ELK MOTOR SAN. ve TİC. A.Ş.
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DATASHEET

THREE PHASE INDUCTION MOTOR - SQUIRREL CAGE

IE3

Type : 3EL160M6D-PD-BA-000 **Date** : 01.06.2024

Power [kW]	: 7.50	Efficiency Class	: IE3
Input Voltage [V]	: 400	Duty Cycle	: S1
Connection Type [Δ / Y]	: Δ	Service Factor	: 1.20
Frequency [Hz]	: 50	Frame Size	: 160M
Pole Number	: 6	Weight [kg]	: 96.0
Nominal Speed [rpm]	: 972	Insulation Class	: F [155°C]
Nominal Current [A]	: 15.6	Temperature Rise	: B [80°K]
Nominal Moment [Nm]	: 73.7	Protection Class	: IP55
Nominal Efficiency [η]	: 89.1	Vibration Severity Grade	: A
Power Factor [cosφ]	: 0.78	Method of Cooling	: IC411 (TEFC)
Locked Rotor Current [Ia/In]	: 6.3	Direction of Rotation	: Bidirectional
Locked Rotor Torque [Ma/Mn]	: 2.6	Balance	: Half Key
Breakdown Torque [Mk/Mn]	: 3.0	Motor Thermal Protection	: PTC
Motor Color	: RAL 7031	Altitude Above Sea Level	: 1000m
Ambient Temperature	: -15°C / +40°C	Sound Pressure Level [dBA]	: 61

ELECTRICAL DATA

Δ / Y	U [V]	f [Hz]	P [kW]	n [rpm]	I [A]	η [%100]	η [%75]	η [%50]	Cosφ	Cl
Δ	400	50	7.50	972	15.6	89.1	89.4	88.4	0.78	IE3
Y	690	50	7.50	972	8.98	89.1	89.4	88.4	0.78	IE3
Δ	460	60	7.50	1174	13.5	91.0	91.3	90.4	0.77	IE3
Δ	460	60	8.70	1170	15.2	91.0	91.2	90.3	0.79	IE3

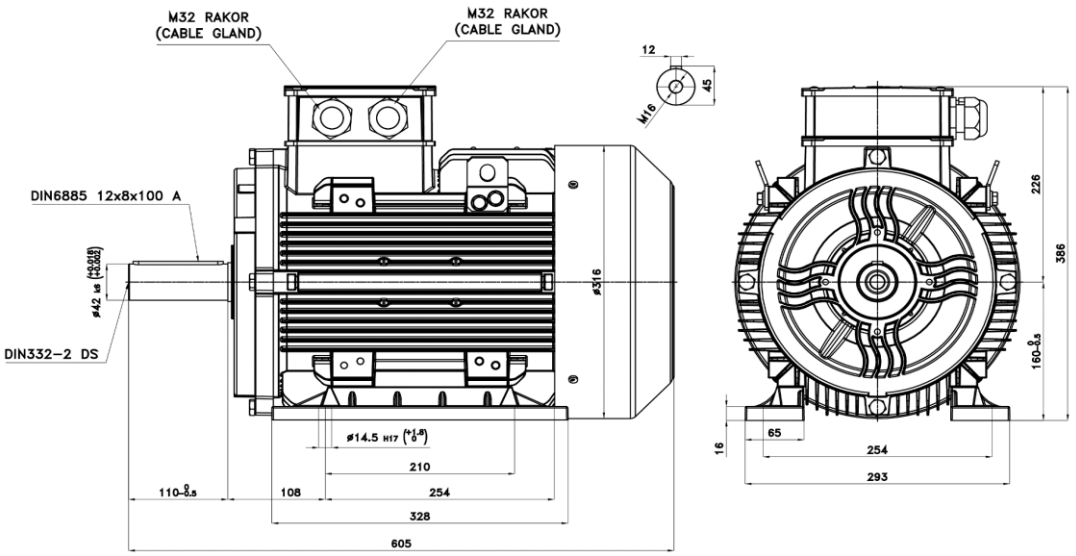
MECHANICAL DATA

Moment of Inertia [kgm^2]	: 0.07870
Bearing [DS / NS]	: 6309ZZ C3 / 6209ZZ 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	: 2xM32x1.5
Terminal Box Blind Cap	: --
Contact Screw Thread	: M6

MECHANICAL DIMENSIONS



Manufactured and tested in accordance with IEC 60034

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 : 3EL160M6D-PD-BA-000 **Date** : 01.06.2024

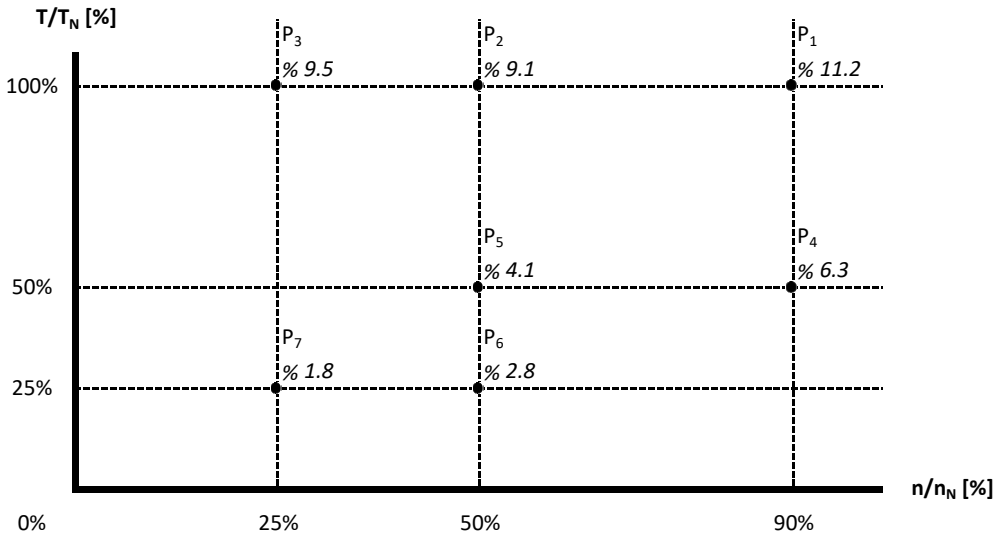
NAMEPLATE DATA

Power [kW]	: 7.50	Nominal Speed [rpm]	: 972
Nominal Voltage [V]	: 400	Nominal Current [A]	: 15.6
Connection Type [Δ / Y]	: Δ	Nominal Moment [Nm]	: 73.7
Nominal Frequency [Hz]	: 50	Nominal Efficiency [η%]	: 89.1

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	11.2	88.9
P_2	50	100	9.1	84.6
P_3	25	100	9.5	72.5
P_4	90	50	6.3	87.7
P_5	50	50	4.1	86.0
P_6	50	25	2.8	81.7
P_7	25	25	1.8	77.3

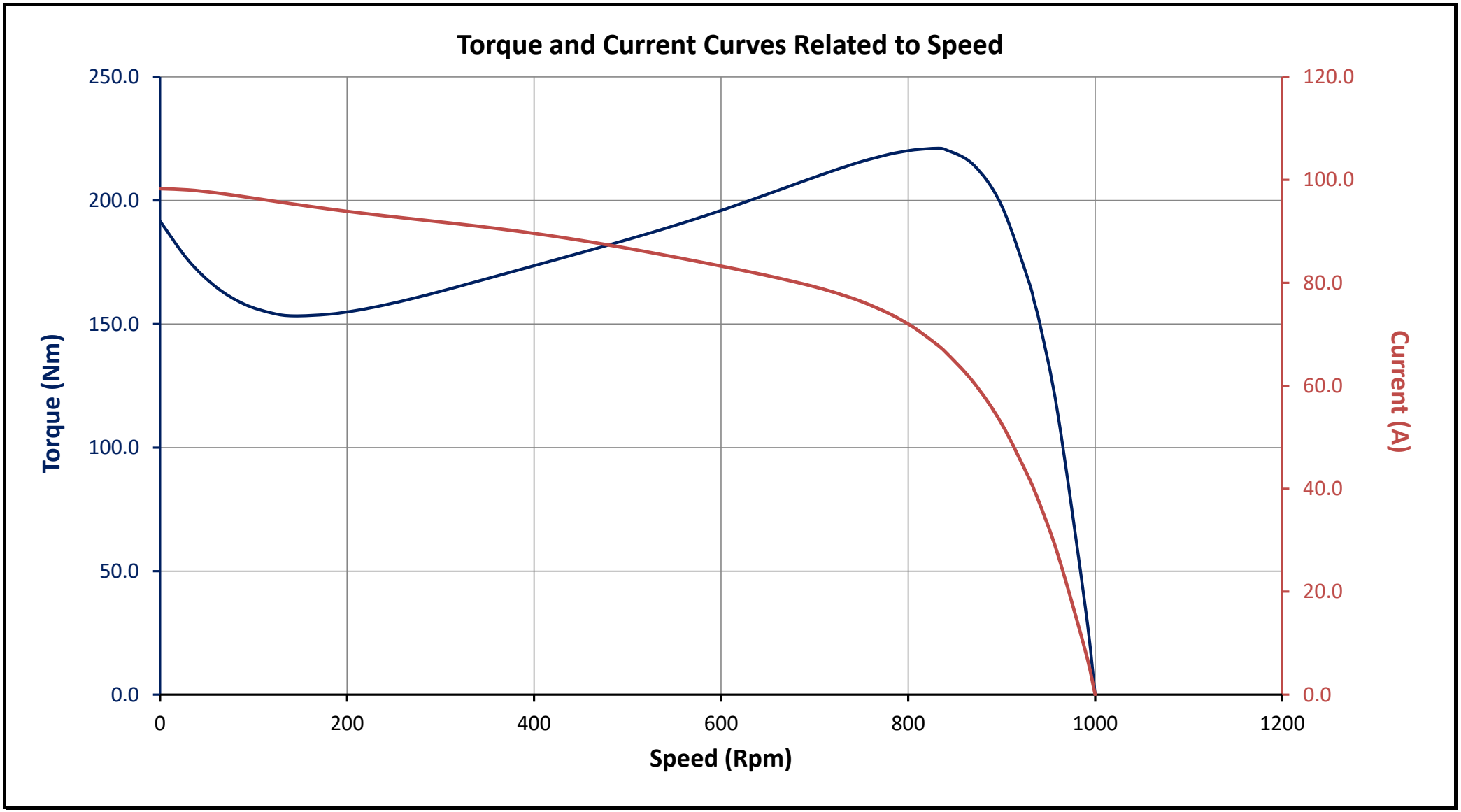
MAP OF RELATIVE POWER LOSSES P_L/P_N [%]



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