

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 13176144

Frame	: 447T	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>	: 1136 kg
Protection degree	: IP55	Moment of inertia (J)	: 3.21 kgm <sup>2</sup>
Design	: B		

Output [HP]	200	150	150	150
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	460/230	208	202	197
L. R. Amperes [A]	3128/1564	1518	1535	1576
LRC [A]	6.8x(Code G)	7.3x(Code H)	7.6x(Code H)	8.0x(Code J)
No load current [A]	148/74.0	73.0	77.0	81.0
Rated speed [RPM]	1782	1485	1487	1488
Slip [%]	1.00	1.00	0.87	0.80
Rated torque [kgfm]	81.5	73.3	73.2	73.2
Locked rotor torque [%]	210	220	250	280
Breakdown torque [%]	229	250	280	310
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	52s (cold) 29s (hot)	70s (cold) 39s (hot)	66s (cold) 37s (hot)	63s (cold) 35s (hot)
Noise level <sup>2</sup>	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)	82.0 dB(A)
Efficiency (%)	25%			
	50%	95.8	95.4	95.4
	75%	96.2	95.4	95.8
	100%	96.2	95.8	95.8
Power Factor	25%			
	50%	0.72	0.70	0.65
	75%	0.80	0.78	0.73
	100%	0.85	0.84	0.81

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type	: NU-319 C3	6316 C3	Max. traction : 1415 kgf
Sealing	: Viton	Viton Seal	Max. compression : 2552 kgf
	Oil Seal		
Lubrication interval	: 4706 h	8569 h	
Lubricant amount	: 45 g	34 g	
Lubricant type	: Mobil Polyrex EM		

Notes  
USABLE @208V 509A SF 1.00 SFA 509A

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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Revision

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## Three Phase Induction Motor - Squirrel Cage



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

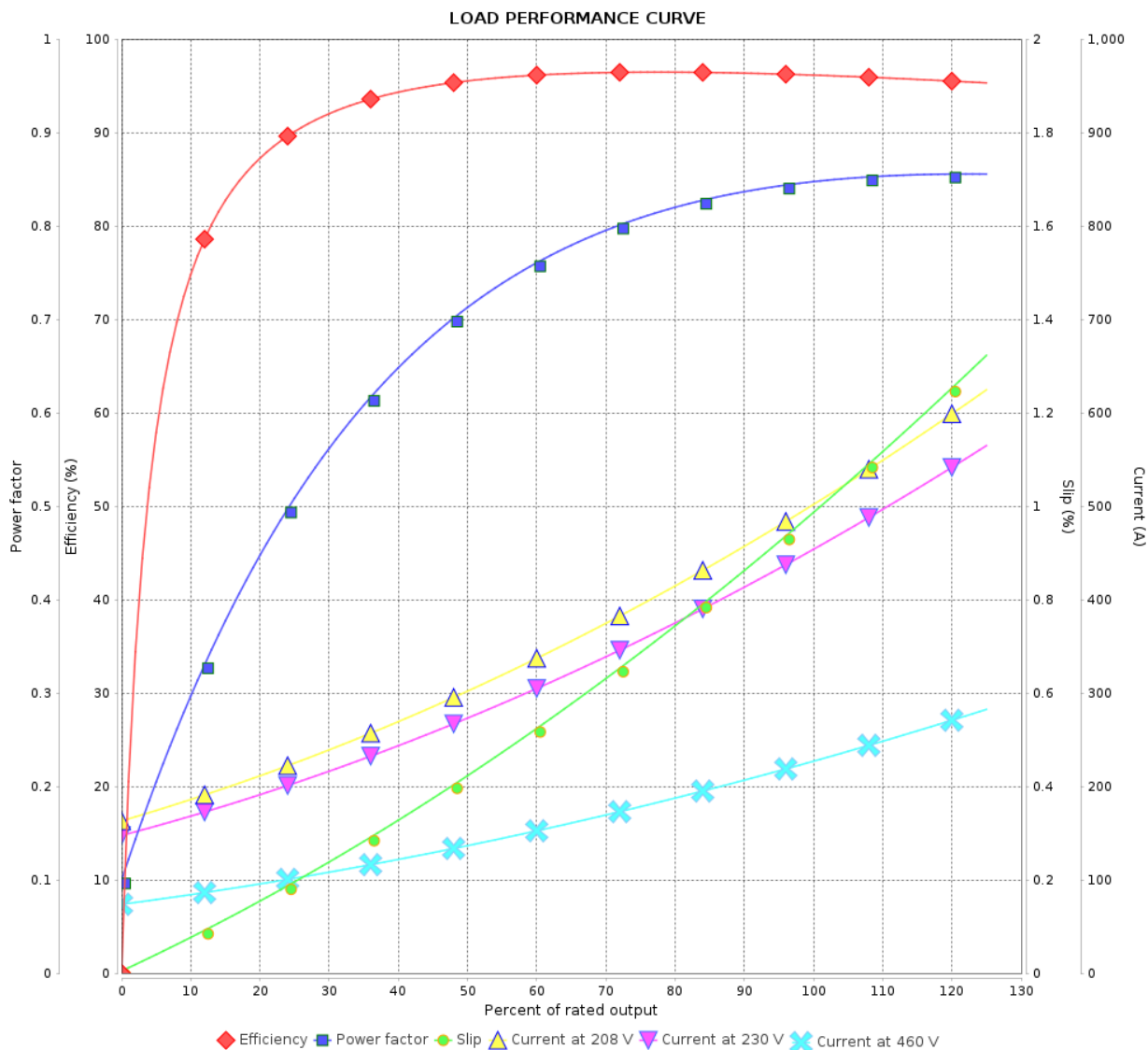
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13176144



Performance : 230/460 V 60 Hz 4P

Rated current : 460/230 A  
LRC : 6.8  
Rated torque : 81.5 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 229 %  
Rated speed : 1782 rpm

Moment of inertia (J) : 3.21 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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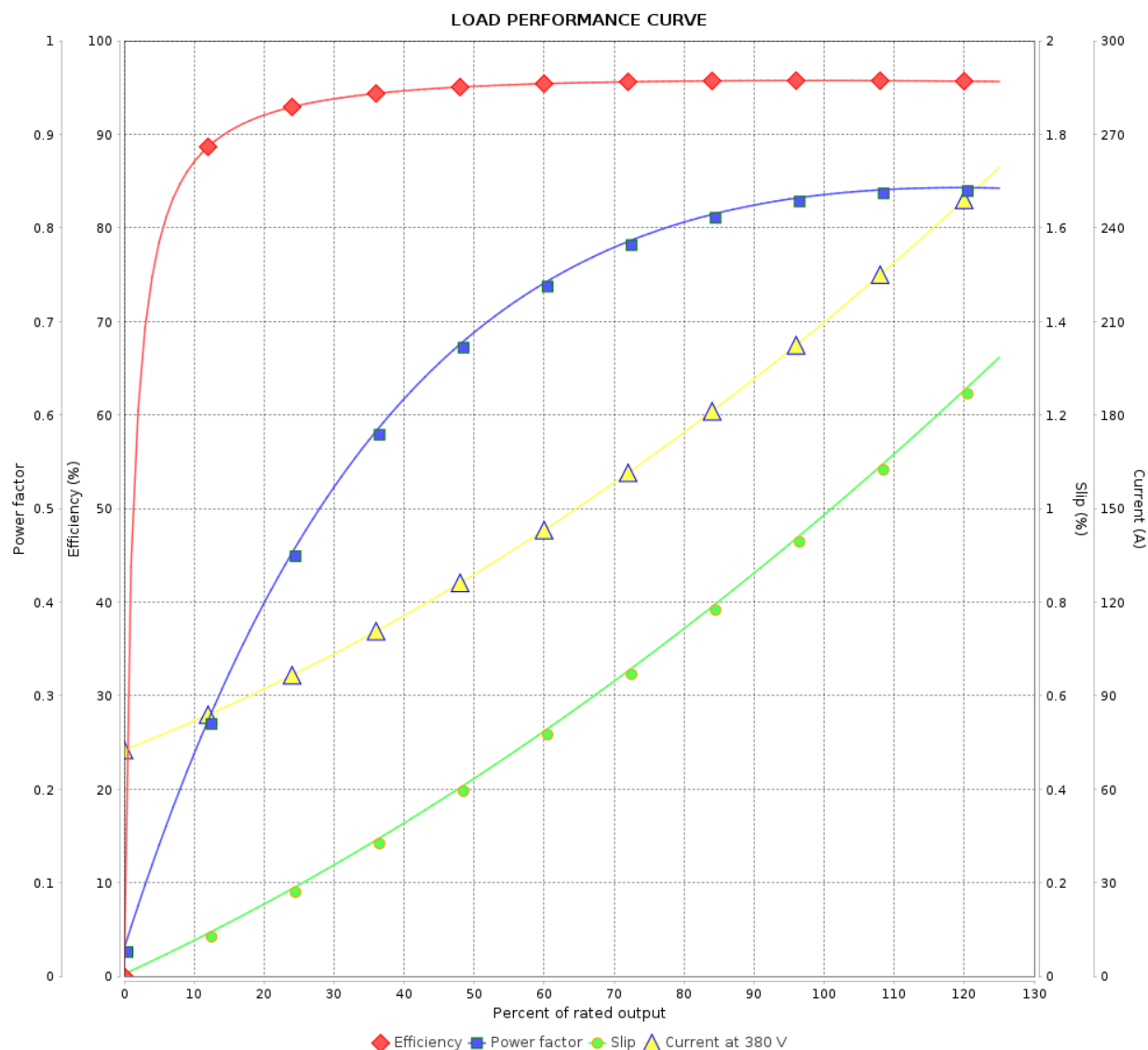
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13176144



Performance : 380 V 50 Hz 4P IE3

Rated current	: 208 A	Moment of inertia (J)	: 3.21 kgm <sup>2</sup>
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 73.3 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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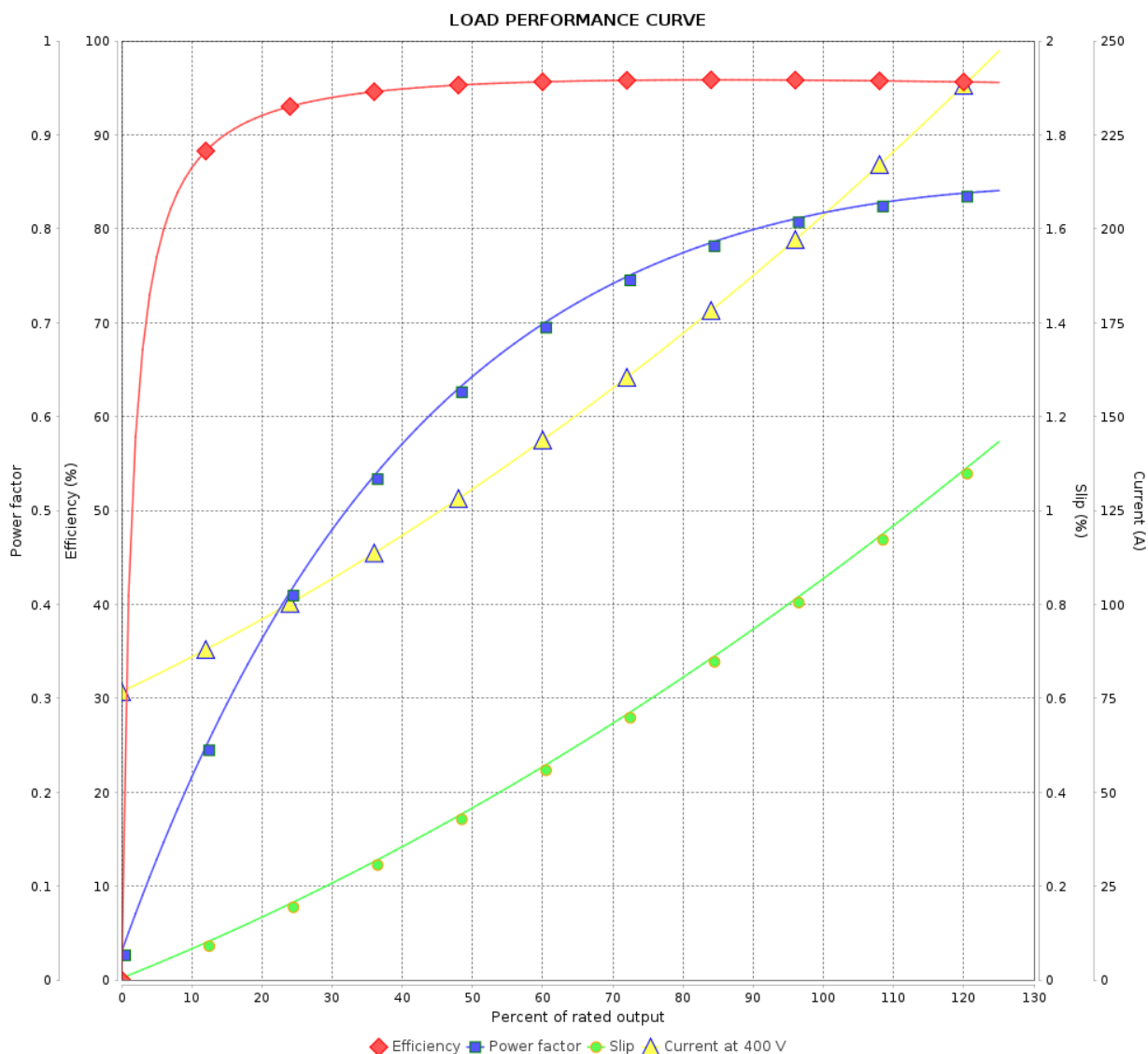
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13176144



Performance : 400 V 50 Hz 4P IE3

Rated current : 202 A  
LRC : 7.6  
Rated torque : 73.2 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 280 %  
Rated speed : 1487 rpm

Moment of inertia (J) : 3.21 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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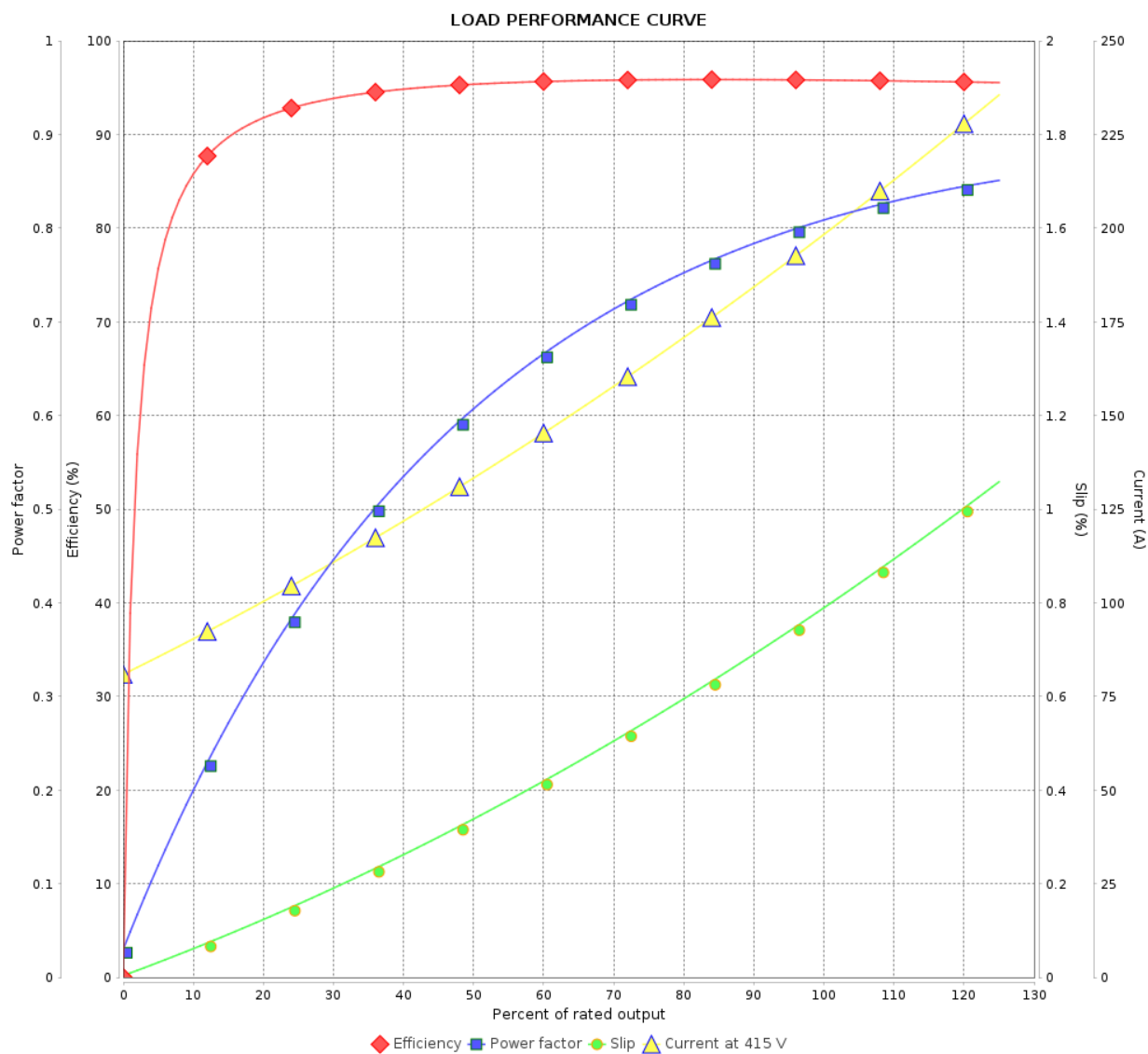
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13176144



Performance : 415 V 50 Hz 4P IE3

Rated current	: 197 A	Moment of inertia (J)	: 3.21 kgm <sup>2</sup>
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 73.2 kgfm	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 1488 rpm	Design	: B

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