ELK MOTOR SAN. ve TİC. A.Ş.
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DATASHEET

THREE PHASE INDUCTION MOTOR - SQUIRREL CAGE

IE3

Type : 3EL090L4D-FA-A0-000 **Date** : 01.06.2024

Power [kW]	: 1.50	Efficiency Class	: IE3
Input Voltage [V]	: 400	Duty Cycle	: S1
Connection Type [Δ / Y]	: Y	Service Factor	: 1.20
Frequency [Hz]	: 50	Frame Size	: 090L
Pole Number	: 4	Weight [kg]	: 18.0
Nominal Speed [rpm]	: 1445	Insulation Class	: F [155°C]
Nominal Current [A]	: 3.30	Temperature Rise	: B [80°K]
Nominal Moment [Nm]	: 9.91	Protection Class	: IP55
Nominal Efficiency [η]	: 85.3	Vibration Severity Grade	: A
Power Factor [cosφ]	: 0.77	Method of Cooling	: IC411 (TEFC)
Locked Rotor Current [Ia/In]	: 7.2	Direction of Rotation	: Bidirectional
Locked Rotor Torque [Ma/Mn]	: 2.8	Balance	: Half Key
Breakdown Torque [Mk/Mn]	: 3.4	Motor Thermal Protection	: --
Motor Color	: RAL 7031	Altitude Above Sea Level	: 1000m
Ambient Temperature	: -15°C / +40°C	Sound Pressure Level [dBA]	: 51

ELECTRICAL DATA

Δ / Y	U [V]	f [Hz]	P [kW]	n [rpm]	I [A]	η [%100]	η [%75]	η [%50]	Cosφ	Cl
Δ	230	50	1.50	1445	5.72	85.3	85.2	83.0	0.77	IE3
Y	400	50	1.50	1445	3.30	85.3	85.2	83.0	0.77	IE3
Y	460	60	1.50	1755	2.86	86.5	86.1	84.7	0.76	IE3
Y	460	60	1.74	1745	3.24	86.5	86.0	85.2	0.78	IE3

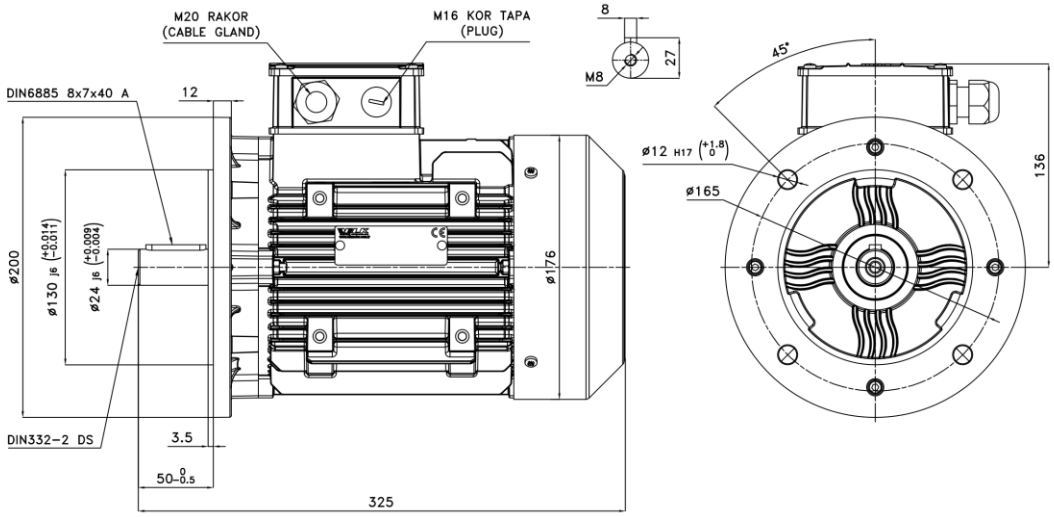
MECHANICAL DATA

Moment of Inertia [kgm^2]	: 0.00411
Bearing [DS / NS]	: 6205ZZ C3 / 6205ZZ C3
Frame Material	: Aluminum
Flange Type / Material	: B5 / Aluminum
Cooling Fan Material	: Plastic
End Shield Material	: Aluminum

TERMINAL BOX

Terminal Box Material	: Aluminum
Terminal Box Position	: Top
Terminal Box Cable Entry	: M20x1.5
Terminal Box Blind Cap	: M16x1.5
Contact Screw Thread	: M4

MECHANICAL DIMENSIONS



Manufactured and tested in accordance with IEC 60034

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

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

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TECHNICAL DATASHEET ACCORDING TO COMMISSION REGULATION (EU) 2019/1781

THREE PHASE INDUCTION MOTOR - SQUIRREL CAGE

Type : 3EL090L4D-FA-A0-000 **Date** : 01.06.2024

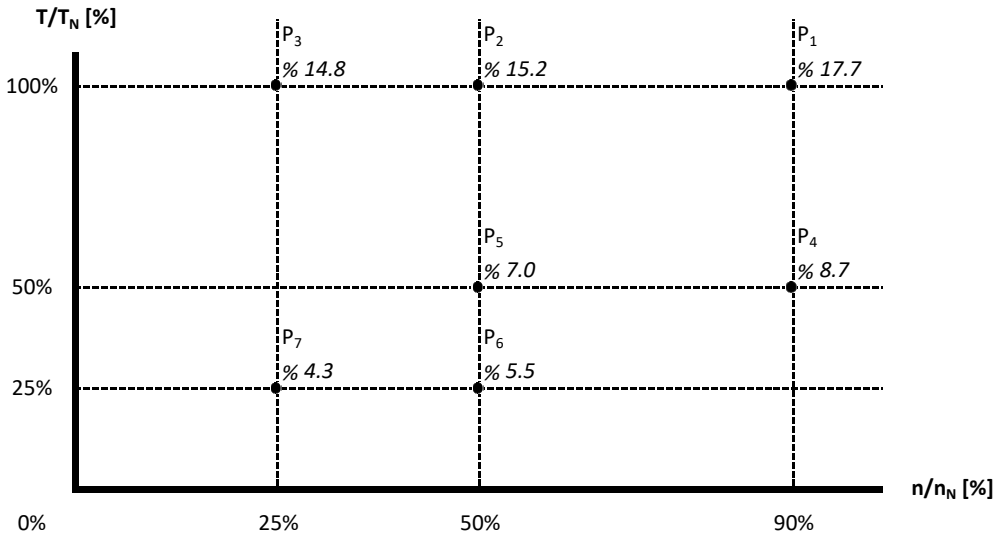
NAMEPLATE DATA

Power [kW]	: 1.50	Nominal Speed [rpm]	: 1445
Nominal Voltage [V]	: 400	Nominal Current [A]	: 3.30
Connection Type [Δ / Y]	: Y	Nominal Moment [Nm]	: 9.91
Nominal Frequency [Hz]	: 50	Nominal Efficiency [η%]	: 85.3

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	17.7	83.6
P_2	50	100	15.2	76.7
P_3	25	100	14.8	62.9
P_4	90	50	8.7	83.8
P_5	50	50	7.0	78.2
P_6	50	25	5.5	69.4
P_7	25	25	4.3	59.1

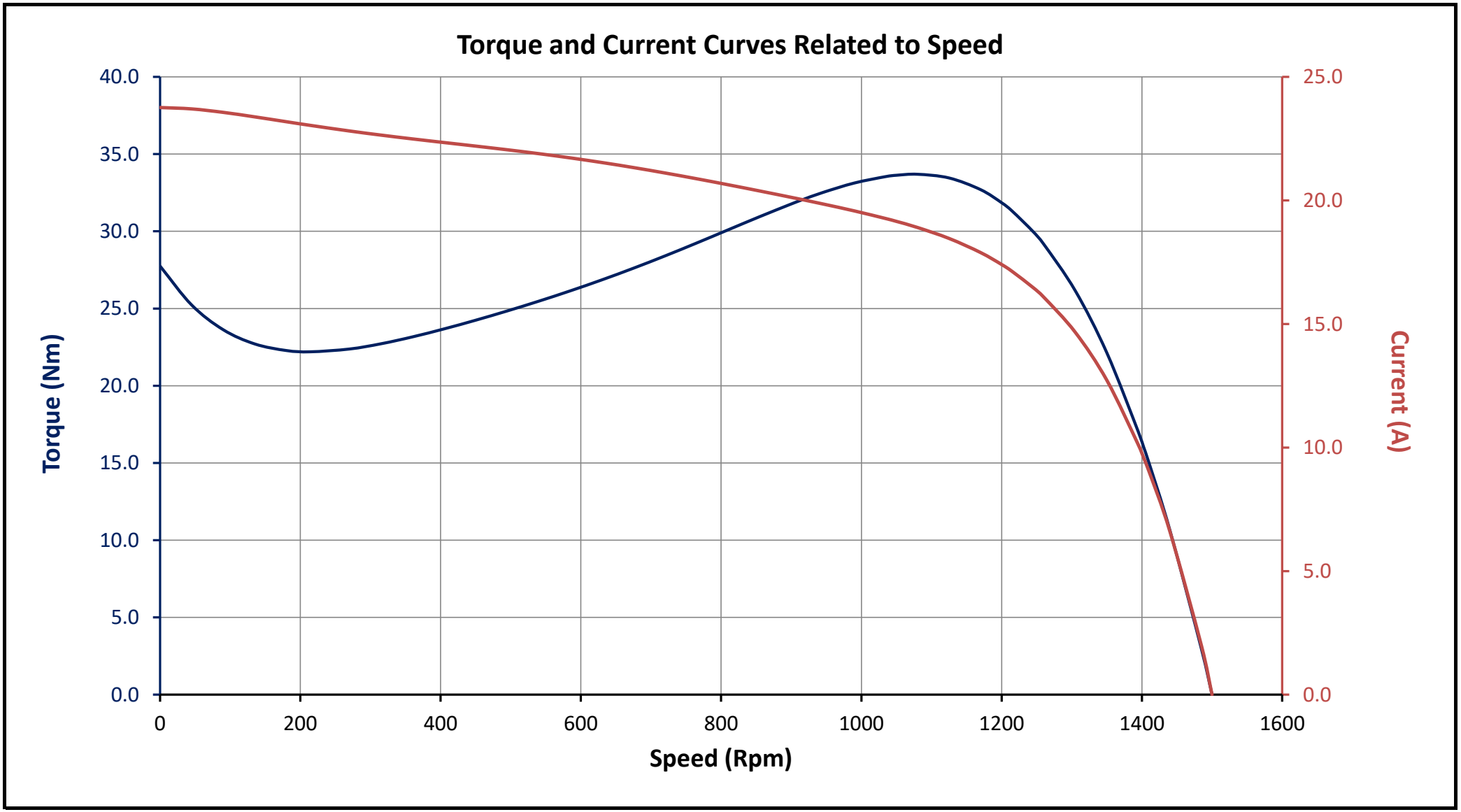
MAP OF RELATIVE POWER LOSSES P_L/P_N [%]



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