

Type 4EL160L4F-PD-BA-000

RE : 894259

Date : 01.01.2025

Power [kW] : 15.0
 Input Voltage [V] : 400
 Connection Type [Δ / Y] : Δ
 Frequency [Hz] : 50
 Pole Number : 4
 Nominal Speed [rpm] : 1475
 Nominal Current [A] : 28.9
 Nominal Moment [Nm] : 97.1
 Nominal Efficiency [η] : 93.9
 Power Factor [cosφ] : 0.80
 Locked Rotor Current [Ia/In] : 8.7
 Locked Rotor Torque [Ma/Mn] : 3.7
 Breakdown Torque [Mk/Mn] : 4.3
 Motor Color : RAL 7031
 Ambient Temperature : -15°C / +40°C

Efficiency Class : IE4
 Duty Cycle : S1
 Service Factor : 1.25
 Frame Size : 160L
 Weight [kg] : 130
 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] : 64

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	15.0	1475	28.9	93.9	94.1	93.8	0.80	IE4
Y	690	50	15.0	1475	16.7	93.9	94.1	93.8	0.80	IE4
Δ	460	60	15.0	1775	25.3	94.1	94.0	93.2	0.79	IE4
Δ	460	60	17.4	1770	28.5	94.5	94.6	94.3	0.81	IE4

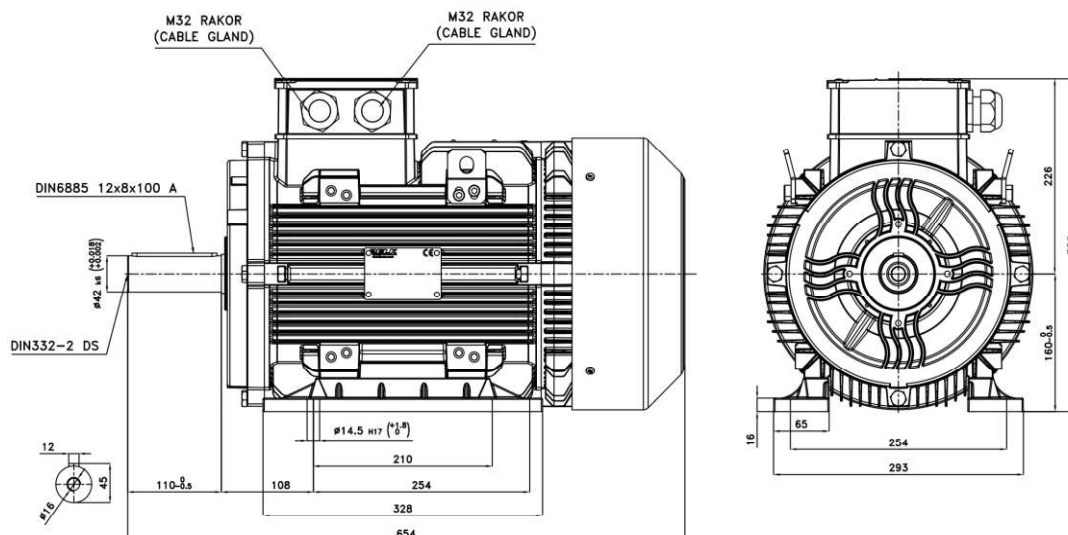
MECHANICAL DATA

Moment of Inertia [kgm²] : 0.12000
 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

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

Mecaline has right to change all the data without prior notice.

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



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

Type : 4EL160L4F-PD-BA-000

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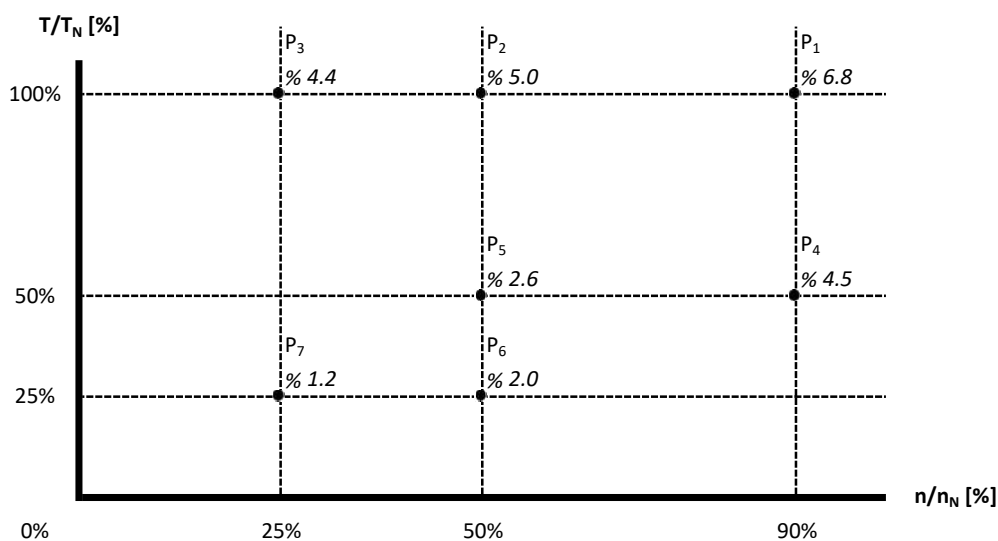
NAMEPLATE DATA

Power [kW]	: 15.0	Nominal Speed [rpm]	: 1475
Nominal Voltage [V]	: 400	Nominal Current [A]	: 28.9
Connection Type [Δ / Y]	: Δ	Nominal Moment [Nm]	: 97.1
Nominal Frequency [Hz]	: 50	Nominal Efficiency [η %]	: 93.9

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	6.8	93.0
P ₂	50	100	5.0	90.9
P ₃	25	100	4.4	85.1
P ₄	90	50	4.5	90.8
P ₅	50	50	2.6	90.5
P ₆	50	25	2.0	86.0
P ₇	25	25	1.2	84.0

MAP OF RELATIVE POWER LOSSES P_L/P_N [%]



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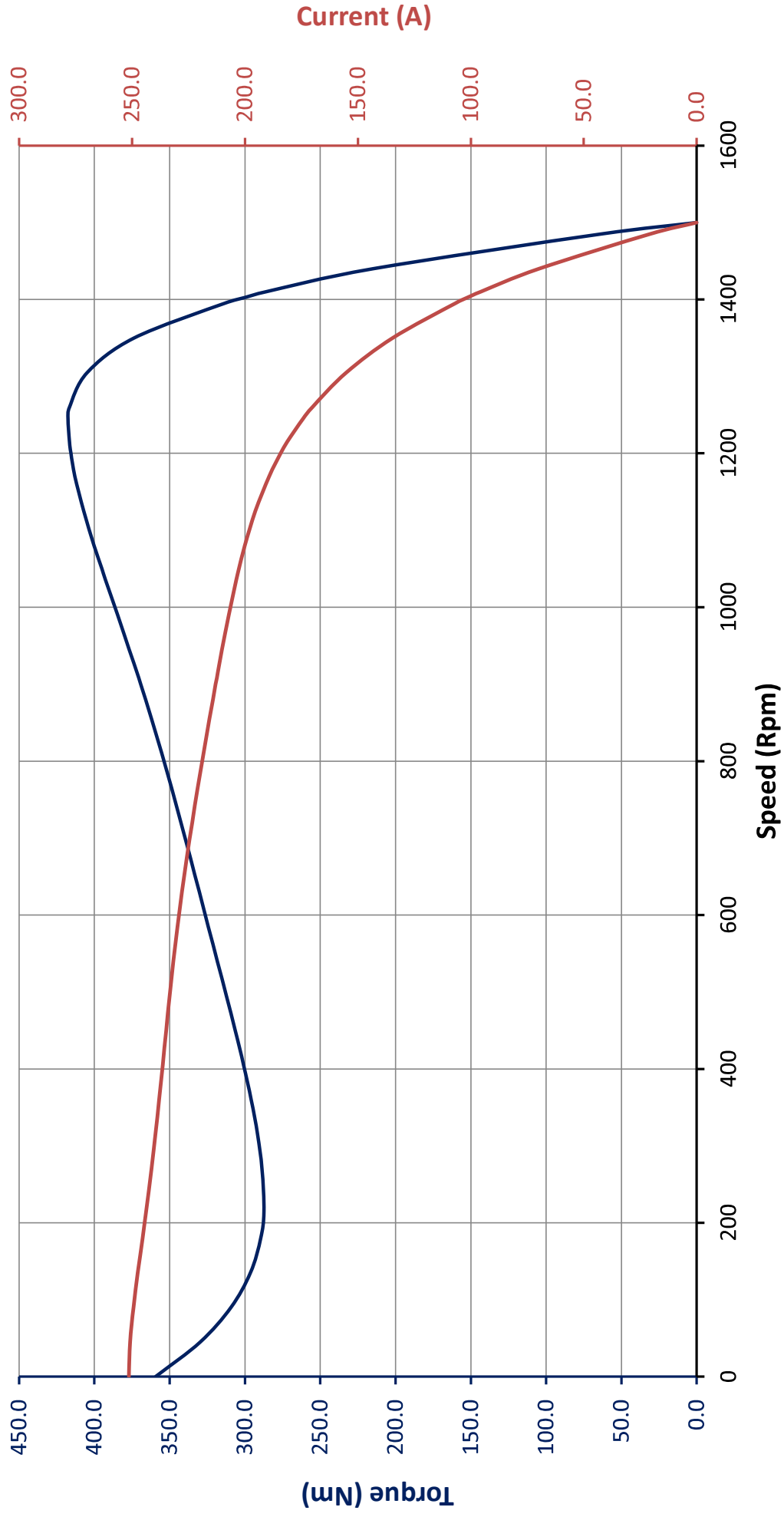
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Rubix Engineering
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France

Motor Code : 4EL160L4F-FC-BA-000

Torque and Current Curves Related to Speed



Motor Code : 4EL160L4F-FC-BA-000

Performance Curves Related to Rated Output

