

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14408651

Frame	: 324TC	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>3</sup>	: 297 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.3441 kgm <sup>2</sup>
Design	: B		

Output [HP]	40	40	40	40
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	96.4/48.2	58.7	56.1	54.1
L. R. Amperes [A]	742/371	364	387	400
LRC [A]	7.7x(Code J)	6.2x(Code G)	6.9x(Code H)	7.4x(Code J)
No load current [A]	46.0/23.0	22.8	24.1	25.3
Rated speed [RPM]	1780	1470	1475	1475
Slip [%]	1.11	2.00	1.67	1.67
Rated torque [kgfm]	16.4	19.9	19.8	19.7
Locked rotor torque [%]	270	200	229	250
Breakdown torque [%]	300	210	240	260
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	34s (cold) 19s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level <sup>2</sup>	71.0 dB(A)	69.0 dB(A)	69.0 dB(A)	69.0 dB(A)
Efficiency (%)	25%			
	50%	93.0	93.0	92.4
	75%	94.1	93.0	93.6
	100%	94.1	92.4	93.0
Power Factor	25%			
	50%	0.66	0.72	0.66
	75%	0.77	0.81	0.77
	100%	0.83	0.84	0.83

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6312 C3	6212 C3	Max. traction	: 495 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 794 kgf
Lubrication interval	: 20000 h	20000 h		
Lubricant amount	: 21 g	13 g		
Lubricant type	: Mobil Polyrex EM			

Notes  
USABLE @208V 107A SF 1.00 SFA 107A

This revision replaces and cancel the previous one, which must be eliminated.  
(1) Looking the motor from the shaft end.  
(2) Measured at 1m and with tolerance of +3dB(A).  
(3) Approximate weight subject to changes after manufacturing process.  
(4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	28/10/2024			

Page 1 / 6  
Revision

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Customer :

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 2 / 6Revision	
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

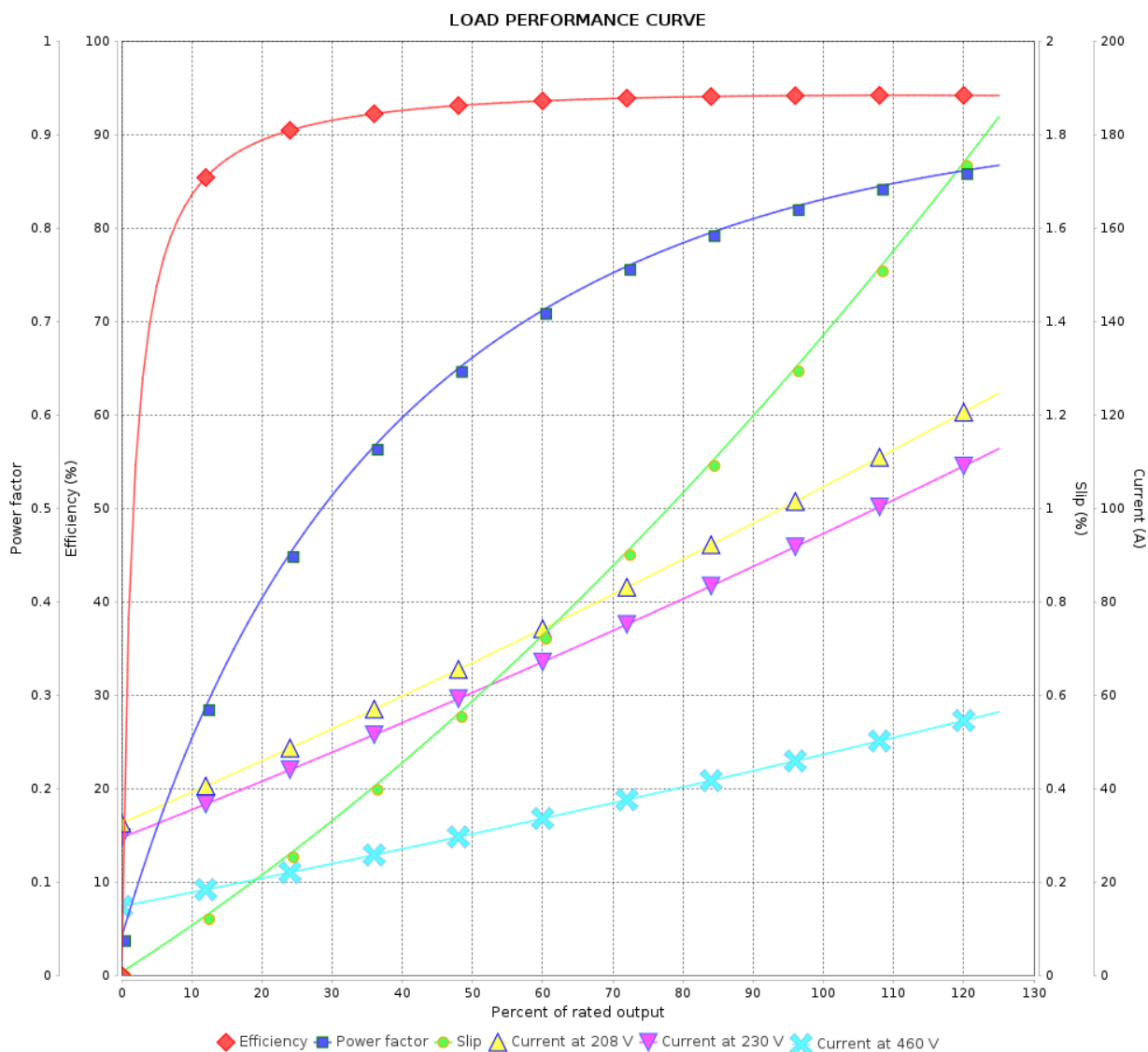
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14408651



Performance : 230/460 V 60 Hz 4P

Rated current : 96.4/48.2 A  
LRC : 7.7  
Rated torque : 16.4 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 300 %  
Rated speed : 1780 rpm

Moment of inertia (J) : 0.3441 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 3 / 6Revision			
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

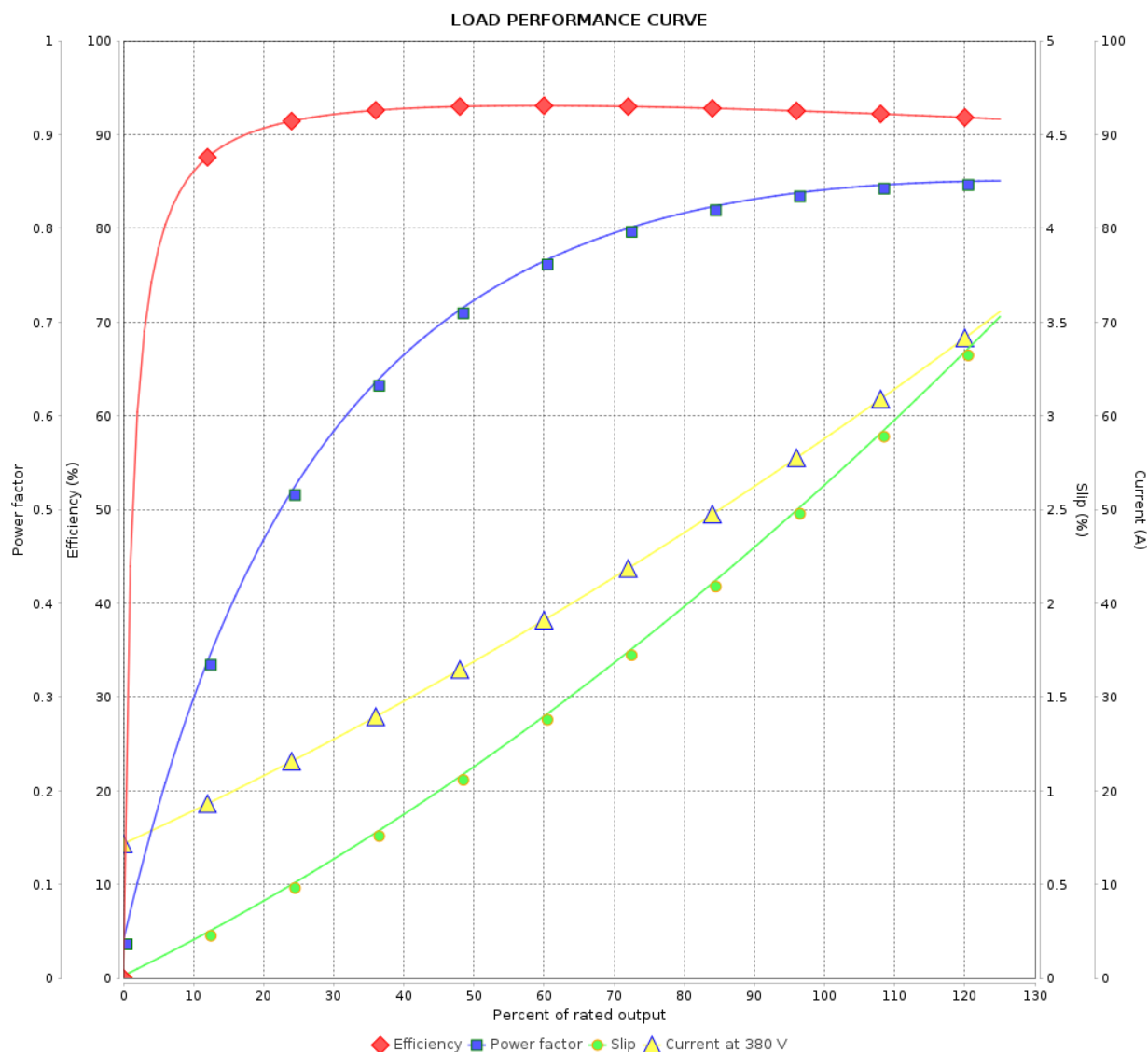
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14408651



Performance : 380 V 50 Hz 4P IE2

Rated current : 58.7 A  
LRC : 6.2  
Rated torque : 19.9 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 210 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.3441 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				4 / 6	
Date					

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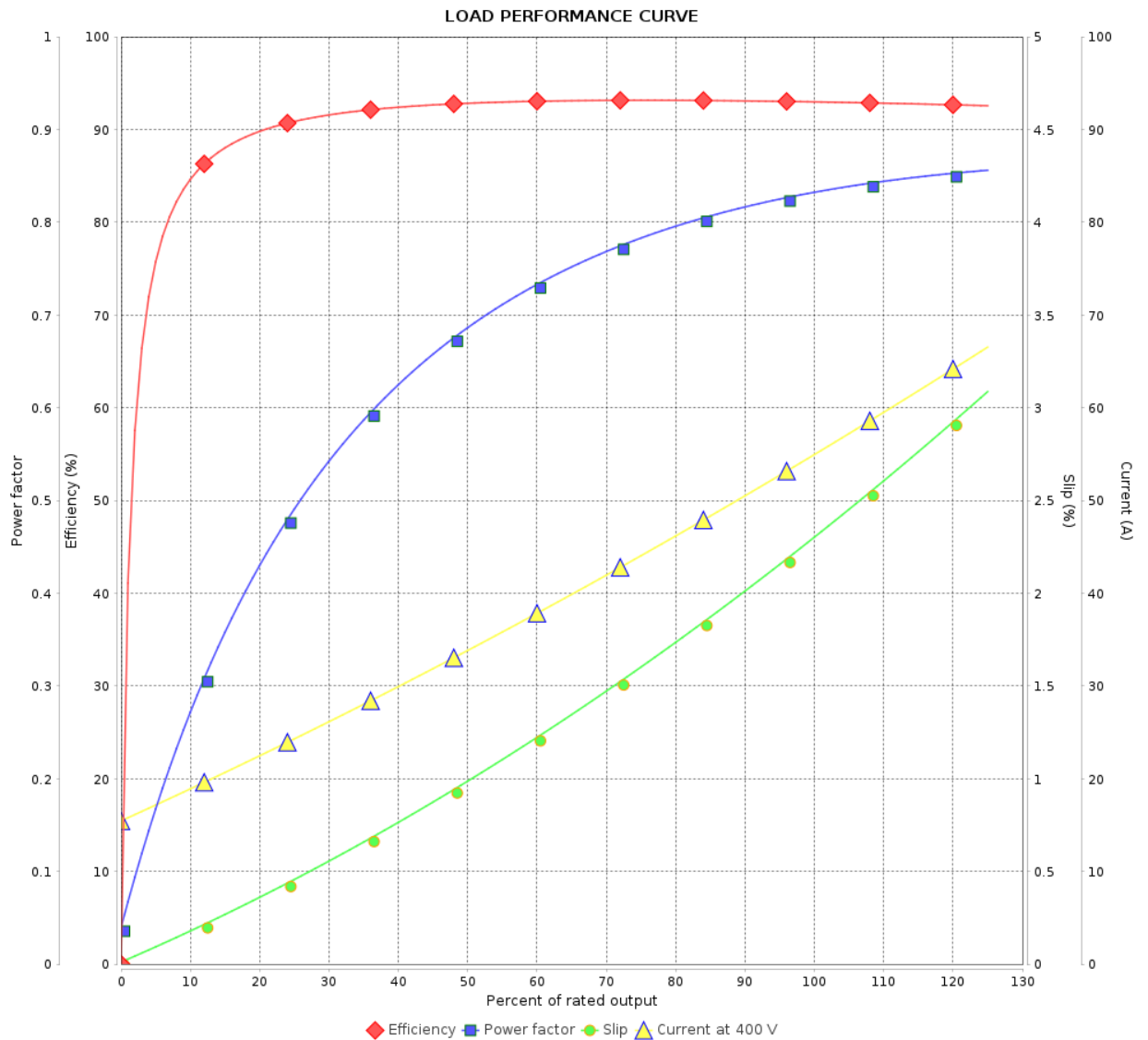
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14408651



Performance : 400 V 50 Hz 4P IE2

Rated current : 56.1 A  
LRC : 6.9  
Rated torque : 19.8 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 240 %  
Rated speed : 1475 rpm

Moment of inertia (J) : 0.3441 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 6Revision		
Checked by				
Date	28/10/2024			

# LOAD PERFORMANCE CURVE

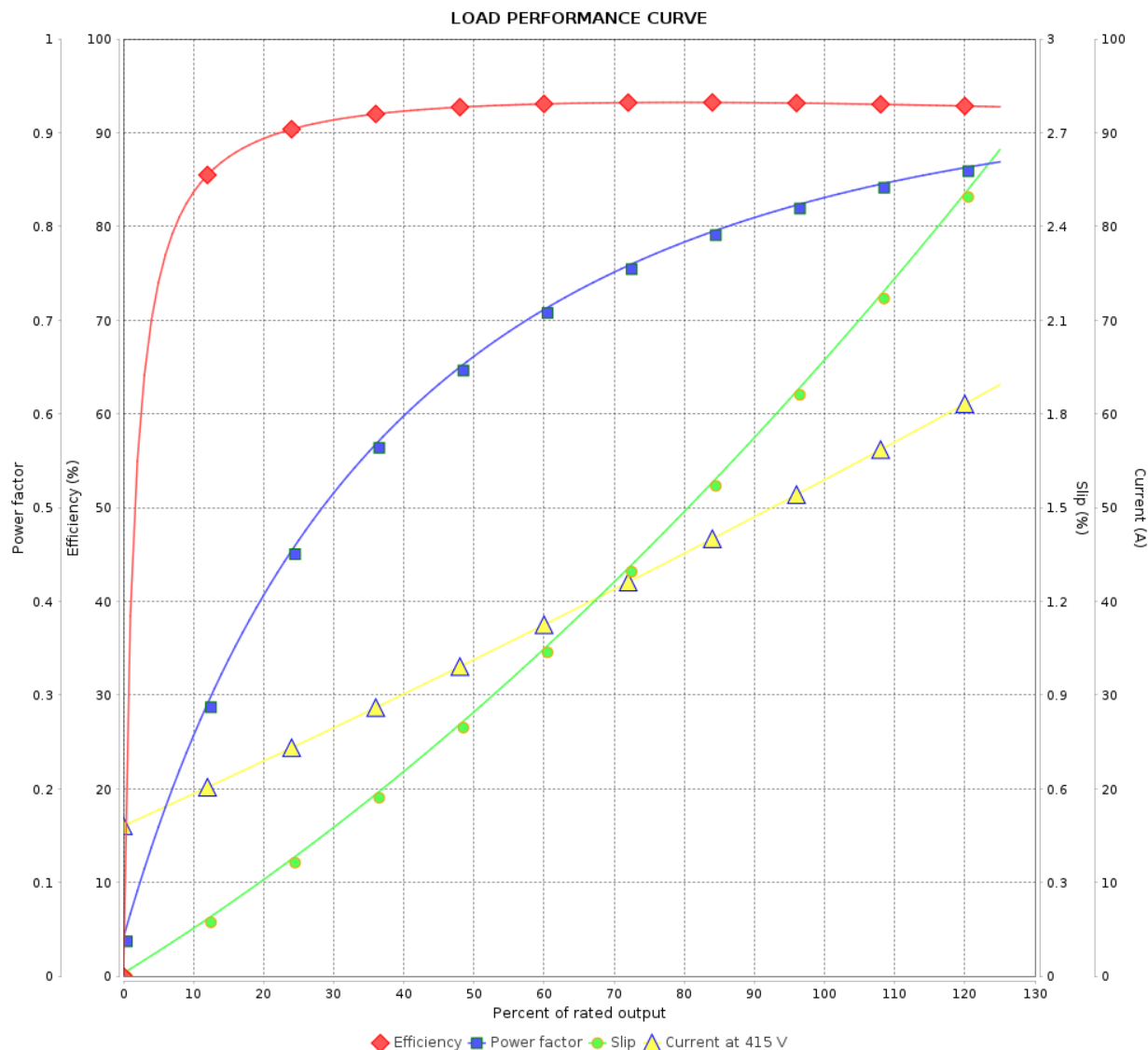
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Premium Efficiency Three-Phase

Product code : 14408651



Performance : 415 V 50 Hz 4P IE2

Rated current : 54.1 A  
LRC : 7.4  
Rated torque : 19.7 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 260 %  
Rated speed : 1475 rpm

Moment of inertia (J) : 0.3441 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 6 / 6	Revision
Checked by					
Date	28/10/2024				