

✚ YEZ Conical Rotor Three-phase Asynchronous Motors

YEZ series conical rotor three-phase asynchronous motor is enclosed cage motor with self-cooling fan and brake rigging (applicable to the construction hoist, concrete mixer and other lifting equipments). It combines the motor and brake device as a whole, has the advantages of big starting torque, strong overload ability, safe and reliable braking, compact structure, light weight, convenient repair regulation ,frequently started free etc.. Connection and installation of any size can be matched with the user.



1. Manufacturing Standards

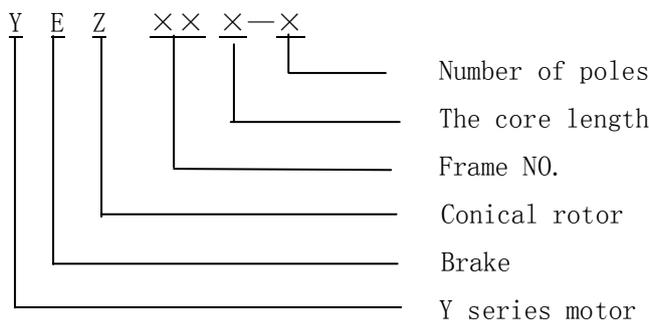
- GB191 Packaging - Pictorial mark
- GB755 Electric motors, ratings and performance
- GB997 Electric motor structure and mounting (IM Code)
- GB1032 Test methods for three-phase asynchronous motors
- GB1993 Electric motor cooling method
- GB4942.1 Electric motor shell protection (IP Code)
- GB133306 Signage

2. Types and Basic Parameters

Q/ZWD001—2010

2.1 The motor can be divided the form of horizontal, flange installation according to their installation.

2.2 Model representation shown as follows:



Marked sample:

Motor frame shaft heights 132mm; Core length is medium length M; 4-pole motor. Its representation is YEZ132M-4.

2.3 Motor case protection rating shall comply with GB4942.1 in IP44.

2.4 Motor cooling method shall comply with GB 193-80 in ICO141.

2.5 Construction and mounting of the motor is IMB5.

2.6 Basic duty type is S4, JC25%. Equivalent to 120 times starts per hour.

2.7 Motor rated voltage 380v, 50 Hz. supply OEM voltage: 220v/230v/240v/400v/415v/418v/440v/480v, 50/60 Hz.

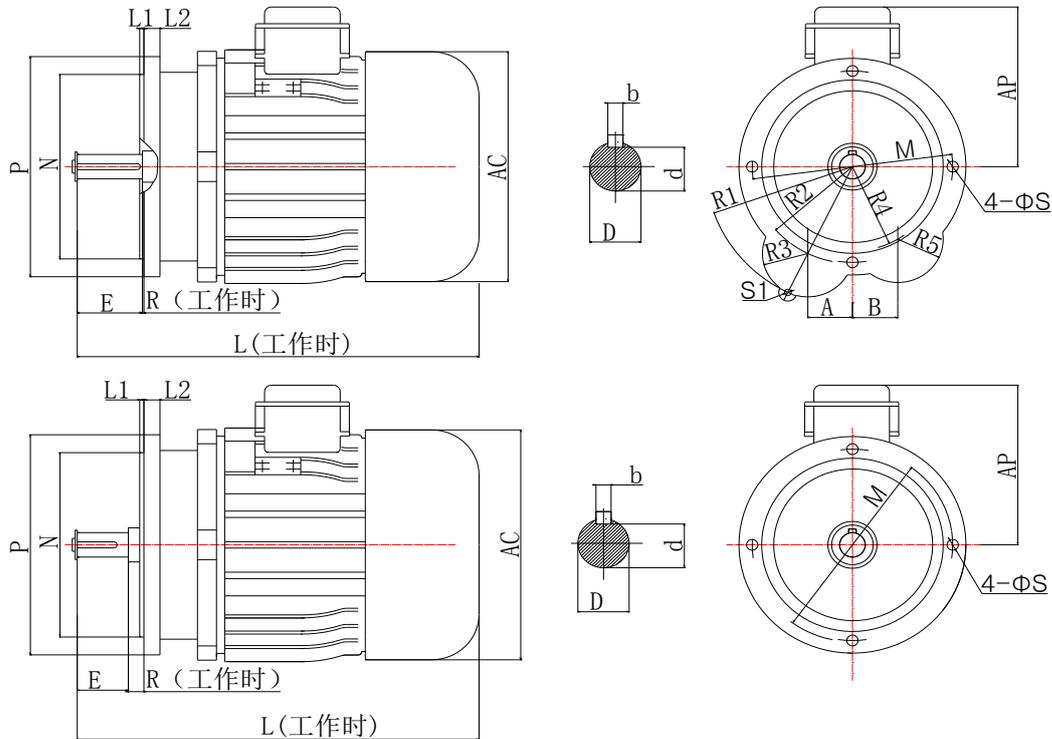
2.8 Motor (including fan rotating wheel) moment of inertia. Tolerance is +10%.

Power (kw)	3.0	4.5	5.5	7.5	11	13	15	18.5
Moment of Inertia (kg.m ²)	0.130	0.160	0.175	0.390	0.700	0.890	1.050	1.120

2.9 Static braking torque and braking torque of motor

Power (kw)	3.0	4.5	5.5	7.5	11	13	15	18.5
Static Braking Torque (N.m)	35	53	64	83	128	154	170	210
Braking Torque (N.m)	42	62.7	75	98	150	182	205	252

2.10 Motor mounting dimensions, tolerances and dimensions



Type	Power KW	M	N	P	L ₁	L ₂	S	Shaft extension Dimensions								A	B	R1	S1	AC	AP	L
								E	R	D	b	d										
YEZ112S-4	3.0	Ø265	240j6	Ø300	4	16	Ø5	平键	60h ₁₂	0	32k ₆	10	28	59	60	194	9	272	171	448		
								花键	40	20	6-23h ₁₅ ×28f ₉ ×6d ₁₁											
YEZ112L-4	4.5	Ø265	240j6	Ø300	4	16	Ø5	平键	60h ₁₂	0	32k ₆	10	28	59	60	194	9	272	171	460		
								花键	30	29	6-23h ₁₅ ×28f ₉ ×6d ₁₁											
YEZ132S-4	5.5	Ø265	240j6	Ø300	4	16	Ø5	平键	80h ₁₂	0	38k ₆	10	34	59	60	194	9	272	171	490		
								花键	35	45	10-28h ₁₅ ×36f ₉ ×4d ₁₁											
YEZ132L-4	7.5	Ø265	240j6	Ø300	4	16	Ø9	平键	80h ₁₂	0	38k ₆	10	34	59	60	194	9	328	188	517		
								花键	35	45	10-28h ₁₅ ×36f ₉ ×4d ₁₁											
YEZ160S-4	11	Ø300	250j6	Ø350	5	18	Ø9	平键	110h ₁₂	0	42k ₆	12	37	/	/	/	/	400	260	662		
								花键	40	65	10-28h ₁₅ ×40f ₉ ×4d ₁₁											
YEZ160M-4	13	Ø300	250j6	Ø350	5	18	Ø9	平键	110h ₁₂	0	42k ₆	12	37	/	/	/	/	400	260	662		
								花键	40	65	10-28h ₁₅ ×40f ₉ ×4d ₁₁											
YEZ160L-4	15	Ø300	250j6	Ø350	5	18	Ø9	平键	110h ₁₂	0	45k ₆	12	37	/	/	/	/	400	260	662		
								花键	40	65	6-40h ₁₅ ×45f ₉ ×12d ₁₁											
YEZ180M-4	18.5	Ø300	250j6	Ø350	5	18	Ø9	平键	110h ₁₂	0	45k ₆	12	37	/	/	/	/	400	260	662		
								花键	55	55	8-42h ₁₅ ×48f ₉ ×8d ₁₁											

平键: Flat Button; 花键: Spline.

3. The Factory Inspection Standards

- 3.1 When motor runs properly, the supply voltage (rated frequency) deviation does not exceed the rating of $\pm 5\%$, output power can be maintained rated power. When the voltage deviation occurs with the rated voltage, motor's winding temperature rises allow improved 10K than the provision. When the frequency (voltage rated) deviation does not exceed the rating of $\pm 1\%$, the output power can be maintained constant value. When the voltage and frequency deviations occur in the same time (two deviations does not exceed $\pm 5\%$ and $\pm 1\%$), the Output power of motor can maintain rated value, in this case the motor winding temperature allows improved 10K than the provision.
- 3.2 Motor work in the rated power and rated voltage, the ratio of maximum torque and stall torque with rated torque as fellow(including stall current):

Power (kw)	Maximum Torque / Rated Torque	Stall Torque / Rated Torque	Stall Current (A)
3.0	2.7	2.7	42
4.5	2.7	2.7	60
5.5	2.7	2.7	85
7.5	3.0	3.0	100
11	3.0	3.0	140
13	3.0	3.0	165
15	3.0	3.0	200
18.5	3.0	3.0	229

- 3.3 Motor with Grade B insulation. When use site altitude does not exceed 1000m, temperature does not exceed $40\text{ }^{\circ}\text{C}$, not lower than $-15\text{ }^{\circ}\text{C}$, motor winding temperature rise should not exceed 80K, Bearing allowable temperature not exceed $95\text{ }^{\circ}\text{C}$.
- 3.4 At rated load, when the motor terminal voltage is not less than 90% of rated voltage, motor can ensure that all bodies can work stably.
- 3.5 The insulation resistance of the motor winding in the hot state is not less than $0.38\text{M}\Omega$.
- 3.6 The motor terminal box has a grounding screw, there should has phase sequence logo when it has six outlet wires.
- 3.7 The noise figure of A-weighted Sound Power Level when the motor no load.

Power (KW)	3.0	4.5	5.5	7.5	11	13	15	18.5
Sound Power Level db(A)	90	90	90	94	96	98	98	98

- 3.8 The fastening bolts of the motor have anti-loosening measures.
- 3.9 Brakes should be smooth and reliable braking, and can be adjusted and replacement when the brake rings wear. Brake wheel assembly to ensure motor starting and braking axial runout between 1.5 to 3.0 mm.
- 3.10 If the user proper care and use of the motor accordance with the instructions, the manufacturer shall ensure the motor be able to run well within one year of the motor in use or not more than two years from the factory shipment date. If within this predetermined time, the motor damage or does not working during normal operation due to poor manufacturing quality, the manufacturer shall be free for users to repair or replace parts or motors.
- 3.11 Visual inspection:
Painting should be uniform, bright, consistent color.



Compose by:
Zhengzhou Five Star Motor Co., Ltd.
Henan Hiya Mechanical Equipment Co., Ltd.
www.hiyamech.com