

山东瑞瀚电机

SHANDONG RUI HAN ELECTRIC MOTOR



# SHANDONG RUI HAN ELECTRIC MOTOR Co., LTD.

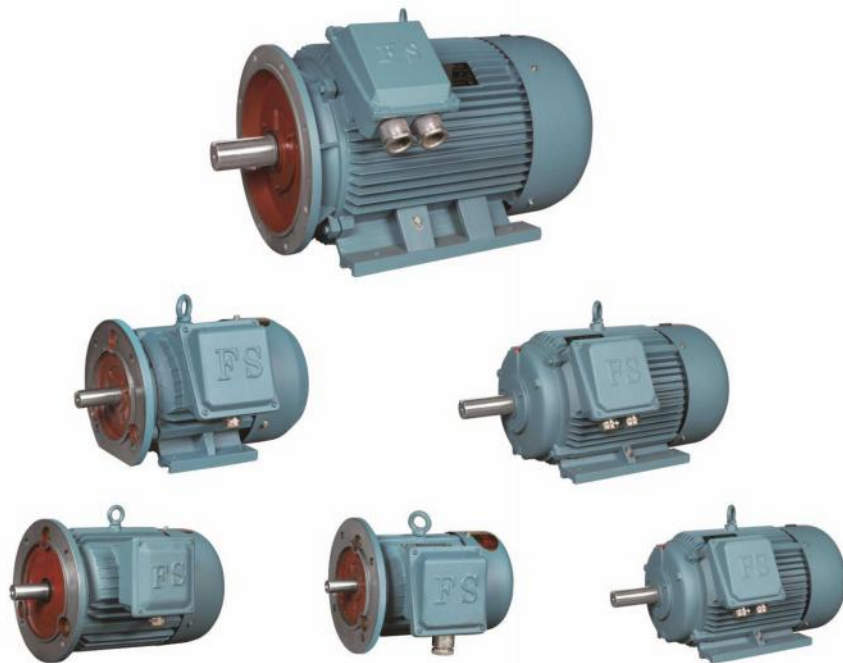
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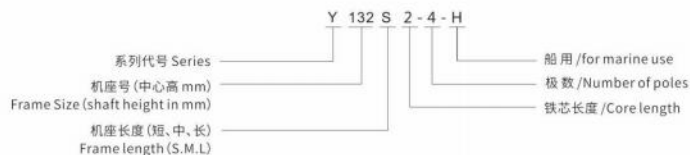
# Y-H系列船用三相异步电动机

Y-H Series three phase marine motor



## 型号说明 Type Designation

电动机型号由字母和数字组成  
The type designation consists of several letters and digits.



## 产品概述 Product overview

Y-H 系列为全封闭, 自扇冷式, 船用三相笼式异步电动机, 适用于船舶上作驱动各种机械, 如泵类、通风机、分离器、液压机械及其它辅助设备之用。  
Y-H 系列是按照国际电工委员会标准 IEC60034-1《旋转电机 定额和性能》和现行的《钢质海船入级与建筑规范》设计的。

电动机也符合以下标准和规范的有关要求。

- IEC60034 —— 旋转电机
- IEC60068 —— 环境试验
- IEC60072 —— 旋转电机的尺寸及功率等级
- IEC60092 —— 船用电器设备

电动机还符合下列船级社规范的部分要求。

- |                   |             |           |
|-------------------|-------------|-----------|
| LR 英国劳氏船级社        | BV 法国船级社    | ABS 美国船级社 |
| GL 德国劳氏船级社        | KR 韩国船级社    | DNV 瑞典船级社 |
| NK 日本海事协会 (日本船级社) | RINA 意大利船级社 |           |

The Y-H series are fully enclosed, self-cooling, marine three-phase cage asynchronous motors, suitable for driving various machinery on the ship, such as pumps, ventilators, separators, hydraulic machinery and other auxiliary equipment.

The Y-H series is designed according to the International Electrotechnical Commission standard IEC60034-1 "Quota and performance of rotating electrical machines" and the current "Code for Classification and Construction of Steel Sea Ships".

The motor also meets the requirements of the following standards and specifications.

- IEC60034 Rotating electrical machines
- IEC60068 Basic environmental testing procedures
- IEC60072 Dimensions and output ratings for rotating electrical machines
- IEC60092 Electrical installation in ships

The motor also meets some of the requirements of the following classification societies.

- |  |                                     |                                     |
|--|-------------------------------------|-------------------------------------|
| LR British Classification Society                            | BV French Classification Society    | ABS American Classification Society |
| GL German Lloyd's Classification Society                     | KR Korean Classification Society    | DNV Swedish Classification Society  |
| NK Japan Maritime Association (Japan Classification Society) | RINA Italian Classification Society |                                     |

## 结构简介 Construction

- ④ 防护等级 Ip44
- ④ 机座、端盖和轴承盖  
材料采用灰铸铁 HT200 (GB/T9437), 机座表面铸有轴向散热筋, 能增加冷却效果。
- ④ 轴伸  
电动机一般只有一个圆柱形轴伸; 根据用户要求, B3 及 B35 型的电动机可制成两个轴伸, 第二轴伸仅能用联轴器传递额定功率。转轴材料采用 45 号优质钢 (GB/T699)。
- ④ 接线盒  
从主轴伸端视之, 电动机的接线盒位于机座右侧。若接线盒要装在左侧, 则必须在订货时加以说明。  
接线盒内有六个接线柱, 接线盒盖内有接线图, 接线标志全部符合 IEC60034-8 的规定。两个相邻导电零件的间隙不小于 8 毫米; 所有漏电距离不小于 12 毫米。接线盒内另有一个供接地用的接线柱。
- ④ 轴承  
本系列电动机用的轴承型号和规格见表 1。
- ④ Protection Ip44
- ④ Frame, end shield and bearing cap  
All made of Grey cast iron HT200 (GB/T9437) and the outer surface of the frame is provided with longitudinal cooling ribs to increase cooling effects.
- ④ Shaft extension  
Standard motors have a cylindrical shaft extension. Motors of B3 and B35 type with two shaft extensions are afforded on request, but the second shaft extension can only transmit rated output with direct coupling. The shaft is made of high grade steel No 45 (GB/T699).
- ④ Terminal Box  
The terminal box is arranged at the "right hand side" when looking at the driving end. If the terminal box is to be arranged at the left-hand side, this fact must be specifically stated when placing the order. Six terminal studs are provided in the terminal box and a connecting diagram is shown on the back of the cover. Terminal markings used are in full conformity with IEC publication 34-8. Clearance between two neighboring conducting parts is made not less than 8mm and all creepages not less than 12mm. An extra terminal is provided inside the box for grounding purpose.
- ④ Bearing  
The type and size of bearings used in these motors are given in table 1.

# Y-H 系列船用三相异步电动机

Y-H eries marine three-phase asynchronous motor

## 工作条件

海拔	0m
空气相对湿度	≤95%
环境空气温度	0°C~45°C
凝露	有
盐雾	有
油雾	有
霉菌	有
冲击	有
振动	有
倾斜摇摆	±22.5°

## 电压、频率

额定电压	380V 或 440V
额定频率	50Hz 或 60Hz

## 接法

3千瓦及以下者	Y
大于3千瓦者	△

## 工作方式

连续工作制 (S1)	
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## 绝缘、温升

绝缘	B 级或 F 级
绕组温升 (电阻法)	75K 或 100K
轴承允许温度 (温度计法)	90°C

## 启动方式

采用满压直接启动, 在空载或轻载时, 允许采用降压启动。

## 传动方式

电动机可用皮带轮, 正齿轮或弹性联轴器传动。

## 噪声

电动机在空载运转时的噪声限值如表 3 所示。

## 振动

电动机在空载时测得的振动烈度 (有效值) 不超过表 4 的数值。

功率 KW	同步转速 r/min				
	3600	3000	1500/1800	1000/1200	750/900
	声功率级 dB(A)				
0.55	—	—	67	—	—
0.75	75	71	67	65	—
1.1	75	71	67	65	—
1.5	79	75	67	67	—
2.2	79	75	70	67	66
3	81	79	70	71	66
4	81	79	74	71	69
5.5	85	83	78	71	69
7.5	85	83	78	75	72
11	87	87	82	75	72
15	87	87	82	78	75
18.5	87	87	82	78	75
22	92	92	82	78	75
30	95	95	84	81	78
37	95	95	84	81	78
45	97	97	84	84	78
55	97	97	86	84	81
75	99	99	92	90	87
90	99	99	92	90	87
110	104	104	98	92	87
132	105	104	101	92	99
160	105	104	101	102	99
200	105	104	101	102	99
250	113	111	108	105	—
315	113	111	108	—	—
355	115	113	111	111	105

## Operating Conditions

Altitude	0m
Relative Humidity	≤95%
Ambient Air Temperature	0°C~45°C
Condensation	exists
Salt Spray	exists
Oil Mist	exists
Mold	exists
Shock	exists
Vibration	exists
Tilt	±22.5°

## Voltage and Frequency

Rated voltage	380V or 440V
Rated frequency	50Hz or 60Hz

## Connection

3kW or Less	Y
more than 3kW	△

## Way of working

Continuous	
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## Insulation, temperature rise

Insulation	B or F
Temp. Rise of winding (resistance method)	75K or 100K
Permissible working temp. of bearing (thermometer method)	90°C

## Type of starting

Direct on full-voltage starting for all sizes; reduced voltage starting allowable at no-load or light load.

## Driving Method

Pulley, spur or flexible coupling can be used for driving.

## Noise

The noise limits (Lw) of the motors measured at the no-load conditions are given in Table 3.

## Vibration

The effective values of vibration velocity, measured at the no-load conditions, does not exceed those given in table 4.

## 安装结构型式

电动机各机座号所具有的安装结构型式如表 5 所示。

B3	卧式, 底脚安装
B5	立式, 凸缘安装
B35	卧式, 底脚带凸缘安装
V1	立式, 凸缘安装

## Mounting Arrangements

Mounting arrangements available for various frame sizes are shown in table 5.

B3	Horizontal, foot-mounted
B5	Horizontal flange-mounted
B35	Horizontal, foot and flange mounted
V1	Vertical, flange mounted

机座号 Frame Size	安装结构形式 (IM) Mounting Arrangements (IM)
80~355	B3, B5, B35, V1

## 浸渍和表面处理

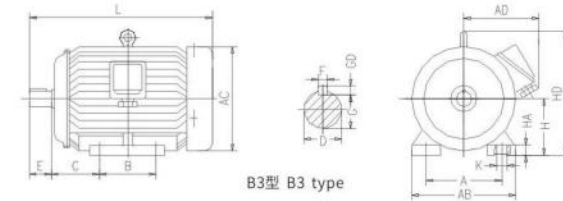
电动机的绕组和金属零件的表面均按照湿热电机的要求, 经过特殊浸渍和处理, 具有良好的防潮、防霉和抗盐雾的性能。

## Impregnation and Surface Treatment

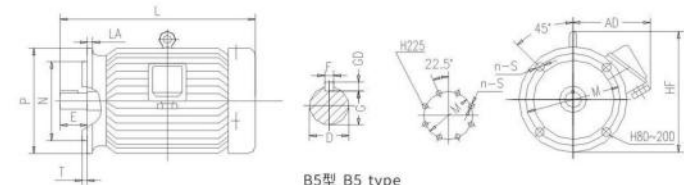
The motor windings impregnated and well treated to obtain the adequate damp-proof, anti-fungus and anti-salt-mist properties in accordance with the specifications for humid-tropic machines.

机座号 Frame Size	80~132	160~225	250~355
振动烈度 (有效值) (毫米/秒) Vibration intensity (effective value) (mm/s)	1.8	2.8	3.5

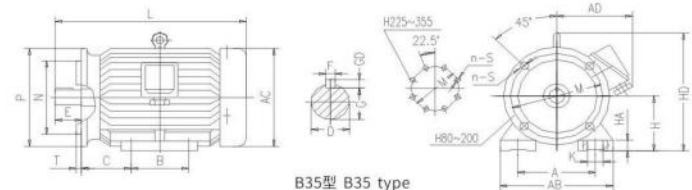
## 外形及安装尺寸 Mounting and overall dimensions



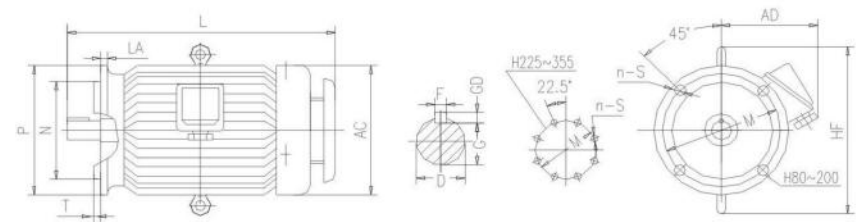
B3型 B3 type



B5型 B5 type



B35型 B35 type



V1型 V1 type

## YZ-H 系列船用起重三相异步电动机 (单速、双速)

YZ-H series marine crane three-phase asynchronous motor (single-speed, double-speed)



### 产品概述 Product overview

YZ-H系列三相异步电动机是按照国家标准GB755《旋转电机性能和定额》、GB/T7060《船用旋转电机基本技术要求》、JB/T7597.1《YZ-H系列船用起重三相异步电动机技术条件》设计制造,具有性能好、体积小、噪音低、工作可靠、维修方便等特点。适用于各类船舶作短时定额的甲板机械电力拖动之用。如锚机、绞盘机及绞盘等,也可作操作不频繁的起货机的动力。

YZ-H series three-phase asynchronous motor is in accordance with the national standard GB755 "rotary motor performance and quota", GB/T7060 "marine rotary motor basic technical requirements", JB/T7597.1 "YZ-H series of marine crane with three-phase asynchronous motor technology" design and manufacture, with good performance, small size, low noise, reliable, easy maintenance and so on. Applicable to all types of ships for short When the quota of the deck mechanical electric drive. Such as windlass, winch and winch, etc., but also for the operation of the cradle less frequently.

#### 该系列电机也符合以下标准和规范的有关要求

- IEC60034——旋转电机
- IEC60068——基本环境试验程序
- IEC60072——旋转电机安装尺寸及功率
- IEC60092——船用电气设备(装备)《钢质海船入级与建造规范》

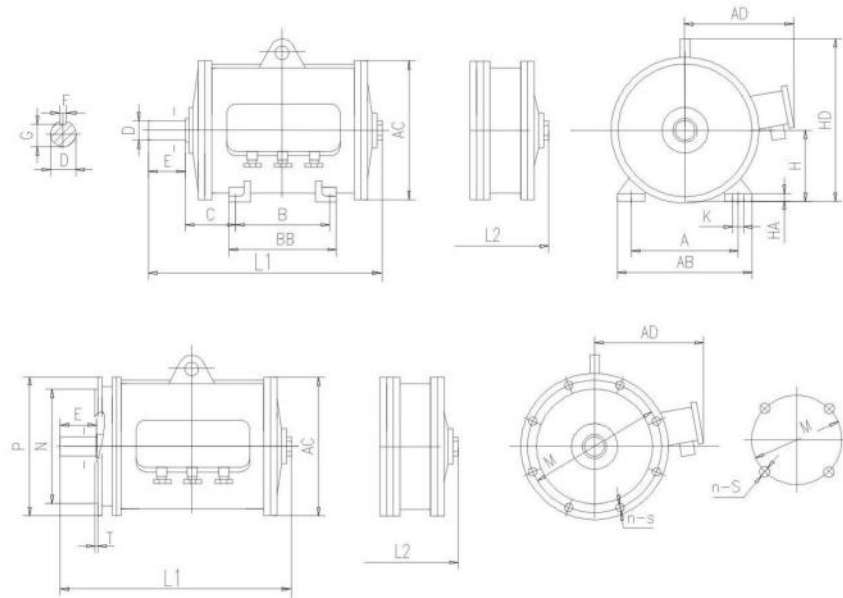
#### This series is in accordance with the following standard:

- IEC60034——Rotate the motor
- IEC60068——Basic environmental testing procedures
- IEC60072——Rotating motor installation size and power)
- IEC60092——Marine electrical equipment (equipment)  
"steel ship classification and construction norms"

### 环境条件 Ambient Conditions

- ◎ 环境温度: -25~+45°C
- ◎ 周期横摇: ±22.5°
- ◎ 空气相对湿度: ≤ 95%
- ◎ 海拔: 0m
- ◎ 纵倾: 10°
- ◎ 单速电动机
- ◎ 冲击、振动: 有
- ◎ 横倾: 15°
- ◎ 凝露、盐雾、油雾: 有
- ◎ Ambient temperature: -25~+45°C
- ◎ Cycle rolling: ±22.5°
- ◎ Air relative humidity: ≤ 95%
- ◎ Elevation: 0m
- ◎ Trim: 10°
- ◎ single speed motor
- ◎ Shock, vibration: exists
- ◎ Heeling: 15°
- ◎ Gel, salt spray, oil mist: exists

### 外形及安装尺寸 Mounting and overall dimensions



## YZ-H 系列船用起重用三相异步电动机 (三速)

YZ-H series three-phase asynchronous motor for marine crane (three speed)



### 产品概述 Product overview

YZ-H 系列起重用三相异步电动机是按照国家标准GB755《旋转电机性能和定额》、GB/T7060《船用旋转电机基本技术要求》、JB/T5801《YZ-H 系列船用三速起重用三相异步电动机技术条件》设计制造,具有性能好、体积小、噪音低、工作可靠、维修方便等特点。适用于各类船舶作短时定额的甲板机械电力拖动之用。如锚机、绞盘机及绞盘等,也可作操作不频繁的起货机的动力。

YZ-H series marine three-speed three-phase induction motors for hoisting and manufactured according to GB755 "Rotating electrical machines-Rating and performance", GB/T7060 "General specifications for rotary electrical machines in ships", Technical Conditions for YZ-H Series Marine Three-speed Three-phase Induction Motors for Hoisting. They have the features of good function, small volume, low noise and convenient protection. They are capstans and intermittent drive of the winches and capstans and intermittent drive for hoisting.

#### 该系列电机也符合以下标准和规范的有关要求

IEC60034 —— 旋转电机  
IEC60068 —— 基本环境试验程序  
IEC60072 —— 旋转电机安装尺寸及功率  
IEC60092 —— 船用电气设备(装备)《钢质海船入级与建造规范》

#### This series is in accordance with the following standard:

IEC60034 —— Rotate the motor  
IEC60068 —— Basic environmental testing procedures  
IEC60072 —— Rotating motor installation size and power  
IEC60092 —— Marine electrical equipment (equipment) "steel ship classification and construction norms"

### 环境条件 Ambient Conditions

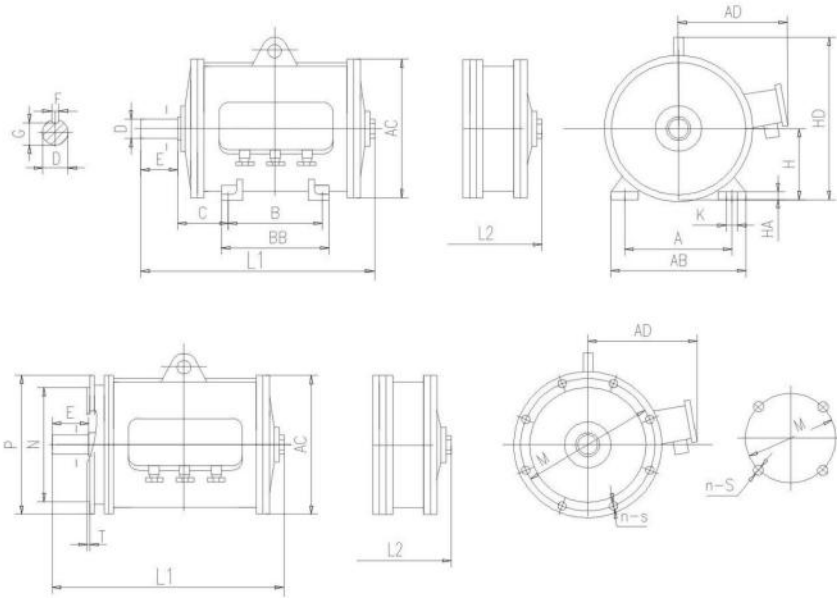
- ◎ 海拔:0m
- ◎ 环境温度:-25~+45°C
- ◎ 空气相对湿度:≤ 95%
- ◎ 冲击、振动:有
- ◎ 凝露、盐雾、油雾:有
- ◎ 周期横摇:±22.5°
- ◎ 横倾:15°
- ◎ 纵倾:10°

- ◎ Elevation:0m
- ◎ Ambient temperature:-25~+45°C
- ◎ Air relative humidity:≤ 95%
- ◎ Shock, vibration:yes
- ◎ Gel, salt spray, oil mist:yes
- ◎ Cycle rolling:±22.5°
- ◎ Heeling:15°
- ◎ Trimming:10°.

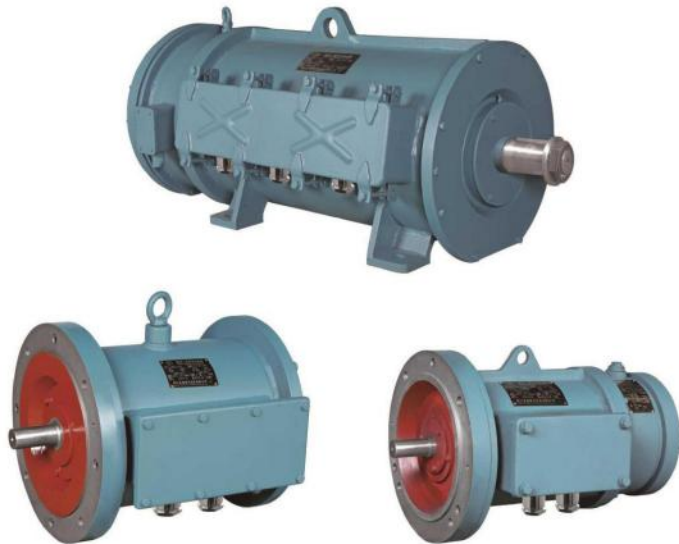
### 技术数据 Technical Data

项目 型号	工作方式 S2-min	额定功率 kW		额定电流 A		额定转速 r/min		直流电磁制动器		
		380V 50Hz	440V 60Hz	380V 50Hz	440V 60Hz	380V 50Hz	440V 60Hz	电压 V	电流 A	制动力矩 N.m
YZ200S-4/8/16-H	10/30/5	9	10	21.4	20.5	1435	1738	110	2.23	260
		9	10	24.7	23.7	684	837			
		4.2	4.7	37.3	36.4	324	406			
YZ200L-4/8/16-H	10/30/5	12.5	14	29.3	28.4	1437	1733	110	2.16	470
		12.5	14	34.3	33.2	689	840			
		5.7	6.5	49.5	49.4	330	410			
YZ225S-4/8/16-H	10/30/5	16.8	19	38.9	38.0	1421	1723	110	2.16	470
		16.8	19	46.2	45.0	683	835			
		8	9.1	67.6	67.9	333	413			
YZ225L-4/8/16-H	10/30/5	22.5	25	51.5	49.4	1422	1725	110	2.16	470
		22.5	25	60.3	57.9	686	858			
		10.6	12	85.6	86.3	334	410			
YZ250S-4/8/16-H	10/30/5	30	33.5	63.8	61.6	1410	1713	110	2.65	876
		30	33.5	71.3	68.7	680	832			
		14.5	16	105.5	103.5	336	415			
YZ250M-4/8/16-H	10/30/5	42	46	86.3	81.6	1410	1707	110	2.65	876
		42	46	95	89.8	676	830			
		20	22	112.6	110	334	414			
YZ280S-4/8/16-H	10/30/5	56	63	114	111.2	1415	1717	110	2.45	1550
		56	63	120.6	117.2	694	844			
		27	30	147.5	145	345	423			
YZ280L-4/8/16-H	10/30/5	75	84	154	149	1427	1729	110	2.45	1550
		75	84	161.5	156.2	692	843			
		36	40	182	179.5	345	423			

## 外形及安装尺寸 Mounting and overall dimensions



**JZ2-H 系列船用起重用三相异步电动机**  
JZ2-H series of marine crane with three-phase asynchronous motor



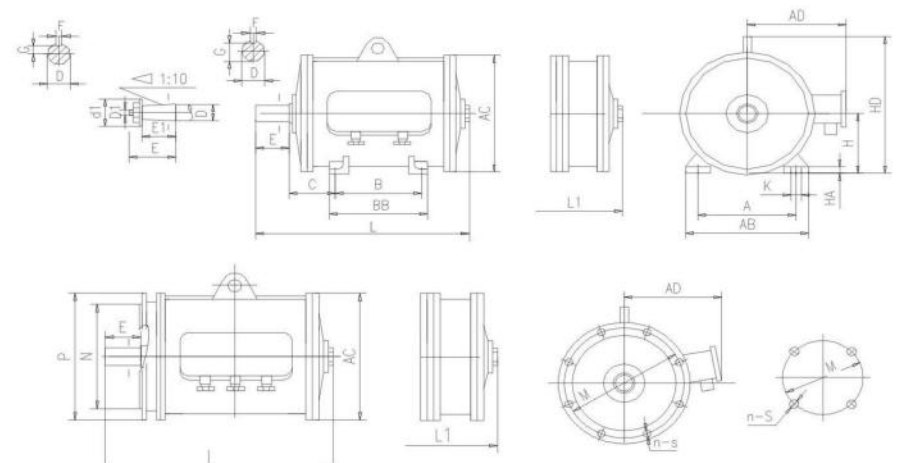
## 产品概述 Product overview

JZ2-H 系列船用起重用三相异步电动机，为鼠笼型结构。适用于船舶上作短时和断续运行的电力拖动之用，如锚机、绞盘机及绞车等甲板机械。  
JZ2-H series marine crane with three-phase asynchronous motor, for the squirrel cage structure. Apply to the ship for short-term and intermittent operation of the electric drive, such as windlass, Winch machines and winches and other deck machinery.

## 环境条件 Ambient Conditions

- 海拔: 0m
- 环境允许最高温度: +45°C
- 相对湿度: ≤95%
- 有船舶正常营运中冲击和振动的影响
- 有霉菌、盐雾和凝露
- 横摆: ±22.5°
- 倾斜: ±22.5°
- Altitude: 0m
- The maximum temperature allowed in the environment: +45 °C
- Relative humidity: ≤95%
- Have the impact of shock and vibration during normal operation of the ship
- Mold, salt spray and condensation
- Rolling: ± 22.5 °
- Tilt: ± 22.5°

## 外形及安装尺寸 Mounting and overall dimensions



# YB2-H系列船用隔爆型三相异步电动机

YB2-H series flameproof three phase asynchronous motor



## 产品概述 Product overview

YB2-H系列船用隔爆型三相异步电动机是YB系列的更新设计,该产品的性能达到国际同类产品的先进水平。

电动机具有高效、节能、堵转转矩高、噪声低、振动小、运行安全可靠、外观美观等特点。其功率等级,安装尺寸及其对应关系符合国际电工委员会(IEC)标准。

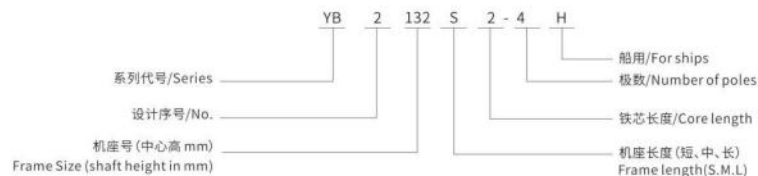
YB2-H series marine explosion-proof three-phase asynchronous motor is the updated design of YB series, and its performance has reached the advanced level of similar international products.

The motor has the characteristics of high efficiency, energy saving, high stall torque, low noise, small vibration, safe and reliable operation, and beautiful appearance. Its power level, installation size and corresponding relationship comply with the International Electrotechnical Commission (IEC) standards.

## 型号说明 Type Designation

电动机的型号由字母和数字组成。

The type designation consists of several letters and digits.



## 结构特点 Construction

YB2-H系列隔爆型三相异步电动机符合 GB3836.2《爆炸性气体环境用电气设备第2部分:隔爆型"d"》的规定。其隔爆结构参数也参照了 IEC60079-1《电气设备隔爆外壳的结构与试验》和 EN50018《爆炸性环境用电气设备"d"》的规定。电动机制成隔爆型。适用于爆炸性气体环境。分为: I类,矿用,标志为 Exd I; II类,除煤矿外的其他爆炸性气体环境,标志为 Exd II AT4、Exd II BT4、Exd II CT4。

电动机的外壳防护等级为IP55。

电动机的机座造型采用垂直水平的平行散热片结构。

电动机轴承采用向心轴承,风扇为小外径宽叶片结构,再加上选择合理的电磁参数及适当的槽配合、槽斜度,使电机的振动与噪声达到有效控制。

电动机为F级绝缘,当海拔和环境空气温度在标准情况下,电动机定子绕组温升限值为 80K(电阻法),对 315L 机座的2.4 极电机及 355 机座号电机温升限值为 105K。

电动机接线盒的进线方式为橡胶电缆,其接线端子分三个(供一种电压)或六个(供二种电压)两种结构,接线盒在电机顶部。根据用户需要也可提供铠装电缆的进线结构。

电动机转向H63~280 机座号和H315~355机座号的4~10 极电动机转向可正转或反转。而 H315~355 机座号的两极电机从轴伸端看为顺时针转动。如需要逆时针转动需订货时说明。

YB2-H series explosion-proof three-phase asynchronous motor complies with GB3836.2, Electrical Apparatus for Use in Explosive Atmosphere part2: Flame-proof Enclosure 'd'. The flame-proof constructions and their parameters have referred to IEC60079-1, Construction and Verification Test of Flame-proof Enclosure for Electrical Apparatus, and EN50018, Electrical pparatus for Use in Explosive Atmosphere: Flame-proof Enclosure 'd'. The motors are made into flame-proof type, and are suitable for use in explosive gas atmosphere, which can be divided into two groups. Group I is used for coal mine and marked with ExdI; Group II is used for explosive gas atmospheres other than coal mine and marked with ExdIIAT4 ExdIIBT4 ExdIICT4.

Degree of protection by enclosure of motors is Ip55.

The frames of motors are designed with parallel cooling ribs which are distributed vertically and horizontally.

The bearings of motors are ball bearings. The fans are of small diameter and wide vanes. In addition to them, reasonable electromagnetic parameters and proper slot combinations and slot-skewing slopes are selected so that the vibration and the noise of motors have effectively been controlled.

The stator windings of the motor are class F insulated. When the altitude above sea level and ambient temperature are in accordance with the values specified by the standard, the temperature rise limit of stator windings is 80K(resistance method). For frame size 315L2-and 4-pole motors and frame size 355 motors, the temperature rise limit is 105K.

The cable entry form for the terminal box of Yb2 range of motors is of cabletyre cable. The terminal box is provided with three terminals (for single voltage) or six terminals(for double voltages). The terminal box is located on the top of the motor. On request of user, rmoured cable can also be applied.

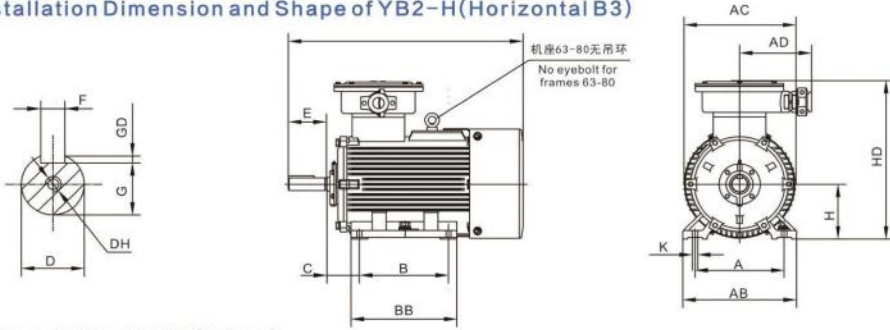
The direction of rotation of the motor. For frame sizes H63 to 280 and H315 to 355 motors (4 to 10-poles), the direction of rotation may be clockwise and anticlockwise, and for frame sizes 315 to 355 2-pole motors, the direction of rotation is clockwise as viewed from the shaft extension. If the motor is required to rotate anticlockwise, please specify it when ordering.

## 应用范围 Application range

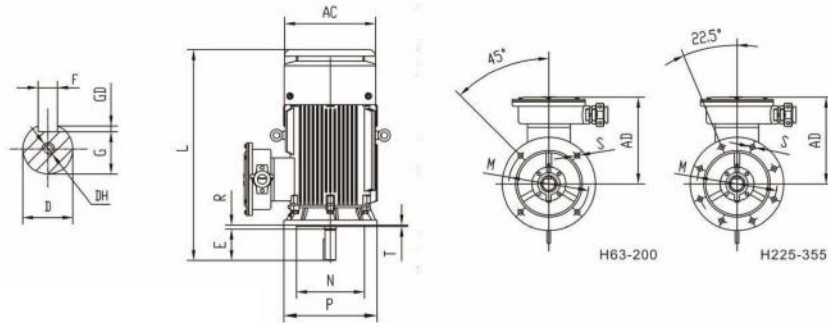
用于船舶上具有IIA、IIB级、IIC,温度组别为T1-T4组的可燃性气体、蒸汽与空气形成的爆炸性混合物的场所。在船舶上作驱动各种机械,如泵类、通风机、分离器、液压机械及其它辅助设备之用

They can be used on ships with protection mark Exd IIA, Exd IIB and Exd IIC and fulfill flammable gas and explosive mixture. The Motors are suitable for driving various machines on ships, such as pumps, blowers, separators, hydraulic engine and other auxiliary equipments.

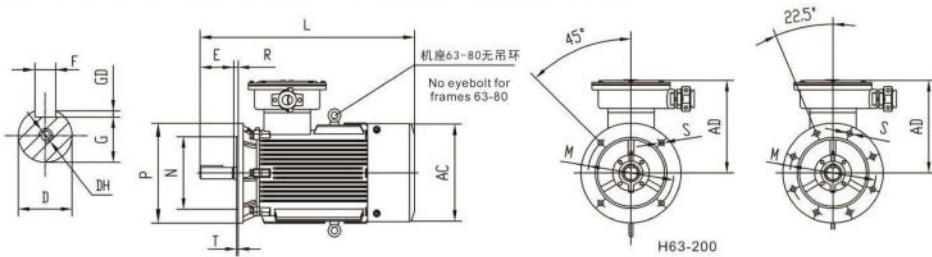
**YB2-H 安装尺寸及外形(卧式B3)**  
**Installation Dimension and Shape of YB2-H(Horizontal B3)**



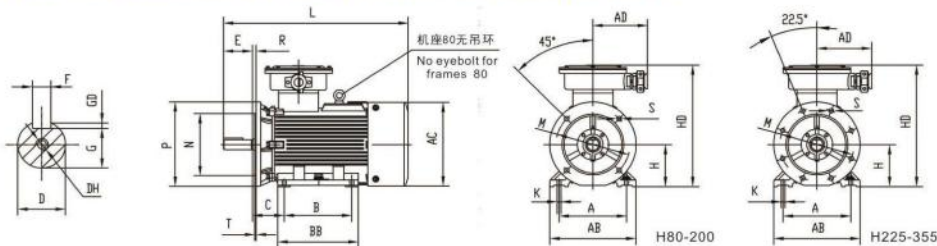
**YB2-H 安装尺寸及外形(立式V1)**  
**Installation Dimension and Shape of YB2-H(Vertical V1)**



**YB2-H 安装尺寸及外形(立式B5)**  
**Installation Dimension and Shape of YB2-H(Vertical B5)**



**YB2-H 安装尺寸及外形(立卧B35)**  
**Installation Dimension and Shape of YB2-H(Stand lying B35)**



**YS-H 系列船用三相异步电动机**  
**YS-H Series Marine Three-phase Asynchronous Motor**

**产品概述 Product overview**

YS-H系列船用微型三相异步电动机适用于船上不含易燃、易爆的一般场所和无特殊要求的机械上。其防护等级为P44，绝缘等级为F级。具有高效节能，起动转矩大，负载噪声小，可靠性高，结构更合理，外形新颖美观等特点。

YS-H series marine miniature three-phase asynchronous motors are suitable for general places without flammability and explosion and machinery without special requirements. Its protection level is P44, and its insulation level is F. The utility model has the advantages of high efficiency, energy saving, large starting torque, low load noise, high reliability, more reasonable structure, novel and beautiful appearance, etc.



**环境条件 Ambient Conditions**

- ◎ 额定电压: 380/440V
- ◎ 额定频率: 50Hz/60Hz
- ◎ 工作制: S1
- ◎ 环境温度: -20~+45°C
- ◎ 环境空气最大相对湿度不大于95%并有凝露
- ◎ 技术数据及安装尺寸见表。
- ◎ Rated voltage: 380/440V
- ◎ Rated frequency: 50Hz/60Hz
- ◎ Working system: S1
- ◎ Ambient temperature: -20 ~ +45 C
- ◎ The maximum relative humidity of ambient air is not more than 95% and there is condensation
- ◎ Technical data and installation dimensions are shown in table.

**技术数据 Technical Data**

电机型号	功率 (kw)	电流		转速		重量 (kg)
		380V	440V	50Hz	60Hz	
<b>380/440V 50/60Hz-2Pole</b>						
YS631-2-H	0.18	0.53	0.47	2720	3260	10
YS632-2-H	0.25	0.7	0.6	2730	3270	11
YS711-2-H	0.37	1.0	0.85	2800	3360	14
YS712-2-H	0.55	1.4	1.2	2800	3360	15
<b>380/440V 50/60Hz-4Pole</b>						
YS631-4-H	0.12	0.45	0.39	1340	1610	11
YS632-4-H	0.18	0.63	0.54	1340	1610	11
YS711-4-H	0.25	0.8	0.7	1400	1680	14
YS712-4-H	0.37	1.12	0.98	1400	1680	15
<b>380/440V 50/60Hz-6Pole</b>						
YS711-6-H	0.18	0.74	0.56	850	1020	14
YS712-6-H	0.25	0.95	0.83	850	1020	15

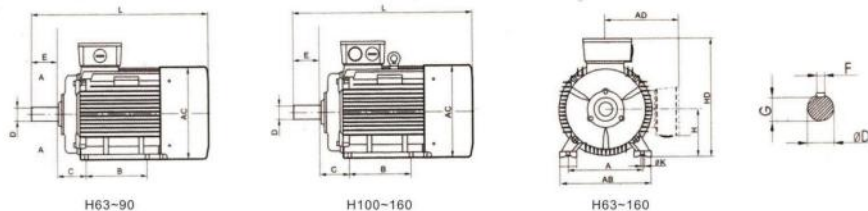
# Y-H 系列船用轴流风机用三相异步电动机

The Y-H series marine flows the breeze machine to three-phase marine flameproof motors

## YS-H系列船用三相异步电动机 (H63-H71)

YS-H series marine three-phase asynchronous motor (H63-H71)

外形尺寸及安装图 (Outline Dimensions and Installation Drawings)



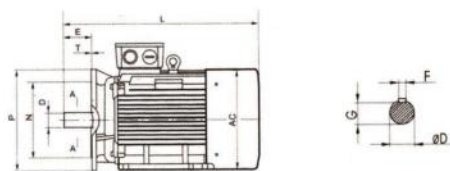
H63-90

H100-160

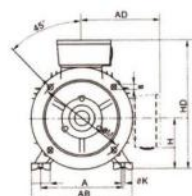
H63-160

B3机座带底脚,端盖无上凸缘的电动机 B3 motor with bottom foot and no flange on end cover

机座号 Frame Size	极数 Poles	安装尺寸 (毫米) Installation Dimensions (mm)										外形尺寸 (毫米) Shape size (mm)							
		A	B	C	D	E	F	G	H	K	AB	AC	AD	HD	L				
63	2.4	100	80	40	11	23	4	8.5	63						135	125	-	185	225
71	2.4.6	112	90	45	14	30	5	11	71	7					145	140	-	200	250



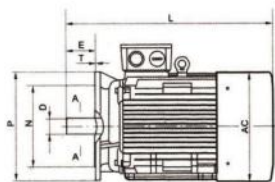
H100-160



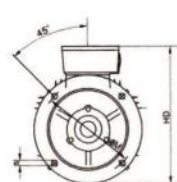
H100-160

B35机座带底脚,端盖上有凸缘(带通孔)的电动机 B35 motor with bottom foot and flange (with through hole) on end cover

机座号 Frame Size	极数 Poles	安装尺寸 (毫米) Installation Dimensions (mm)														外形尺寸 (毫米) Shape size (mm)					
		A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L
63	2.4	100	80	40	11	23	4	8.5	63	7	115	90	140	0	4- $\phi$ 10	4	135	125	-	180	225
71	2.4.6	112	90	45	14	30	5	11	71	7	130	110	160	0	4- $\phi$ 10	4	150	140	-	200	250



H63-160



H63-160

B5机座带底脚,端盖上有凸缘(带螺孔)的电动机 B5 motor with bottom foot and flange (with screw hole) on end cover

机座号 Frame Size	极数 Poles	安装尺寸 (毫米) Installation Dimensions (mm)										外形尺寸 (毫米) Shape size (mm)				
		D	E	F	G	H	K	M	N	P	R	S	T	AC	HD	L
63	2.4	11	23	4	8.5	63	7	115	90	140	0	4- $\phi$ 10	4	125	185	225
71	2.4.6	14	30	5	11	71	7	130	110	160	0	4- $\phi$ 10	4	140	200	250



### 产品概述 Product overview

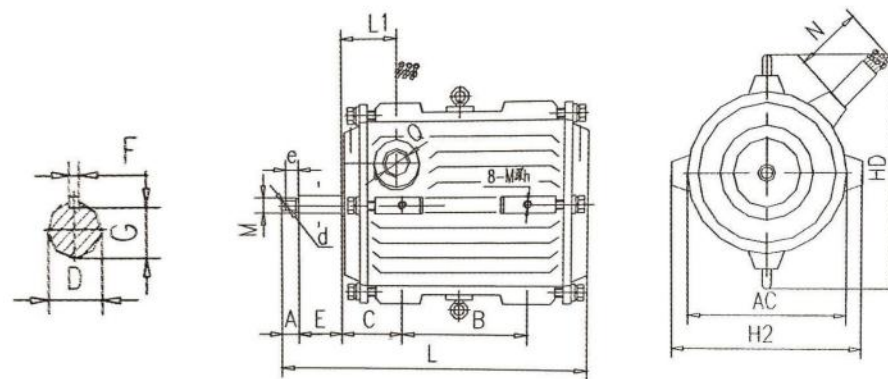
Y-H系列船用轴流风机用三相异步电动机是为船舶通风机设计的专用电动机。除外形及安装尺寸外,其他性能指标与Y-H系列电动机相同。  
Y-H系列电动机为全封闭、鼠笼型电动机,具有高效、节能、启动转矩大、性能好、噪声低等优点。

Y-H series three-phase asynchronous motor for marine axial-flow fan is a special motor designed for marine fan. Except for the shape and installation size, other performance indicators are the same as Y-H series motors.

Y-H series motors are fully enclosed squirrel cage motors, which have the advantages of high efficiency, energy saving, high starting torque, good performance and low noise.

### 环境条件 Ambient Conditions

- 环境温度: -15°C~45°C
- 海拔: 0m
- 额定频率: 50Hz 或 60Hz
- 额定电压: 380V 或 440V
- 接线方法: 3kW 以下为Y
- 其他功率为 $\Delta$
- 工作方式: 连续 S1
- Temperature of Ambient air: -15°C~45°C
- Altitude: 0m
- Rated Frequency: 50Hz 或 60Hz
- Rated Voltage: 380V 或 440V
- Connection: 3kW 以下为Y
- Other power is  $\Delta$
- Duty Type: Continuous S1



# CZT系列船用轴流通风机

CZT Series Marine Axial Flow ventilator Foreword



## 特点 Characteristic

机壳可开启	The machine Casing can be opened
可逆转	Reverse rotation possible
防腐性能好	Good anti-conti-swing,vibration-proof
抗摇摆,振动和冲击性能强。	Strong resistance to sway, vibration and shock.

## 产品概述 Product overview

CZT 系列船用轴流通风机(以下简称通风机)可输送空气、含有盐雾的海洋空气和含有少量油雾等的腐蚀性空气,通风机适用于船舶上各种舱室的通风换气,也可应用于其他适当的场合。

通风机按照GB11864《船用轴流通风机》和中国船舶检验局《钢质海船入级和建造规范》有关规定设计制造。

CZT series marine axial flow fan (hereinafter referred to as "axial flow fan") Ventilators can transport air and salt fog in the ocean Air and corrosive air containing a small amount of oil mist, The fan is suitable for the ventilation of various cabins on the ship Gas can also be applied to other appropriate occasions.

Fan in accordance with GB11864 "ship shaft circulation" "Fan" and China Shipbuilding Inspection Bureau "steel ships entering" Design and manufacture of relevant regulations for grade and construction code.

## 结构型式 Structural Type

- ◎ 通风机制成电动机置于机壳内的结构,叶轮直接装在电动机轴上。
- ◎ 叶轮由防腐铝合金压铸制成,机壳采用普通钢材材料焊接而成。
- ◎ 机壳可根据需要制成整体式或沿轴向开启式。开启式机壳是将叶轮和电动机装在可开启的半机壳上,故便于现场检修和更换零部件。
- ◎ 通风机制成从电动机端正视,叶轮按顺时针方向旋转。在使用中,允许通风机逆向旋转。
- ◎ 通风机可配用380V,50Hz或440V,60Hz船用交流电动机。
- ◎ The ventilator is manufactured with a built-in casing motor structure. The vane wheel is directly mounted on the motor shaft.
- ◎ The vane wheel is made of anti-corrosive case aluminium alloy while the casing is made of welded common steel.
- ◎ As desired, the casing can either be made into an integral one or an open type into an integral one or an open type along the vane wheel and the casing so as to bring convenience for on-the-spot repair and the replacement of its spare parts.
- ◎ Viewed from the motor side, the vane wheel rotates clockwise while service the ventilator is allowed to rotate reversely.
- The ventilator can be matched with marine DC motor of 380V, 50Hz or 440V, 60Hz.

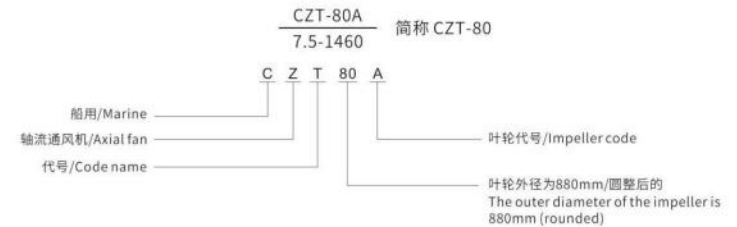
## 工作条件 Working conditions

- ◎ 介质温度:-25℃~+50℃
- ◎ 最大相对湿度:95%
- ◎ 周期性摇摆:22.2°(摇摆周期7~10S)
- ◎ 持续横倾:15°
- ◎ 持续纵倾:7.5°
- ◎ 振动:有
- ◎ 冲击:有
- ◎ Medium temperature:-25℃~+50℃
- ◎ Maximal relative humidity:95%
- ◎ Periodic rocking:22.2°(Rocking Period 7~10S)
- ◎ Continuous heeling:15°
- ◎ Continuous trim:7.5°
- ◎ Vibration:exists
- ◎ To attack:exists

## 型号说明 Model specification

通风机的型号以汉语拼音字母的字母,叶轮外径和转速等表示。示例如下:

The type of fan is in Chinese phonetic alphabet First, the outer diameter of the impeller speed and said. For example Under the:0Hz or 440V,60Hz marine AC motor.



注:整体式机壳不标注7.5—电动机功率为7.5KW1460—标准转速为1460r/min(50Hz)

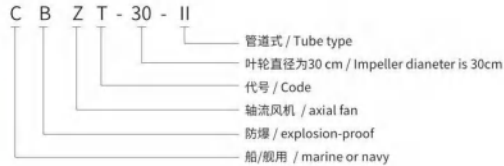
# CBZT 系列船用防爆轴流通风机

CBZT series marine explosion-proof axial flow fan



## 型号说明

Structure type



## 一、概述

CBZT 系列船用防爆轴流通风机(以下简称“防爆通风机”)是照 GB11800-2008《舰船用防爆轴流通风机》、GB3836.1-2010《爆炸性环境第1部分:设备通用要求》、GB3836.2-2010《爆炸性环境第2部分:由隔爆外壳“d”保护的设备的有关规定》和中国船舶检验局现行《钢质海船建造规范》的有关规定设计制造的。

本系列防爆通风机经中华人民共和国防爆检验单位检验合格,取得了防爆合格证,同时也经中国船级社检验合格,取得了产品船检证书。

## 二、特点

防爆,运转安全可靠、防腐性能好、抗摇摆、振动和冲击性能强。

## 三、结构形式

防爆通风机有五种结构,即I型(甲板式)、II型(管道式)、III型(隔舱式)、IV型橄榄式、V型上出风式整机结构,均为无火花型。

I型防爆电机装在机架上部,机架周围2目/英寸不锈钢网,整机立式安装在甲板上,可用于抽风或送风。

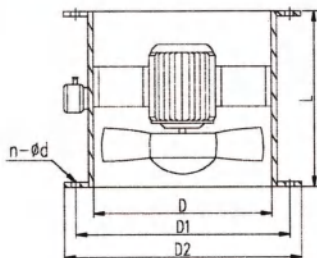
II型防爆通风机不带风帽,防蚀电动机为内装式,由静叶撑脚固定在机壳上,可立式或卧式安装,也可安装在甲板上,可用于抽风或送风。

根据用户特殊需要,可制成III型结构,即风机和电机分隔舱型式,中间加传动装置,密封填料函和挠性联轴器的结构,主要用于排除危险舱室的气伙。

防爆通风机制成从防爆电机端正视,叶轮按顺时针方向旋转的结构。

## 主要性能参数及外形安装尺寸

Main performance parameters and overall installation dimensions



## 1. Overview

The CBZT series marine anti-dry shaft circulating fans (hereinafter referred to as "explosion-proof fans") are based on GB11800-2008 "Marine Explosion-proof Shaft Circulating Fans", GB3836.1-2010 Explosive Environment Part 1: General Requirements for Equipment "GB3836.2-2010 "Explosive environment Part 2: Equipment protected by flameproof enclosure"d and relevant regulations of the China Ship Inspection Bureau's current "Code for the Construction of Steel Sea-going Ships" are designed and manufactured.

This series of explosion-proof ventilators have passed the inspection of the People's Republic of China's explosion-proof inspection unit and obtained the explosion-proof certificate. At the same time, they have passed the inspection of China Classification Society and obtained the product inspection certificate.

## 2. Features

Explosion-proof, safe and reliable operation, good anti-corrosion performance, anti-sway, strong vibration and shock performance.

## 3. Structure type

Explosion-proof fans have five types of structures, namely type I (deck type), type II (pipe type), type III (compartment type), type IV olive type, and type V upper air outlet type structures, all of which are non-sparking type.

Type I explosion-proof motors are installed on the upper part of the rack, and the 2 mesh / inch stainless steel mesh around the rack is installed on the deck vertically, which can be used for exhaust or supply air.

Type II explosion-proof ventilator does not have a hood, and the anti-corrosion motor is built-in type. It is fixed on the casing by static blade feet. It can be installed vertically or horizontally, or it can be installed on the deck.

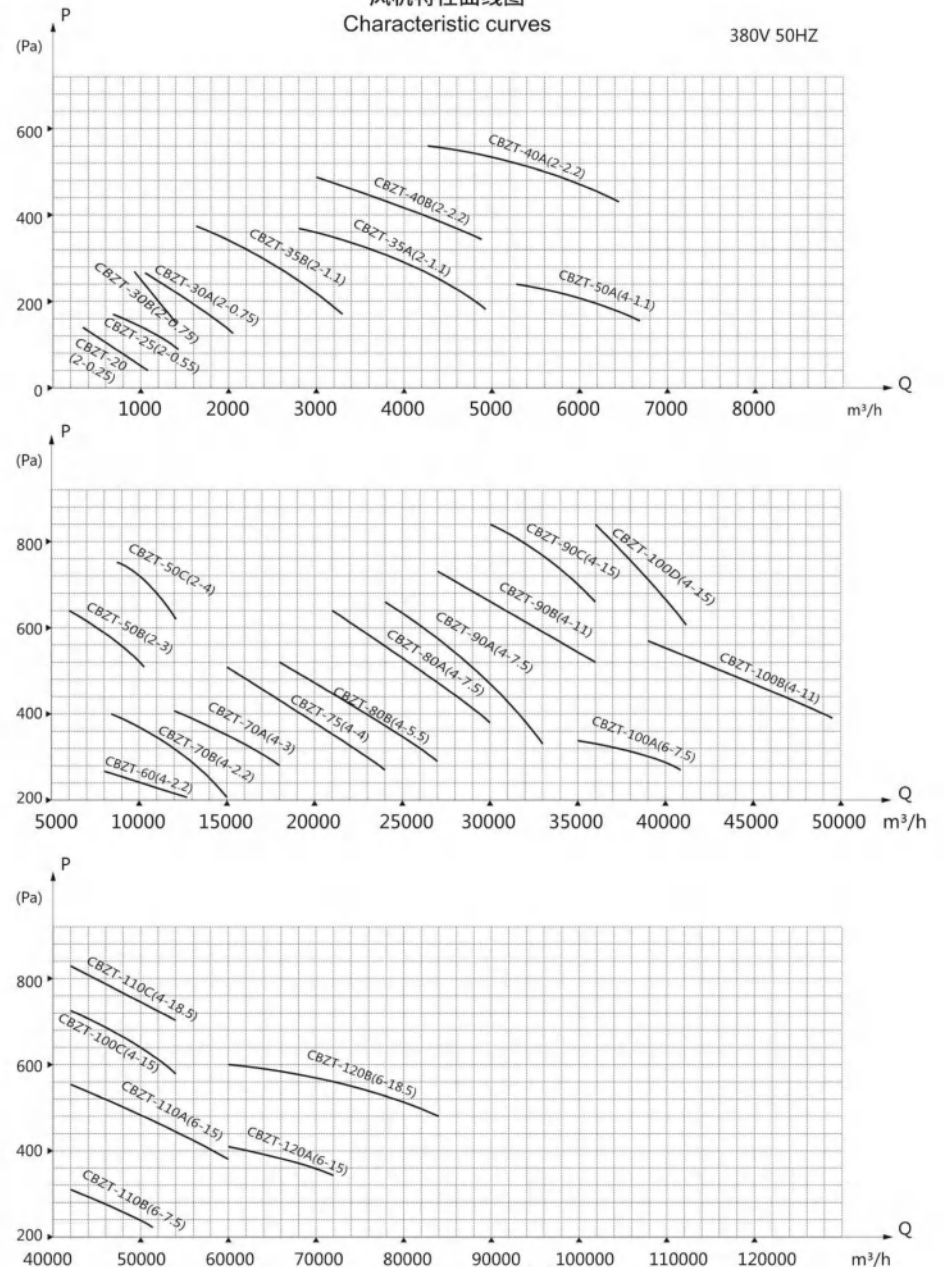
According to the special needs of users, it can be made into type III structure, that is, the structure of the fan and motor compartment, the structure with the transmission device in the middle, the sealed stuffing box and the flexible coupling, which is mainly used to exclude the gas in the dangerous compartment.

The explosion-proof ventilator is made of a structure where the impeller rotates clockwise when viewed from the explosion-proof motor.

## 风机特性曲线图

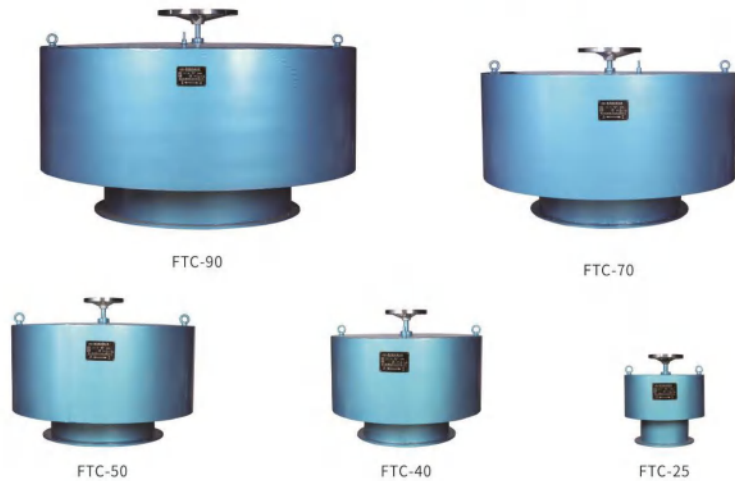
Characteristic curves

380V 50HZ



# FTC 系列船用菌形通风筒

FTC Series Marine Fungal Ventilators



## 性能选用 Performance Selection

表中性能参数是指标准大气状况大气压力101325Pa, 温度20°C, 相对湿度50%, 气体密度为1.2kg/m 下的空气性能。实际的气体状况和转速与表中所列不同时, 通风机的性能可按下列各式换算。

The performance parameters in the table refer to the air performance under standard atmospheric conditions (atmospheric pressure 101325Pa, temperature 20°C, relative humidity 50%, and gas density 1.2kg / m. Ventilation when the actual gas conditions and rotation speed are different from those listed in the table, The performance of the machine can be converted according to the following formulas.

$$Q = Q_0 \left( \frac{n}{n_0} \right) \quad (\text{m}^3 / \text{h}) \quad \text{式中 } Q_0, P_0, N_0, P_0 \text{ 为标准大气状况和标准转速 } n_0 \text{ 时的流量、压力、功率和气密度。}$$

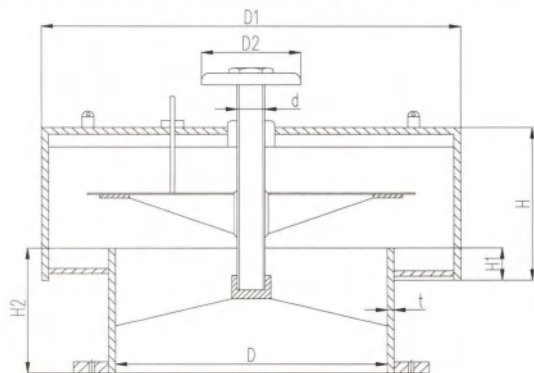
$$P = P_0 \left( \frac{n}{n_0} \right)^2 \frac{P}{P_0} \quad (\text{Pa}) \quad Q, P, N, p, n \text{ 为实际的流量、压力、功率、气体密度和转速。}$$

$$N = N_0 \left( \frac{n}{n_0} \right)^3 \frac{P}{P_0} \quad (\text{Kw}) \quad \text{标准流量下的全压值允许差为 } -5\% \sim +15\%$$

$Q_0, P_0, N_0$  and  $P_0$  are the standard atmospheric conditions and standards Flow rate, pressure, power and gas density at quasi speed  $n_0$  can be converted according to the following types.

$Q, P, N, P$  and  $N$  are actual flow, pressure and power Gas density and rotation speed.

The allowable deviation of the total pressure value is  $-5\% \sim +15\%$  under the standard flow rate



## General Introduction

YZ-H series Marine three-speed reuse three-phase asynchronous motor is designed and manufactured according to the national standard GB755 "Performance and Quota of Rotating Motor", GB/T7060 "Basic Technical Requirements of Marine Rotating Motor", JB/T7597 "YZ-H series Marine reuse three-phase asynchronous motor Technical Conditions". With good performance, small volume, low noise, reliable work, convenient maintenance, beautiful appearance, strong impact resistance and other characteristics. It is suitable for all kinds of ships to be used for short - time fixed deck machinery electric drive. Such as windlass, winch and winch, also can be used for infrequent operation of winch power.

## Standardize

YZ-H series Marine three-speed reuse three-phase asynchronous motor meets the following standards

Standard Name	IEC	GB
Rotating motor specification and performance	IEC60034-1	GB755
Rotating motor dimensions and output power class	IEC60072-1	GB4772.1
Test methods for three-phase asynchronous motors	IEC60034-2-1	GB/T1032
Standard Voltage	IEC60038	GB/T156
Rotary motor line end mark and direction of rotation	IEC60034-8	GB1971
Marine electric apparatus	IEC60092	GB/T6994
Environmental testing of electrical and electronic products	IEC60068	GB/T2423
Protection class (IP) classification of rotary motors	IEC60034-5	GB/T4942.1
Noise limits for rotary motors	IEC60034-9	GB10069.3
Rotating motor cooling method	IEC60034-6	GB/T1993
Code of motor structure and installation form	IEC60034-7	GB/T977

It is also in line with the requirements of CCS "Steel Seawall Classification and Building Code", as well as other major classification society standards

## Technical Feature

- Standard voltage and frequency: 380V/50Hz, 440V/60Hz, and other non-standard power supply
- Careful industrial appearance design
- Specially designed for Marine deck equipment, the motor housing is made of high strength cast iron, with good impact and vibration resistance
- Mechanical structure design and surface treatment for all kinds of harsh Marine environment, with excellent moisture-proof, mildew proof and salt spray proof performance
- Protection grade standard IP56, all matching places are designed with O-type sealing ring waterproof design
- Excellent electrical performance, VPI immersion paint /F grade insulation/low speed pole can withstand 1min of blocked rotation
- The brake has excellent performance and is more convenient for maintenance and maintenance of moisture-proof protection and winding thermal protection work

## Operation Environment

- Ambient air temperature:  $-25^{\circ}\text{C} \sim +45^{\circ}\text{C}$ , non-standard design can reach  $-60^{\circ}\text{C} \sim +65^{\circ}\text{C}$
- Altitude: 0m
- Air relative humidity: no more than 95%
- There are salt spray, oil mist, mold and seawater influence
- Tilt swing: Tilt:  $\pm 30^{\circ}$  Swing:  $\pm 22.5^{\circ}$
- Electric motors for various mobile and stationary platforms used in offshore exploration or exploitation of seabed petroleum resources
- Have the effect of sulfur dioxide and hydrogen sulfide and other chemical active substances
- The impact of shock and vibration caused by the normal operation and operation of ships and offshore installations

## Model Description

YZ	250	M	1	-	2/4/12	-	H
Series number	Base number	Base length	Core length	Three speed pole number:		Apply	
Marine crane series	200	S	1:Miniwatt	4 /8/16		Marine	
three-phase asynchronous motor	225	M	2:Medium power	2/4/ 12			
	250	L	3:High power	2 /6/ 12			
	280						
	+315						
	+355						

\*315/355:If you need a larger seat, please consult relevant business personnel in each region or contact our company's technical personnel

## Brake parameters

Base number	Braking voltage	Braking torque	Braking current	Remarks
200	DC110V	260N.m	2.23A	The brake torque is all dynamic torque The protection level of the brake is consistent with that of the motor Manual release method: Bolt release Optional with other brands of brakes: Chengdu Ruidi or others
225		470N.m	2.16A	
250		876N.m	2.65A	
280		1550N.m	2.45A	

## Electric motor working system and connection method

Working system	S2-10/30/5min					
Connection	1U 1V 1W	3U 3V 3W	3U 3V 3W	1U 1V 1W	1U 1V 1W	3U 3V 3W
	2U 2V 2W	1U 1V 1W	2U 2V 2W	2U 2V 2W	3U 3V 3W	2U 2V 2W
	3U 3V 3W	2U 2V 2W	1U 1V 1W	3U 3V 3W	2U 2V 2W	1U 1V 1W
	High speed	Mid speed	Low speed	High speed	Mid speed	Low speed
	4/8/16 pole, 2/6/12 pole			2/4/12 pole		

## Damp proof heater parameter

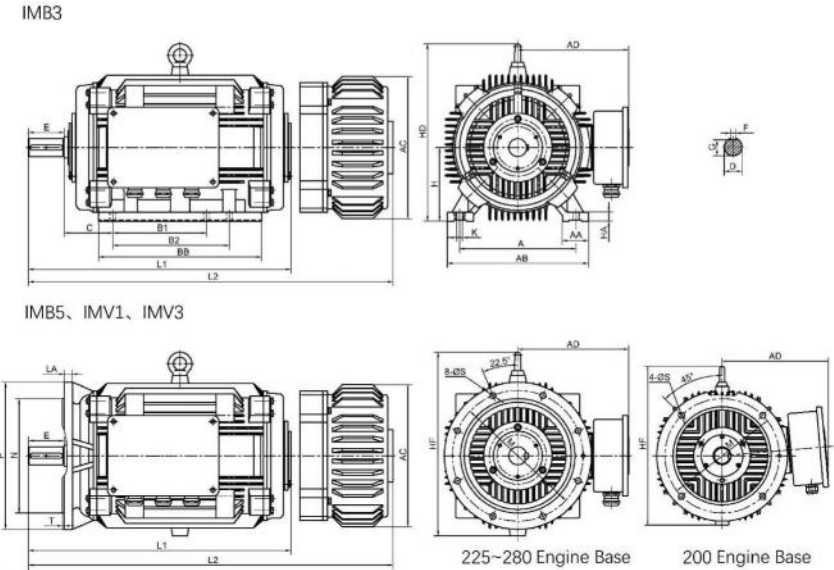
Base number	Parameter
200	220V/50W
225~280	220V/60W
315	220V/80W

## Interface parameters of junction box stuffing box

Base number	Main power source	Suitable for cable outer diameter	Brakes and heaters
200	3-H-M32×1.5	18~25mm	2-H-M20×1.5, Suitable for cable outer diameter: 10~14mm
225~250	3-H-M40×1.5	22~32mm	
280	3-H-M50×1.5	32~38mm	
315	3-H-M63×1.5	45~52mm	



## Outline Installation Dimensional Drawing



## IMB3

Base number	Installation and overall dimensions																		
	A	B1	B2	C	D	E	F	G	H	K	AA	AB	AC	AD	BB	HA	HD	L1	L2
200S	318	228	/	133	48	110	14	42.5	200	18.5	80	385	390	335	302	24	480	600	778
200L		267	305								80	385	390	335	379	24	480	675	855
225S/L	356	286	356	149	55		16	49	225		80	432	445	360	498	28	550	850	1015
250S/M	406	311	349	168	65		18	58	250	24	95	492	485	420	570	30	630	950	1150
280S/L	457	368	457	190	75	140	20	67.5	280		100	557	555	465	690	35	720	1090	1250
315ML	508	457	508	216	80	170	22	71	315	28	120	660	660	520	700	35	780	1150	1320

## IMB5、IMV1、IMV3

Base number	Installation and overall dimensions						
	M	N	P	S	T	HF	LA
200	350	300	400	18.5	5	505	20
*200						505	24
225	400	350	450	18.5	5	565	25
*225						565	22
250	500	450	550	18.5	5	625	25
280	600	500	660	22	5	700	30
*280						700	20
315	600	550	660	24	6	760	30

- L1 is total length of motor without brake configuration
- L2 is total length of motor with brake configuration, If equipped with other brands of brakes, This size is subject to the confirmation drawing
- Footing Installing the motor, can provide a top outlet solution for the junction box
- When installing flange flanges, Dimensions with \* are non-standard dimensions, also available.
- The dimensions in the table are for reference only, Subject to actual supply



## YE3 系列三相异步电动机

### YE3 Super Three-phase Induction Motor

YE3 系列为全封闭, 自扇冷式三相笼式异步电动机, 适用于需要连续运行能频繁工作的一般使用场合, 如风机、水泵等, 符合 GB18613-2020 标准效率值 3 级能效 (IEC60034 中 IE3 能效等级)。其外形美观, 高效节能, F 级绝缘,

The motors are totally enclosed, fan-cooled three phase induction motor. They are suitable for the places where need continuous running and frequent work, such as ventilators and pumps, They are fulfilled with the grade 3 energy efficiency of GB18613-2020 (IE3 IN IEC 60034). Their appearance is beautiful, insulation is F, protection class is IP55, and running is steady

## 电气特性(Electrical characteristics)

### YE3 系列电动机性能指标(performance index)

机座号 (Frame no.)	63 ~ 355
功率 (Power)	0.12 ~ 315kW
工作制 (Duty)	S1
冷却方式 (Cooling method)	IC411
同步转速 (Synchronous Speed)	3000、1500、1000、750r/min
额定电压和频率 (Rated voltage and frequency)	380V、50Hz
能效等级 (Energy efficiency index)	3 级 (中国 GB18613-2020)、

### 适用于(Apply to)

需要节能的连续运行能频繁工作的一般使用场所。如风机、水泵等。

They are suitable for the places where need energy saving, continuous running and frequent work, such as ventilators and pumps

### 特点(Features)

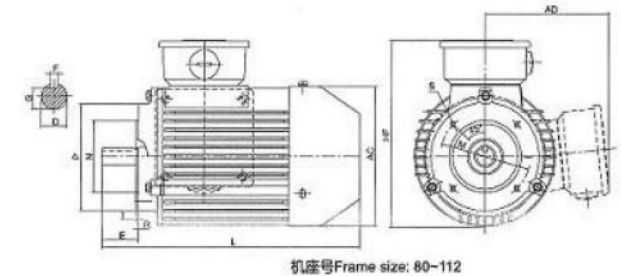
其外形美观, 高效节能, F 级绝缘, 防护等级为 IP55, 电机噪声低, 振动小、运行可靠。

Beautiful appearance, high efficiency, energy saving, F insulation class, IP55 protection class, low noise, small vibration and steady operation.

## 安装及外形尺寸 (Mounting and overall dimensions)

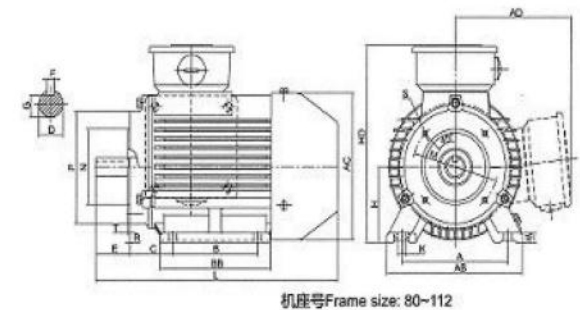
### B14 机座无底脚、端盖上有小凸缘 (带丝孔)

(Frame without foot, end cover with small flange (with screw hole))



### B34 机座带底脚、端盖上有小凸缘 (带丝孔)

(Frame with foot, end cover with small flange (with screw hole))





**不锈钢叶轮**  
Stainless steel impeller



**主机鼓风机叶轮**  
Main blower impeller



**轴流风机叶轮**  
Stainless steel impeller

