

# TOSHIBA

## Low Voltage Three-Phase Squirrel-cage Induction Motor REFRIGERATOR FAN MOTOR



## General Information

The cooling fan motor is designed to achieve IE3 efficiency, bringing high value to the freezer industry, installed in equipment with operating temperature (-50~20°C) with this special design allowing the motor to operate stably in refrigerators, freezers and cooling fans.

## Available Features

- IE3 Efficiency Levels per JIS C 4213 : 2014
- Totally Enclosed, Non-Ventilated
- Connection Lead wire is Cab type (without terminal box) with free length according to customer request
- With feature of motor frame by cast iron
- Designed with materials that can withstand cold

## Suitable for various application



### General air conditioning

For cooling and heating, air conditioning and ventilation, apply for axial flow fan



### Freezing and refrigeration

For blowing, exhausting, and agitating cold air in freezers and refrigerators



### Drying

For drying wood, tobacco, laver, fish, grain, grass, rush, shiitake mushrooms, etc.



### Equipment cooling

For help maintain airflow and temperature control in buildings, warehouses, and factories.

**Standard Specifications**

Item		Description						
1	Pole	4						
2	Output (kW)	0.75	1.5	2.2	3.7			
3	Frame size	80M	90L	100L	112M			
4	Insulation Class	120 (E)						
5	Type	IKH3						
6	Form	FBK21E						
7	Voltage - Frequency	200/200/220V-50/60/60Hz						
8	Efficiency Class	IE3						
9	Enclosure Construction	TENV (TOTALLY-ENCLOSED, NON-VENTILATED)						
10	Protection	IP40						
11	Cooling system	IC411						
12	Grease	MULTEMP SRL						
13	Time Rating	Cont. (S1)						
14	Rotational Direction*	Counterclockwise, as viewed from load side						
15	Mounting Direction	Foot Mounting, Horizontal						
16	Driven connection	Direct connection						
17	Lead wire Connection Method	Exit method	Cab type (without terminal box)					
		Location	Left side as see from the load side					
18	Temperature **	-50 ~ -20 °C						
19	Humidity	Up to 100% (No condensation)						
20	Altitude	Up to 1000m						
21	Coating	Dark green (Approximate color match to JIS code 3.74BG3.04/1.25)						
22	Standard	JIS C 4213:2014						

\*Can also be used clockwise; please inquire for details

\*\* - Make sure there is no external thermal influence during operation

- Make sure there is no obstruction to the motor cooling airflow

(Ensure that the airflow is the same as when the motor is operating alone)

## Dimensions

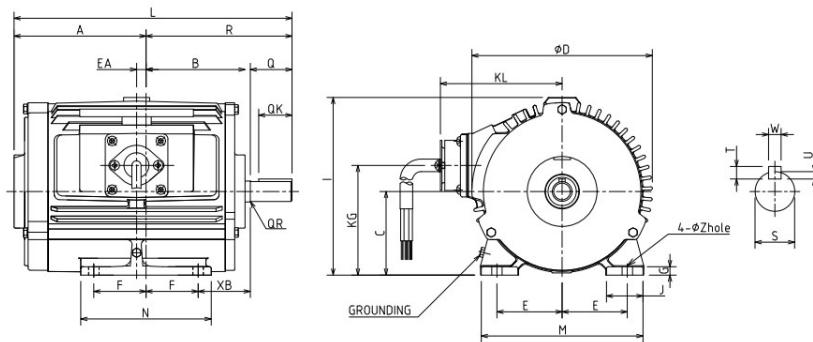


Fig. 1

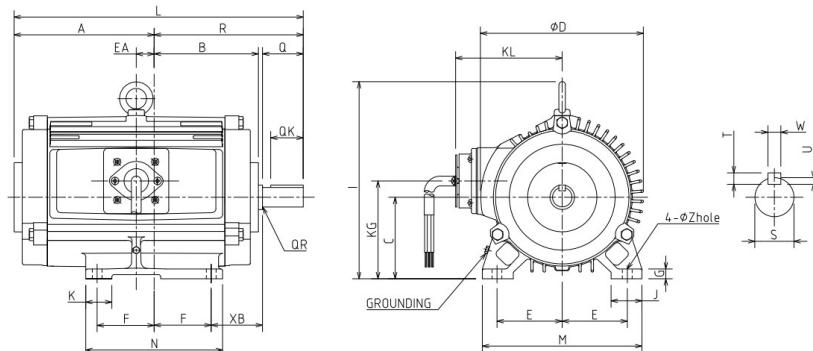


Fig. 2

Frame	Fig.	A	B	C	D	E	F	G	I	J	K	L	XB
80M	1	126.5	95	80	173	62.5	50	8	170	35	-	266.5	50
90L	2	148.5	113.5	90	200	70	62.5	10	232	38	31	317	56
100L	2	172	128	100	200	80	70	12	242	38	32	355	63
112M	2	180	134	112	243	95	70	12	274	40	36	380	70

Frame	Fig.	EA	Q	QR	S	W	T	U	M	N	R	Z
80M	1	9	40	32	0.5	19	6	6	3.5	155	125	140 4-Ø10
90L	2	17.5	50	40	0.5	24	8	7	4	172	149	168.5 4-Ø10
100L	2	22	50	40	0.5	24	8	7	4	196	168	183 4-Ø12
112M	2	23	60	45	1.5	28	8	7	4	220	168	200 4-Ø12

(1) Tolerance of C dimensions is 0 ~ -0.5.

(2) Tolerance of S is stipulated by JIS B 0401 (dimensional tolerance and fit); Ø19~28mm: j6.

(3) Shaft end key and keyway conform with the parallel key and keyway of JIS B 1301

### Cautions

- ※ If you are using the motor on equipment that could seriously affect human lives or public functions (such as nuclear power control, traffic machinery, transport machinery, life-support system, chemical plant, various types of safety equipment, etc.), please contact us for consultation.
- ※ Though Toshiba's motors are made under a strict quality control, due to the environment and conditions, there is a possibility of malfunctioning. Please create a failsafe or back-up system on the equipment design, if there is any possibility of serious damage when the motor's malfunction.
- ※ The usage environment's limit range is stated in the catalog and manual. Please do not use it out of the usage environment range. It could cause accidents such as injuries and fire.
- ※ Please read the manual's safety instructions, and use the motor correctly.
- ※ If the motors are used for personal transports or elevators, please establish a protection device for safety of the equipping side.
- ※ For further information, please contact your nearest Toshiba Representative. The information in this brochure is subject to change without notice.

## TOSHIBA INDUSTRIAL PRODUCTS ASIA

### Designs Department Motor Drive Division

Plot 309, Road 9, Amata IP, Long Binh Ward, Bien Hoa city, Dong Nai Province, Vietnam

Tel: (84-251) 3936969

Fax: (84-251) 3936847

Tax Code: 3601324879