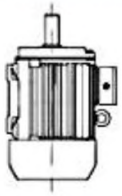
During transportation, YBX4 series non sparking motor should avoid damage from external forces such as impact, compression, and vibration. This requires packaging materials with certain mechanical strength and corrosion resistance, such as wooden boxes, metal boxes, or plastic films. Choosing suitable packaging materials is crucial for protecting the motor.

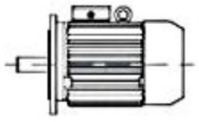
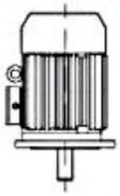
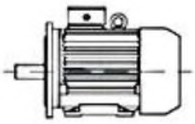
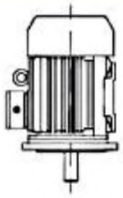
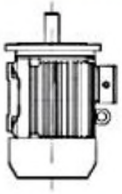


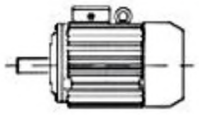
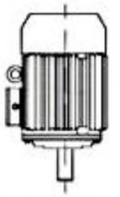
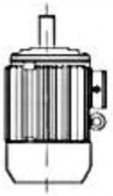
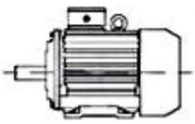
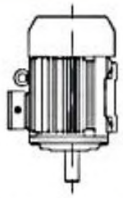
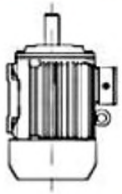
规格型号 Type	IEC	GB	效率 (%) Eff.	耗电量 (kWh) Power consumption	年节电量 (kWh) Energy saving
Y2-160L-4	IE1		89.4	100671	0
YE2-160L-4	IE2	3 级能效	90.6	99338	1333
YE3-160L-4	IE3	2 级能效	92.1	97720	2951
YE4-160L-4	IE4	1 级能效	93.9	95847	4824

绝缘等级 Insulation class	最高使用温度 Highest temperature	最大温升 Limit of temperature rise
B	130℃	80K
F	155℃	105K
H	180℃	125K

《GB/T 997-2008 Rotating electrical machine - Classification of types of construction, mounting arrangements and terminal box position》（IEC60034-7:2001）

机座带底脚，端盖无法兰 With feet, without flange on the end-shield					
					
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071

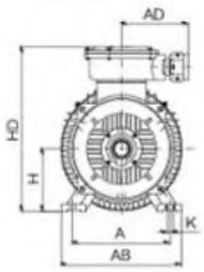
机座不带底脚，端盖有法兰 Without feet,flange on the end-shield			机座带底脚，端盖有法兰 With feet,flange on the end-shield		
					
IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031

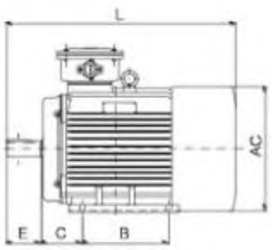
机座不带底脚，端盖有小法兰 Without feet,C-flange on the end-shield			机座带底脚，端盖有小法兰 With feet,C-flange on the end-shield		
					
IM B14	IM V18	IM V19	IM B34	IM V17	IM V37
IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131

型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩 倍数	最大转矩 倍数	堵转电流 倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
2 极 - 同步转速 3000rpm-50Hz									
YE3-80M1-2	0.75	1.7	2885	80.7	0.82	2.4	2.3	2.3	7.0
YE3-80M2-2	1.1	2.4	2885	82.7	0.83	3.5	2.2	2.3	7.3
YE3-90S-2	1.5	3.2	2905	84.2	0.84	4.8	2.2	2.3	7.6
YE3-90L-2	2.2	4.6	2905	85.9	0.85	7.0	2.2	2.3	7.6
YE3-100L-2	3	6.0	2895	87.1	0.87	9.6	2.2	2.3	7.8
YE3-112M-2	4	7.8	2915	88.1	0.88	12.7	2.2	2.3	8.3
YE3-132S1-2	5.5	10.6	2925	89.2	0.88	17.5	2.0	2.3	8.3
YE3-132S2-2	7.5	14.4	2925	90.1	0.88	23.9	2.0	2.3	7.8
YE3-160M1-2	11	20.6	2950	91.2	0.89	35.0	2.0	2.3	8.1
YE3-160M2-2	15	27.9	2950	91.9	0.89	47.8	2.0	2.3	8.1
YE3-160L-2	18.5	34.2	2950	92.4	0.89	58.9	2.0	2.3	8.2
YE3-180M-2	22	40.5	2960	92.7	0.89	70.0	2.0	2.3	8.2

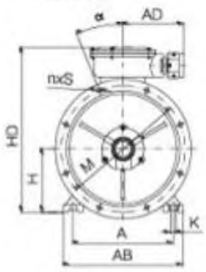
型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩 倍数	最大转矩 倍数	堵转电流 倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
YE3-200L1-2	30	54.9	2965	93.3	0.89	95.5	2.0	2.3	7.6
YE3-200L2-2	37	67.4	2965	93.7	0.89	118	2.0	2.3	7.6
YE3-225M-2	45	80.8	2965	94.0	0.90	143	2.0	2.3	7.7
YE3-250M-2	55	98.5	2970	94.3	0.90	175	2.0	2.3	7.7
YE3-280S-2	75	134	2975	94.7	0.90	239	1.8	2.3	7.1
YE3-280M-2	90	160	2975	95.0	0.90	287	1.8	2.3	7.1
YE3-315S-2	110	195	2980	95.2	0.90	350	1.8	2.3	7.1
YE3-315M-2	132	234	2980	95.4	0.90	420	1.8	2.3	7.1
YE3-315L1-2	160	279	2980	95.6	0.91	509	1.8	2.3	7.2
YE3-315L2-2	200	349	2980	95.8	0.91	637	1.8	2.2	7.2
YE3-355M-2	250	436	2985	95.8	0.91	796	1.6	2.2	7.2
YE3-355L-2	315	549	2985	95.8	0.91	1003	1.6	2.2	7.2
YE3-3551-2	355	619	2985	95.8	0.91	1130	1.6	2.2	7.2
YE3-3552-2	375	654	2985	95.8	0.91	1194	1.6	2.2	7.2

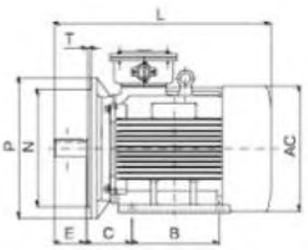
IM B3



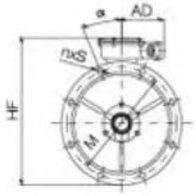


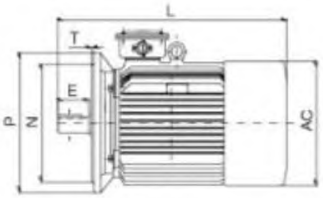
IM B35



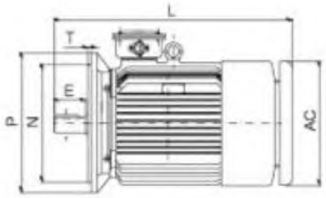


IM B5



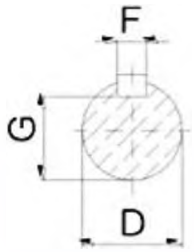


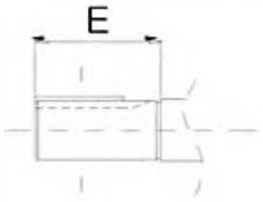
IM V1



机座 Frame	外形安装尺寸 External and mounting dimensions										进线口管螺纹 Pipe thread		L			
													2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	单口	双口	其他	V1	其他	V1
80M	125	100	50	80	10	165	165	180	320	340	M30*2		320	375	320	375
90S	140	100	56	90	10	180	180	180	350	360	M30*2		370	415	370	415
90L	140	125	56	90	10	180	180	180	350	360	M30*2		395	440	395	440
100L	160	140	63	100	12	200	205	180	400	425	M30*2		448	505	448	505
112M	190	140	70	112	12	245	230	200	420	435	M30*2		500	560	500	560
132S	216	140	89	132	12	280	270	200	450	470	M30*2	—	550	630	550	630
132M	216	178	89	132	12	280	270	200	450	470	M30*2		600	680	600	680
160M	254	210	108	160	14.5	330	325	220	520	535	M36*2		720	790	720	790
160L	254	254	108	160	14.5	330	325	220	520	535	M36*2		750	820	750	820
180M	279	241	121	180	14.5	355	360	220	550	545	M36*2		770	840	770	840
180L	279	279	121	180	14.5	355	360	220	550	545	M36*2		790	860	790	860
200L	318	305	133	200	18.5	390	400	250	645	645	M48*2	M48*2	840	910	840	910
225S	356	286	149	225	18.5	435	450	250	690	690	M48*2	M48*2	—		888	935
225M	356	311	149	225	18.5	435	450	250	690	690	M48*2	M48*2	888	950	918	980
250M	406	349	168	250	24	490	500	300	730	775	M64*2	M48*2	965	1055	965	1055
280S	457	368	190	280	24	545	560	300	810	825	M64*2	M48*2	1007	1100	1007	1100
280M	457	419	190	280	24	545	560	300	810	825	M64*2	M48*2	1072	1150	1072	1150
315S	508	406	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1185	1340	1260	1370
315M	508	457	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1420	1380	1450
315L	508	508	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1510	1380	1530
355S	610	500	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1415	1600	1485	1600
355M	610	560	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1495	1600	1565	1600
355L	610	630	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1645	1780	1675	1780

◆ 轴伸尺寸 Shaftdimensions





mm

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37
180	≥ 2	48	110	14	42.5
200	≥ 2	55	110	16	49
225	2	55	110	16	49

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
225	≥ 4	60	140	18	53
250	2	60	140	18	53
	≥ 4	65	140	18	58
280	2	65	140	18	58
	≥ 4	75	140	20	67.5
315	2	65	140	18	58
	≥ 4	80	170	22	71
355	2	75	140	20	67.5
	≥ 4	95	170	25	86

YBX4 Series Hazardous Area Motor

YBX4 series hazardous area motor is a special type of motor used in flammable and explosive environments. Explosion proof motors have special capabilities to prevent ignition or explosion caused by equipment or operational errors, ensuring safe production. Explosion proof motors are mainly used in industries such as coal mines, oil and gas, petrochemicals, chemical industry, textiles, metallurgy, urban gas, transportation, grain and oil processing, papermaking, and pharmaceuticals.

YBX4 series hazardous area motor have a wide range of applications, including petrochemicals, coal mines, underground mines, oil tankers, pharmaceuticals, aerospace, rail transportation, ships, and other fields. Common explosion-proof types of low-voltage explosion-proof motors include explosion-proof motors, increased safety motors, positive pressure motors, spark free motors, and dust explosion-proof motors.

- Explosion proof motors use explosion-proof enclosures to separate electrical components that may generate sparks, arcs, and hazardous temperatures from the surrounding explosive gas mixture, preventing sparks or arcs from igniting the mixture.
- Measures have been taken in the design of increased safety motors to improve the safety of electrical equipment and reduce or eliminate external and internal factors that may cause explosions, such as increasing insulation levels and reducing surface temperatures.
- Positive pressure motors prevent explosive gases from entering the equipment by maintaining the internal gas pressure higher than the external environment, thus avoiding the occurrence of explosions.
- Non sparking motors are designed and material selected to ensure that sparks are not generated under normal operation or fault conditions, making them suitable for spark sensitive environments.
- Dust explosion-proof motors are specifically designed to prevent dust accumulation and ignition, and are suitable for places with dust explosion risks.

These explosion-proof hazardous area motors are selected according to different usage environments and safety requirements to ensure safe operation in flammable and explosive places

Temperature group

Explosion proof motors are classified into different temperature groups based on their usage conditions and environmental temperature requirements. The common temperature groups for explosion-proof motors are T1, T2, T3, T4, T5, and T6.

T1 group: Suitable for places with a maximum surface temperature not exceeding 450 ℃.

T2 group: Suitable for places with a maximum surface temperature not exceeding 300 ℃.

T3 group: suitable for places with a maximum surface temperature not exceeding 200 ℃.

T4 group: Suitable for places with a maximum surface temperature not exceeding 135 ℃.

T5 group: Suitable for places with a maximum surface temperature not exceeding 100 ℃.

T6 group: suitable for places with a maximum surface temperature not exceeding 85 ℃.

Based on actual usage and temperature requirements, selecting the appropriate explosion-proof motor temperature group can ensure that the motor can operate safely and reliably in harsh environments.

Level I:

Suitable for places where explosive gas environments exist year-round, such as methane, acetylene, etc.

Level II:

Suitable for places with explosive gases and vapors, such as ethylene, propylene, etc.

Level III:

Suitable for places with flammable dust or fibers, such as sawdust, coal powder, etc.

概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL

Explosion proof terminal box

Exd explosion-proof junction box belongs to the pressure explosion explosion-proof level and is suitable for places where explosive gases exist. This type of junction box, through special design and structure, can withstand the pressure generated by internal explosions and prevent the spread of explosion flames outward.

Metal gland

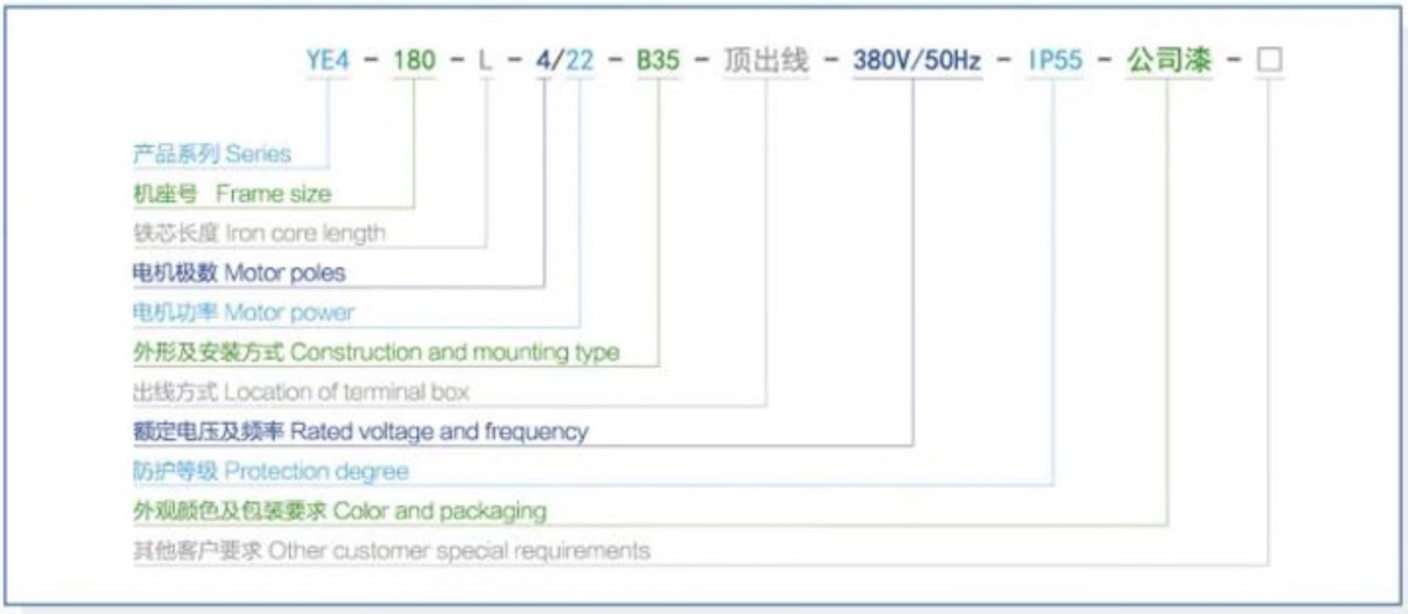
Explosion proof metal gland is specifically used for explosion-proof equipment such as explosion-proof distribution boxes and explosion-proof instrument boxes of YBX4 series hazardous area motor. Their most important function is explosion-proof and isolation, so they are widely used in various places that require electrical safety and explosion-proof, such as petroleum and chemical industries.

Temperature sensor

Temperature sensors play an important role in motor monitoring. It can monitor the temperature of YBX4 series hazardous area motor in real time and detect motor overheating problems in a timely manner. Meanwhile, the temperature sensor can also detect the ambient temperature, providing more reliable data support for the normal operation of the motor.

Bearings

Generally speaking, the service life of imported bearings may be longer than that of domestic bearings, reaching 2 to 5 years, while domestic bearings are generally between 2 to 4 years. However, the actual service life of bearings is affected by various factors, such as usage environment, load capacity, and structure.



规格型号 Type	IEC	GB	效率 (%) Eff.	耗电量 (kWh) Power consumption	年节电量 (kWh) Energy saving
Y2-160L-4	IE1		89.4	100671	0
YE2-160L-4	IE2	3 级能效	90.6	99338	1333
YE3-160L-4	IE3	2 级能效	92.1	97720	2951
YE4-160L-4	IE4	1 级能效	93.9	95847	4824

◆ **IEC 标准定义的 50Hz 效率限定值** Minimum efficiency values under50Hz defined in IEC/EN 60034-30-1

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
kW	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole
0.12	53.6	59.1	50.6	39.8	60.8	64.8	57.7	50.7	66.5	69.8	64.9	62.3
0.18	60.4	64.7	56.6	45.9	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.25	64.8	68.5	61.6	50.6	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	69.5	72.7	67.6	56.1	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.55	74.1	77.1	73.1	61.7	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	79.6	81.4	78.1	70.8	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	81.3	82.8	79.8	74.1	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	83.2	84.3	81.8	77.6	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3	84.6	85.5	83.3	80.0	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	85.8	86.6	84.6	81.9	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	87.0	87.7	86.0	83.8	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	88.1	88.7	87.2	85.3	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	89.4	89.8	88.7	86.9	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	90.3	90.6	89.7	88.0	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	90.9	91.2	90.4	88.6	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	91.3	91.6	90.9	89.1	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	92.0	92.3	91.7	89.8	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
37	92.5	92.7	92.2	90.3	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	92.9	93.1	92.7	90.7	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	93.2	93.5	93.1	91.0	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	93.8	94.0	93.7	91.6	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	94.1	94.2	94.0	91.9	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	94.3	94.5	94.3	92.3	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	94.6	94.7	94.6	92.6	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	94.8	94.9	94.8	93.0	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4
250	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.5	95.4
315-1000	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4

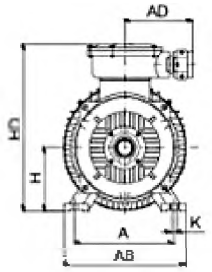
※ 测试方法基于 IEC60034-2-1 中规定 B 法，损耗值为实测，不同的测试方法取得的效率值不具有可比性

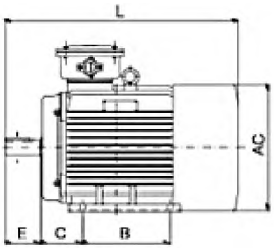
※ based on test methods specified in IEC 60034-2-1

4 极 - 同步转速 1500rpm-50Hz									
YE3-80M2-4	0.75	1.8	1435	82.5	0.75	4.8	2.3	2.3	6.6
YE3-90S-4	1.1	2.6	1435	84.1	0.76	7.0	2.3	2.3	6.8
YE3-90L-4	1.5	3.5	1435	85.3	0.77	9.6	2.3	2.3	7.0
YE3-100L1-4	2.2	4.8	1450	86.7	0.81	14.0	2.3	2.3	7.6
YE3-100L2-4	3	6.3	1450	87.7	0.82	19.1	2.3	2.3	7.6
YE3-112M-4	4	8.4	1455	88.6	0.82	25.5	2.2	2.3	7.8
YE3-132S-4	5.5	11.2	1465	89.6	0.83	35.0	2.0	2.3	7.9
YE3-132M-4	7.5	15.0	1465	90.4	0.84	47.8	2.0	2.3	7.5
YE3-160M-4	11	21.5	1470	91.4	0.85	70.0	2.2	2.3	7.7
YE3-160L-4	15	28.8	1470	92.1	0.86	95.5	2.2	2.3	7.8
YE3-180M-4	18.5	35.3	1475	92.6	0.86	118	2.0	2.3	7.8
YE3-180L-4	22	41.8	1475	93.0	0.86	140	2.0	2.3	7.8
YE3-200L-4	30	56.6	1475	93.6	0.86	191	2.0	2.3	7.3
YE3-225S-4	37	69.6	1480	93.9	0.86	236	2.0	2.3	7.4
YE3-225M-4	45	84.4	1480	94.2	0.86	287	2.0	2.3	7.4
YE3-250M-4	55	103	1485	94.6	0.86	350	2.2	2.3	7.4
YE3-280S-4	75	136	1485	95.0	0.88	478	2.0	2.3	6.9
YE3-280M-4	90	163	1485	95.2	0.88	573	2.0	2.3	6.9
YE3-315S-4	110	197	1485	95.4	0.89	700	2.0	2.2	7.0
YE3-315M-4	132	236	1485	95.6	0.89	840	2.0	2.2	7.0
YE3-315L1-4	160	285	1485	95.8	0.89	1019	2.0	2.2	7.1
YE3-315L2-4	200	352	1485	96.0	0.90	1273	2.0	2.2	7.1
YE3-355M-4	250	440	1490	96.0	0.90	1592	2.0	2.2	7.1
YE3-355L-4	315	554	1490	96.0	0.90	2006	2.0	2.2	7.1
YE3-3551-4	355	638	1490	96.0	0.88	2260	1.7	2.2	7.0
YE3-3552-4	375	674	1490	96.0	0.88	2388	1.7	2.2	7.0

◆ 外形及安装尺寸 External and mounting dimensions

IM B3





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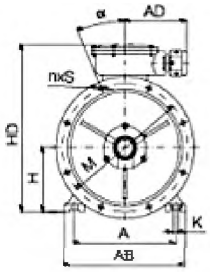

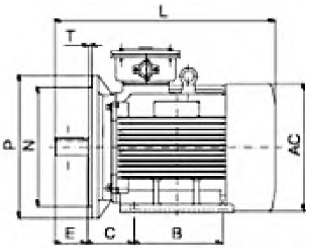

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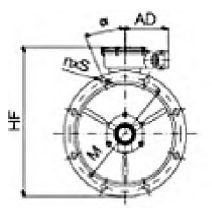
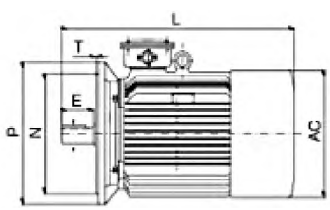
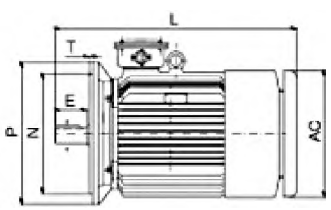




IM V1



YBX3 Series Explosion Proof Fan Motor

In the process of mining production, it is easy to trigger explosions due to combustible gases in the mine, which poses a huge threat to the lives and property of miners. YBX3 series explosion proof fan motor can avoid the generation of sparks and arcs, effectively reducing the incidence of mining accidents and ensuring the safety of miners. Explosion proof motors have also been widely used in the mining industry.

Explosion proof fan motors play an important role in many industrial fields. It can operate safely and reliably in hazardous environments through its special structure and design, preventing the generation of sparks and thus avoiding the occurrence of fires and explosions. The use of explosion-proof motors not only protects the safety of workers and equipment, but also ensures the continuity of the production process And stability.
In which industries are explosion-proof motors used?

1. Oil and gas industry

In the process of petrochemical production, it is easy to cause explosion accidents due to chemical reactions, high temperature and pressure, and other factors. The emergence of YBX3 series explosion proof fan motor can effectively prevent phenomena such as sparks, flames, or stimulating arcs, reduce the incidence of explosion accidents, and ensure production safety. Therefore, explosion-proof motors are widely used in the petrochemical industry.

2. Chemical industry

The chemical industry is also an important field for using explosion-proof motors. In the process of chemical production, toxic substances, flammable and explosive gases, and steam are often involved. The use of explosion-proof motors can avoid chemical reactions caused by electric sparks, prevent accidents, and ensure the safety of the production process.

3. Coal mining industry

Coal mines are a hazardous working environment with high concentrations of combustible gases and dust. Ordinary motors are prone to triggering explosions in such environments. And explosion-proof motors prevent gas and dust explosions by preventing the generation of sparks, ensuring the safety of miners' lives.

4. Pharmaceutical industry

Flammable substances and gases are often used in the pharmaceutical process. The use of explosion-proof motors can ensure that the motor does not generate sparks, prevent fires and explosions, protect the safety of workers and equipment, and ensure the quality of production.

5. Nuclear power plants

Nuclear power plants are important facilities for using nuclear energy to generate electricity, and their equipment operation requirements are very strict. Due to the presence of hazardous factors such as

radioactive materials and high temperature and pressure in nuclear power plants, the consequences of an accident can be very serious. The use of explosion-proof motors can prevent the motor from causing fires and explosions, ensuring the safe operation of nuclear power plants

6. Automotive industry

In the process of automobile production, it often involves processes such as painting and glue spraying, which require the use of flammable substances. The use of YBX3 series explosion proof fan motor can ensure that the motor does not generate sparks, prevent fires and explosions, and ensure the safety of workers' lives

7. Other industries

Explosion proof motors are also widely used in gas, liquefied gas, oil and gas fields, aerospace, textile, paper, food processing, electronics industry and other fields, all of which have the danger of flammable, hazardous and toxic substances.

Level I:

Suitable for places where explosive gas environments exist year-round, such as methane, acetylene, etc.

Level II:

Suitable for places with explosive gases and vapors, such as ethylene, propylene, etc.

Level III:

Suitable for places with flammable dust or fibers, such as sawdust, coal powder, etc.

概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL

◆ IEC 标准定义的 50Hz 效率限定值 Minimum efficiency values under50Hz defined in IEC/EN 60034-30-1

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
kW	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole	2 pole	4 pole	6 pole	8 pole
0.12	53.6	59.1	50.6	39.8	60.8	64.8	57.7	50.7	66.5	69.8	64.9	62.3
0.18	60.4	64.7	56.6	45.9	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.25	64.8	68.5	61.6	50.6	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	69.5	72.7	67.6	56.1	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.55	74.1	77.1	73.1	61.7	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	79.6	81.4	78.1	70.8	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	81.3	82.8	79.8	74.1	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	83.2	84.3	81.8	77.6	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3	84.6	85.5	83.3	80.0	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	85.8	86.6	84.6	81.9	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	87.0	87.7	86.0	83.8	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	88.1	88.7	87.2	85.3	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	89.4	89.8	88.7	86.9	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	90.3	90.6	89.7	88.0	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	90.9	91.2	90.4	88.6	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	91.3	91.6	90.9	89.1	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	92.0	92.3	91.7	89.8	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7

Output	IE2 high efficiency				IE3 premium efficiency				IE4 super premium efficiency			
37	92.5	92.7	92.2	90.3	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	92.9	93.1	92.7	90.7	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	93.2	93.5	93.1	91.0	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	93.8	94.0	93.7	91.6	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	94.1	94.2	94.0	91.9	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	94.3	94.5	94.3	92.3	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	94.6	94.7	94.6	92.6	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	94.8	94.9	94.8	93.0	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4
250	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.5	95.4
315-1000	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4

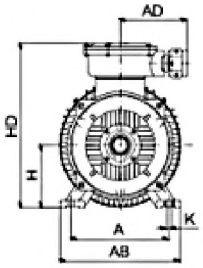
※ 测试方法基于 IEC60034-2-1 中规定 B 法，损耗值为实测，不同的测试方法取得的效率值不具有可比性

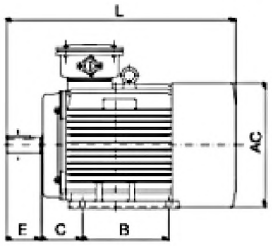
※ based on test methods specified in IEC 60034-2-1

mm

机座 Frame	外形安装尺寸 External and mounting dimensions										进线口管螺纹 Pipe thread		L			
													2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	单口	双口	其他	V1	其他	V1
80M	125	100	50	80	10	165	165	180	320	340	M30*2		320	375	320	375
90S	140	100	56	90	10	180	180	180	350	360	M30*2		370	415	370	415
90L	140	125	56	90	10	180	180	180	350	360	M30*2		395	440	395	440
100L	160	140	63	100	12	200	205	180	400	425	M30*2		448	505	448	505
112M	190	140	70	112	12	245	230	200	420	435	M30*2		500	560	500	560
132S	216	140	89	132	12	280	270	200	450	470	M30*2	—	550	630	550	630
132M	216	178	89	132	12	280	270	200	450	470	M30*2		600	680	600	680
160M	254	210	108	160	14.5	330	325	220	520	535	M36*2		720	790	720	790
160L	254	254	108	160	14.5	330	325	220	520	535	M36*2		750	820	750	820
180M	279	241	121	180	14.5	355	360	220	550	545	M36*2		770	840	770	840
180L	279	279	121	180	14.5	355	360	220	550	545	M36*2		790	860	790	860
200L	318	305	133	200	18.5	390	400	250	645	645	M48*2	M48*2	840	910	840	910
225S	356	286	149	225	18.5	435	450	250	690	690	M48*2	M48*2	—		888	935
225M	356	311	149	225	18.5	435	450	250	690	690	M48*2	M48*2	888	950	918	980
250M	406	349	168	250	24	490	500	300	730	775	M64*2	M48*2	965	1055	965	1055
280S	457	368	190	280	24	545	560	300	810	825	M64*2	M48*2	1007	1100	1007	1100
280M	457	419	190	280	24	545	560	300	810	825	M64*2	M48*2	1072	1150	1072	1150
315S	508	406	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1185	1340	1260	1370
315M	508	457	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1420	1380	1450
315L	508	508	216	315	28	640	630	400	1020	1035	M72*3	M64*2	1305	1510	1380	1530
355S	610	500	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1415	1600	1485	1600
355M	610	560	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1495	1600	1565	1600
355L	610	630	254	355	28	740	750	500	1080	1125	M72*3	M64*2	1645	1780	1675	1780

IM B3





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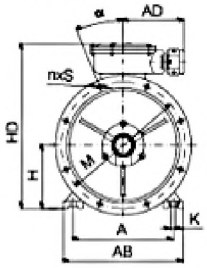
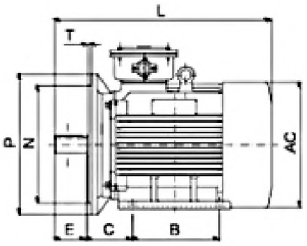
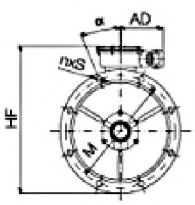
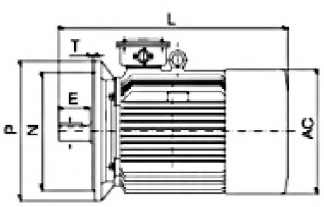


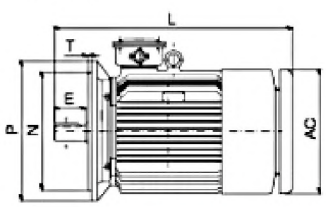


IM B5





IM V1



型号 Type	功率 Power	额定电流 Current	额定转速 Speed	效率 EFF.	功率因数 P.F.	额定转矩 RT	堵转转矩倍数	最大转矩倍数	堵转电流倍数
	kW	A	rpm	%		N · m	Tst/TN	Tmax/TN	Ist/IN
YE3-90L-6	1.1	2.8	950	81.0	0.73	10.5	2.0	2.1	6.0
YE3-100L-6	1.5	3.8	960	82.5	0.73	14.3	2.0	2.1	6.5
YE3-112M-6	2.2	5.4	960	84.3	0.74	21.0	2.0	2.1	6.6
YE3-132S-6	3	7.2	970	85.6	0.74	28.7	2.0	2.1	6.8
YE3-132M1-6	4	9.5	970	86.8	0.74	38.2	2.0	2.1	6.8
YE3-132M1-6	5.5	12.7	970	88.0	0.75	52.5	2.0	2.1	7.0
YE3-160M-6	7.5	16.2	975	89.1	0.79	71.6	2.0	2.1	7.0
YE3-160L-6	11	23.1	975	90.3	0.80	105	2.0	2.1	7.2
YE3-180L-6	15	30.9	980	91.2	0.81	143	2.0	2.1	7.3
YE3-200L1-6	18.5	37.8	980	91.7	0.81	177	2.0	2.1	7.3
YE3-200L2-6	22	44.8	980	92.2	0.81	210	2.0	2.1	7.4
YE3-225M-6	30	59.1	985	92.9	0.83	287	2.0	2.1	6.9
YE3-250M-6	37	71.7	985	93.3	0.84	353	2.0	2.1	7.1
YE3-280S-6	45	85.8	990	93.7	0.85	430	2.0	2.0	7.3
YE3-280M-6	55	103	990	94.1	0.86	525	2.0	2.0	7.3
YE3-315S-6	75	143	990	94.6	0.84	716	2.0	2.0	6.6
YE3-315M-6	90	170	990	94.9	0.85	860	2.0	2.0	6.7
YE3-315L1-6	110	207	990	95.1	0.85	1051	2.0	2.0	6.7
YE3-315L2-6	132	245	990	95.4	0.86	1261	2.0	2.0	6.8
YE3-355M1-6	160	296	990	95.6	0.86	1528	1.8	2.0	6.8
YE3-355M2-6	200	365	990	95.8	0.87	1910	1.8	2.0	6.8
YE3-355L-6	250	456	990	95.8	0.87	2388	1.8	2.0	6.8
YE3-3552-6	315	581	990	95.8	0.86	3008	1.8	2.0	6.8

YBX3 Series Zone 2 Motor

YBX3 series zone 2 motor is a special type of motor used in flammable and explosive environments. Explosion proof motors have special capabilities to prevent ignition or explosion caused by equipment or operational errors, ensuring safe production. Explosion proof motors have a wide range of applications, including petrochemicals, coal mines, underground mines, oil tankers, pharmaceuticals, aerospace, rail transportation, ships, and other fields.

Brief Introduction

Explosion proof motors are particularly widely used in coal mines, oil and gas, petrochemicals, and chemical industries, as these industries typically involve the handling and operation of flammable and explosive substances, with extremely high requirements for equipment safety. In addition, YBX3 series zone 2 motor also plays an important role in industries such as textiles, metallurgy, urban gas, transportation, grain and oil processing, paper-making, and pharmaceuticals, ensuring the safety and stability of the production process.

Explosion proof motors can be divided into the following three types and their composite types based on their basic principles of meeting explosion-proof requirements:

1. Explosion proof type (Type B)

A motor that does not cause an external explosive mixture explosion when an explosion occurs inside the motor. The motor casing has sufficient mechanical strength (high-grade cast iron, steel plate as the casing) to withstand explosive pressure and external impact without damage; All gaps that make up the entire explosion-proof shell, such as end caps and stoppers, must comply with the structural parameters (gaps and lengths) of the explosion-proof joint surface; Requirements for junction boxes, incoming devices, etc; Control the temperature of the outer shell surface to prevent it from reaching dangerous temperatures.

2. Increased safety type (Type A)

The motor should have good sealing and meet the protection level requirement of IP55; Electromagnetic design should consider reducing temperature rise; Control the time it takes for the rotor to reach a dangerous temperature during stalling, and equip it with an automatic control electrical device; Improve the inter turn, ground and phase to phase test voltage of winding insulation; Improve the inter turn, ground and phase to phase test voltage of winding insulation; Improve the reliability of conductor connections; Control the minimum unilateral clearance between the stator and rotor. In short, to prevent the occurrence of accidental sparks, arcs, or dangerous temperatures from both structural and electrical aspects, thereby improving the safety level of operation.

3. Positive pressure type (P-type)

Inject positive pressure fresh air or inert gas (such as nitrogen) into the casing to prevent external explosive mixtures from entering the explosion-proof motor inside.
Scope of use: Explosion proof and positive pressure types are suitable for all explosive hazardous areas, and explosion-proof motors (type B) are widely used in China. The manufacturing cost and price of the increased safety YBX3 series zone 2 motor are lower than those of the explosion-proof type, and it is only suitable for Zone 2 locations.

Conduct environmental analysis: Understand the nature, level, and temperature requirements of the explosion.

Determine motor type: Select the corresponding explosion type (gas, dust, or coexistence) based on environmental classification.

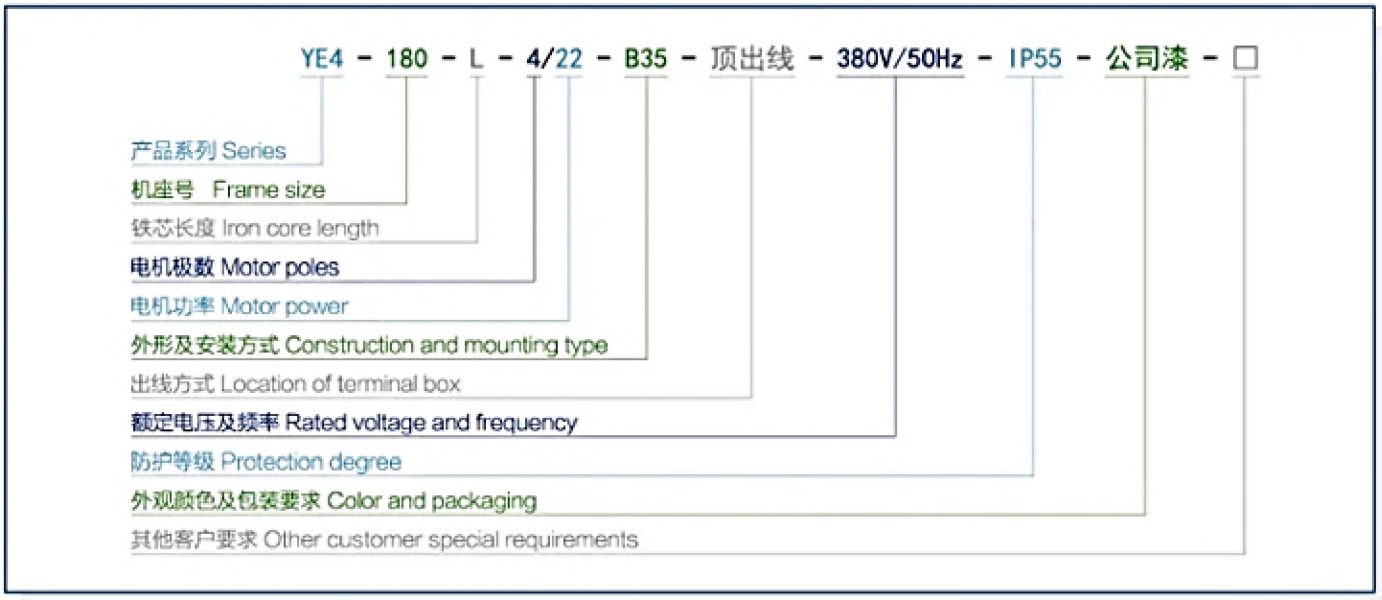
Choose explosion level: Select based on the nature and level of the explosion present in the actual environment.

Consider temperature rating: Ensure that the temperature rating of the motor meets environmental requirements.

Refer to product certification: Ensure that the selected motor meets the safety standards and certification requirements of the relevant country or region.

Pay attention to motor performance: consider the power, speed, insulation level, and protection level of the motor.

概 述	Summary
机座号：H80~H355	Frame Size: H80~H355
额定功率：0.55~315kW	Rated Power: 0.55~315kW
额定电压：380V,660V	Rated Voltage: 380V,660V
额定频率：50Hz	Rated Frequency: 50Hz
极数：2~8 极	Poles: 2p,4p,6p,8p
防护等级：IP55	Protection Degree: IP55
绝缘等级：F	Insulation Class: F
冷却方式：IC411	Cooling Method: IC411
工作制：S1 连续工作制	Duty: S1
能效等级：GB18613-2012 2 级	Efficiency Class: IEC60034-30-1:IE3
技术数据：同 YE3 系列	Technical data：the same as YE3 series
相比 YB3 电机的长度增加 ΔL	Motor length increase than YB3 series by ΔL



◆ IP 55

表征字母	第一位数字	第二位数字
IP	5	5

Characteristic letters	First number	Second number
IP	5	5

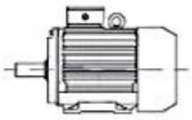
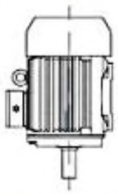
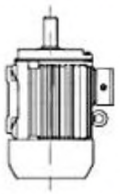
第一位数字	含义
2	防护＞ 12mm 固体异物进入
4	防护＞ 1mm 固体异物进入
5	防尘
6	尘密

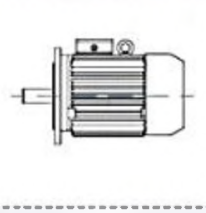
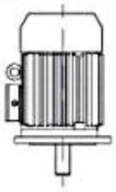
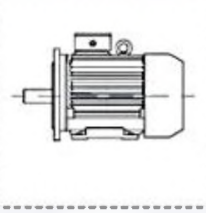
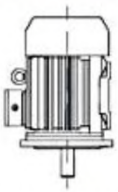
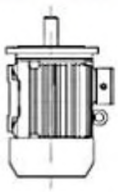
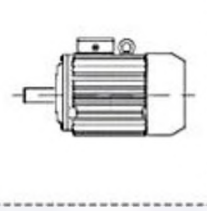
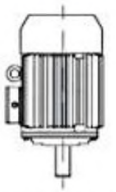
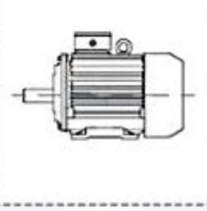
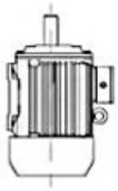
1st number	Brief description
2	Against solid objects > 12mm
4	Against solid objects > 1mm
5	Dust-protected
6	Dust-tight

第二位数字	含义
3	防淋水电机
4	防溅水电机
5	防喷水电机
6	防海浪电机

2nd number	Brief description
3	Against spraying water
4	Against splashing water
5	Against water jets
6	Against heavy seas

《GB/T 997-2008 Rotating electrical machine - Classification of types of construction, mounting arrangements and terminal box position》（IEC60034-7:2001）

机座带底脚，端盖无法兰 With feet, without flange on the end-shield					
					
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071

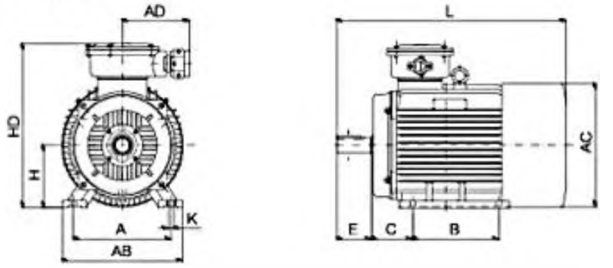
机座不带底脚，端盖有法兰 Without feet,flange on the end-shield			机座带底脚，端盖有法兰 With feet,flange on the end-shield		
					
IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031
机座不带底脚，端盖有小法兰 Without feet,C-flange on the end-shield			机座带底脚，端盖有小法兰 With feet,C-flange on the end-shield		
					
IM B14	IM V18	IM V19	IM B34	IM V17	IM V37
IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131

4 极 - 同步转速 1500rpm-50Hz

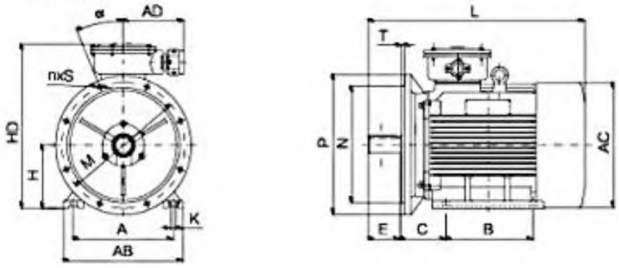
YE3-80M2-4	0.75	1.8	1435	82.5	0.75	4.8	2.3	2.3	6.6
YE3-90S-4	1.1	2.5	1435	84.1	0.76	7.0	2.3	2.3	6.8
YE3-90L-4	1.5	3.5	1435	85.3	0.77	9.6	2.3	2.3	7.0
YE3-100L1-4	2.2	4.8	1450	86.7	0.81	14.0	2.3	2.3	7.6
YE3-100L2-4	3	6.3	1450	87.7	0.82	19.1	2.3	2.3	7.6
YE3-112M-4	4	8.4	1455	88.6	0.82	25.5	2.2	2.3	7.8
YE3-132S-4	5.5	11.2	1465	89.6	0.83	35.0	2.0	2.3	7.9
YE3-132M-4	7.5	15.0	1465	90.4	0.84	47.8	2.0	2.3	7.5
YE3-160M-4	11	21.5	1470	91.4	0.85	70.0	2.2	2.3	7.7
YE3-160L-4	15	28.8	1470	92.1	0.86	95.5	2.2	2.3	7.8
YE3-180M-4	18.5	35.3	1475	92.6	0.86	118	2.0	2.3	7.8
YE3-180L-4	22	41.8	1475	93.0	0.86	140	2.0	2.3	7.8
YE3-200L-4	30	56.6	1475	93.6	0.86	191	2.0	2.3	7.3
YE3-225S-4	37	69.6	1480	93.9	0.86	236	2.0	2.3	7.4
YE3-225M-4	45	84.4	1480	94.2	0.86	287	2.0	2.3	7.4
YE3-250M-4	55	103	1485	94.6	0.86	350	2.2	2.3	7.4
YE3-280S-4	75	136	1485	95.0	0.88	478	2.0	2.3	6.9
YE3-280M-4	90	163	1485	95.2	0.88	573	2.0	2.3	6.9
YE3-315S-4	110	197	1485	95.4	0.89	700	2.0	2.2	7.0
YE3-315M-4	132	236	1485	95.6	0.89	840	2.0	2.2	7.0
YE3-315L1-4	160	285	1485	95.8	0.89	1019	2.0	2.2	7.1
YE3-315L2-4	200	352	1485	96.0	0.90	1273	2.0	2.2	7.1
YE3-355M-4	250	440	1490	96.0	0.90	1592	2.0	2.2	7.1
YE3-355L-4	315	554	1490	96.0	0.90	2006	2.0	2.2	7.1
YE3-3551-4	355	638	1490	96.0	0.88	2260	1.7	2.2	7.0
YE3-3552-4	375	674	1490	96.0	0.88	2388	1.7	2.2	7.0

◆ 外形及安装尺寸 External and mounting dimensions

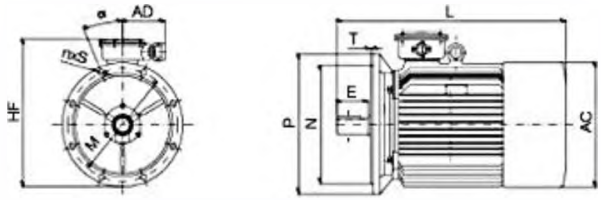
IM B3



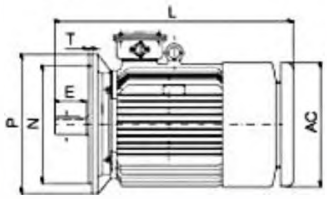
IM B35



IM B5



IM V1

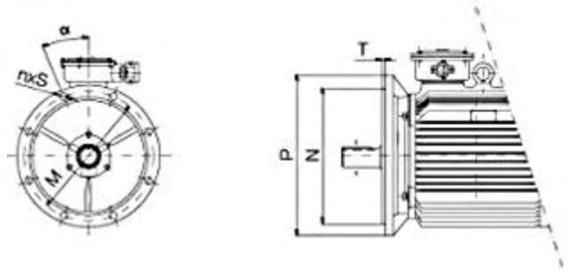


mm

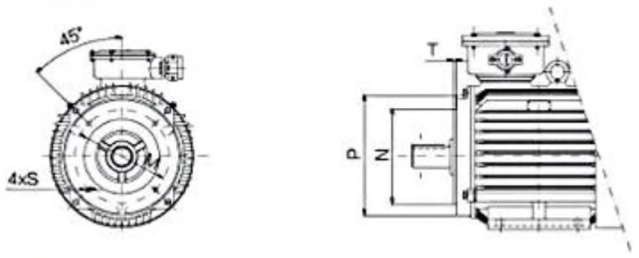
机座 Frame	外形安装尺寸 External and mounting dimensions										进线口管螺纹 Pipe thread		L			
													2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	单口	双口	其他	V1	其他	V1
80M	125	100	50	80	10	165	165	180	320	340	M30*2		320	375	320	375
90S	140	100	56	90	10	180	180	180	350	360	M30*2		370	415	370	415
90L	140	125	56	90	10	180	180	180	350	360	M30*2		395	440	395	440
100L	160	140	63	100	12	200	205	180	400	425	M30*2		448	505	448	505
112M	190	140	70	112	12	245	230	200	420	435	M30*2		500	560	500	560
132S	216	140	89	132	12	280	270	200	450	470	M30*2	—	550	630	550	630
132M	216	178	89	132	12	280	270	200	450	470	M30*2		600	680	600	680
160M	254	210	108	160	14.5	330	325	220	520	535	M36*2		720	790	720	790
160L	254	254	108	160	14.5	330	325	220	520	535	M36*2		750	820	750	820
180M	279	241	121	180	14.5	355	360	220	550	545	M36*2		770	840	770	840

◆ 法兰尺寸 Flange dimensions

IM B5



IM B14



mm

机座 Frame	凸缘号 Flange	B35、B5、V1 法兰					
		M	N	P	T	α	n*ΦS
80、90	FF165	165	130	200	3.5	45	4*12
100、112	FF215	215	180	250	4	45	4*14.5
132	FF265	265	230	300	4	45	4*14.5
160、180	FF300	300	250	350	5	45	4*18.5
200	FF350	350	300	400	5	45	4*18.5
225	FF400	400	350	450	5	22.5	8*18.5
250、280	FF500	500	450	550	5	22.5	8*18.5
315	FF600	600	550	660	6	22.5	8*24
355	FF740	740	680	800	6	22.5	8*24

机座 Frame	凸缘号 Flange	B34、B14 法兰				
		M	N	P	S	T
80	FT100	100	80	120	M6	3
90	FT115	115	95	140	M8	3
100、112	FT130	130	110	160	M8	3.5

YVF3 Series Variable Speed Induction Motor

YVF3 series variable speed induction motor is also known as AC variable frequency regulating speed motor.A variable frequency variable speed motor is a machine that converts electrical energy into mechanical energy. Usually, the working part of an electric motor rotates, and this type of motor is called a rotor motor.

Brief Introduction

The use and control of YVF3 series variable speed induction motor are very convenient, with the ability to self start, accelerate, brake, reverse, and hold, which can meet various operational requirements; The working efficiency of electric motors is high, and there is no smoke or odor, which does not pollute the environment, and the noise is also small.

With the continuous development of technology and the replacement of old and new, people's research on variable frequency speed control systems mainly focuses on the topology structure and control algorithms of frequency converters, and has made significant progress, greatly improving the dynamic performance and speed control accuracy of electric drives. Various AC variable frequency speed control motor systems are widely used in various fields such as CNC machine tools, industrial robots, automatic mechanical equipment, flexible production lines in textile, printing, and light industry systems, steel rolling, mining, locomotive drag, aerospace, and shipbuilding.

YVF3 series variable speed induction motor follows Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance , which equals to IEC60034-1:2004.

Ordinary motors are designed based on the frequency and corresponding power of the mains, and can only operate stably under rated conditions. Variable frequency motors need to overcome overheating and vibration at low frequencies, so their performance is improved in design compared to ordinary motors.

Ordering notice

1.Load connection
The electric motor and the driven load should be driven co-axialy through a coupling. If the transmission method is belt,chain, gear, etc., please specify it earlier at least before placing order.
2.Starting method
The variable frequency motor should be started with VFD. If not available,please specify it earlier at least before placing order.
3.Bearing brand
Without requirement, our offers are for Chinese-brand motors. If buyers need foreign bearings,please specify it earlier.
4.Altitude

For motor values, they are designed under 1000m as altitude.For plateau regions,mountain areas, if altitude is over 1000m,please specify it earlier at least before placing order.

5.AMB temperature

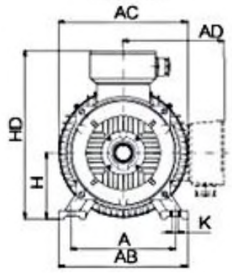
For motor feature and performance, they are designed around -15 ℃ ~ +40℃ as temperature.For tropical regions, plateau regions, near the Arctic regions,their AMB temperature could be over 45 ℃ or lower than 20 ℃,please specify it earlier at least before placing order.

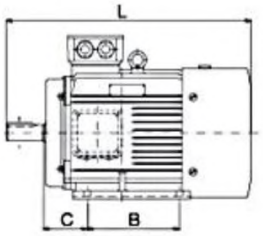
Technical Specifications

Series	YVF2;
HS code	8501520090 (750W＜P≤75kW); 8501530090 (P＞75kW)
Frame size	H80~H355
Output range(KW)	0.55 to 355
Frequency(Hz)	50/60,3～100Hz
Voltage(V)	220/380/400/415/440
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm
Enclosure	IP55/IP54
Cooling	IC416/TEFV
Working duty	S1,S6,S9
Mounting	IM1001IM3001;IM3601;IM3011;IM2001.

Dimensions and Parts' codes

IM B3





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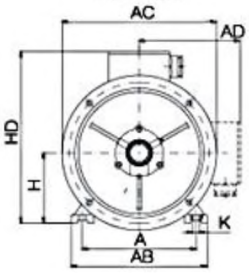

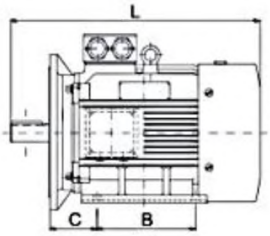

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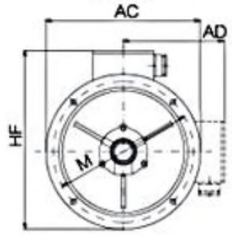
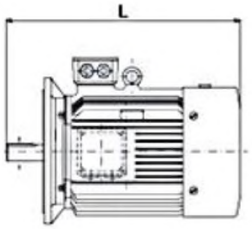
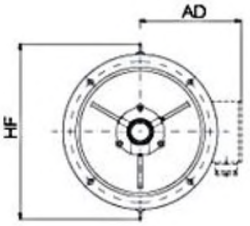
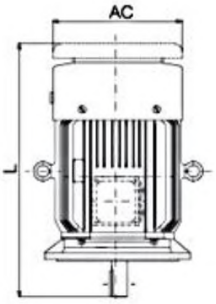


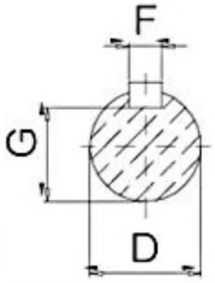


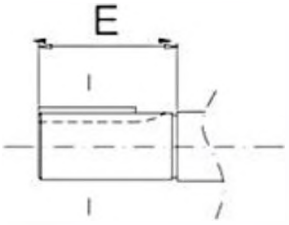
IM V1





机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560	—	560	—
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	
180M	279	241	121	180	14.5	355	380	280	455	430	740	800	740	800
180L	279	279	121	180	14.5	355	380	280	455	430	790	850	790	850
200L	318	305	133	200	18.5	395	420	305	505	480	790	940	790	940
225S	356	286	149	225	18.5	435	470	335	560	535	—		830	905
225M	356	311	149	225	18.5	435	470	335	560	535	825	910	855	940
250M	406	349	168	250	24	490	510	370	615	595	915	1015	915	1015
280S	457	368	190	280	24	550	580	410	680	650	985	1150	985	1150
280M	457	419	190	280	24	550	580	410	680	650	1035	1385	1035	1385
315S	508	406	216	315	28	635	645	530	845	900	1180	1480	1290	1510
315M	508	457	216	315	28	635	645	530	845	900	1210	1590	1320	1260
315L	508	508	216	315	28	635	645	530	845	900	1210	1590	1320	1260

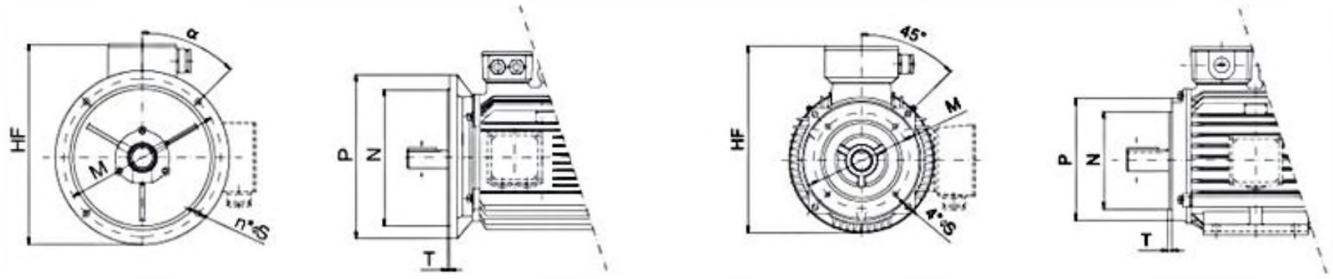




mm

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37
180	≥ 2	48	110	14	42.5
200	≥ 2	55	110	16	49
225	2	55	110	16	49
225	≥ 4	60	140	18	53

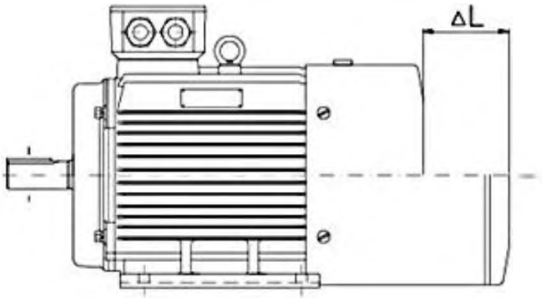
机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
250	2	60	140	18	53
	≥ 4	65	140	18	58
280	2	65	140	18	58
	≥ 4	75	140	20	67.5
315	2	65	140	18	58
	≥ 4	80	170	22	71
355M、L	2	75	140	20	67.5
	≥ 4	95	170	25	86
355	2	80	170	22	71
	≥ 4	110	210	28	100



mm

机座 Frame	凸缘号 Flange	B35、B5 法兰					
		M	N	P	T	α	n*ΦS
80、90	FF165	165	130	200	3.5	45	4*12
100、112	FF215	215	180	250	4	45	4*14.5
132	FF265	265	230	300	4	45	4*14.5
160、180	FF300	300	250	350	5	45	4*18.5
200	FF350	350	300	400	5	45	4*18.5
225	FF400	400	350	450	5	22.5	8*18.5
250、280	FF500	500	450	550	5	22.5	8*18.5
315	FF600	600	550	660	6	22.5	8*24
355M、L	FF740	740	680	800	6	22.5	8*24
355	FF840	840	780	900	6	22.5	8*24

机座 Frame	凸缘号 Flange	B34、B14 法兰				
		M	N	P	S	T
80	FT100	100	80	120	M6	3
90	FT115	115	95	140	M8	3
100、112	FT130	130	110	160	M8	3.5



机座号 Frame size	80	90	100	112	132	160	180	200	225	250	280	315	355
风机功率 Fan power	30	30	50	50	50	80	80	200	200	250	250	370	550
ΔL (mm)	65	110	115	130	130	125	120	170	175	175	240	270	270

YVF3 Series VFD Fan Motor

In recent years, especially with the increasingly widespread application of frequency converters in the field of industrial control,using YVF3 series VFD fan motor has significant advantages over DC speed regulation motors. Variable frequency speed regulation has become the mainstream speed regulation scheme and can be widely used in various industries for continuously variable transmission.

Brief Introduction

1. With the rapid development of power electronics technology and new semiconductor devices, AC speed regulation technology has been continuously improved and improved. Gradually improved frequency converters, also called VFD, are widely used in AC motors with their good output waveform and excellent performance to price ratio.
For example, large electric motors and small and medium-sized roller motors used in steel mills for rolling, traction motors for railways and urban rail transit, elevator motors, lifting motors for container lifting equipment, motors for water pumps and fans, compressors, and motors for household appliances have all successively used YVF3 series VFD fan motor, and have achieved good results.

2. What are the structural differences between variable frequency motors and ordinary motors?
● Insulation level: Generally F level or higher, strengthen the strength of ground insulation and wire turn insulation, especially considering the ability of insulation to withstand impulse voltage.
● Regarding the vibration and noise issues of the motor: full consideration should be given to the rigidity of the motor components and the overall structure, and efforts should be made to increase its natural frequency to avoid resonance with various force waves.
● Cooling method: Generally, forced ventilation cooling is used, that is, the main motor cooling fan is driven by an independent motor.
● Measures to prevent shaft current: For motors with a capacity exceeding 160KW, bearing insulation measures should be adopted. Mainly, it is prone to magnetic circuit asymmetry and also generates shaft current. When the currents generated by other high-frequency components combine, the shaft current will increase significantly, leading to bearing damage. Therefore, insulation measures should generally be taken.
● For constant power variable frequency motors: When the speed exceeds 3000/min, special high-temperature resistant lubricating grease should be used to compensate for the temperature rise of the bearings.

3. For ordinary asynchronous motors, the main performance parameters to consider during redesign are overload capacity, starting performance, efficiency, and power factor. And for YVF3 series VFD fan motor, as the critical slip rate is inversely proportional to the power frequency, they can be started directly when the critical slip rate is close to 1. Therefore, overload capacity and starting performance no longer need to be considered too much.

4. For pumps and fans, the fluid flow rate is directly proportional to the first power of the speed, the torque is directly proportional to the second power of the speed, and the power is directly proportional to

the third power of the speed. When the speed decreases, the power consumption of the motor decreases in a third power. Therefore, the energy-saving effect of variable frequency speed regulation is very significant.

5. YVF3 series VFD fan motor follows Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance, which equals to IEC60034-1:2004.

Technical Specifications

Standard	IEC60034
Voltage(V)	220/380/400/415/440/550/660/690
Pole	2/4/6/8/10
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm
Mounting	foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot:IMB35/IM2001;IMV5;IMV6
Working duty	S1,S6,S9
Frame	H80~H355
Output range(KW)	0.55 to 355
Enclosure	IP55/IP54
Cooling	IC416/TEFV
Frequency(Hz)	50/60;3～100Hz
Application	CNC machine tools, industrial robots, various automatic mechanical equipment, flexible production lines for textile, printing, and light industry systems, steel rolling, mining, locomotive drag, aerospace, and shipbuilding,etc.

Production Overview

CAST IRON CASE

The design of the cast iron case of YVF3 series VFD fan motor takes into account the heat dissipation function, which helps to remove the heat generated by the operation of the motor through appropriate heat dissipation surfaces or air cooling flowability channels, so that the motor winding operates within its rated temperature range.

VIBRATION SENSOR

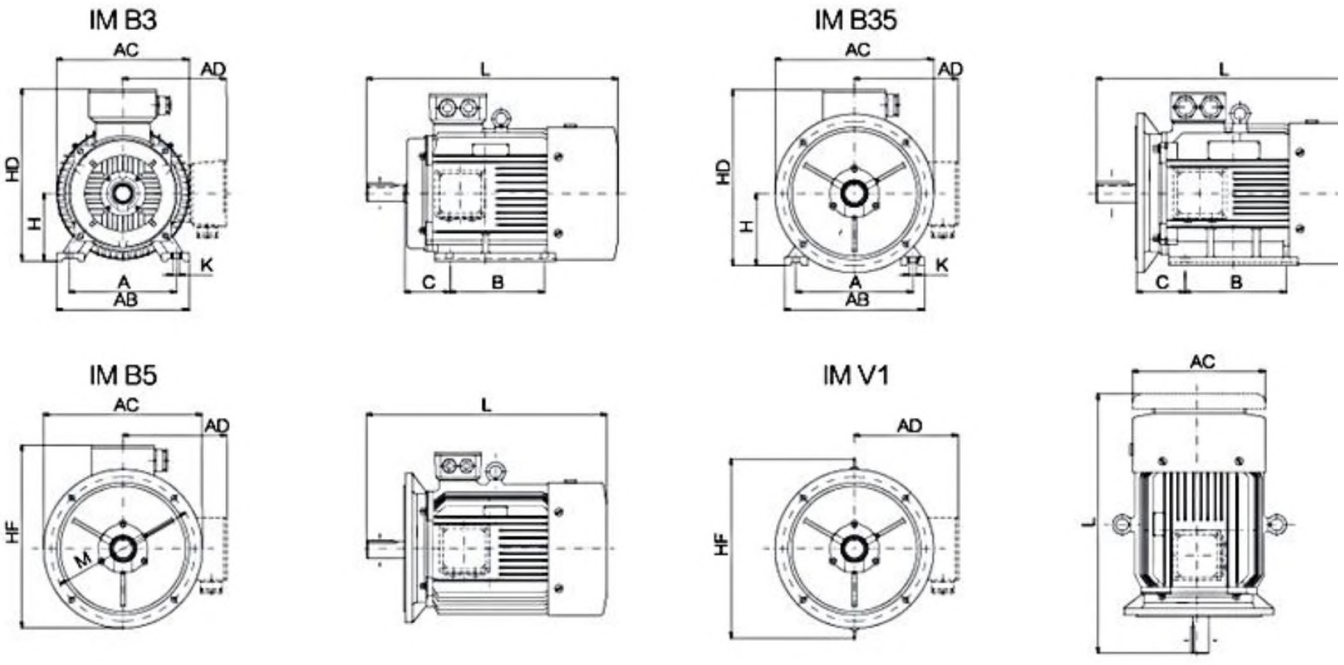
Vibration sensor is a single free oscillation system composed of springs, dampers, and inertial mass blocks. It converts mechanical vibrations into electrical signals that are easy to transmit, transform, process, and store through its transducer components.

TERMINAL BOX

The motor terminal box is used to connect power lines and motor coils, mainly composed of a box body, terminals, screws, washers, fixing plates, and other parts.

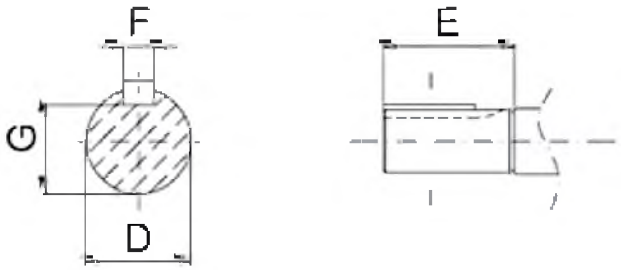
SHAFT

Precision shafts are manufactured based on the tolerance of the shaft and are generally suitable for transmitting high-precision loads. The precision shaft is manufactured using high-quality materials and advanced processing technology. The tolerance control of the size and shape of the shaft is relatively strict, and it can withstand relatively large axial and radial loads.



mm

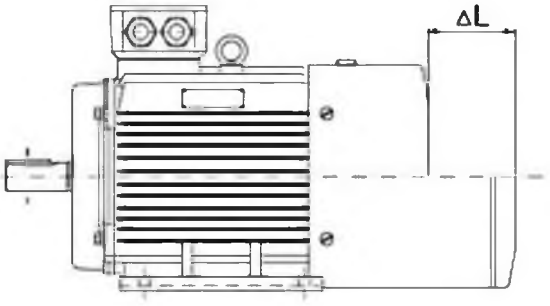
机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560	—	560	—
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	
180M	279	241	121	180	14.5	355	380	280	455	430	740	800	740	800
180L	279	279	121	180	14.5	355	380	280	455	430	790	850	790	850
200L	318	305	133	200	18.5	395	420	305	505	480	790	940	790	940
225S	356	286	149	225	18.5	435	470	335	560	535	—		830	905
225M	356	311	149	225	18.5	435	470	335	560	535	825	910	855	940
250M	406	349	168	250	24	490	510	370	615	595	915	1015	915	1015
280S	457	368	190	280	24	550	580	410	680	650	985	1150	985	1150
280M	457	419	190	280	24	550	580	410	680	650	1035	1385	1035	1385
315S	508	406	216	315	28	635	645	530	845	900	1180	1480	1290	1510
315M	508	457	216	315	28	635	645	530	845	900	1210	1590	1320	1260
315L	508	508	216	315	28	635	645	530	845	900	1210	1590	1320	1260



mm

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
250	2	60	140	18	53
	≥ 4	65	140	18	58
280	2	65	140	18	58
	≥ 4	75	140	20	67.5
315	2	65	140	18	58
	≥ 4	80	170	22	71



机座号 Frame size	80	90	100	112	132	160	180	200	225	250	280	315	355
风机功率 Fan power	30	30	50	50	50	80	80	200	200	250	250	370	550
ΔL (mm)	65	110	115	130	130	125	120	170	175	175	240	270	270

YVF3 Series Converter Multi-Speed Motor

Energy saving of YVF3 series converter multi-speed motor is achieved by continuously adjusting speed to adapt to different usage environments, in order to reduce unnecessary losses. Electric motor systems account for over 65% of the current industry's power consumption. By installing or upgrading VFD optimized motor control systems, equipment energy consumption can be reduced by up to 70%. Variable frequency speed regulation has become the mainstream speed regulation scheme and can be widely used in various industries for continuously variable transmission.

Send Inquiry

Description Technical Parameters

Brief Introduction

Variable frequency motor - used in special occasions with frequency converters, it differs from ordinary motors in that it adds a strong cooling fan. And the power of this fan comes from a separate power source and cannot be connected from the main motor. The function of a strong cooling fan is to ensure the cooling of the motor at low speeds.

YVF3 series converter multi-speed motor can adjust the speed of the motor, thereby achieving energy-saving goals based on load conditions. A regular motor is a device with a fixed speed and cannot be adjusted.

There is a significant difference in the manufacturing process between ordinary motors and variable frequency motors. A regular motor, also known as a power frequency motor, only needs to consider the starting process and the working situation at one point of the power frequency, and then design the motor; The variable frequency motor needs to consider the starting process and the working conditions of all points within the variable frequency range, and then design the motor.

Here is one chart of low voltage AC motor to compare ordinary motor and variable frequency motor.



Technical Specifications

No.	Type	Ordinary motor	Variable frequency motor
1	Squirrel cage motor	yes	yes
2	Model	YE3/YE4/YE5	YVF3
3	Frequency	50Hz/60Hz	Fixed 50Hz/60Hz with a range 3Hz~100Hz
4	Cooling method	IC411	IC416
5	Cooling feature	TEFC, self-fan cooling	TEFV, forced ventilation with separate fan motor
6	Protection class	IP54/IP55	IP54/IP55
7	Insulation	F/H	F/H
8	Terminal box	1	2
9	Efficiency	IE3/IE4/IE5	Higher efficiency in same power compared with fixed frequency motor
10	Dimension		Extra dimensions marked with data of L as chart below

YVF3 series converter multi-speed motor follows Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance , which equals to IEC60034-1:2004.

Ordering Notice

1.Load connection
The electric motor and the driven load should be driven co-axialy through a coupling. If the transmission method is belt,chain, gear, etc., please specify it earlier at least before placing order.
2.Starting method
The variable frequency motor should be started with VFD. If not available,please specify it earlier at least before placing order.
3.Bearing brand
Without requirement, our offers are for Chinese-brand motors. If buyers need foreign bearings,please specify it earlier.
4.Altitude
For motor values, they are designed under 1000m as altitude.For plateau regions,mountain areas, if altitude is over 1000m,please specify it earlier at least before placing order.
5.AMB temperature
For motor feature and performance, they are designed around -15 ℃ ~ +40℃ as temperature.For tropical regions, plateau regions, near the Arctic regions,their AMB temperature could be over 45 ℃ or lower than 20 ℃,please specify it earlier at least before placing order.

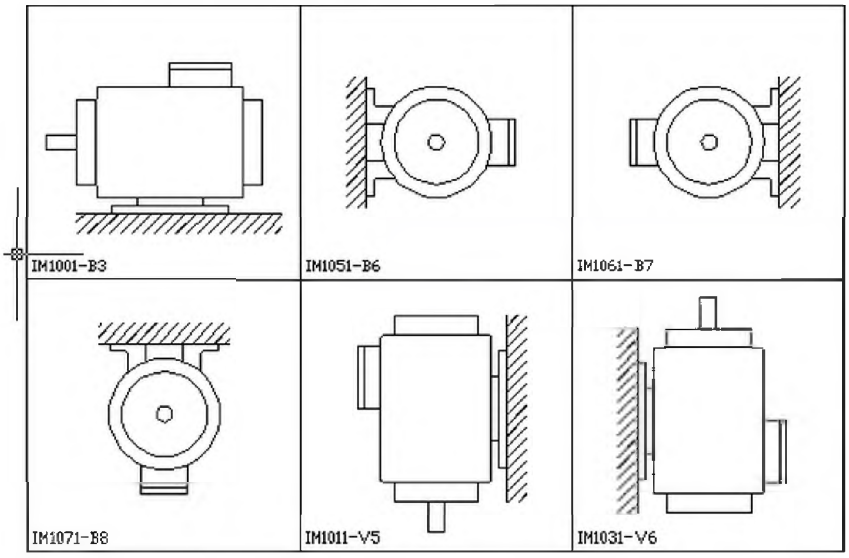
Industrial Application

规格型号 Model

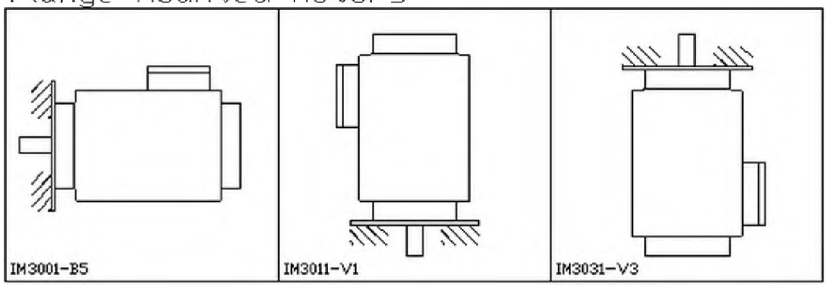
◆ **中小型三相异步电动机的性能容差范围** Electrical performance tolerance

电气参数	Electrical performance	容差 Tolerance
效率（η）	Efficiency	≤ 150kW: -15%*（1-η）; > 150kW: -10%*（1-η）
功率因数（cosφ）	Power factor	-1/6(1-cosφ), 最小绝对值 (min) 为 0.02
转差率	Slip ratio	±20%
堵转转矩倍数	Locked rotor torque	-15%
最小转矩倍数	Pull-up torque	-15%
最大转矩倍数	Breakdown torque	-10%
堵转电流倍数	Locked rotor current	20%
转动惯量	Moment of inertia	±10%

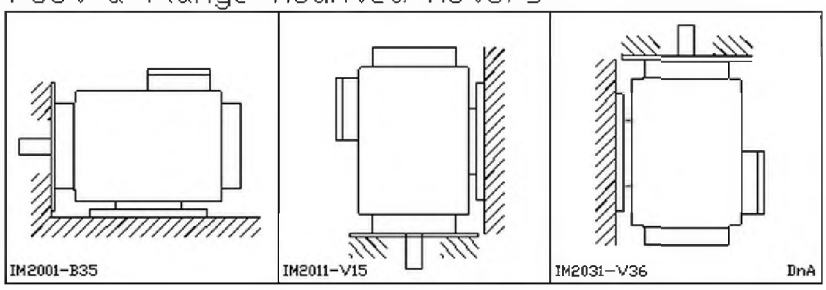
Foot Mounted Motors



Flange Mounted Motors



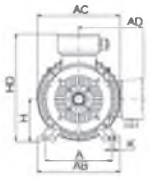
Foot & Flange Mounted Motors

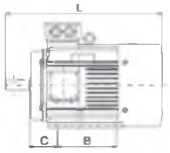


型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N·m
YVF2-80M1-2	0.75	1.8	2.4
YVF2-80M2-2	1.1	2.6	3.5
YVF2-90S-2	1.5	3.5	4.8
YVF2-90L-2	2.2	4.9	7.0
YVF2-100L-2	3	6.3	9.5
YVF2-112M-2	4	8.2	12.7
YVF2-132S1-2	5.5	11.1	17.5
YVF2-132S2-2	7.5	14.9	23.9
YVF2-160M1-2	11	21.2	35.0
YVF2-160M2-2	15	28.6	47.7
YVF2-160L-2	18.5	34.7	58.9
YVF2-180M-2	22	41.0	70.0
YVF2-200L1-2	30	55.4	95.5
YVF2-200L2-2	37	67.9	118
YVF2-225M-2	45	82.1	143
YVF2-250M-2	55	99.8	175
YVF2-280S-2	75	135	239
YVF2-280M-2	90	160	287
YVF2-315S-2	110	195	350
YVF2-315M-2	132	233	420
YVF2-315L1-2	160	282	509
YVF2-315L2-2	200	348	637
YVF2-355M1-2	220	382	700
YVF2-355M2-2	250	434	796
YVF2-355L1-2	280	485	891
YVF2-355L2-2	315	545	1003
YVF2-80M1-4	0.55	1.6	3.5
YVF2-80M2-4	0.75	2.0	4.8
YVF2-90S-4	1.1	2.9	7.0
YVF2-90L-4	1.5	3.7	9.6
YVF2-100L1-4	2.2	5.2	14.0

型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N·m
YVF2-180L-4	22	43.4	140
YVF2-200L-4	30	57.6	191
YVF2-225S-4	37	69.9	236
YVF2-225M-4	45	84.7	287
YVF2-250M-4	55	103	350
YVF2-280S-4	75	140	478
YVF2-280M-4	90	167	573
YVF2-315S-4	110	201	700
YVF2-315M-4	132	241	840
YVF2-315L1-4	160	292	1019
YVF2-315L2-4	200	365	1273
YVF2-355M-4	250	450	1592
YVF2-355L1-4	280	488	1783
YVF2-355L2-4	315	545	2006
YVF2-90S-6	0.75	2.3	7.2
YVF2-90L-6	1.1	3.2	10.5
YVF2-100L-6	1.5	3.9	14.3
YVF2-112M-6	2.2	5.7	21.0
YVF2-132S-6	3	7.6	28.7
YVF2-132M1-6	4	9.6	38.2
YVF2-132M2-6	5.5	12.8	52.5
YVF2-160M-6	7.5	17.2	71.6
YVF2-160L-6	11	24.4	105
YVF2-180L-6	15	31.6	143
YVF2-200L1-6	18.5	37.5	177
YVF2-200L2-6	22	43.8	210
YVF2-225M-6	30	56.8	287
YVF2-250M-6	37	72.0	353
YVF2-280S-6	45	87.5	430
YVF2-280M-6	55	107	525
YVF2-315S-6	75	140	716

IM B3





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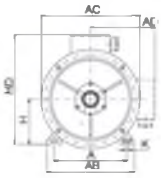

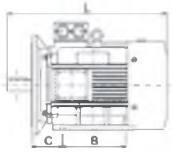

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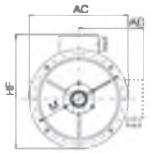

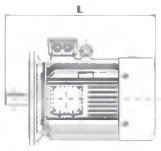

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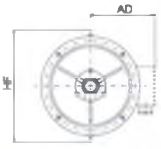
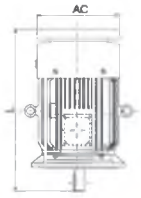
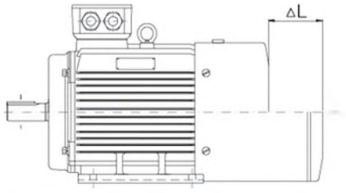




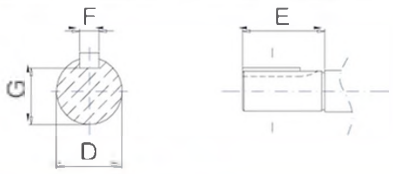
mm

mm

机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560	—	560	—
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	
180M	279	241	121	180	14.5	355	380	280	455	430	740	800	740	800
180L	279	279	121	180	14.5	355	380	280	455	430	790	850	790	850
200L	318	305	133	200	18.5	395	420	305	505	480	790	940	790	940
225S	356	286	149	225	18.5	435	470	335	560	535	—	—	830	905
225M	356	311	149	225	18.5	435	470	335	560	535	825	910	855	940
250M	406	349	168	250	24	490	510	370	615	595	915	1015	915	1015
280S	457	368	190	280	24	550	580	410	680	650	985	1150	985	1150
280M	457	419	190	280	24	550	580	410	680	650	1035	1385	1035	1385
315S	508	406	216	315	28	635	645	530	845	900	1180	1480	1290	1510
315M	508	457	216	315	28	635	645	530	845	900	1210	1590	1320	1260
315L	508	508	216	315	28	635	645	530	845	900	1210	1590	1320	1260
355M	610	560	254	355	28	730	710	655	1010	1010	1500	1750	1530	1780
355L	610	630	254	355	28	730	710	655	1010	1010	1500	1750	1530	1780
355	630	800	224	355	35	760	770	760	1130	1220	1870	2130	1920	2180



机座号 Frame size	80	90	100	112	132	160	180	200	225	250	280	315	355
风机功率 Fan power	30	30	50	50	50	80	80	200	200	250	250	370	550
ΔL (mm)	65	110	115	130	130	125	120	170	175	175	240	270	270



mm

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37
180	≥ 2	48	110	14	42.5
200	≥ 2	55	110	16	49
225	2	55	110	16	49
225	≥ 4	60	140	18	53

机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
250	2	60	140	18	53
	≥ 4	65	140	18	58
280	2	65	140	18	58
	≥ 4	75	140	20	67.5
315	2	65	140	18	58
	≥ 4	80	170	22	71
355M、L	2	75	140	20	67.5
	≥ 4	95	170	25	86
355	2	80	170	22	71
	≥ 4	110	210	28	100

YVF2 Series Energy Saving Motor

In recent years, the use of YVF2 series energy saving motor is also becoming more widespread.Frequency conversion speed control transmission devices have developed at an annual growth rate of 13% to 16% internationally, and there is a trend of gradually replacing most DC speed control transmission devices. Variable frequency speed regulation has become the mainstream speed regulation scheme and can be widely used in various industries for continuously variable transmission.Especially with the increasingly widespread application of frequency converters in the field of industrial control,using AC variable frequency speed regulation motors has significant advantages over DC speed regulation motors.

Send Inquiry

Description Technical Parameters

Brief Introduction

YVF2 series energy saving motor follows Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance , which equals to IEC60034-1:2004.

With the rapid development of power electronics technology and new semiconductor devices, AC speed regulation technology has been continuously improved and improved. Gradually improved frequency converters are widely used in AC motors with their good output waveform and excellent performance to price ratio. For example, large electric motors and small and medium-sized roller motors used in steel mills for rolling, traction motors for railways and urban rail transit, elevator motors, lifting motors for container lifting equipment, motors for water pumps and fans, compressors, and motors for household appliances have all successively used AC variable frequency speed control motors, and have achieved good results.

The use of AC variable frequency speed regulation motors has significant advantages over DC speed regulation motors,such as

1. Easy speed regulation and energy-saving.
2. The AC motor has a simple structure, small volume, small inertia, low cost, easy maintenance, and durability.
3. Capacity can be expanded to achieve high speed and high voltage operation.
4. It can achieve soft start and fast braking.
5. Spark free, explosion-proof, and strong environmental adaptability.

The social benefits of domestically produced high-voltage frequency conversion devices are significant, mainly in terms of energy conservation, thereby saving resources and reducing environmental pollution. Eliminate the starting shock of the motor and its impact on the power grid, and reduce the failure rate of the motor and equipment. Improve control accuracy and automation level. The economic benefits of YVF2 series energy saving motor are also very significant.

Here is one chart of low voltage AC motor to compare fixed frequency motor and variable frequency motor.

No.	Type	Fixed frequency motor	Variable frequency motor	Note
1	Squirrel cage motor	yes	yes	
2	Model	YE3/YE4/YE5	YVF2/YVF3	
3	Frequency	50Hz/60Hz	Fixed 50Hz/60Hz with a range 3Hz~100Hz	
4	Cooling method	IC411	IC416	
5	Cooling feature	TEFC, self-fan cooling	TEFV, forced ventilation with separate fan motor	
6	Protection class	IP54/IP55	IP54/IP55	
7	Insulation	F/H	F/H	
8	Terminal box	1	2	
9	efficiency	IE3/IE4/IE5	Higher efficiency in same power compared with fixed frequency motor	

Technical Parameters

Series	YVF2;
HS code	8501520090 (750W < P≤75kW);8501530090 (P > 75kW)
Frame size	H80~H355
Output range(KW)	0.55 to 355
Frequency(Hz)	50/60,3 ~ 100Hz
Voltage(V)	220/380/400/415/440
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm
Enclosure	IP55/IP54

Cooling	IC416/TEFV
Working duty	S1,S6,S9
Mounting	foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601;
vertical-IMV1/IM3011	flange-foot,IMB35/IM2001;

Our Services

1. Inquiry response within 6/24 hours;
2. Ensure every quotation is practical & customized according to your requirements;
3. Provide the technical specification of motors;
4. Provide the design drawing of motors;
5. Ensure motor spare parts' availability offer for 5 years;
6. Quality assurance: 18 months except consumable parts;
7. After-sale service abroad is under managing and will serve customers better and better in the future.

Typical Application


Textile


Pharmacy


Manufacturing


Gas

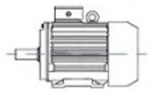
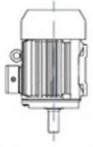
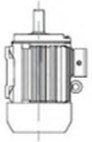
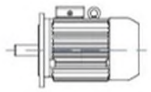
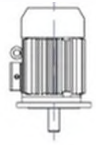
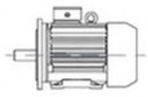
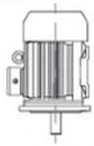
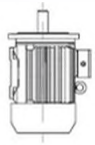
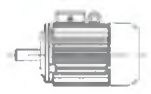

plastic

国家 Country	USA	Canada	Mexico	Brazil	Australia	Turkey
电压 Voltage	≤ 600V	≤ 600V	≤ 600V	≤ 1000V	≤ 1100V	≤ 1000V
时间 Time	2010	2012	2010	2012	2006	2017
标准 Standard	IE3	IE3	IE2	IE2	IE2	IE3
极数 Poles	2,4,6	2,4,6	2,4,6,8	2,4,6,8	2,4,6,8	2,4,6
范围 Range	1-200HP	1-200HP	0.75-375kW	0.75-185kW	0.75-185kW	0.75-375kW

国家 Country	EU	Switzerland	Saudi Arabia	South Korea	Japan	China
电压 Voltage	≤ 1000V	≤ 1000V	≤ 1000V	≤ 600V	≤ 1000V	≤ 1000V
时间 Time	2017	2017	2017	2018	2015	2012
标准 Standard	IE3	IE3	IE3	IE3	IE3	IE2
极数 Poles	2,4,6	2,4,6	2,4,6	2,4,6,8	2,4,6	2,4,6
范围 Range	0.75-375kW	0.75-375kW	0.75-375kW	0.75-375kW	0.75-375kW	0.75-375kW

规格型号 Model

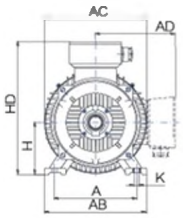
《GB/T 997-2008 Rotating electrical machine - Classification of types of construction, mounting arrangements and terminal box position》（IEC60034-7:2001）

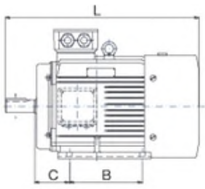
机座带底脚，端盖无法兰 With feet, without flange on the end-shield					
					
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
机座不带底脚，端盖有法兰 Without feet,flange on the end-shield			机座带底脚，端盖有法兰 With feet,flange on the end-shield		
					
IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031
机座不带底脚，端盖有小法兰 Without feet,C-flange on the end-shield			机座带底脚，端盖有小法兰 With feet,C-flange on the end-shield		
					
IM B14	IM V18	IM V19	IM B34	IM V17	IM V37
IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131

型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N · m
YVF2-80M1-2	0.75	1.8	2.4
YVF2-80M2-2	1.1	2.6	3.5
YVF2-90S-2	1.5	3.5	4.8
YVF2-90L-2	2.2	4.9	7.0
YVF2-100L-2	3	6.3	9.5
YVF2-112M-2	4	8.2	12.7
YVF2-132S1-2	5.5	11.1	17.5
YVF2-132S2-2	7.5	14.9	23.9
YVF2-160M1-2	11	21.2	35.0
YVF2-160M2-2	15	28.6	47.7
YVF2-160L-2	18.5	34.7	58.9
YVF2-180M-2	22	41.0	70.0
YVF2-200L1-2	30	55.4	95.5
YVF2-200L2-2	37	67.9	118
YVF2-225M-2	45	82.1	143
YVF2-250M-2	55	99.8	175
YVF2-280S-2	75	135	239
YVF2-280M-2	90	160	287
YVF2-315S-2	110	195	350
YVF2-315M-2	132	233	420
YVF2-315L1-2	160	282	509
YVF2-315L2-2	200	348	637
YVF2-355M1-2	220	382	700
YVF2-355M2-2	250	434	796
YVF2-355L1-2	280	485	891
YVF2-355L2-2	315	545	1003
YVF2-80M1-4	0.55	1.6	3.5
YVF2-80M2-4	0.75	2.0	4.8
YVF2-90S-4	1.1	2.9	7.0
YVF2-90L-4	1.5	3.7	9.6
YVF2-100L1-4	2.2	5.2	14.0

型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N · m
YVF2-180L-4	22	43.4	140
YVF2-200L-4	30	57.6	191
YVF2-225S-4	37	69.9	236
YVF2-225M-4	45	84.7	287
YVF2-250M-4	55	103	350
YVF2-280S-4	75	140	478
YVF2-280M-4	90	167	573
YVF2-315S-4	110	201	700
YVF2-315M-4	132	241	840
YVF2-315L1-4	160	292	1019
YVF2-315L2-4	200	365	1273
YVF2-355M-4	250	450	1592
YVF2-355L1-4	280	488	1783
YVF2-355L2-4	315	545	2006
YVF2-90S-6	0.75	2.3	7.2
YVF2-90L-6	1.1	3.2	10.5
YVF2-100L-6	1.5	3.9	14.3
YVF2-112M-6	2.2	5.7	21.0
YVF2-132S-6	3	7.6	28.7
YVF2-132M1-6	4	9.6	38.2
YVF2-132M2-6	5.5	12.8	52.5
YVF2-160M-6	7.5	17.2	71.6
YVF2-160L-6	11	24.4	105
YVF2-180L-6	15	31.6	143
YVF2-200L1-6	18.5	37.5	177
YVF2-200L2-6	22	43.8	210
YVF2-225M-6	30	56.8	287
YVF2-250M-6	37	72.0	353
YVF2-280S-6	45	87.5	430
YVF2-280M-6	55	107	525
YVF2-315S-6	75	140	716

IM B3





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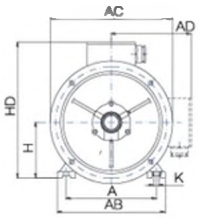
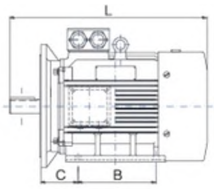
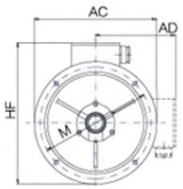
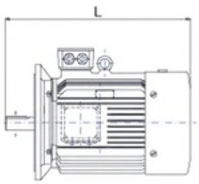


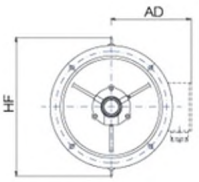


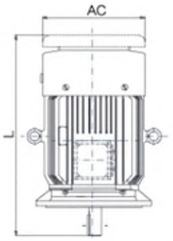
IM B5





IM V1

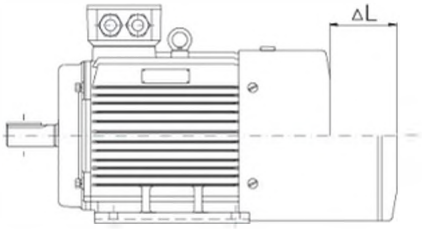




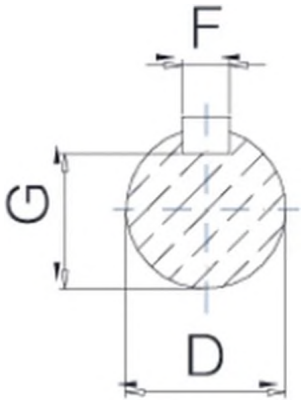
mm

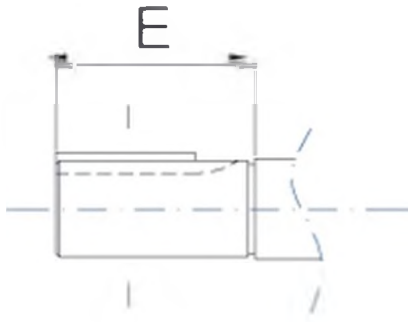
机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560		560	
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	
180M	279	241	121	180	14.5	355	380	280	455	430	740	800	740	800
180L	279	279	121	180	14.5	355	380	280	455	430	790	850	790	850
200L	318	305	133	200	18.5	395	420	305	505	480	790	940	790	940
225S	356	286	149	225	18.5	435	470	335	560	535	—		830	905
225M	356	311	149	225	18.5	435	470	335	560	535	825	910	855	940

Technical data of separately fan



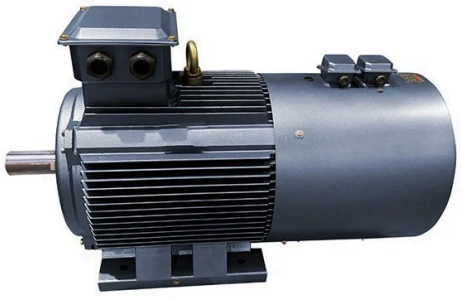
机座号 Frame size	80	90	100	112	132	160	180	200	225	250	280	315	355
风机功率 Fan power	30	30	50	50	50	80	80	200	200	250	250	370	550
ΔL (mm)	65	110	115	130	130	125	120	170	175	175	240	270	270





机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37
180	≥ 2	48	110	14	42.5
200	≥ 2	55	110	16	49
225	2	55	110	16	49
225	≥ 4	60	140	18	53



YVF2 Series VFD Blower Motor

Variable frequency speed regulation motor, abbreviated as variable frequency motor, is a general term for motors driven by frequency converters.YVF2 series VFD blower motor is one kind of adjustable speed motors. Various AC variable frequency speed control motor systems are widely used in various fields such as CNC machine tools, industrial robots, automatic mechanical equipment, flexible production lines in textile, printing, and light industry systems, steel rolling, mining, locomotive drag, aerospace, and shipbuilding.

Send Inquiry

Description Technical Parameters

Brief Introduction

Variable frequency speed regulation motors follow Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance , which equals to IEC60034-1:2004.

The so-called variable frequency speed regulation motor mainly refers to an efficient motor that is suitable for being powered by a frequency converter. The motor can achieve different speeds and torques under the drive of a frequency converter to adapt to changes in load demand. Variable frequency motors have evolved from traditional squirrel cage motors, replacing traditional motor fans with independent fans and improving the insulation performance of motor windings.

With the increasingly widespread application of frequency converters in the field of industrial control, the use of YVF2 series VFD blower motor is also becoming more and more widespread. It can be said that due to the superiority of variable frequency motors over ordinary motors in frequency control, we can easily see the presence of variable frequency motors wherever frequency converters are used.

From motors' outlook, there will be one obvious difference compared with normal AC motor. On the fan cover of motor NDE side, there will be one extra junction box, in which there will be cables for connection separate fan motor. Here is one chart for fan motor parameters.

In order to meet the needs of variable frequency speed control systems, novel electric motors continue to emerge, characterized by breaking away from the concept of conventional rotating magnetic fields and utilizing the mechanism of magnetic field deformation generated by the combination of motor structure and control to drive rotor rotation.



Technical Data

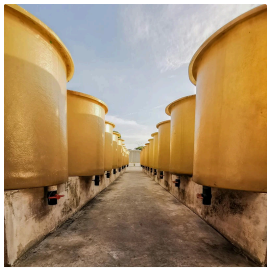
Frame size	H80~H355
Output range(KW)	0.55 to 355
Frequency(Hz)	50/60,3～100Hz
Voltage(V)	220/380/400/415/440
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm
Enclosure	IP55/IP54
Cooling	IC416/TEFV
Working duty	S1,S6,S9
Mounting	Foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot： IMB35/IM2001;IMV5;IMV6

Typical Application


coal mining


Power plant

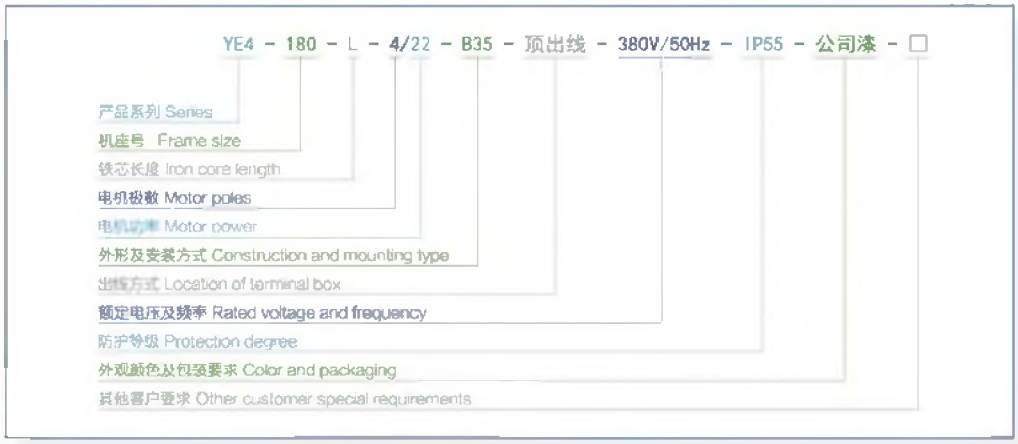

Manufacturing


Chemical plant


Cement

Dimensions And Parts' Codes

规格型号 Model



1-2 《GB755-2008 旋转电机定额和性能》(IEC60034-1:2004)

《GB755-2008 Rotating electrical machines-Rating and performance》(IEC60034-1:2004)

电动机的性能容差范围 Electrical performance tolerance

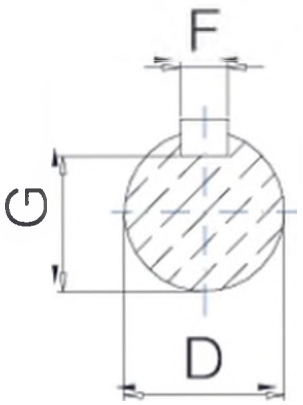
电气参数	Electrical performance	容差 Tolerance
效率（η）	Efficiency	-10%*（1-η）
功率因数（cosφ）	Power factor	-1/6(1-cosφ),最小绝对值(min)为 0.02
转差率	Slip ratio	±20%
堵转转矩倍数	Locked rotor torque	-15%
最小转矩倍数	Pull-up torque	-15%
最大转矩倍数	Breakdown torque	-10%
堵转电流倍数	Locked rotor current	20%
转动惯量	Moment of inertia	±10%

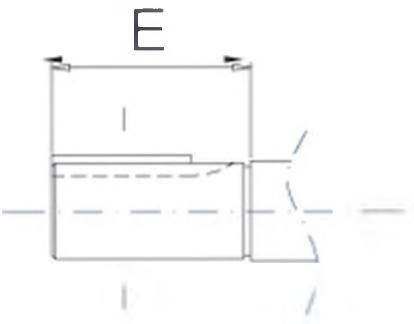
IM Ref#	Shaft	Feet	Mount
IM 1001 / IM B3	Horizontal	on Floor	Foot
IM 1071 / IM B8	Horizontal	on ceiling	Foot
IM 1051 / IM B6	Horizontal	Wall mounted (feet lhs when viewed from drive end)	Foot
IM 1011 / IM V5	Vertical	on wall	Foot
IM 1061 / IM B7	Horizontal	Wall mounted (feet rhs when viewed from drive end)	Foot
IM 1031 / IM V6	Vertical	on wall	Foot
IM 3001 / IM B5	Horizontal		Flange
IM 2001 / IM B35	Horizontal	on Floor	Flange
IM 3011 / IM V1	Vertical (facing down)		Flange
IM 2011 / IM V15	Vertical (facing down)	on wall	Flange
IM 3031 / IM V3	Vertical (facing up)		Flange
IM 2031 / IM V36	Vertical (facing up)	on wall	Flange
IM 3601 / IM B14	Horizontal		Face
IM 2101 / IM B34	Horizontal	on wall	Face
IM 3611 / IM V18	Vertical (facing down)		Face
IM 2111 / IM V58	Vertical (facing down)	on wall	Face
IM 3631 / IM V19	Vertical (facing up)		Face
IM 2131 / IM V69	Vertical (facing up)	on wall	Face
IM 9101 / IM B9	Horizontal	threaded tie rods	No drive end shield
IM 1201 / IM B15	Horizontal	feet and threaded tie rods	No drive end shield

型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N · m
YVF2-80M1-2	0.75	1.8	2.4
YVF2-80M2-2	1.1	2.6	3.5
YVF2-90S-2	1.5	3.5	4.8
YVF2-90L-2	2.2	4.9	7.0
YVF2-100L-2	3	6.3	9.5
YVF2-112M-2	4	8.2	12.7
YVF2-132S1-2	5.5	11.1	17.5
YVF2-132S2-2	7.5	14.9	23.9
YVF2-160M1-2	11	21.2	35.0
YVF2-160M2-2	15	28.6	47.7
YVF2-160L-2	18.5	34.7	58.9
YVF2-180M-2	22	41.0	70.0
YVF2-200L1-2	30	55.4	95.5
YVF2-200L2-2	37	67.9	118
YVF2-225M-2	45	82.1	143
YVF2-250M-2	55	99.8	175
YVF2-280S-2	75	135	239
YVF2-280M-2	90	160	287
YVF2-315S-2	110	195	350
YVF2-315M-2	132	233	420
YVF2-315L1-2	160	282	509
YVF2-315L2-2	200	348	637
YVF2-355M1-2	220	382	700
YVF2-355M2-2	250	434	796
YVF2-355L1-2	280	485	891
YVF2-355L2-2	315	545	1003
YVF2-80M1-4	0.55	1.6	3.5
YVF2-80M2-4	0.75	2.0	4.8
YVF2-90S-4	1.1	2.9	7.0
YVF2-90L-4	1.5	3.7	9.6
YVF2-100L1-4	2.2	5.2	14.0

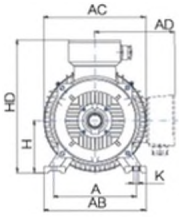
型号 Type	功率 Power	额定电流 Current	额定转矩 RT
	kW	A	N · m
YVF2-180L-4	22	43.4	140
YVF2-200L-4	30	57.6	191
YVF2-225S-4	37	69.9	236
YVF2-225M-4	45	84.7	287
YVF2-250M-4	55	103	350
YVF2-280S-4	75	140	478
YVF2-280M-4	90	167	573
YVF2-315S-4	110	201	700
YVF2-315M-4	132	241	840
YVF2-315L1-4	160	292	1019
YVF2-315L2-4	200	365	1273
YVF2-355M-4	250	450	1592
YVF2-355L1-4	280	488	1783
YVF2-355L2-4	315	545	2006
YVF2-90S-6	0.75	2.3	7.2
YVF2-90L-6	1.1	3.2	10.5
YVF2-100L-6	1.5	3.9	14.3
YVF2-112M-6	2.2	5.7	21.0
YVF2-132S-6	3	7.6	28.7
YVF2-132M1-6	4	9.6	38.2
YVF2-132M2-6	5.5	12.8	52.5
YVF2-160M-6	7.5	17.2	71.6
YVF2-160L-6	11	24.4	105
YVF2-180L-6	15	31.6	143
YVF2-200L1-6	18.5	37.5	177
YVF2-200L2-6	22	43.8	210
YVF2-225M-6	30	56.8	287
YVF2-250M-6	37	72.0	353
YVF2-280S-6	45	87.5	430
YVF2-280M-6	55	107	525
YVF2-315S-6	75	140	716

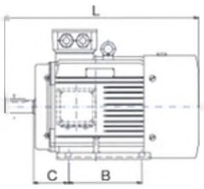
机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37





IM B3





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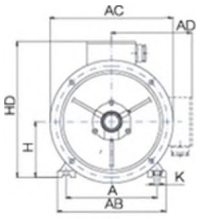
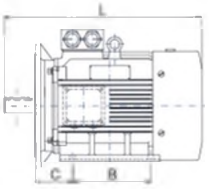
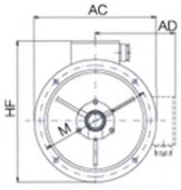
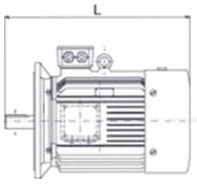


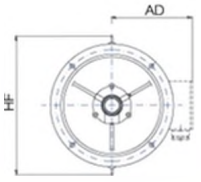


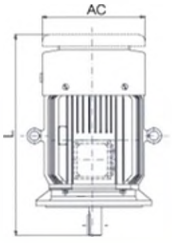
IM B5





IM V1

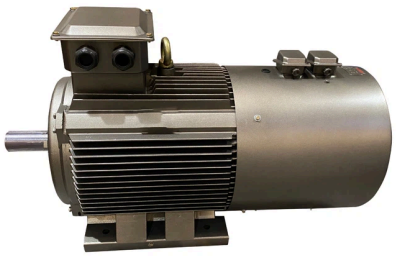




mm

机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560	—	560	—
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	



YVF2 Series Frequency Control Motor

YVF2 series frequency control motor can achieve speed regulation from base speed down, using constant torque speed regulation method and speed regulation from base speed up, using constant power speed regulation method. In recent years, the development of AC speed regulation has been very rapid both domestically and internationally, breaking the dominant position of DC drive in the field of speed regulation in the past. Variable frequency motor both low voltage and high voltage are having more roles in economic development.

Send Inquiry

Description Technical Parameters

Brief Introduction

In the petroleum and petrochemical industry, the operation of drilling rigs, pumping units, fans, water pumps, oil pumps, and mud pumps on the production site all consume a large amount of electrical energy. It is very important to fully and reasonably utilize electrical energy. The energy-saving effect of frequency control motor is very obvious after adopting frequency conversion speed regulation technology.

AC variable frequency speed regulation technology is widely recognized both domestically and internationally as the most widely used, efficient, and ideal electrical transmission solution in the world, representing the development direction of electrical transmission due to its excellent speed regulation performance, significant energy-saving effect, and wide application in various economic fields. It plays a crucial role in improving product quality, saving energy, reducing consumption, and improving enterprise economic efficiency.

国家 Country	USA	Canada	Mexico	Brazil	Australia	Turkey
电压 Voltage	≤ 600V	≤ 600V	≤ 600V	≤ 1000V	≤ 1100V	≤ 1000V
时间 Time	2010	2012	2010	2012	2006	2017
标准 Standard	IE3	IE3	IE2	IE2	IE2	IE3
极数 Poles	2,4,6	2,4,6	2,4,6,8	2,4,6,8	2,4,6,8	2,4,6
范围 Range	1~200HP	1~200HP	0.75~375kW	0.75~185kW	0.75~185kW	0.75~375kW

国家 Country	EU	Switzerland	Saudi Arabia	South Korea	Japan	China
电压 Voltage	≤ 1000V	≤ 1000V	≤ 1000V	≤ 600V	≤ 1000V	≤ 1000V
时间 Time	2017	2017	2017	2018	2015	2012
标准 Standard	IE3	IE3	IE3	IE3	IE3	IE2
极数 Poles	2,4,6	2,4,6	2,4,6	2,4,6,8	2,4,6	2,4,6
范围 Range	0.75~375kW	0.75~375kW	0.75~375kW	0.75~375kW	0.75~375kW	0.75~375kW

Here is one photo of efficiency grade of different foreign countries.

Appealing for low carbon and environmental protection during the whole world,YVF2 series frequency control motor is widely accepted by all industrial users, like the factories of light industry, textile, chemical, metallurgy, machine tool,etc.

This series of motors is highly trusted by users for their high efficiency, wide speed regulation range, and good speed stability. By adopting electromagnetic design, the resistance values of the stator and rotor are reduced, resulting in a small slip rate during motor operation, step less speed regulation, and improved efficiency. The voltage range of the motor can reach 220V~690V, suitable for 50Hz and 60Hz power sources, with a frequency modulation range of 3-100Hz and a power range of 0.55kW~315kW Motor frame numbers H80~H355.

This series motor follow Chinese standard, GB755-2008 Rotating electrical machines-Rating and performance , which equals to IEC60034-1:2004.

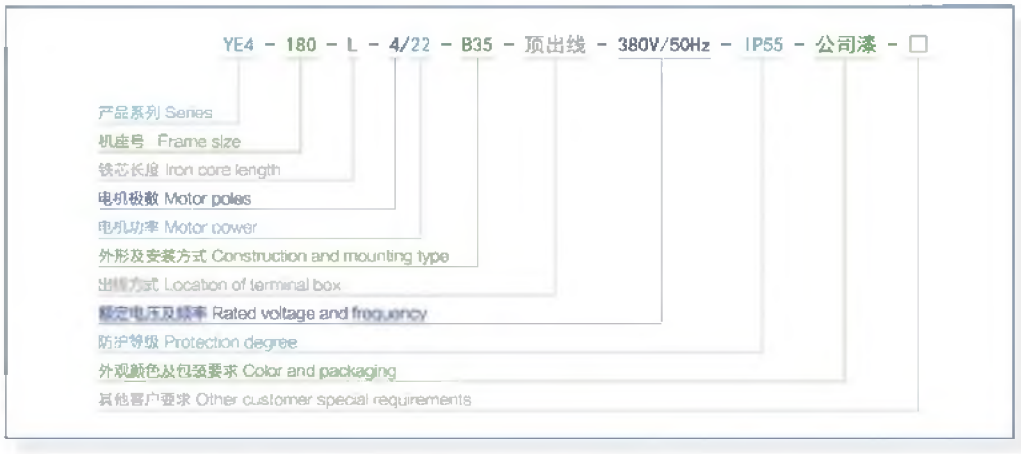


Technical Parameters

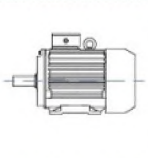
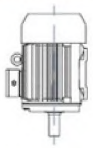
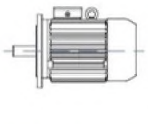
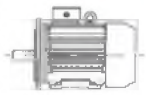
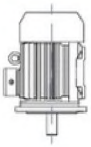
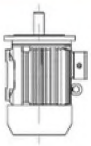
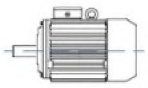
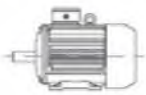
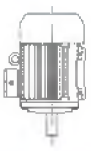
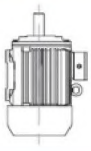
Frame size	H80~H355
Output range(KW)	0.55 to 355
Frequency(Hz)	50/60,3 ~ 100Hz
Voltage(V)	220/380/400/415/440/550/660/690
Poles	2/4/6/8/10
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm
Enclosure	IP55/IP54
Cooling	IC416/TEFV
Working duty	S1,S6,S9
Mounting	Foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot:IMB35/IM2001;IMV5;IMV6

Typical Application

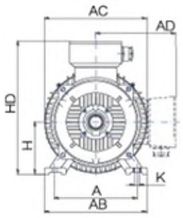
规格型号 Model

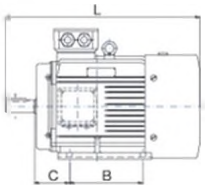


《GB/T 997-2008 Rotating electrical machine - Classification of types of construction, mounting arrangements and terminal box position》（IEC60034-7:2001）

机座带底脚，端盖无法兰 With feet, without flange on the end-shield					
					
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
机座不带底脚，端盖有法兰 Without feet,flange on the end-shield			机座带底脚，端盖有法兰 With feet,flange on the end-shield		
					
IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031
机座不带底脚，端盖有小法兰 Without feet,C-flange on the end-shield			机座带底脚，端盖有小法兰 With feet,C-flange on the end-shield		
					
IM B14	IM V18	IM V19	IM B34	IM V17	IM V37
IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131

IM B3





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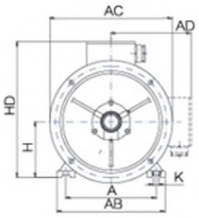
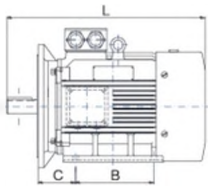
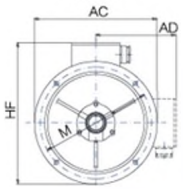
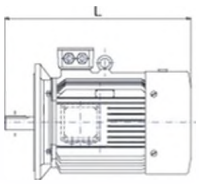


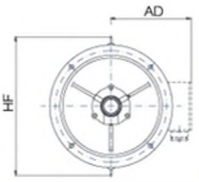


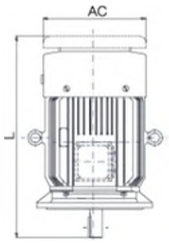
IM B5





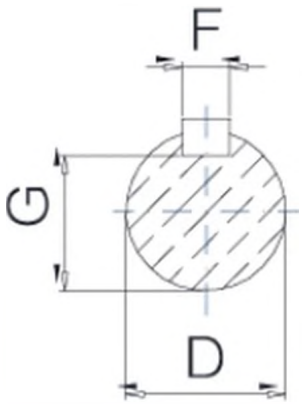
IM V1

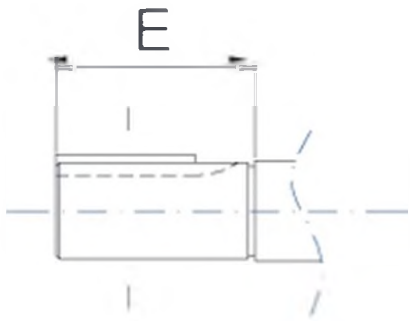




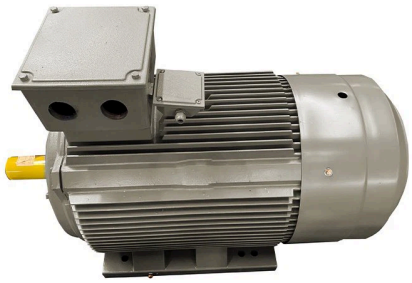
mm

机座 Frame	外形安装尺寸 External and mounting dimensions										L			
											2p		≥ 4p	
	A	B	C	H	K	AB	AC	AD	HD	HF	其他	V1	其他	V1
80M	125	100	50	80	10	165	175	145	220		305		305	
90S	140	100	56	90	10	180	195	165	260	—	360		360	
90L	140	125	56	90	10	180	195	165	260		390	—	390	—
100L	160	140	63	100	12	205	215	180	275	245	435		435	
112M	190	140	70	112	12	230	240	190	300	265	470		470	
132S	216	140	89	132	12	270	275	210	345	315	510		510	
132M	216	178	89	132	12	270	275	210	345	315	560	—	560	—
160M	254	210	108	160	14.5	320	330	255	420	385	670		670	
160L	254	254	108	160	14.5	320	330	255	420	385	700		700	





机座 Frame	级数 Poles	轴伸尺寸 Shaft dimensions			
		D	E	F	G
80	≥ 2	19	40	6	15.5
90	≥ 2	24	50	8	20
100	≥ 2	28	60	8	24
112	≥ 2	28	60	8	24
132	≥ 2	38	80	10	33
160	≥ 2	42	110	12	37



IE5 Series Ip65 Motor

IE5 series ip65 motor is the ultra-high efficiency motor with highest protection grade, which belongs to squirrel cage three phase alternating current motor for general industrial and domestic using.

Description Technical Parameters

Brief Introduction

• IE5 series ip65 motor,compared with IE3 series or IE4 series cast iron motor, it is with ultra-high efficiency and strictly designated by engineers of some special industries . With the the global appeal for low carbon and environmental protection,this series motor is gradually accepted by users and already realized the energy-saving after comparison, like the factories of pump,fan, compressor, blower, printing,etc. With great energy saving, easy maintenance,strong stability and low noise, it's already the most popular motor series for end users, especially, in China.

• Because of the using of good materials, the cost of IE5 series motors is higher. Because of IP65 protection, which means that motors has the ability to completely prevent dust and water spray.

The motor terminal box and design will be done with special treatment. Therefore, IE5 series ip65 motor will also cause motor cost higher and cause motor production longer.

This series motor efficiency indicators meet level 5 energy efficiency, i.e. IE5, which are specified in Chinese standard GB18613-2020 and in international standard IEC60034-30.

Technical Specifications

Frame size	H80~H355
Output range(KW)	0.55 to 375
Frequency(Hz)	50/60
Voltage(V)	220/380/400/415/440/550/660/690
Pole	2/4/6/8/10/12
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm/500rpm
Enclosure	IP55/IP56/IP65
Cooling	IC411/TEFC
Working duty	S1,S6,S9
Mounting	foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot:IMB35/IM2001
Standard	IEC60034
Application	pump,fan,compressor,mixer,machine tool,crusher,etc.

Production Overview

FRAME

Cast iron casing is the highest demand for all domestic and international markets. Except standard motor mounting IMB3,we can make all kinds of mounting motors,like IMB5, IMB35, IMV1,IMB14,IMV6,etc.

STATOR

High quality copper is needed to ensure the stator winding in best state, for reaching best motor performance and long working service for end users.

ROTOR

Energy efficiency, this will be ensured by aluminum casting rotor, silicon steel sheet of rotor core and high-accurate machined shaft.

METAL GLAND

IE5 series ip65 motor, having a series of high standards to inspect the motors from technical parameters, dimensions, parts and external polishing and painting,we are working to improve the overall level of both interior and exterior for electric motors.

PACKING

This series motor will be packed and fixed specially according to their special mounting method,outline,weights and shipment methods. Each carton case, wooden package or steel rack,putting enough desiccants inside for removing moisture as much as possible is always necessary .

IE4 Series B35 Mounting Motor

IE4 series b35 mounting motor is a squirrel cage three phase alternating current motor with premium energy efficiency for general industrial and domestic using.

Description Technical Parameters

Brief Introduction

- This series b35 mounting motor,compared with IE3 series cast iron motor, it is with premium energy efficiency and highly promoted and popular these years . Responding to the global call for low carbon and environmental protection, IE4 series motor is quickly accepted by users and gradually replaced the previous IE1 and IE2 motors, like the factories of pump,fan, compressor, blower, printing,etc. With easy maintenance,strong stability, low noise and energy saving, it's already the best selling series motors for electric manufacturers.
- With the innovation of technology and out shell design, this series motor can achieve great performance in same and smaller frame and can totally replace old series motors, like IE3 and IE2 series motors.
- This series motor efficiency indicators meet level 4 energy efficiency, i.e. IE4, which are specified in Chinese standard GB18613-2020 and in international standard IEC60034-30.

Technical Specifications

Frame size	H80~H355
Output range(KW)	0.55 to 375
Frequency(Hz)	50/60
Voltage(V)	220/380/400/415/440/550/660/690
Pole	2/4/6/8/10/12
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm/500rpm
Enclosure	IP55/IP56/IP65
Cooling	IC411/TEFC
Working duty	S1,S6,S9
Mounting	foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot:IMB35/IM2001
Standard	IEC60034
Application	pump,fan,compressor,mixer,machine tool,crusher,etc.

Production Overview

FRAME

Cast iron casing is the highest demand for all domestic and international markets. Except standard motor mounting IMB3,we can make all kinds of mounting motors,like IMB5, IMB35, IMV1,IMB14,IMV6,etc.

STATOR

High quality copper is needed to ensure the stator winding in best state, for reaching best motor performance and long working service for end users.

ROTOR

Energy efficiency, this will be ensured by aluminum casting rotor, silicon steel sheet of rotor core and high-accurate machined shaft.

TRIMMING

IE4 series b35 mounting motor, having a series of internal standards to inspect the motors from technical parameters, dimensions,parts and external polishing and painting,we are working to improve the overall level of both interior and exterior for electric motors.

PACKING

IE4 series b35 mounting motor will be packed and fixed specially according to their special mounting method,outline,weights and shipment methods. Each carton case, wooden package or steel rack,putting enough desiccants inside for removing moisture as much as possible is always necessary .




IE3 Series Cast Iron Motor

IE3 series cast iron motor is a wide-using three phase asynchronous motor with TEFC structure for all kinds of industries.

Description Technical Parameters

Brief Introduction

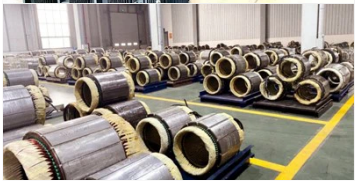
- This series motor is the best selling three phase induction motor with TEFC structure. IE3 series cast iron motor can work for all kinds of industries, like plants of pump,fan, compressor, blower, printing,etc. With easy maintenance, large starting torque, low noise and good performance features, it's always the first choice for lots of factories and individual business.
- With the innovation of technology and design, this series motor can achieve better performance in same and smaller frame compared with previous series of this type.
- This series motor efficiency indicators meet level 3 energy efficiency, which are specified in Chinese standard GB18613-2020 and in international standard IEC60034-30.



Technical Specifications

Frame size	H80~H355
Output range(KW)	0.55 to 375
Frequency(Hz)	50/60
Voltage(V)	220/380/400/415/440/550/660/690
Pole	2/4/6/8/10/12
Speed	3000rpm/1500rpm/1000rpm/750rpm/600rpm/500rpm
Enclosure	IP55/IP56/IP65
Cooling	IC411/TEFC
Working duty	S1,S6,S9
Mounting	foot-IMB3/IM1001;flange-IMB5/IM3001;face-IMB14/IM3601; vertical-IMV1/IM3011;flange-foot:IMB35/IM2001
Standard	IEC60034
Application	pump,fan,compressor,mixer,machine tool,crusher,etc.

Production Overview

FRAME

Cast iron casing is the highest demand for all domestic and international markets. Except IEC standard motors, we design and make all kinds of customized motors.

STATOR

Best quality copper is to ensure the stator winding in best state for reaching best motor performance and long working service for users.

ROTOR

Induction efficiency, this will be ensured by aluminum casting rotor, silicon steel sheet of rotor core and well-machined shaft.

TRIMMING

IE3 series cast iron motors, factory have a series of internal standards to inspect the motors from technical parameters, dimensions,parts and external polishing and painting.We are committed to improving the overall level of both interior and exterior for electric motors.

PACKING

Motors will be packed well according to their dimensions, weights and shipment methods. Each carton case, wooden package or steel rack, we will put enough desiccants inside for removing moisture as possible as we can while shippin

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Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
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Красноярск (391)204-63-61
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Курган (3522)50-90-47
Липецк (4742)52-20-81
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