

Type : 3EC160L4F-FC-BA-000

Date : 01.01.2023

Power [kW]	: 18.5	Efficiency Class	: IE3
Input Voltage [V]	: 400	Duty Cycle	: S1
Connection Type [ $\Delta$ / Y]	: $\Delta$	Service Factor	: --
Frequency [Hz]	: 50	Frame Size	: 160L
Pole Number	: 4	Weight [kg]	: 113
Nominal Speed [rpm]	: 1465	Insulation Class	: F [155°C]
Nominal Current [A]	: 35.8	Temperature Rise	: B [80°K]
Nominal Moment [Nm]	: 121	Protection Class	: IP55
Nominal Efficiency [ $\eta$ ]	: 92.6	Vibration Severity Grade	: A
Power Factor [ $\cos\phi$ ]	: 0.81	Method of Cooling	: IC411 (TEFC)
Locked Rotor Current [ $I_a/I_n$ ]	: 7.4	Direction of Rotation	: Bidirectional
Locked Rotor Torque [ $M_a/M_n$ ]	: 3.1	Balance	: Half Key
Breakdown Torque [ $M_k/M_n$ ]	: 3.4	Motor Thermal Protection	: PTC
Motor Color	: RAL 7031	Altitude Above Sea Level	: 1000m
Ambient Temperature	: -15°C / +40°C	Sound Pressure Level [dBA]	: 65

### ELECTRICAL DATA

$\Delta$ / Y	U [V]	f [Hz]	P [kW]	n [rpm]	I [A]	$\eta$ [%100]	$\eta$ [%75]	$\eta$ [%50]	Cos $\phi$	Cl
$\Delta$	400	50	18.5	1465	35.8	92.6	93.1	92.8	0.81	IE3
Y	690	50	18.5	1465	20.7	92.6	93.1	92.8	0.81	IE3

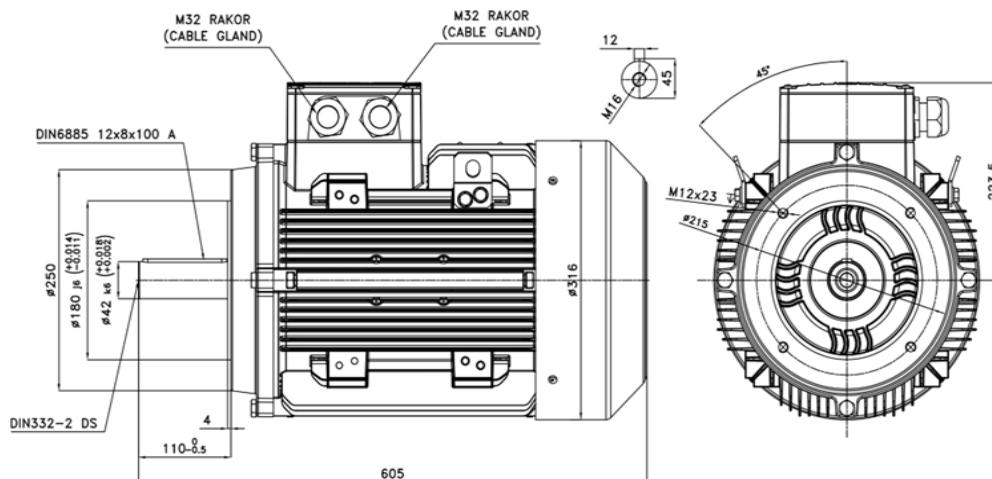
### MECHANICAL DATA

Moment of Inertia [kgm <sup>2</sup> ]	: 0.09300
Bearing [DS / NS]	: 6309ZZ / 6209ZZ
Frame Material	: Aluminum
Flange Type / Material	: B14 / Cast Iron
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





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

Type : 3EC160L4F-FC-BA-000

Date : 01.01.2023

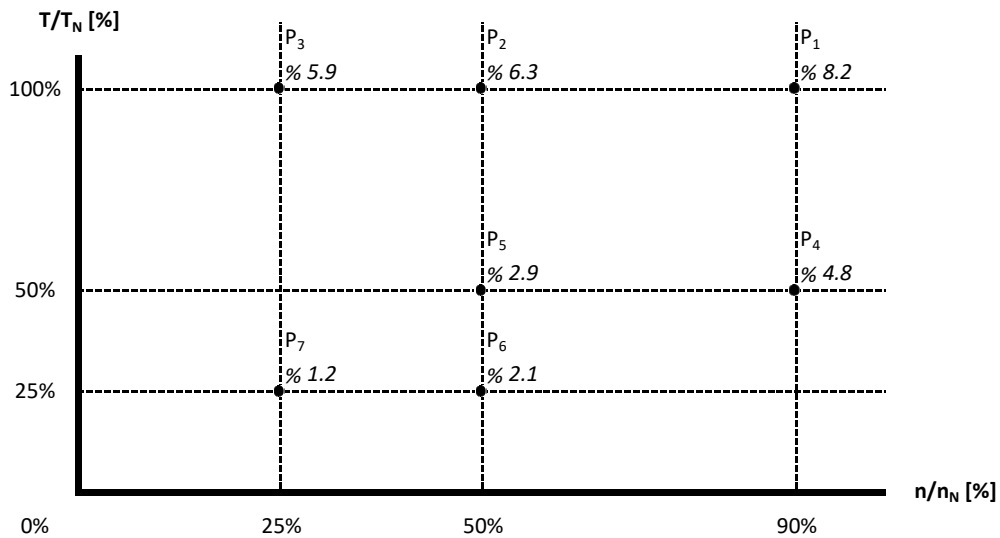
### NAMEPLATE DATA

Power [kW]	: 18.5	Nominal Speed [rpm]	: 1465
Nominal Voltage [V]	: 400	Nominal Current [A]	: 35.8
Connection Type [ $\Delta$ / Y]	: $\Delta$	Nominal Moment [Nm]	: 121
Nominal Frequency [Hz]	: 50	Nominal Efficiency [ $\eta$ %]	: 92.6

### 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	8.2	91.7
P <sub>2</sub>	50	100	6.3	88.8
P <sub>3</sub>	25	100	5.9	80.9
P <sub>4</sub>	90	50	4.8	90.3
P <sub>5</sub>	50	50	2.9	89.6
P <sub>6</sub>	50	25	2.1	85.9
P <sub>7</sub>	25	25	1.2	83.5

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



Manufactured and tested in accordance with IEC 60034

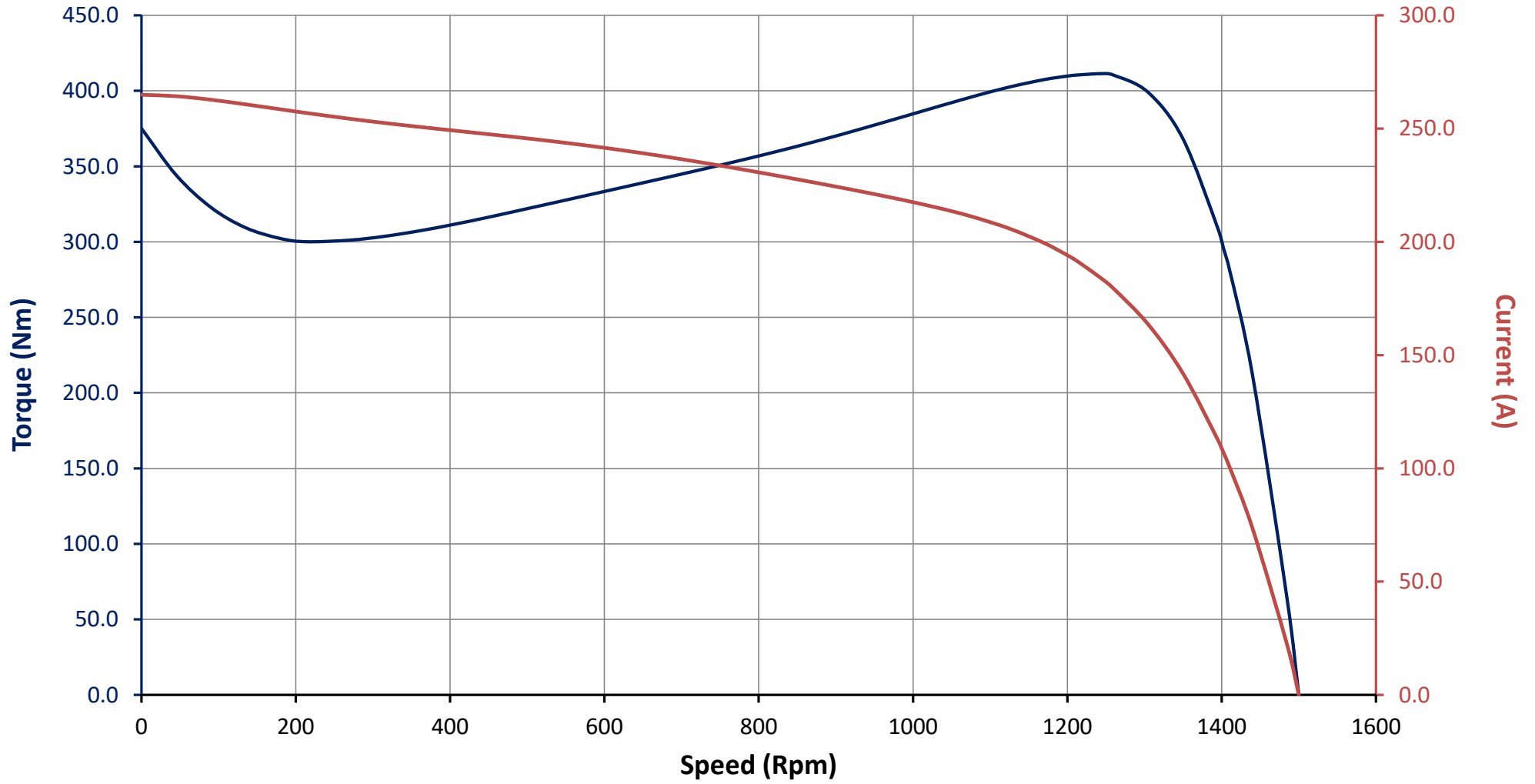
FR.AG.010 REV.NO: 04 REV.DATE: 01.01.2023

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

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

Motor Code : 3EC160L4F-FC-BA-000

### Torque and Current Curves Related to Speed



Motor Code : 3EC160L4F-FC-BA-000

### Performance Curves Related to Rated Output

