

Type : 3EL225M4D-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 : 4
Nominal Speed [rpm] : 1477
Nominal Current [A] : 80.0
Nominal Moment [Nm] : 291
Nominal Efficiency [η] : 94.2
Power Factor [$\cos\phi$] : 0.86
Locked Rotor Current [I_a/I_n] : 8.6
Locked Rotor Torque [Ma/Mn] : 3.3
Breakdown Torque [Mk/Mn] : 3.2
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] : 267
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] : 67

ELECTRICAL DATA

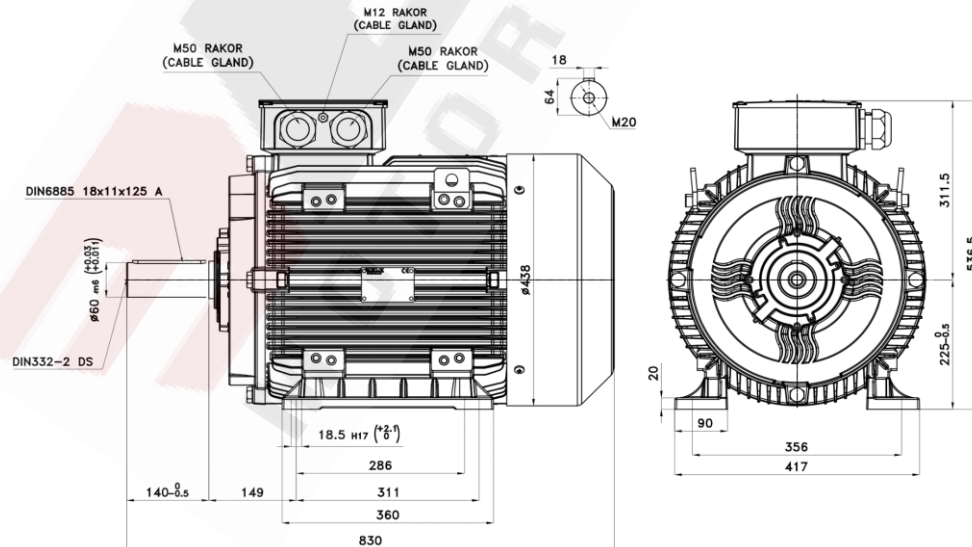
Δ / Y	U [V]	f [Hz]	P [kW]	n [rpm]	I [A]	η [%100]	η [%75]	η [%50]	$\cos\phi$	CI
Δ	400	50	45.0	1477	80.0	94.2	94.7	94.7	0.86	IE3
Y	690	50	45.0	1477	46.2	94.2	94.7	94.7	0.86	IE3
Δ	460	60	45.0	1782	69.3	95.0	95.0	94.2	0.86	IE3
Δ	460	60	52.2	1780	80.0	94.1	94.4	94.3	0.87	IE2

MECHANICAL DATA

Moment of Inertia [kgm^2] : 0.44100
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



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

Type : 3EL225M4D-PD-BA-000

Date : 12/08/2025

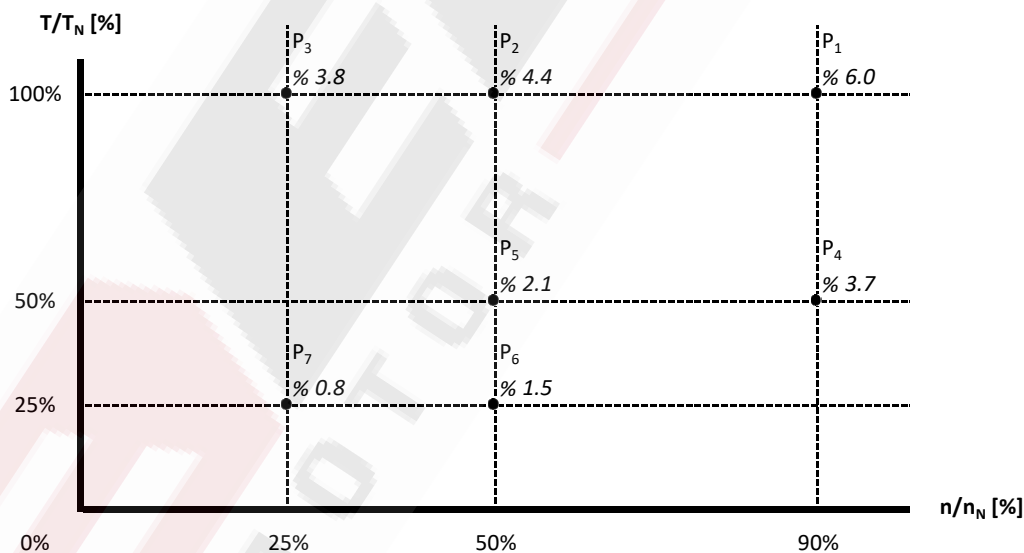
NAMEPLATE DATA

Power [kW]	: 45.0	Nominal Speed [rpm]	: 1477
Nominal Voltage [V]	: 400	Nominal Current [A]	: 80.0
Connection Type [Δ / Y]	: Δ	Nominal Moment [Nm]	: 291
Nominal Frequency [Hz]	: 50	Nominal Efficiency [η %]	: 94.2

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 η [%]
P ₁	90	100	6.0	93.8
P ₂	50	100	4.4	91.9
P ₃	25	100	3.8	86.7
P ₄	90	50	3.7	92.4
P ₅	50	50	2.1	92.2
P ₆	50	25	1.5	89.2
P ₇	25	25	0.8	88.1

MAP OF RELATIVE POWER LOSSES P_L/P_N [%]



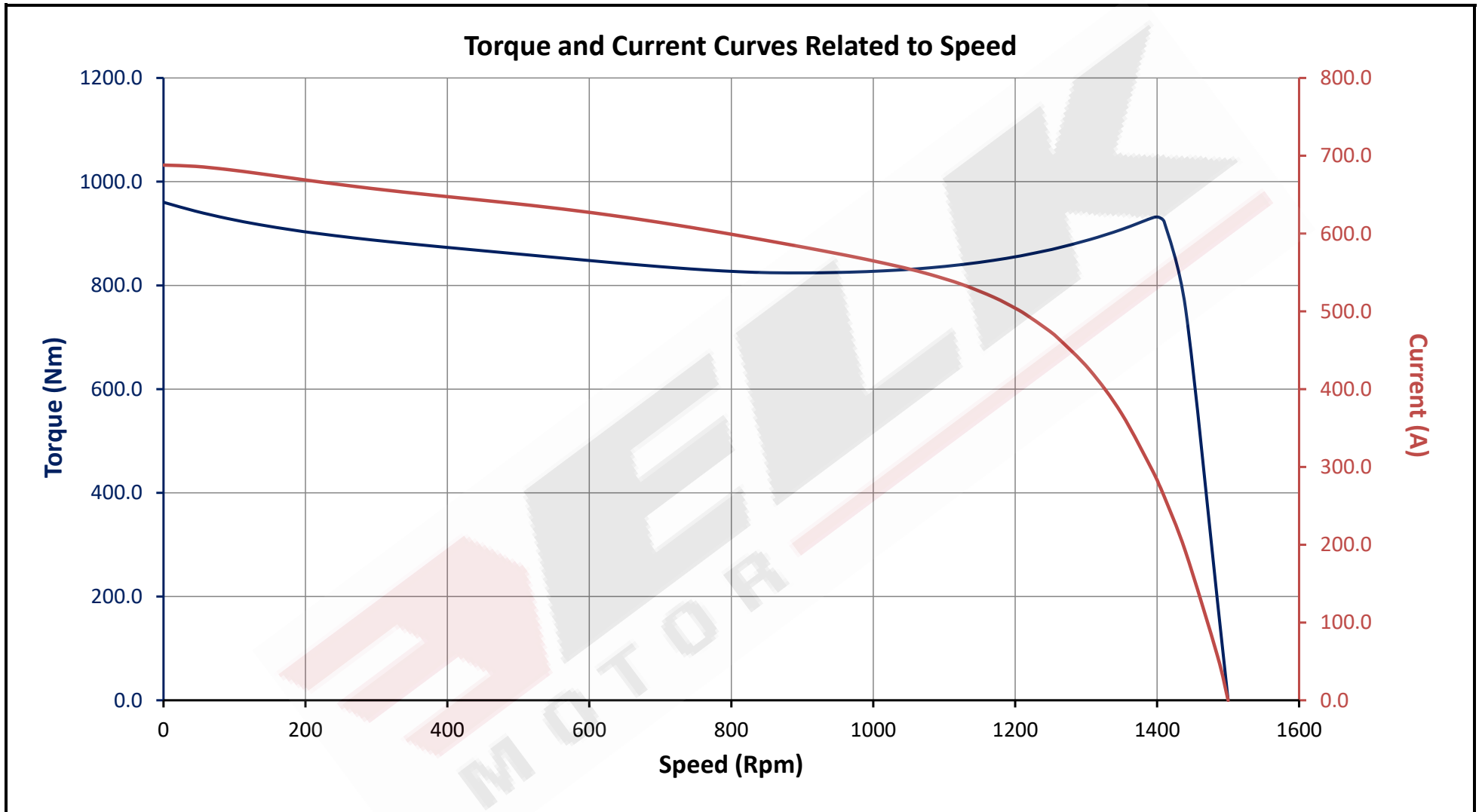
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Performance Curves Related to Rated Output

