

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase		Product code : 14390091			
Frame : 324T Insulation class : F Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Design : B		Cooling method : IC411 - TEFC Mounting : F-1 Rotation <sup>1</sup> : Both (CW and CCW) Starting method : Direct On Line Approx. weight <sup>3</sup> : 295 kg Moment of inertia (J) : 0.3441 kgm <sup>2</sup>			
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]	16.3	19.7	19.7	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%	92.8	93.4	92.9	
	50%	93.0	93.0	93.0	
	75%	94.1	93.0	93.0	
	100%	94.1	92.4	93.0	
Power Factor	25%	0.39	0.45	0.42	
	50%	0.66	0.72	0.68	
	75%	0.77	0.81	0.79	
	100%	0.83	0.84	0.83	
Bearing type : <u>Drive end</u> 6312 C3 <u>Non drive end</u> 6212 C3 Sealing : Oil Seal Lip Seal Lubrication interval : 20000 h 20000 h Lubricant amount : 21 g 13 g Lubricant type : Mobil Polyrex EM		Foundation loads Max. traction : 497 kgf Max. compression : 792 kgf			
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.			
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Customer : \_\_\_\_\_

### Thermal protection

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

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# LOAD PERFORMANCE CURVE

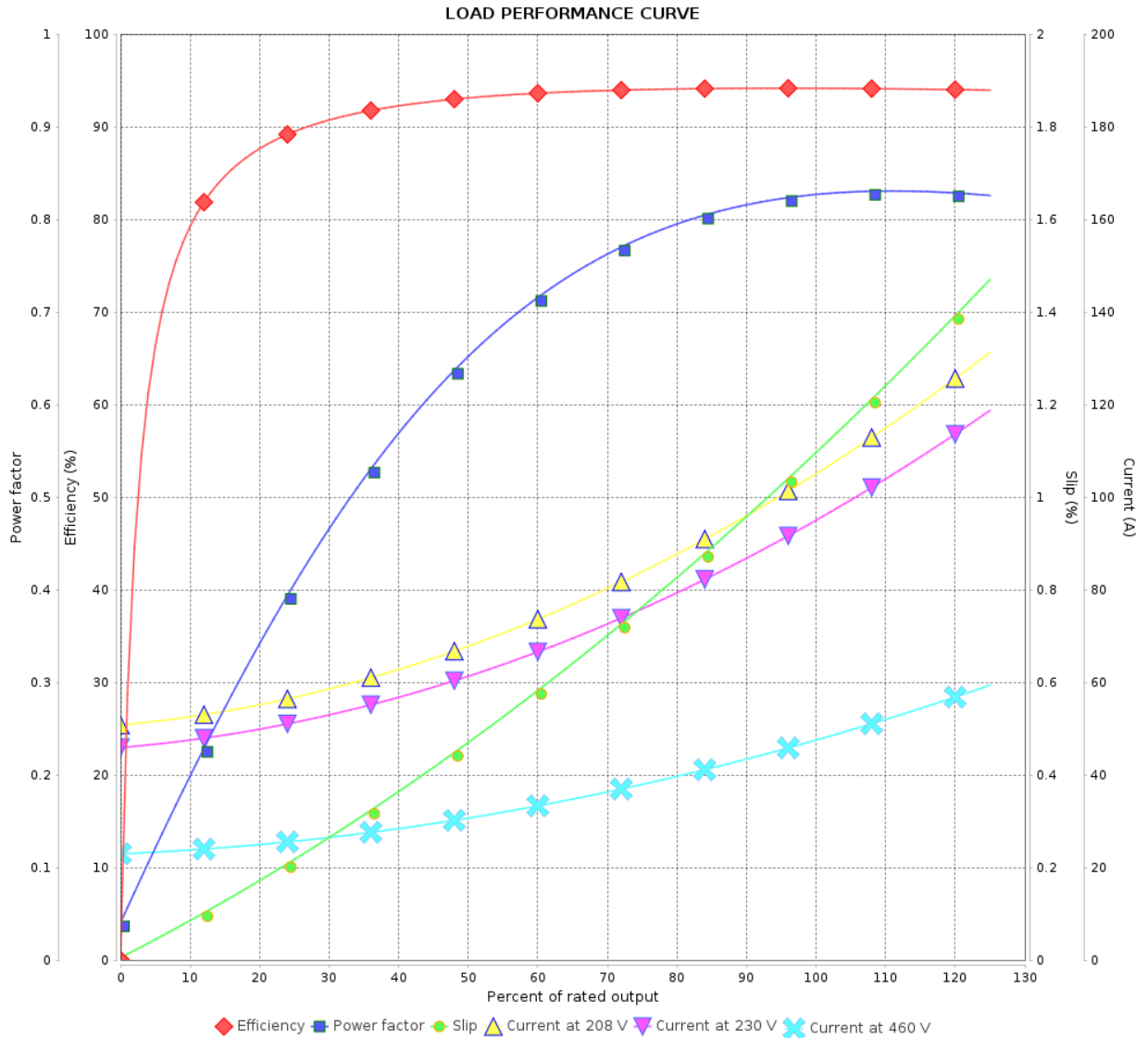
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

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Performance : 230/460 V 60 Hz 4P

Rated current : 96.4/48.2 A  
LRC : 7.7  
Rated torque : 16.3 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

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# LOAD PERFORMANCE CURVE

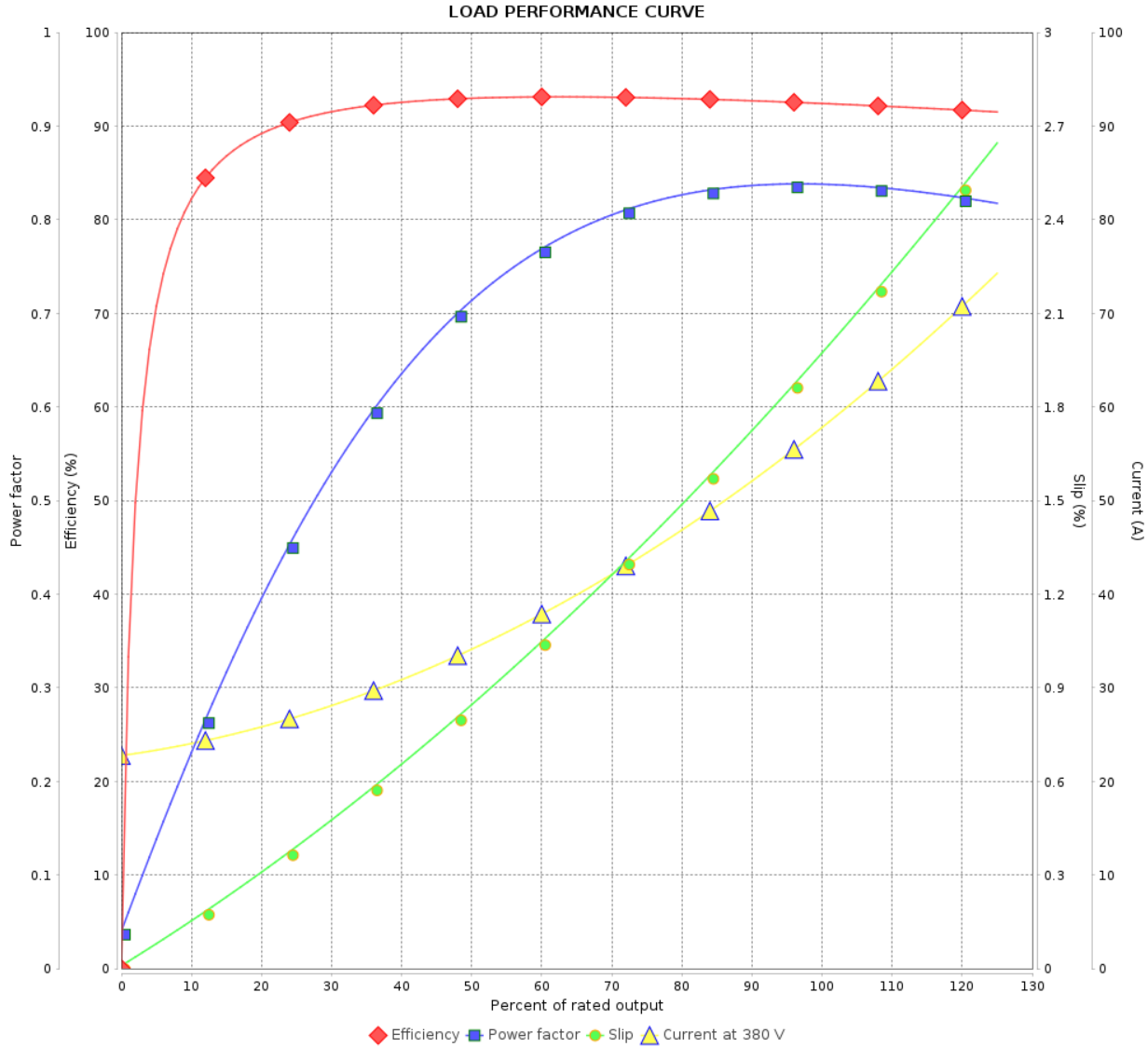
Three Phase Induction Motor - Squirrel Cage



Customer :

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Efficiency Three-Phase

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Performance : 380 V 50 Hz 4P IE2

Rated current : 58.7 A  
LRC : 6.2  
Rated torque : 19.7 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

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# LOAD PERFORMANCE CURVE

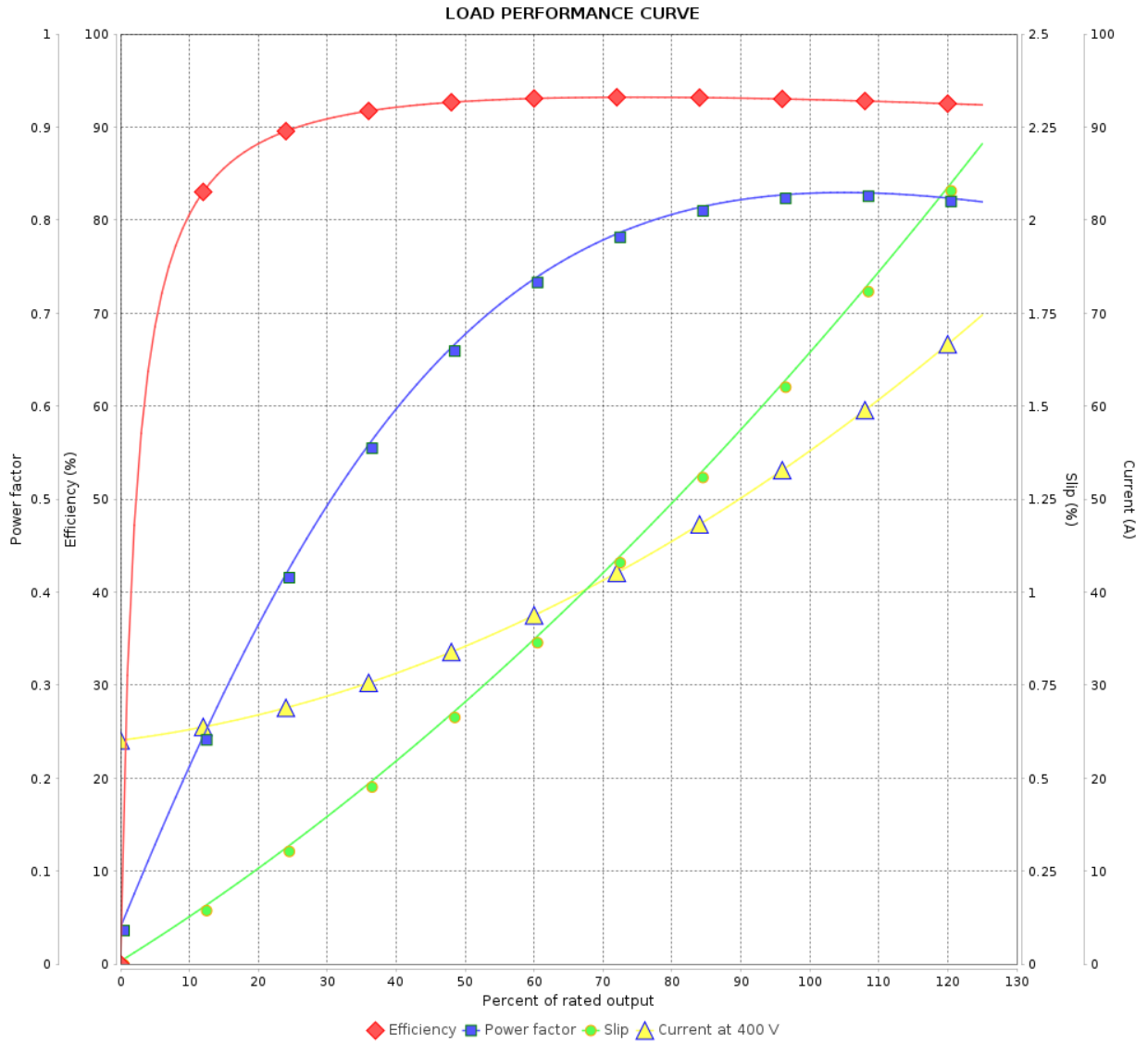
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 400 V 50 Hz 4P IE2

Rated current : 56.1 A  
LRC : 6.9  
Rated torque : 19.7 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

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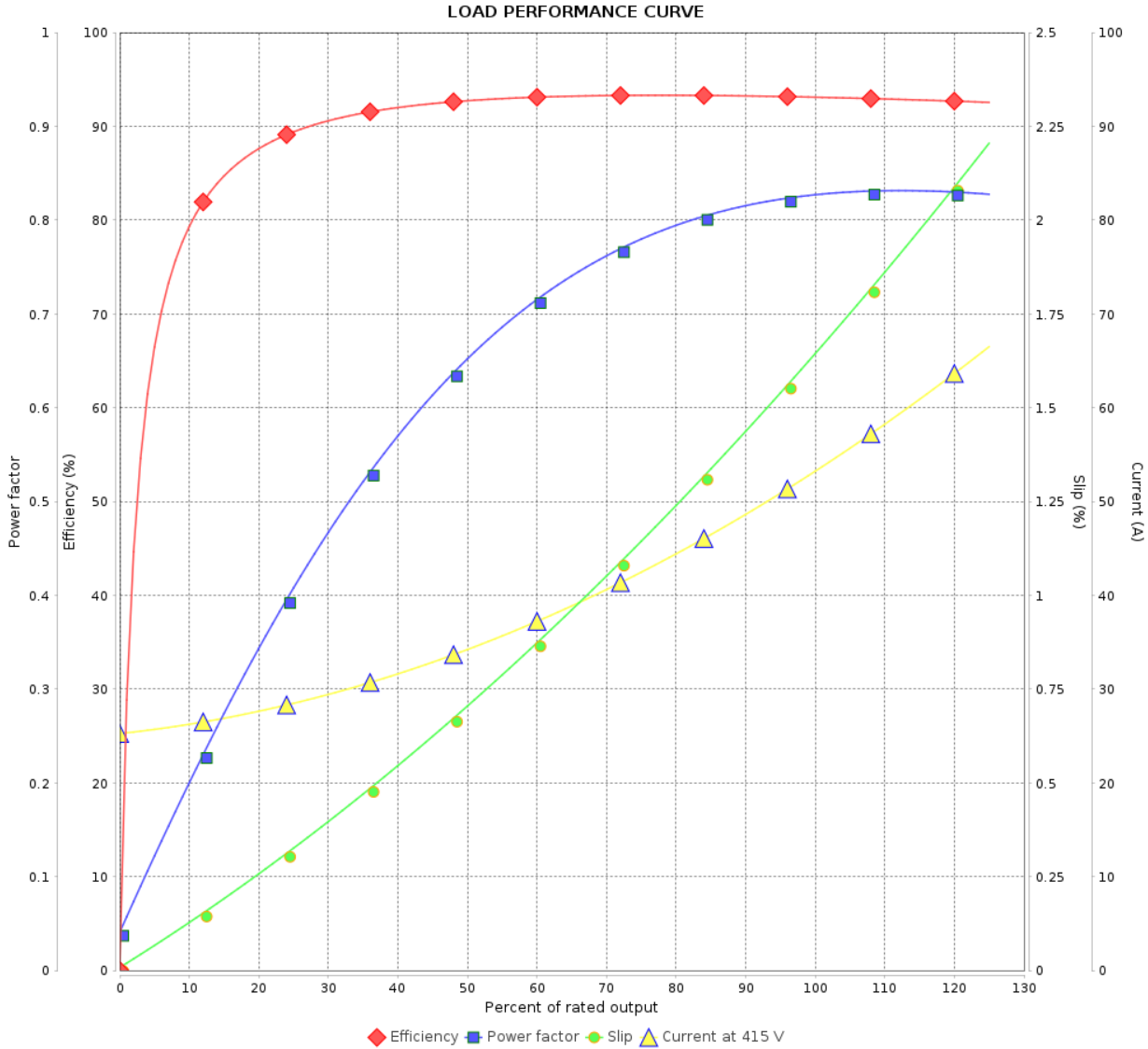
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

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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

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