3-phase Asynchronous Motors for Coal Mills in Power Stations

CATALOGUE

»Part1

■ Company Profile..... P01-02

■ Leaders' Care..... P03-04

■State-of-the-art Manufacturing Capability..... P05-06

■World-Class Electric Machine Manufacturing Equipment..... P07-08

■Best-in-class Core Development Technology P09-10

■Reliable Quality Assurance System..... P11-12

■ All-round Customer Service P13-14

■ Ordering Instructions..... P15-16

» Part2

■3-phase Asynchronous Motors for Coal Mills in Power Stations P17-18

■Technical Data of 3-phase Asynchronous Motors for Coal Mills in Power Stations P19-22

■Overall and Installation Dimensions of 3-phase Asynchronous Motors for Coal Mills in Power Stations P23-24

■National Standards for Vibration of Electric Machines National Standards for Noise of Electric Machines..... P25-26

■ Motor Paint Colors P27-28

Ordering Instructions

Dear Customers,

When placing an order, please note the following in addition to providing the basic parameters of your selected motor. Please carefully read the following items to make sure that your demands are responded most satisfactorily and quickly. If no special requirements are mentioned, production will be made in accordance with national standards and our enterprise standards.

1 Please specify your special requirement on noise (if any). (See national standard for noise on P26)

2. Please specify your special requirement on vibration (if any). (Standard: amplitude 0.037mm, velocity 2.3hm/s; see national standard for vibration in page 25)

3. Please specify your special requirement on number of starts (if any). (Standard: twice at cold state; once at hot state.)

4. Please specify your special requirement on direction of rotation (if any). (Standard: clockwise, viewed from motor shaft extension end; direction of rotation must be indicated for high efficiency energy-saving motor)

5. Please specify types of driven equipment of motors. (e.g. water pump, mill, crushing machine, compressor, rolling mill, disc mill.)

6. Please specify your special requirement on moment of inertia of the load (if any).

7 Please specify types of drive (e.g. with fluid coupling or gearbox or direct-connected)

8 Please specify types of coupling. (e.g. coupling and belt pulley; belt tension must be indicated)

9. Please specify whether installation location for encoder should be reserved on motor.

10 Please specify whether the motor is used in plateau. (Motors with installation altitude over 1000m are subject to special design)

11. Please specify the ambient temperature of the motor.

12. Please specify whether the motor is used in humid tropical zone.

13. Please specify whether the motor is used outdoor.

14. Please specify whether the motor is used near the sea.

15. Please specify requirements for corrosion prevention. (e.g. F1 for low corrosivity, F2 for medium corrosivity, F3 for high corrosivity.)

16 Please specify types of bearings. (e.g. rolling or sliding bearing). Please specify whether imported bearings are needed. （□SKF□FAG□NSK□Domestic)

17. Please specify whether bearings bear thrust.

18. Please specify insulation requirements for bearings.
19. Please specify whether lubrication device needs to be provided by us.
20 If required, please specify special requirements for the lubrication device (if any). (Home-made device will be used if there are no requirements.)
21 Is the required motor standby motor? If yes, please indicate the serial number of the original motor.
22. Please specify whether the neutral points need to be led out.
23. Please specify whether CTs are needed. If yes, please indicate their installation position, for example, in the main terminal box or in the neutral point terminal box.
24. If CTs are needed, please specify the quantity.
25. Please specify whether a space heater is needed.
26. Please specify whether vibration sensors are needed.
27. Please specify special requirement for temperature detectors (if any).
28 Please specify special requirement for material of squirrel-cage rotor (if any) (e.g. cast aluminum, copper bar and trapezoid copper bar)
29 Does paint color need to be specified? (Our standard: “jade green” for indoor, "light gray" for outdoor; for others, please refer to the attached "Paint Colors P27-28")
30. Is double-shaft extension necessary for the motor?
31. Please specify the location of terminal boxes. (Standard: on the right side, viewed from shaft extension end.)
32. Please specify special requirement for ratio of max. torque to rated torque of the motor (if any).
33. Please specify special requirement for ratio of starting torque to rated torque of the motor (if any).
34. Please specify special requirement for ratio of starting current to rated current of the motor (if any).
35. Although high-efficiency motors with power less than or equal to 355kW are not covered by allowance issued by China's Ministry of Finance, it is recommended that high-efficiency motors should still be selected.
36 Magnetic slot wedge should be used for all high-efficiency motors with the central height ≤H710.

3-phase Asynchronous Motors for Coal Mills in Power Stations



I. Overview

This series of motors was developed by our company in the early 1990s according to IEC standard and mechanical industry standard JB/T7128-2007 *Specification for YTM, YHP, YMPS Series 3-phase Asynchronous Motors* after introducing the latest technologies from US-based Westinghouse and Switzerland-based BBC in the 1980s.

YTM series motors are special motors for barrel-type coal mills; the YHP series are special motors for bowl-type HP coal mills; the YMPS series motors are special motors for bowl-type MPS coal mills.

The protection grade of the motor housing is IP54; The cooling mode is IC611 (air-air cooling), and IC81W (air-water cooling) can also be provided as required; The installation type is IMB3; The rated voltage is 6000 V or 3000 V and 380 V; The rated frequency is 50 Hz, and the working mode is continuous working system (S1).

II. Structure Description

The motor adopts the box structure prevailing in the world, and the frame and end covers are made of welded steel plates, featuring good rigidity and light weight. After removing the protective cover (or cooler), you can observe and touch the inside of the motor, which is convenient for the installation and maintenance of the motor.

The stator adopts the external press-fitting structure. The stator winding adopts F-class edge material and anti-corona material, with the winding end fixed with special binding technology, which is firm and reliable. The whole stator is treated by vacuum pressure impregnation of F-class solvent-free paint (VPI). The motor has excellent and reliable insulation performance, moisture resistance and impact resistance.

For this series of squirrel-cage-rotor motors, cast aluminum rotors are adopted for low-power motors, and copper bar rotors are adopted for high-power motors. The squirrel-cage copper bar rotors adopt advanced and reliable welding technology and in-groove fastening. No broken rotor bars, reliable operation.

There are two types of bearings, rolling bearing and sliding bearing, depending on the power and rotating speed of the motor, and the protection grade is IP54.

Motors with rolling bearing structure are all equipped with non-stop grease adding and discharging devices and special greasing tools.

The main outlet box is of sealed structure, and the protection grade is IP54. It is generally installed on the right side of the motor (facing the extended end of the motor shaft) or on the left side as required. The inlet hole of the outlet box can be switched up, down, left and right. There is a separate ground terminal inside the box.

III. Model Definitions

Y TM 500 - 6 The performance data in the technical table are guaranteed according to the following conditions:

- 6 — Poles
- 500 — Shaft center height
- TM — Barrel-type coal mill
- Y — Squirrel-cage rotor 3-phase asynchronous motors



VI. Ordering Notes

Environmental conditions: altitude ≤1000m, maximum ambient air temperature no higher than 40°C, minimum ambient temperature -15°C for rolling bearing motors, and 5°C for sliding bearing motors.

The rated frequency of the motor is 50 Hz.

The motor working system is continuous working system S1.

Motors with different requirements for environmental conditions, voltage, frequency, installation size, load moment of inertia, working system or performance etc. may also be ordered after signing separate technical agreement upon ordering.



XEMC 湘电集团

3-phase Asynchronous Motors for Coal Mills in Power Stations

► Technical Data of YTM Series Asynchronous Motors (6kV)

Model	Rated power (kW)	Stator current (A)	Rated speed (r/min)	Efficiency (%)	Power factor cosφ	Max. torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor current Rated current $\frac{I_{st}}{I_N}$	Moment of inertia		Weight (kg)
									Motor Jm ($kg.m^2$)	Load J ($kg.m^2$)	IP54
YTM400-6	185	24	990	91.4	0.80	2.0	1.5	7.0	9	180	2500
YTM400-6	200	26	990	91.6	0.80	2.0	1.5	7.0	10	190	2550
YTM400-6	220	29	990	91.7	0.80	2.0	1.5	7.0	11	200	2600
YTM400-6	250	33	990	91.8	0.80	2.0	1.5	7.0	12	220	2700
YTM400-6	280	37	990	92.0	0.80	2.0	1.5	7.0	13	250	2800
YTM450-6	315	41	990	92.6	0.80	2.0	1.5	7.0	15	300	3600
YTM450-6	355	46	990	92.8	0.80	2.0	1.5	7.0	16	320	3700
YTM450-6	400	52	990	92.9	0.80	2.0	1.5	7.0	18	350	3800
YTM450-6	450	58	990	93.0	0.80	2.0	1.5	7.0	20	390	3900
YTM450-6	500	65	990	93.2	0.80	2.0	1.5	7.0	23	440	4070
YTM500-6	560	69	990	93.4	0.84	2.0	1.5	7.0	30	480	4550
YTM500-6	630	77	990	93.5	0.84	2.0	1.5	7.0	33	540	4700
YTM500-6	710	87	990	93.6	0.84	2.0	1.5	7.0	36	600	4850
YTM560-6	800	97	990	94.5	0.84	2.0	1.5	7.0	76	640	6400
YTM560-6	900	109	990	94.6	0.84	2.0	1.5	7.0	84	740	6800
YTM560-6	1000	121	990	94.7	0.84	2.0	1.5	7.0	90	810	7200
YTM630-6	1000	121	990	94.8	0.84	2.0	1.5	7.0	120	840	7800
YTM630-6	1120	135	990	94.9	0.84	2.0	1.5	7.0	131	890	8200
YTM630-6	1250	151	990	95.0	0.84	2.0	1.5	7.0	145	950	9000
YTM710-6	1400	169	990	95.1	0.84	2.0	1.8	7.0	152	1100	11500
YTM710-6	1600	193	990	95.2	0.84	2.0	1.8	7.0	166	1200	12000
YTM710-6	1800	216	990	95.3	0.84	2.0	1.8	7.0	188	1300	12500
YTM710-6	2000	240	990	95.4	0.84	2.0	1.8	7.0	205	1400	13000

3-phase Asynchronous Motors for Coal Mills in Power Stations

► Technical Data of YTM Series Asynchronous Motors (6kV)

Model	Rated power (kW)	Stator current (A)	Rated speed (r/min)	Efficiency (%)	Power factor cosφ	Max. torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor current Rated current $\frac{I_{st}}{I_N}$	Moment of inertia		Weight (kg)
									Motor Jm ($kg.m^2$)	Load J ($kg.m^2$)	IP54
YTM400-8	160	22	742	91.0	0.78	2.0	1.5	7.0	11	310	2700
YTM400-8	185	25	742	91.1	0.78	2.0	1.5	7.0	12	350	2800
YTM400-8	200	27	742	91.2	0.78	2.0	1.5	7.0	15	390	2900
YTM400-8	220	30	742	91.3	0.78	2.0	1.5	7.0	17	430	3000
YTM450-8	250	34	742	92.0	0.78	2.0	1.5	7.0	19	470	3600
YTM450-8	280	38	742	92.0	0.78	2.0	1.5	7.0	20	530	3700
YTM450-8	315	42	742	92.2	0.78	2.0	1.5	7.0	23	590	3800
YTM450-8	355	47	742	92.3	0.78	2.0	1.5	7.0	25	650	4000
YTM500-8	400	53	742	93.4	0.78	2.0	1.5	7.0	33	730	4400
YTM500-8	450	59	742	93.5	0.78	2.0	1.5	7.0	42	810	4600
YTM500-8	500	66	742	93.6	0.78	2.0	1.5	7.0	45	900	4800
YTM500-8	560	74	742	93.7	0.78	2.0	1.5	7.0	50	1000	5100
YTM560-8	560	72	742	93.8	0.80	2.0	1.5	7.0	77	1000	6200
YTM560-8	630	81	742	93.9	0.80	2.0	1.5	7.0	86	1100	6500
YTM560-8	710	91	742	94.0	0.80	2.0	1.5	7.0	96	1200	6800
YTM560-8	800	102	742	94.1	0.80	2.0	1.5	7.0	102	1300	7100
YTM630-8	900	112	742	94.2	0.82	2.0	1.5	7.0	120	1400	8000
YTM630-8	1000	124	742	94.3	0.82	2.0	1.5	7.0	130	1600	8400
YTM630-8	1120	139	742	94.4	0.82	2.0	1.5	7.0	150	1800	8800
YTM630-8	1250	155	742	94.5	0.82	2.0	1.5	7.0	170	2000	9200
YTM710-10	1250	163	594	94.5	0.78	2.0	1.5	7.0	302	3500	12500
YTM710-10	1400	183	594	94.6	0.78	2.0	1.5	7.0	314	3900	13000
YTM800-10	1600	208	594	94.7	0.78	2.0	1.5	7.0	470	4300	17000
YTM800-10	1800	234	594	94.8	0.78	2.0	1.5	7.0	525	4800	18000

3-phase Asynchronous Motors for Coal Mills in Power Stations

► Technical Data of YTM Series Asynchronous Motors（380/660V）

Model	Rated power (kW)	Stator current (A)	Rated speed (r/min)	Efficiency (%)	Power factor cosφ	Max. torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor torque Rated torque $\frac{T_M}{T_N}$	Rated stall current Current $\frac{I_{st}}{I_N}$	Moment of inertia		Weight (kg)
									Motor Jm ($kg.m^2$)	Load J ($kg.m^2$)	IP54
YTM400-8	160	327/188	742	93.0	0.80	2.0	1.8	6.5	10	70	2600
YTM400-8	200	408/235	742	93.0	0.80	2.0	1.8	6.5	11	90	2700
YTM450-8	280	565/305	742	93.0	0.81	2.0	1.8	6.5	18	125	4400
YTM450-8	315	635/366	742	93.0	0.81	2.0	1.8	6.5	20	135	4500

► Technical Data of YMPS Series Asynchronous Motors (6kV)

Model	Rated power (kW)	Stator current (A)	Rated speed (r/min)	Efficiency (%)	Power factor cosφ	Max. torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor torque Rated torque $\frac{T_M}{T_N}$	Rated stall current Current $\frac{I_{st}}{I_N}$	Moment of inertia		Weight (kg)
									Motor Jm ($kg.m^2$)	Load J ($kg.m^2$)	IP54
YMPS400-6	185	27	985	91.3	0.72	2.0	2.8	7.5	12	170	2900
YMPS400-6	200	29	985	91.4	0.72	2.0	2.8	7.5	13	190	3000
YMPS400-6	220	32	985	91.5	0.72	2.0	2.8	7.5	14	210	3100
YMPS450-6	250	36	985	91.7	0.73	2.0	2.8	7.5	18	240	3600
YMPS450-6	280	40	985	91.9	0.73	2.0	2.8	7.5	20	260	3750
YMPS450-6	315	45	985	92.0	0.73	2.0	2.8	7.5	22	290	3900
YMPS450-6	355	51	985	92.2	0.73	2.0	2.8	7.5	24	330	4100
YMPS500-6	400	54	988	92.3	0.77	2.0	2.8	7.5	36	360	4600
YMPS500-6	450	60	988	92.4	0.78	2.0	2.8	7.5	39	400	4800
YMPS500-6	500	67	988	92.5	0.78	2.0	2.8	7.5	44	440	5000
YMPS500-6	560	75	988	92.6	0.78	2.0	2.8	7.5	47	490	5300
YMPS560-6	630	81	990	93.2	0.80	2.0	2.8	7.5	95	540	6700
YMPS560-6	710	91	990	93.4	0.80	2.0	2.8	7.5	98	600	6900
YMPS560-6	800	103	990	93.6	0.80	2.0	2.8	7.5	102	660	7200
YMPS560-6	900	115	990	93.8	0.80	2.0	2.8	7.5	116	730	7500
YMPS630-6	1000	124	992	94.4	0.82	2.0	2.8	7.5	138	810	8500
YMPS630-6	1120	139	992	94.5	0.82	2.0	2.8	7.5	152	890	8900
YMPS630-6	1250	155	992	94.6	0.82	2.0	2.8	7.5	161	980	9300

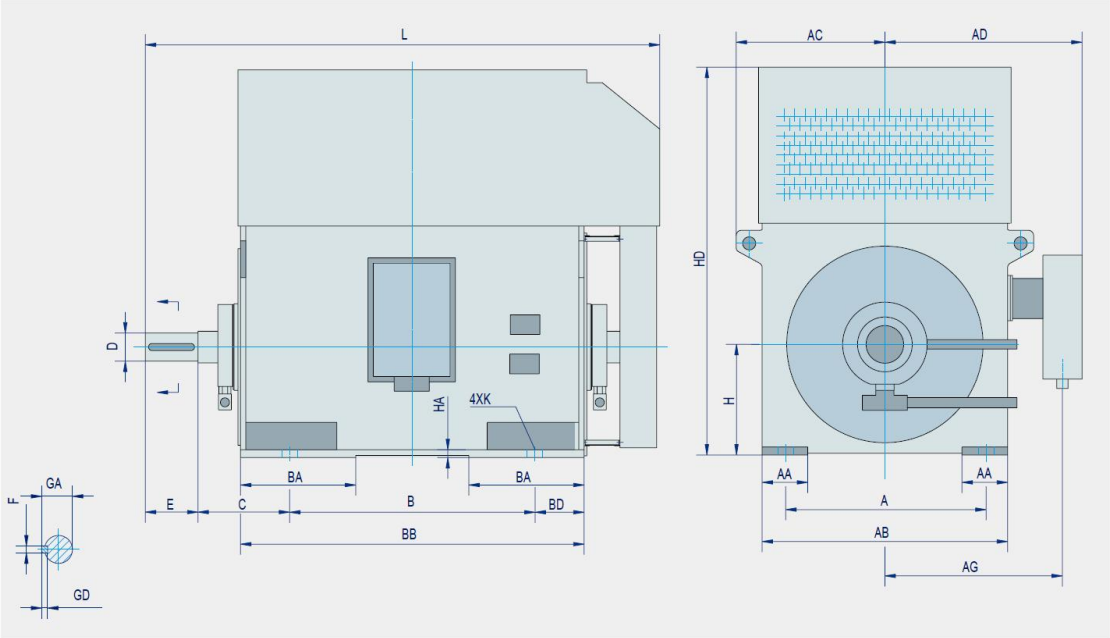
3-phase Asynchronous Motors for Coal Mills in Power Stations

Technical Data of YHP Series Asynchronous Motors (6kV)

Model	Rated power (kW)	Stator current (A)	Rated speed (r/min)	Efficiency (%)	Power factor cosφ	Max. torque Rated torque $\frac{T_M}{T_N}$	Locked-rotor torque Rated torque $\frac{T_M}{T_N}$	Rated stall current Current $\frac{I_{st}}{I_N}$	Moment of inertia		Weight (kg)
									Motor Jm ($kg.m^2$)	Load J ($kg.m^2$)	IP54
YHP450-6	280	40	990	92.0	0.74	2.0	2.4	7.5	18	210	3400
YHP450-6	315	45	990	92.1	0.74	2.0	2.4	7.5	22	230	3700
YHP450-6	355	49	990	92.3	0.75	2.0	2.4	7.5	26	250	4100
YHP500-6	400	53	990	92.4	0.78	2.0	2.4	7.5	38	360	4400
YHP500-6	450	60	990	92.5	0.78	2.0	2.4	7.5	43	410	4700
YHP500-6	500	67	990	92.6	0.78	2.0	2.4	7.5	48	460	5000
YHP560-6	560	72	990	93.0	0.80	2.0	2.4	7.5	93	490	6300
YHP560-6	630	81	990	93.1	0.80	2.0	2.4	7.5	99	560	6600
YHP560-6	710	92	990	93.2	0.80	2.0	2.4	7.5	106	630	6900
YHP630-6	800	102	990	93.3	0.81	2.0	2.4	7.5	114	670	7400
YHP630-6	900	114	990	93.4	0.81	2.0	2.4	7.5	126	740	7800
YHP630-6	1000	127	990	93.5	0.81	2.0	2.4	7.5	138	810	8200
YHP560-10	400	60	594	91.0	0.70	2.0	2.4	6.8	88	500	6600
YHP560-10	450	68	594	91.2	0.70	2.0	2.4	6.8	100	550	7000

3-phase Asynchronous Motors for Coal Mills in Power Stations

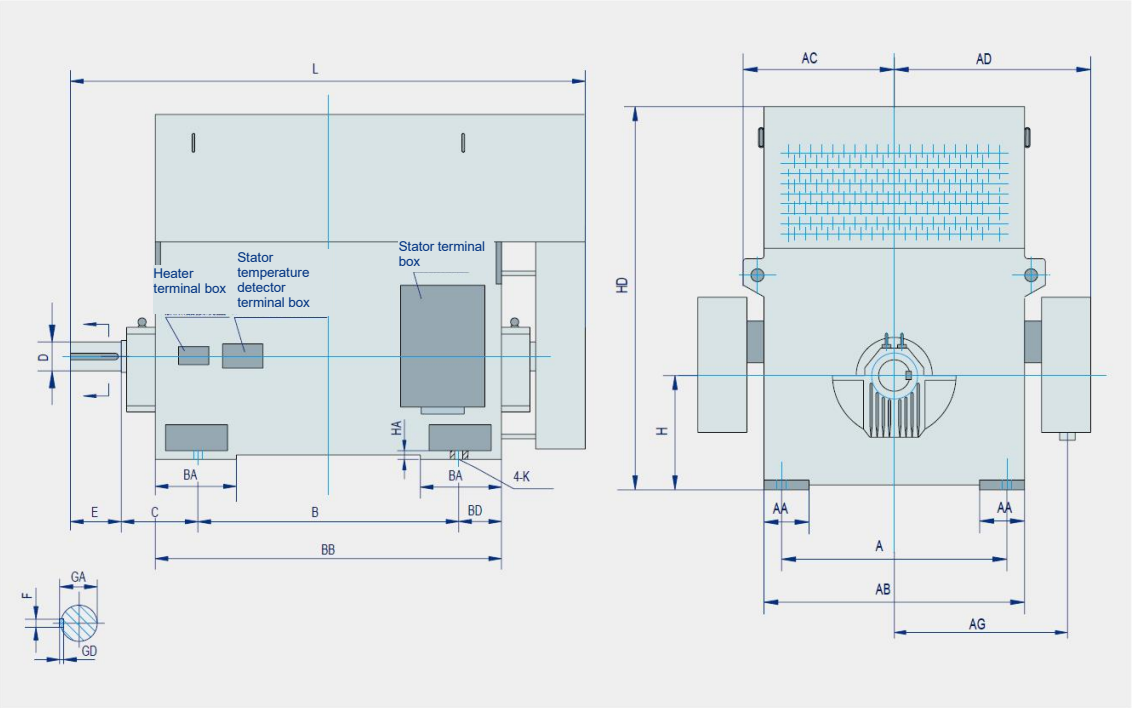
Outline Drawings and Mounting Dimensions of H400~630YTM, YHP, and YMPS Series Motors



Frame No.	Mounting dimensions and tolerance									Overall dimensions											
	A	B	C	D	E	F	GA	GD	H	K	AA	AB	AC	AD	AG	BA	BB	BD	HA	HD	L
400	710±1.75	1000±1.75	355±4.0	Φ110	+0.035 0.013	210±0.57	28	116	16	$400^{0}_{-1.0}$	Φ35	275	900	560	840	680	500	1510	255	30	1330	2030
450	800±1.75	1120±1.75	355±4.0	Φ130	+0.040 + 0.015	210±0.57	32	137	18	$450^{0}_{-1.0}$	Φ35	305	1000	620	900	730	575	1660	270	30	1450	2240
500	900±2.1	1250±2.1	475±4.0	Φ140	+0.040 + 0.015	250±0.57	36	148	20	$500^{0}_{-1.0}$	Φ42	335	1120	690	970	790	655	1820	285	30	1600	2430
560	1000±2.1	1400±2.1	500±4.0	Φ160	+0.040 + 0.015	300±0.65	40	169	22	$560^{0}_{-1.0}$	Φ42	220	1260	760	1200	925	600	2010	305	45	2290	3000
630	1120±2.1	1600±2.1	530±4.0	Φ180	+0.040 +0.015	300±0.65	45	190	25	$630^{0}_{-1.0}$	Φ48	205	1310	785	1125	950	600	2200	300	45	2490	3280

3-phase Asynchronous Motors for Coal Mills in Power Stations

Outline and Installation Dimensions of H710~ 800 YTM Series Motors



Frame No.	Mounting dimensions and tolerance										Overall dimensions											
	A	B	c	D		E	F	GA	GD	H		K	AA	AB	AC	AD	AG	BA	BB	BD	HA	HD	L
710	1400±2.8	1800±2.9	530±4.2	Φ200	+0.046 + 0.017	350±0.70	45	210	25	710	0 -1.5	Φ56	280	1600	930	1500	1135	560	2390	295	61	2710	3580
800	1600±2.8	2000±2.9	530±4.2	Φ220	+0.046 + 0.017	350±0.70	50	231	28	800	0 -1.5	Φ56	280	1860	1100	1600	1265	560	2590	345	70	3300	3900



National Standards for Vibration of Electric Machines National Standards for Noise of Electric Machines

According to the requirements in national standard GB10068-2008 of the People's Republic of China (PRC) *Mechanical Vibration of Certain Machines with Shaft Heights 56 mm and Higher - Measurement, Evaluation and Limits of Vibration Severity* for vibration of electric machines, during running at no load, our motors are subject to the following vibration intensity limits expressed by displacement and speed measured in the factory vibration test: 37μm and 2.3mm/s.

Excerpts from National Standards Are as Follows:

• Vibration intensity limits

The vibration limits are applicable to the broadband root mean square values of vibration speed, displacement and acceleration measured in the frequency range specified in Chapter 5.

The maximum values of these three measured values are used to evaluate the intensity of vibration.

Under the two installation conditions specified in Chapter 6, the vibration intensity of DC and 3-phase AC motors with the shaft center height of 56mm or above shall not exceed the limits in Table 1. Vibration levels are divided into two types. If the vibration level is not specified, the vibration limit of the motor shall meet the requirements of level "A".

For motors with the rotating speed of 600 r/min~3600 r/min, only the vibration speed needs to measure during the inspection test. During the type test, all three vibration values shall be measured.

Note: When the inspection test is carried out under free suspension installation, the type test must include the test under the condition of rigid installation. This article applies to all speed ranges in this standard.

Table 1 Limits of vibration intensity (root mean square value) expressed by displacement, velocity and acceleration for different shaft center heights H (mm)

Vibration grade	Shaft center height/mm	56<H≤132			132<H≤280			H>280		
	Installation mode	Displacement μm	Speed/ (mm/s)	Acceleration (m/s^2)	Displacement μm	Speed/ (mm/s)	Acceleration (m/s^2)	Displacement μm	Speed/ (mm/s)	Acceleration (m/s^2)
A	Free suspension	25	1.6	2.5	35	2.2	3.5	45	2.8	4.4
	Rigid installation	21	1.3	2.0	29	1.8	2.8	37	2.3	3.6
B	Free suspension	11	0.7	1.1	18	1.1	1.7	29	1.8	2.8
	Rigid installation	-	-	-	14	0.9	1.4	24	1.5	2.4
Note 1: Grade "A" is suitable for motors with no special requirements for vibration. Note 2: Grade "B" is suitable for motors with special requirements for vibration. Motors with the shaft center height lower than 132 mm is not considered for rigid installation. Note 3: The interface frequency of displacement and speed and that of speed and acceleration are 10 Hz and 250 Hz respectively.										

Note 1: Manufacturers and users should consider that measuring instruments may have a measuring tolerance of ±10%.

Note 2: Take the shaft center height of a horizontal motor with casters of the frame as that of a motor without casters of the frame or a motor with casters upward or a vertical motor.

Note 3: A motor with good self-balance and the vibration intensity level meeting the requirements in Table 1 will also show great vibration when installed in the field due to various factors, such as uneven foundation, reaction of load machinery and ripple current in the power supply. In addition, because the natural frequencies of the driven units are very close to the excitation frequencies of the tiny residual unbalance of the motor rotor, vibration will also occur. In these cases, not only the motor but also every unit in the device shall be tested, as shown in ISO10816-3.

National Standards for Vibration of Electric Machines

There are the following descriptions and requirements for motor noise in national standard (GB10069.3-2008) of the People's Republic of China (PRC): *Measurement of Airborne Noise Emitted by Rotating Electrical Machines and Noise Limits-Part3: Noise Limits*.

Noise can be expressed by sound power level or sound pressure level, in decibels (dB). Motor noise is generally assessed by sound power level, and the values of sound power level and sound pressure level are quite different according to the size of the motor (envelope surface area). Generally, the sound power level is 15 ~ 18 dB larger than the sound pressure level.

- On page 6 of the national standard, it is stipulated that the sound power level Lw (dB) measured at different rotating speeds, cooling modes and rated output power shall not exceed the values in the following table.

Rated speed n_N/(r/min)	$n_N \leq 960$			$960 < n_N \leq 1320$			$1320 < n_N \leq 1900$			$1900 < n_N \leq 2360$			$2360 < n_N \leq 3150$			$3150 < n_N \leq 3750$		
Cooling mode (Simple code)	IC01 IC11 IC21 Note 1	IC411 IC511 IC611 Note 2	IC31 IC71W IC81W IC8A1W7 Note 2	IC01 IC11 IC21 Note 1	IC411 IC511 IC611 B2	IC31 IC71W IC81W IC8A1W7 Note 2	IC01 IC11 IC21 Note 1	IC411 IC511 IC611 Note 2	IC31 IC71W IC81W IC8A1W7 Note 2	IC01 IC11 IC21 Note 1	IC411 IC511 IC611 Note 2	IC31 IC71W IC81W IC8A1W7 Note 2	IC01 IC111 IC21 Note 1	IC411 IC511 IC611 Note 2	IC31 IC71W IC81W IC8A1W7 Note 2	IC01 IC11 IC21 Note 1	IC411 IC511 IC611 Note 2	IC31 IC71W IC81W IC8A1W7 Note 2
Rated output P_N/kW (or kVA)																		
$1 \leq P_N \leq 1.1$	73	73	—	76	76	——	77	78	——	79	81	—	81	84	—	82	88	——
$1.1 < P_N \leq 2.2$	74	74	—	78	78	——	81	82	——	83	85	—	85	88	—	86	91	——
$2.2 < P_N \leq 5.5$	77	78	—	81	82	——	85	86	——	86	90	—	89	93	—	93	95	——
$5.5 < P_N \leq 11$	81	82	—	85	85	——	88	90	——	90	93	—	93	97	—	97	98	——
$11 < PN < 22$	84	86	—	88	88	——	91	94	——	93	97	—	96	100	—	97	100	——
$22 < P_N \leq 37$	87	87	—	91	91	——	94	98	——	96	100	—	99	102	—	101	102	——
$37 < P_N \leq 55$	90	93	—	94	94	——	97	100	——	98	102	—	101	104	—	103	104	——
$55 < P_N \leq 110$	93	96	—	97	98	——	100	103	——	101	104	—	103	106	—	105	106	——
$110 < P_N \leq 220$	97	99	—	100	102	——	103	106	——	103	107	—	105	109	—	107	110	——
$220 < P_N \leq 550$	99	102	98	103	105	100	106	108	102	106	109	102	107	111	102	110	113	105
$550 < P_N \leq 1100$	101	105	100	106	108	103	108	111	104	108	111	104	109	112	104	111	116	106
$1000 < P_N \leq 2200$	103	107	102	108	110	105	109	113	105	109	113	105	110	113	105	112	118	107
$2200 < P_N \leq 5500$	105	109	104	110	112	106	110	115	106	111	115	107	112	115	107	114	120	109

Note 1: The typical protection type is IP22 or IP23.
Note 2: The typical protection type is IP44 or IP54.

- There is no specific requirement for sound pressure level in national standards. If there is a requirement, the sound pressure level can be directly converted from the sound power level of the following equation:

(Equation 1)

$$L_p = L_w - 10 \lg \left(\frac{S}{S_0} \right)$$

Where:

L_P - sound pressure level in free field on the reflecting surface 1m away from the motor.
L_w - sound power level determined according to the standards
S_0 - 1.0 m^2
S-motor measurement envelope surface area 1m away from the reference body

Paint colors for motor

According to the statistics of the colors used by customers for many years, combining some advantages and disadvantages, it is suggested that customers choose from the following common colors when ordering.

Preferred recommended colors:

When the customer doesn't specify the color of the top coat, the hammer paint of our factory is adopted by default, and the motor used indoors is "jade green" and the motor used outdoors is "light gray".

Advantages: The two colors are polyurethane hammer paint with beautiful and clear patterns, bright and plump paint film, good weather resistance, oil resistance, chemical corrosion resistance, and good hardness and wear resistance. The paint film dries quickly and is convenient for construction. It is widely used in indoor and outdoor metal structures.

Examples:



Light gray



Jade green

Other recommended colors:

Colors in commonly used national standard color card GSB 05-1426-2001

Phthalein blue (PB09)	Lake green (BG02)
Light gray (B03)	Apple green (G01)
Silver ash (B04)	

Colors in commonly used international color card RAL

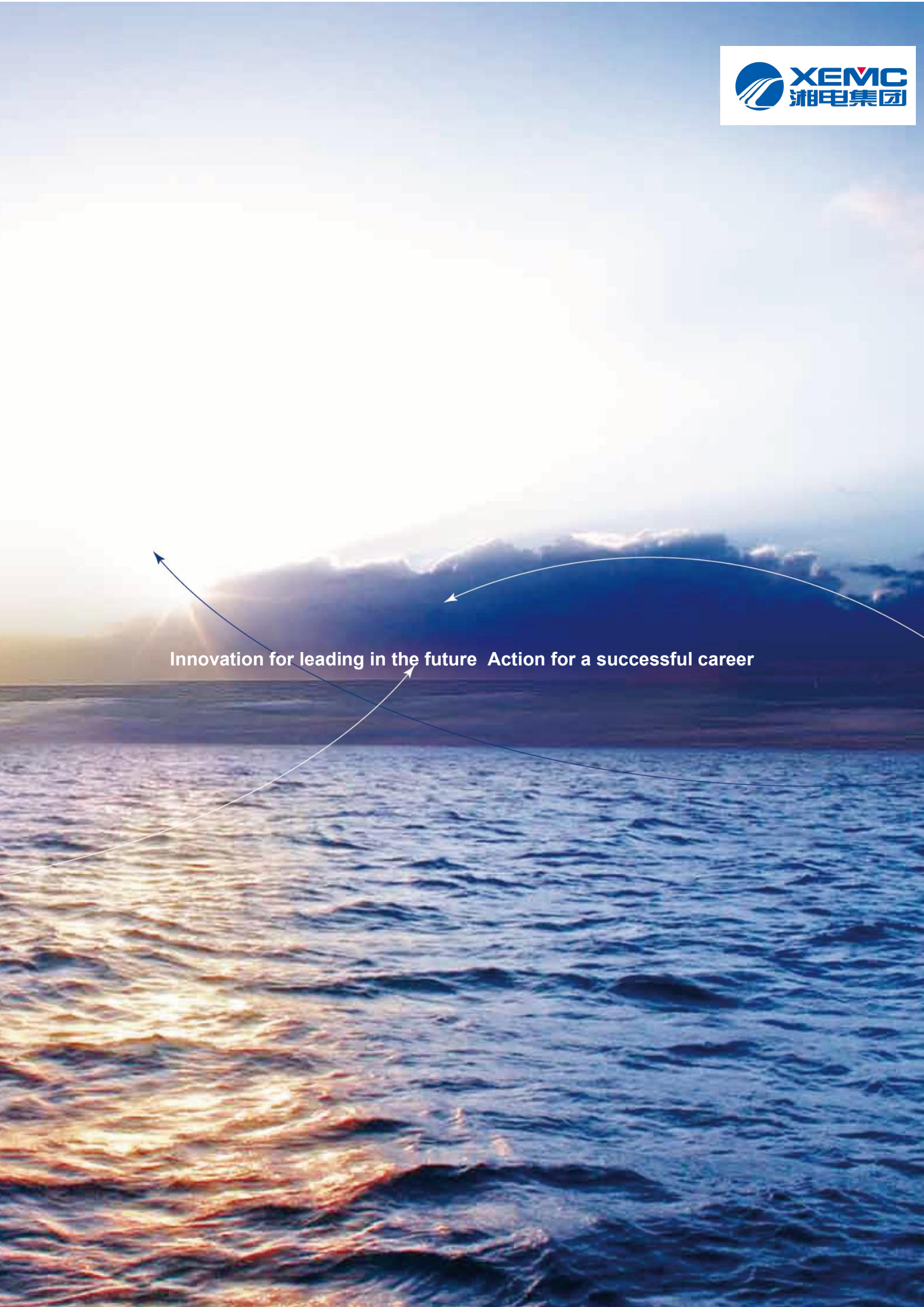
Light gray (RAL7035)	Light blue (RAL 5012)
Light green (RAL6021)	

Note:

1. The electronic version of paint colors is for reference only, and the construction and quality inspection are subject to the physical standard color cards.

2. Please indicate the paint label number in the contract documents when ordering.




XEMC
湘电集团
Innovation for leading in the future Action for a successful career