

Synchronous Main Motor

A New Main Motor Series

Taipei, Taiwan, 2018

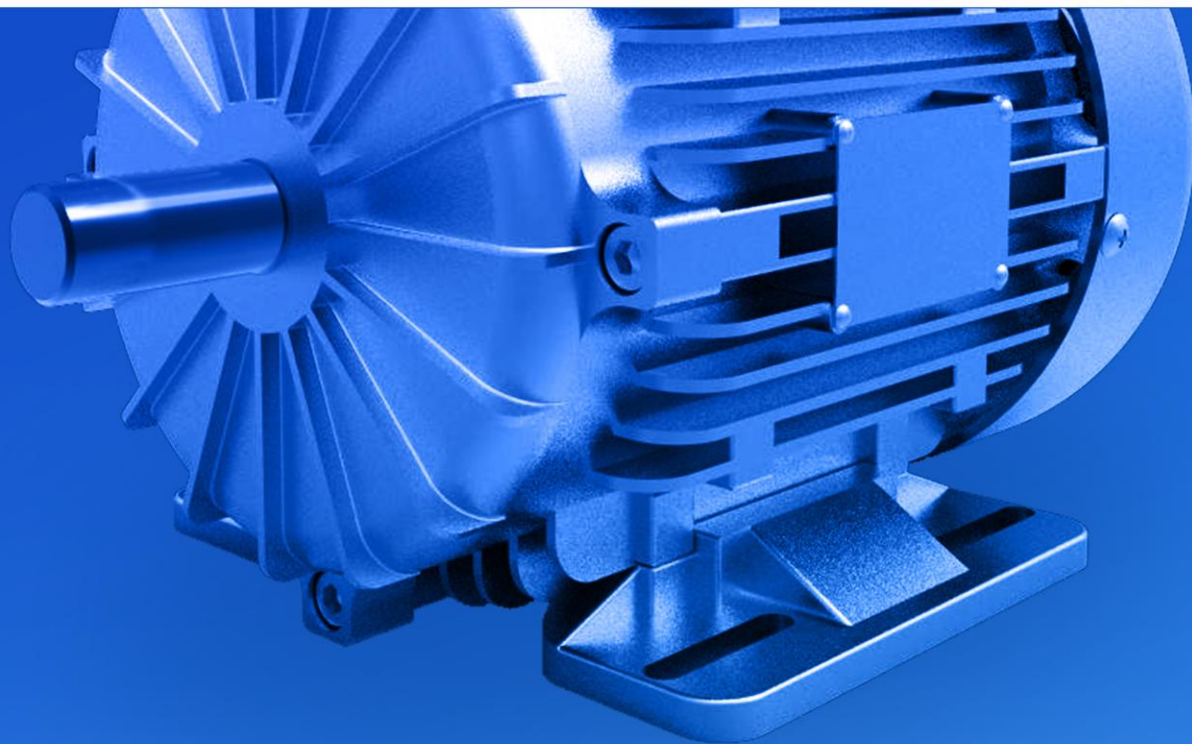
Chicony Power announced a new main motor series. The main motor series covers an achievement range from 1.5kW to 11kW. It features high efficiency, wide rotating speed, low noise and low vibration. The motor integrates with an encoder and a forced ventilation fan, and is compatible with universal drives. It could apply to many areas, especially multi-axis motion control application.



Features

- High Efficiency
- High Protection Grade
- Fast Acceleration
- High Peak Torque
- Low Cogging Torque
- Low Noise & Vibration

Chicony
POWER TECHNOLOGY



Super Premium Efficiency Permanent Magnet Motor

High efficiency and compact design
make Chicony Power Motor.

IE4⁺

Chicony
POWER TECHNOLOGY

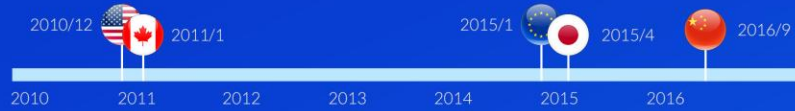


Interior Permanent Magnet

Synchronous motor without slip
Variable speed control
Low inertia & high peak torque
Low noise & low vibration

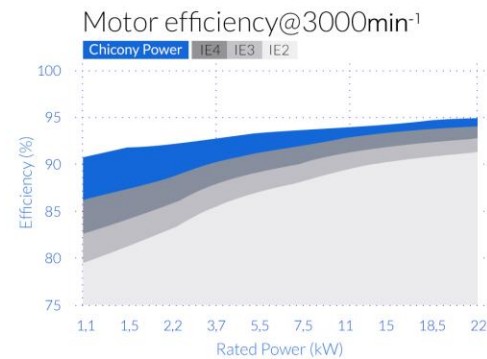
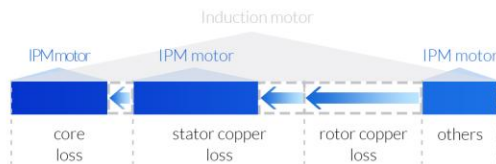
High efficiency is mandatory

Since Jan. 2015, the energy efficiency of new released motors has to be the same or higher than IE3 level, which is enforced by the European Union.



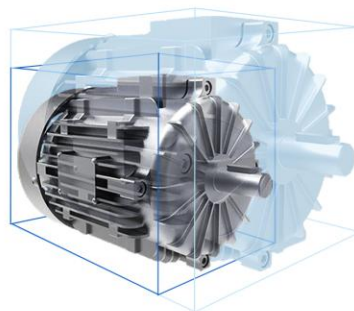
1 High Efficiency

Permanent magnets are used in rotor to achieve higher efficiency without rotor copper loss generated.



2 Compact

Smaller and lighter than ever before !

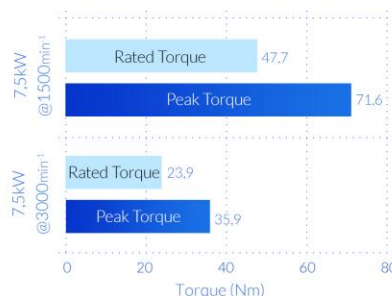


3 Lightweight



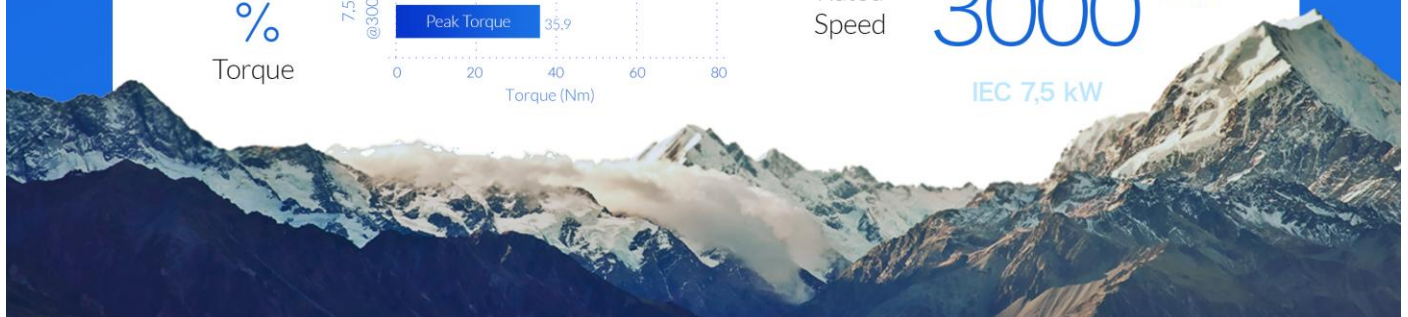
4 High Peak Torque

50%
Torque



5 High Rotating Speed

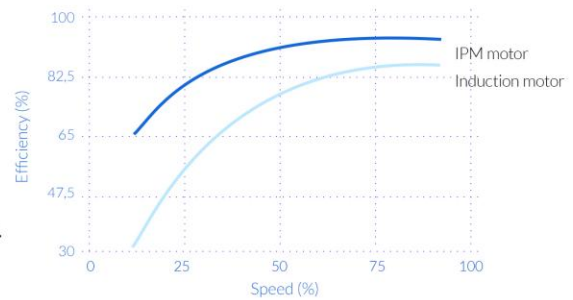
Maximum Speed: 5400 min⁻¹
Rated Speed: 3000 min⁻¹
IEC 7.5 kW



Highest efficiency at speed and load as required

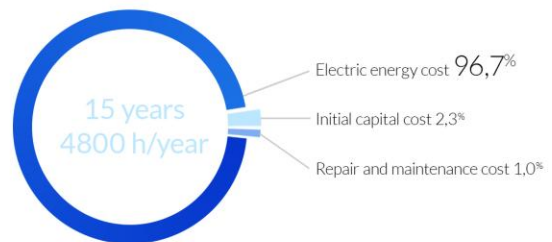
IPM motors are controlled by inverters, offering the notable features:

- Highest efficiency at the load as required, particularly at partial load.
- High peak torque at instantaneous 150% load.
- Low temperature rise in bearings provided longer life span.
- Much lower starting current provided longer life span.



Most effective way for total cost saving

Using the operation cost structure of an 11kW motor as an example, 96.7% of the total cost is associated with powering the motor; the rest of it is spending on initial capital, repair and maintenance. Obviously, applying more efficient IPM motors can reduce your energy bill significantly year after year.



Quick payback and environmental friendly

Voltage/Frequency: 230V/50Hz
 Running time per year: 4800h (16h/day, 300days)
 Electricity price: €0,15/kWh
 CO2 emission: 1000kWh≈0,55ton CO2
 Electricity cost savings (Eur) = Rated power (kW) x
 Running time (h/year) x Electricity price (Eur/kWh)
 $\times \left(\frac{100}{\text{Standard efficiency (\%)}} - \frac{100}{\text{High efficiency (\%)}} \right)$

€510 savings
 CO₂ 1,75 tons reduction
 7,5 kW

€911 savings
 CO₂ 3,58 tons reduction
 22 kW

€1.370 savings
 CO₂ 5,32 tons reduction
 45 kW

Energy Cost

7,5 kW

22 kW

45 kW

Standard Efficiency

€ 6.279

€ 17.620

€ 35.333

Chicony Power

€ 5.769

€ 16.709

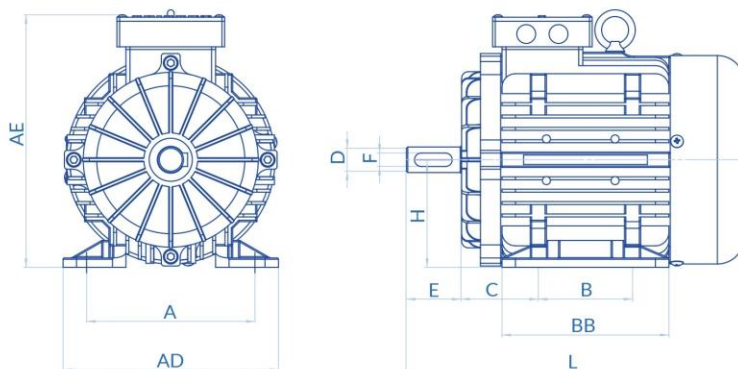
€ 33.962

VOLTAGE @400VACInsulation Class F
Protection Class IP54

Rated Power kW	Rated Speed min ⁻¹	Maximum Speed min ⁻¹	Rated Torque Nm	Peak Torque Nm	Rated Current A	IEC Frame	Weight kg
0,55	1500	2700	3,5	5,3	1,1	80	8,0
0,75	1500	2700	4,8	7,2	1,5	80	9,0
1,1	1500	2700	7,0	10,5	2,2	80	10,5
1,5	1500	2700	9,5	14,3	3,0	80	11,5
2,2	1500	2700	14,0	21,0	4,5	90	16,0
3,7	1500	2700	23,6	35,4	7,4	90	18,0
5,5	1500	2700	35,0	52,5	11,5	112	27,5
7,5	1500	2700	47,7	71,6	14,8	112	32,0
1,1	3000	5400	3,5	5,3	2,2	80	8,0
1,5	3000	5400	4,8	7,2	3,0	80	9,0
2,2	3000	5400	7,0	10,5	4,5	80	10,5
3,7	3000	5400	11,8	17,7	7,4	90	16,0
5,5	3000	5400	17,5	26,3	10,9	90	18,0
7,5	3000	5400	23,9	35,9	14,0	112	23,5
11,0	3000	5400	35,0	52,5	23,0	112	27,5
15,0	3000	5400	47,7	71,6	30,0	112	32,0
2,2	6000	8100	3,5	5,3	4,3	80	8,0
3,0	6000	8100	4,8	7,2	6,0	80	9,0
3,7	6000	8100	5,9	8,9	7,7	80	9,5
4,4	6000	8100	7,0	10,5	8,6	80	10,5
5,5	6000	8100	8,8	13,2	11,2	80	11,0
6,0	6000	8100	9,5	14,3	12,0	80	11,5
8,8	6000	8100	14,0	21,0	18,0	90	16,0
7,5	6000	8100	11,9	17,9	14,0	112	19,0
11,0	6000	8100	17,5	26,3	21,0	112	21,0
15,0	6000	8100	23,9	35,9	28,0	112	23,5

IM B3 Unit: mm * IM B5, B35, B14, V1 are available upon request.

IEC	H	A	B	C	D	E	F	L	AD	AE	BB
80	80	125	100	50	19	40	6	277	160	179	130
90	90	140	125	54	24	50	8	328	173	227	150
112	112	190	140	70	28	60	8	340	230	268	185

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