

**Type** : 3EL225M2C-PD-BA-000**Date** : 12/08/2025

Power [kW] : 45.0  
Input Voltage [V] : 400  
Connection Type [Δ / Y] : Δ  
Frequency [Hz] : 50  
Pole Number : 2  
Nominal Speed [rpm] : 2970  
Nominal Current [A] : 76.8  
Nominal Moment [Nm] : 145  
Nominal Efficiency [η] : 94.0  
Power Factor [cosφ] : 0.90  
Locked Rotor Current [Ia/In] : 8.6  
Locked Rotor Torque [Ma/Mn] : 3.3  
Breakdown Torque [Mk/Mn] : 3.1  
Motor Color : RAL 7031  
Ambient Temperature : -15°C / +40°C

Efficiency Class : IE3  
Duty Cycle : S1  
Service Factor : 1.20  
Frame Size : 225M  
Weight [kg] : 275  
Insulation Class : F [155°C]  
Temperature Rise : B [80°K]  
Protection Class : IP55  
Vibration Severity Grade : A  
Method of Cooling : IC411 (TEFC)  
Direction of Rotation : Bidirectional  
Balance : Half Key  
Motor Thermal Protection : PTC  
Altitude Above Sea Level : 1000m  
Sound Pressure Level [dBA] : 74

**ELECTRICAL DATA**

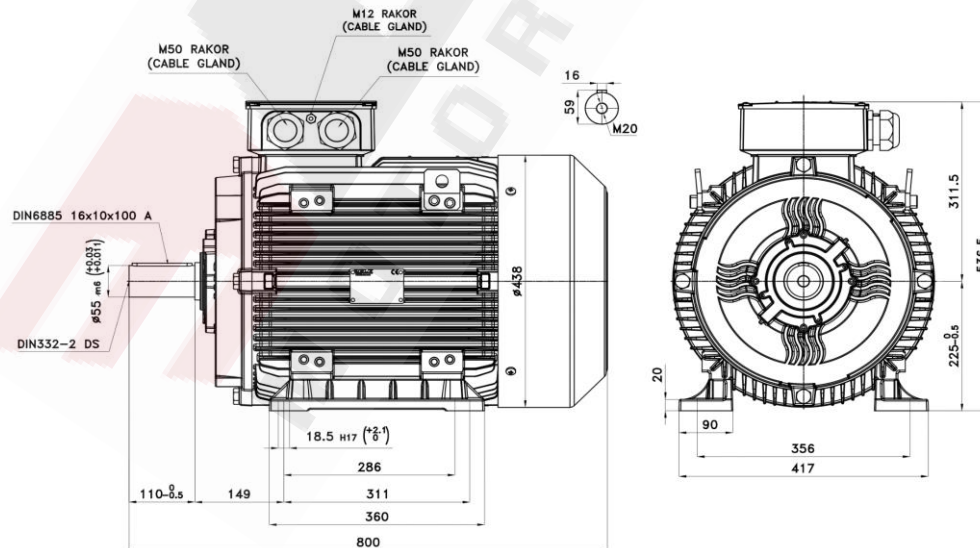
| Δ / Y | U [V] | f [Hz] | P [kW] | n [rpm] | I [A] | η [%100] | η [%75] | η [%50] | cosφ | CI  |
|-------|-------|--------|--------|---------|-------|----------|---------|---------|------|-----|
| Δ     | 400   | 50     | 45.0   | 2970    | 76.8  | 94.0     | 94.4    | 94.2    | 0.90 | IE3 |
| Y     | 690   | 50     | 45.0   | 2970    | 44.3  | 94.0     | 94.4    | 94.2    | 0.90 | IE3 |
| Δ     | 460   | 60     | 45.0   | 3565    | 67.0  | 93.8     | 94.2    | 94.0    | 0.90 | IE3 |
| Δ     | 460   | 60     | 52.2   | 3560    | 76.7  | 94.0     | 94.5    | 94.3    | 0.91 | IE3 |

**MECHANICAL DATA**

Moment of Inertia [kgm<sup>2</sup>] : 0.25353  
Bearing [DS / NS] : 6313ZZ C3 / 6213ZZ C3  
Frame Material : Aluminum  
Flange Type / Material : B3 / Aluminum  
Cooling Fan Material : Plastic  
End Shield Material : Aluminum

**TERMINAL BOX**

Terminal Box Material : Aluminum  
Terminal Box Position : Top  
Terminal Box Cable Entry : M12x1.5+2xM50x1.5  
Terminal Box Blind Cap : --  
Contact Screw Thread : M8

**MECHANICAL DIMENSIONS**

Manufactured and tested in accordance with IEC 60034

\*Technical data are subject to change! There may be discrepancies between calculated and rating plate values.

\*ELK Motor has right to change all the data without prior notice.

FR.AG.010 REV.NO: 04 REV.DATE: 01.01.2023



ELK MOTOR SAN. ve TİC. A.Ş.  
www.elkmotor.com.tr  
+90 (282) 726 92 94

TECHNICAL DATASHEET ACCORDING TO  
COMMISSION REGULATION (EU) 2019/1781  
THREE PHASE INDUCTION MOTOR - SQUIRREL CAGE

Type : 3EL225M2C-PD-BA-000

Date : 12/08/2025

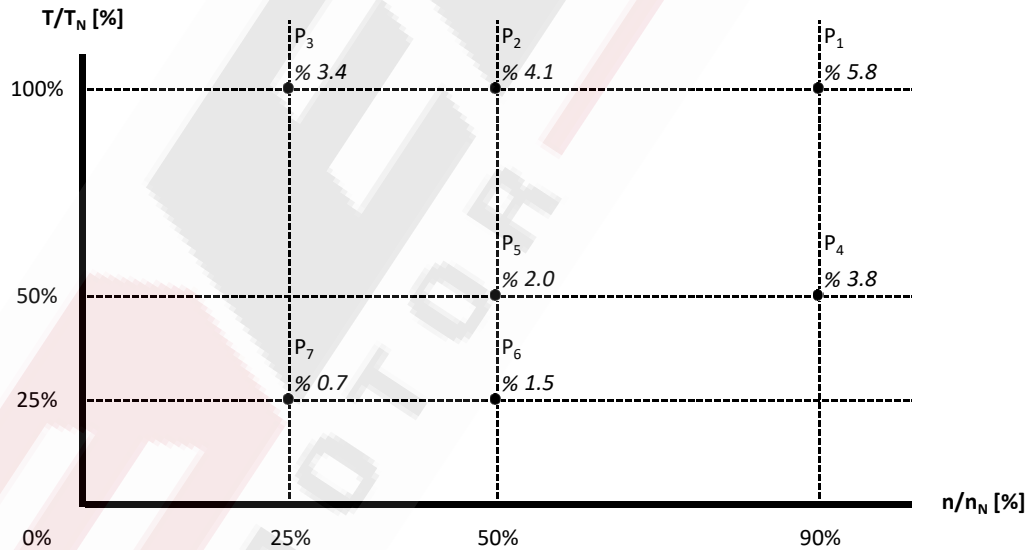
NAMEPLATE DATA

|                                 |            |                                |        |
|---------------------------------|------------|--------------------------------|--------|
| Power [kW]                      | : 45.0     | Nominal Speed [rpm]            | : 2970 |
| Nominal Voltage [V]             | : 400      | Nominal Current [A]            | : 76.8 |
| Connection Type [ $\Delta$ / Y] | : $\Delta$ | Nominal Moment [Nm]            | : 145  |
| Nominal Frequency [Hz]          | : 50       | Nominal Efficiency [ $\eta$ %] | : 94.0 |

THE POWER LOSSES AT SEVEN OPERATING POINTS ACCORDING TO COMMISSION REGULATION (EU) 2019/1781

| Operating Point Number | Speed $n/n_N$ [%] | Torque $T/T_N$ [%] | Relative Power Losses $P_L/P_N$ [%] | Efficiency $\eta$ [%] |
|------------------------|-------------------|--------------------|-------------------------------------|-----------------------|
| P <sub>1</sub>         | 90                | 100                | 5.8                                 | 93.9                  |
| P <sub>2</sub>         | 50                | 100                | 4.1                                 | 92.5                  |
| P <sub>3</sub>         | 25                | 100                | 3.4                                 | 88.0                  |
| P <sub>4</sub>         | 90                | 50                 | 3.8                                 | 92.2                  |
| P <sub>5</sub>         | 50                | 50                 | 2.0                                 | 92.5                  |
| P <sub>6</sub>         | 50                | 25                 | 1.5                                 | 89.4                  |
| P <sub>7</sub>         | 25                | 25                 | 0.7                                 | 89.3                  |

MAP OF RELATIVE POWER LOSSES  $P_L/P_N$  [%]



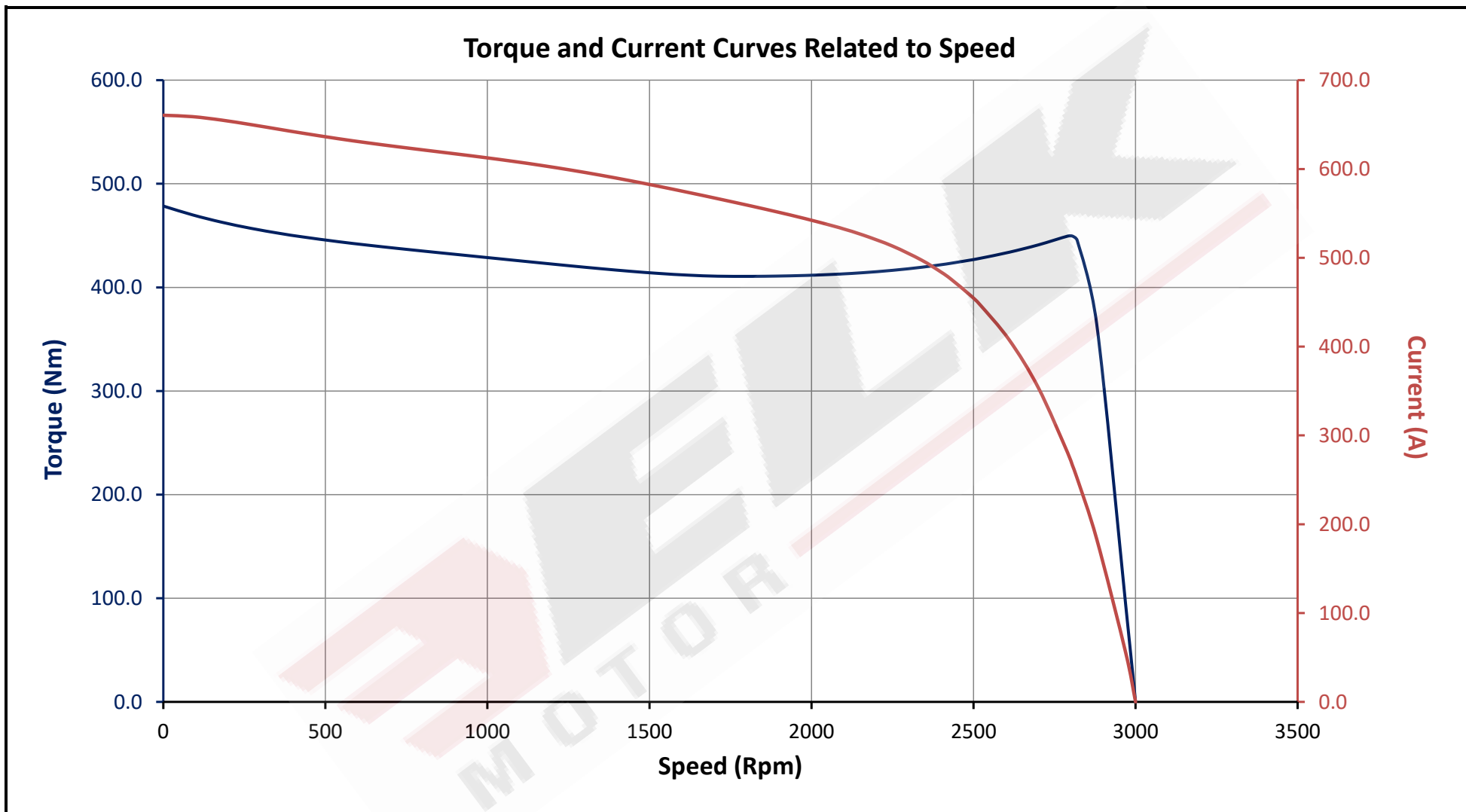
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Performance Curves Related to Rated Output

