IEC Motors

Totally Enclosed Fan Cooled
Tosh-ECO® Permanent Magnet Motor

Toshiba is proud to introduce new Permanent Magnet low voltage motor products. With ever-increasing regulations on energy efficiency for electric motors, Toshiba offers AC Permanent Magnet motors designed to meet IE4 and "Super Premium" efficiency levels. The AC Permanent Magnet Motor utilizes rare-earth neodymium elements in the rotor construction. By using permanent magnets incorporated into the AC Motor design, the motor utilizes the same power output and high torque density with reduced size and weight.

Standard Features:

- Totally Enclosed Fan Cooled
- Average Efficiency Improvement of 5-8% over Induction Motors
- Powerful Mechanical Strength & Corrosion Resistance of Rare Earth Magnet in Core
- Meets IE4 Efficiency Levels (As Defined by IEC60034-30-1)
- 400 V
- Three-Phase
- 1.0 Service Factor
- Class F-Random Wound
- IP55 Protection
- Slipless Design, Synchronous Speed, & Precise Application and Rotation Control
- No I2R Losses in Rotor
- Rotatable 90˚ Increments F-3 (Top Mount) with 2 Ground Provisions (One Plastic Cable Gland & Plug)
- Suitable for High Speed Operation Up to 20% Above Rated Speed at Constant Power (Beyond NEMA Max Overspeed)
- Non-NAFTA Qualified
- Pairs with AS3 & S15 Adjustable Speed Drives

Applications:

- Pumps
- Fans
- Conveyors
- Compressors
- Centrifuges
- Mixers

Totally Enclosed Fan Cooled
Tosh-ECO®
Permanent Magnet Motor
Super Premium Efficiency

CC129B

3 THREE YEAR WARRANTY

Toshiba is proud to introduce the IEC IE4 Permanent Magnet motors from the new Tosh-ECO® series. With ever-increasing regulations on energy efficiency for electric motors, Toshiba offers an AC permanent magnet motor to meet the IE4 and "Super Premium" efficiency levels. The AC permanent magnet motor utilizes rare-earth neodymium elements in the rotor construction. By using permanent magnets incorporated into the AC motor design, the motor utilizes the same power output and high torque density with reduced size and weight.

Product Scope:

Power:	.55 to 315 kW
Speed:	4500, 3600 & 1800 RPM
Volt:	400 V
Enclosure:	Totally Enclosed Fan Cooled
Frame Size:	71 - 315 Frame per IEC 60072
Construction:	Aluminum Frame 71 - 132; Cast Iron Frame 160 - 315
Insulation Class:	Class F-Random Wound
Applicable Standards:	IEC 60034, 60072, 60204
Mounting:	Suitable for Horizontal Mounting; All Mounting Orientations for <160 Frame

Note: Consult factory for other ratings not listed
*Operates with an ASD

KW	Speed (RPM)	Volts	Frame	Weight (kg)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol
0.55	3600	400	71M	5	PM1	1.2	88.0	1	MECPMM
0.55	1800	400	71M	5	PM2	1.2	87.1	1	MECPMM
0.75	4500	400	71M	5	PM3	1.6	88.2	1	MECPMM
0.75	3600	400	71M	5	PM4	1.6	88.6	1	MECPMM
0.75	1800	400	71M	6	PM5	1.6	88.6	1	MECPMM
1.1	4500	400	71M	5	PM6	2.3	89.5	1	MECPMM
1.1	3600	400	71M	6	PM7	2.3	90.0	1	MECPMM
1.1	1800	400	71M	7	PM8	2.3	89.7	1	MECPMM
1.5	4500	400	71M	6	PM9	3.2	90.4	1	MECPMM
1.5	3600	400	71M	6	PM10	3.2	90.9	1	MECPMM
1.5	1800	400	71M	7	PM11	3.2	89.9	1	MECPMM
1.5	1800	400	90L	11	PM12	3.2	90.9	1	MECPMM
2.2	4500	400	71M	7	PM13	4.6	91.5	1	MECPMM
2.2	4500	400	90L	11	PM14	4.7	90.0	1	MECPMM
2.2	3600	400	71M	7	PM15	4.5	91.8	1	MECPMM
2.2	3600	400	90L	11	PM16	4.6	91.3	1	MECPMM
2.2	1800	400	90L	13	PM17	4.5	91.5	1	MECPMM
3	4500	400	90L	11	PM18	6.4	91.2	1	MECPMM
3	3600	400	90L	13	PM19	6.3	91.6	1	MECPMM
3	1800	400	90L	15	PM20	6.2	91.5	1	MECPMM
4	4500	400	90L	13	PM21	8.3	92.0	1	MECPMM
4	3600	400	90L	15	PM22	8.3	91.7	1	MECPMM

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Tosh-ECO®
Permanent Magnet Motor
Super Premium Efficiency

KW	Speed (RPM)	Volts	Frame	Weight (kg)	Model Number	FL Amps	Nominal FL EFF	Notes	Discount Symbol
4	1800	400	90L	18	PM23	8.1	92.1	1	MECPMM
4	1800	400	112M	24	PM24	8.1	92.2	1	MECPMM
5.5	4500	400	90L	15	PM25	11.5	92.6	1	MECPMM
5.5	3600	400	90L	17	PM26	11.2	93.0	1	MECPMM
5.5	3600	400	112M	24	PM27	11.3	92.2	1	MECPMM
5.5	1800	400	112M	27	PM28	11.1	92.8	1	MECPMM
7.5	3600	400	112M	27	PM29	15.0	92.8	1	MECPMM
7.5	1800	400	112M	32	PM30	14.9	93.4	1	MECPMM
11	3600	400	112M	32	PM31	22	93.6	1	MECPMM
11	1800	400	112M	35	PM32	22	93.6	1	MECPMM
11	1800	400	132M	54	PM33	22	94.2	1	MECPMM
15	3600	400	112M	35	PM34	29	93.9	1	MECPMM
15	3600	400	132M	54	PM35	31	94.0	1	MECPMM
15	1800	400	132M	61	PM36	29	94.7	1	MECPMM
18.5	3600	400	132M	61	PM37	37	94.3	1	MECPMM
18.5	1800	400	132M	68	PM38	36	94.8	1	MECPMM
22	3600	400	132M	68	PM39	44	94.4	1	MECPMM
30	3600	400	132M	75	PM40	58	94.7	1	MECPMM

FL Amps and FL EFF are average expected design values and not guaranteed.
The weights listed above are estimated.
Please contact Toshiba for information on product availability.
"CF" = Consult Factory