

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 16176156

Frame	: 326TSC	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>	: 306 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.2284 kgm <sup>2</sup>
Design	: B		

Output [HP]	50	40	40	40
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	111/55.5	55.1	52.6	51.0
L. R. Amperes [A]	799/400	369	389	403
LRC [A]	7.2x(Code H)	6.7x(Code G)	7.4x(Code H)	7.9x(Code J)
No load current [A]	29.5/14.8	14.5	15.7	16.6
Rated speed [RPM]	3560	2960	2965	2965
Slip [%]	1.11	1.33	1.17	1.17
Rated torque [kgfm]	10.2	9.81	9.79	9.79
Locked rotor torque [%]	260	240	270	280
Breakdown torque [%]	260	250	280	300
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	59s (cold) 33s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	81.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)
Efficiency (%)	25%			
	50%	92.4	92.4	92.4
	75%	93.6	93.0	93.6
	100%	94.1	93.0	93.6
Power Factor	25%			
	50%	0.82	0.82	0.79
	75%	0.88	0.88	0.86
	100%	0.89	0.89	0.88

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6312 C3	6212 C3	Max. traction	: 216 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 523 kgf
Lubrication interval	: 9829 h	12143 h		
Lubricant amount	: 21 g	13 g		
Lubricant type	: Mobil Polyrex EM			

Notes  
USABLE @208V 123A SF 1.00 SFA 123A

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

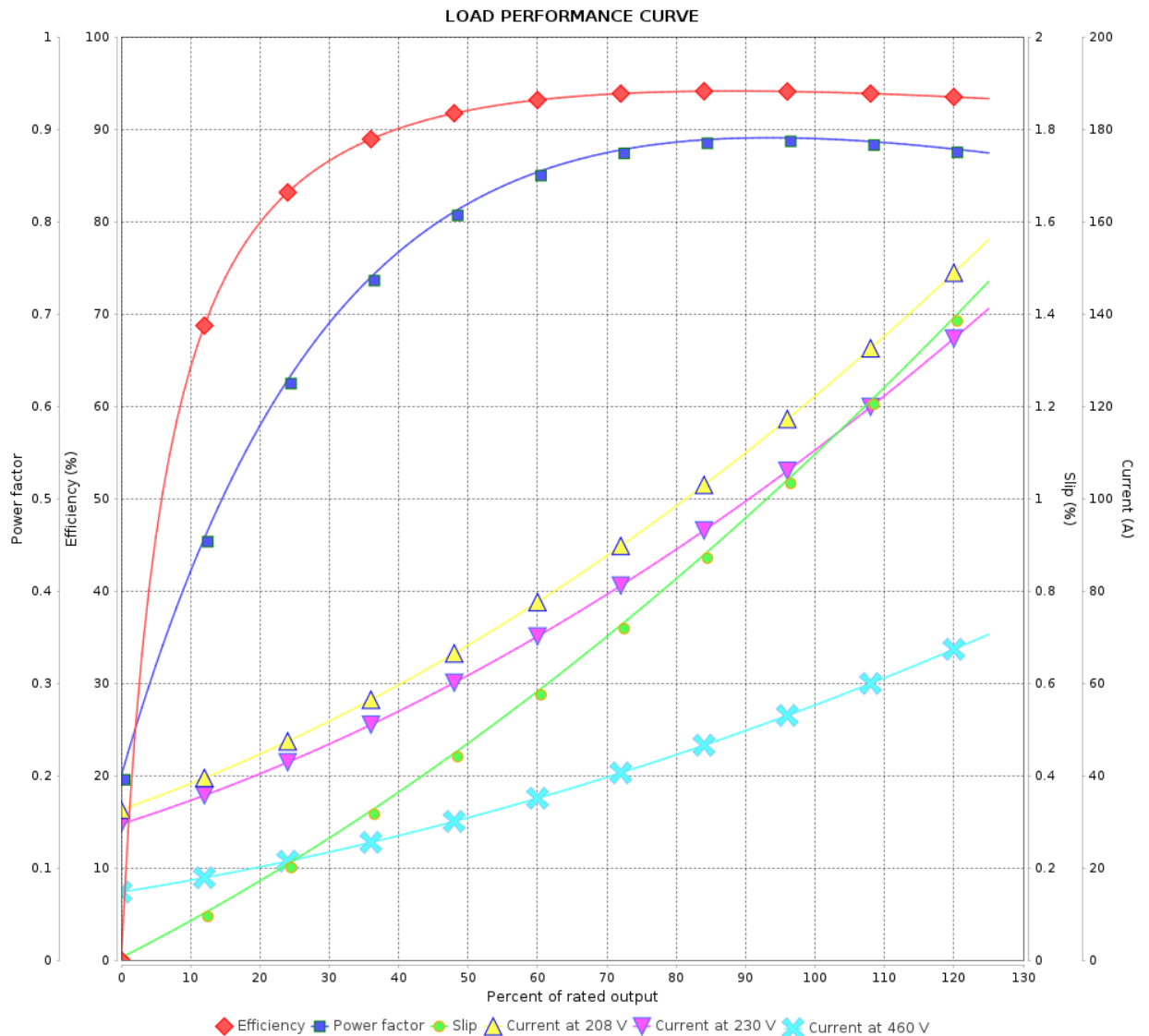
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Premium Efficiency Three-Phase

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Performance : 230/460 V 60 Hz 2P

Rated current : 111/55.5 A  
LRC : 7.2  
Rated torque : 10.2 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 260 %  
Rated speed : 3560 rpm

Moment of inertia (J) : 0.2284 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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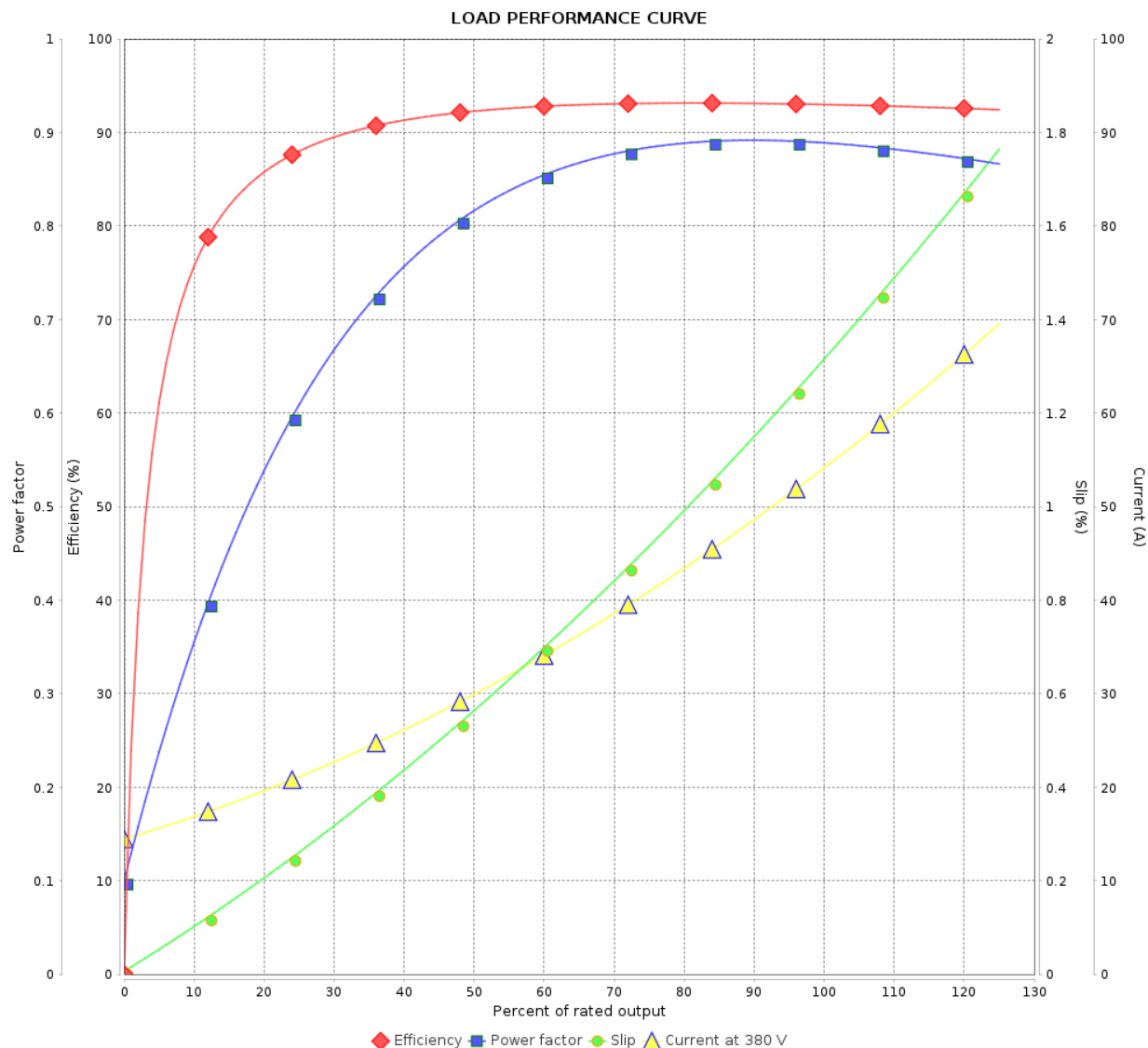
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 16176156



Performance : 380 V 50 Hz 2P IE2

Rated current : 55.1 A  
LRC : 6.7  
Rated torque : 9.81 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 250 %  
Rated speed : 2960 rpm

Moment of inertia (J) : 0.2284 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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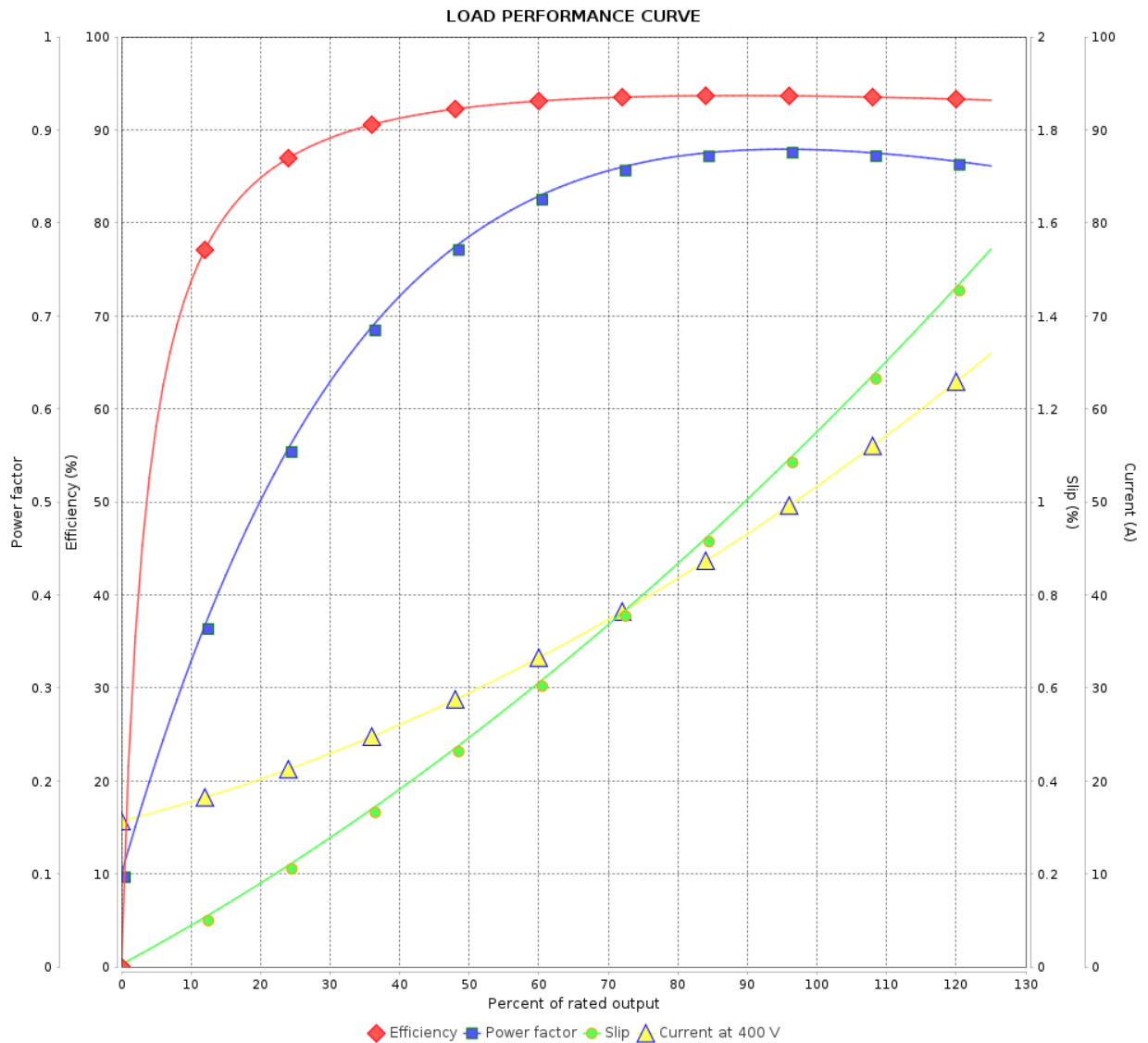
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 400 V 50 Hz 2P IE3

Rated current	: 52.6 A	Moment of inertia (J)	: 0.2284 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 9.79 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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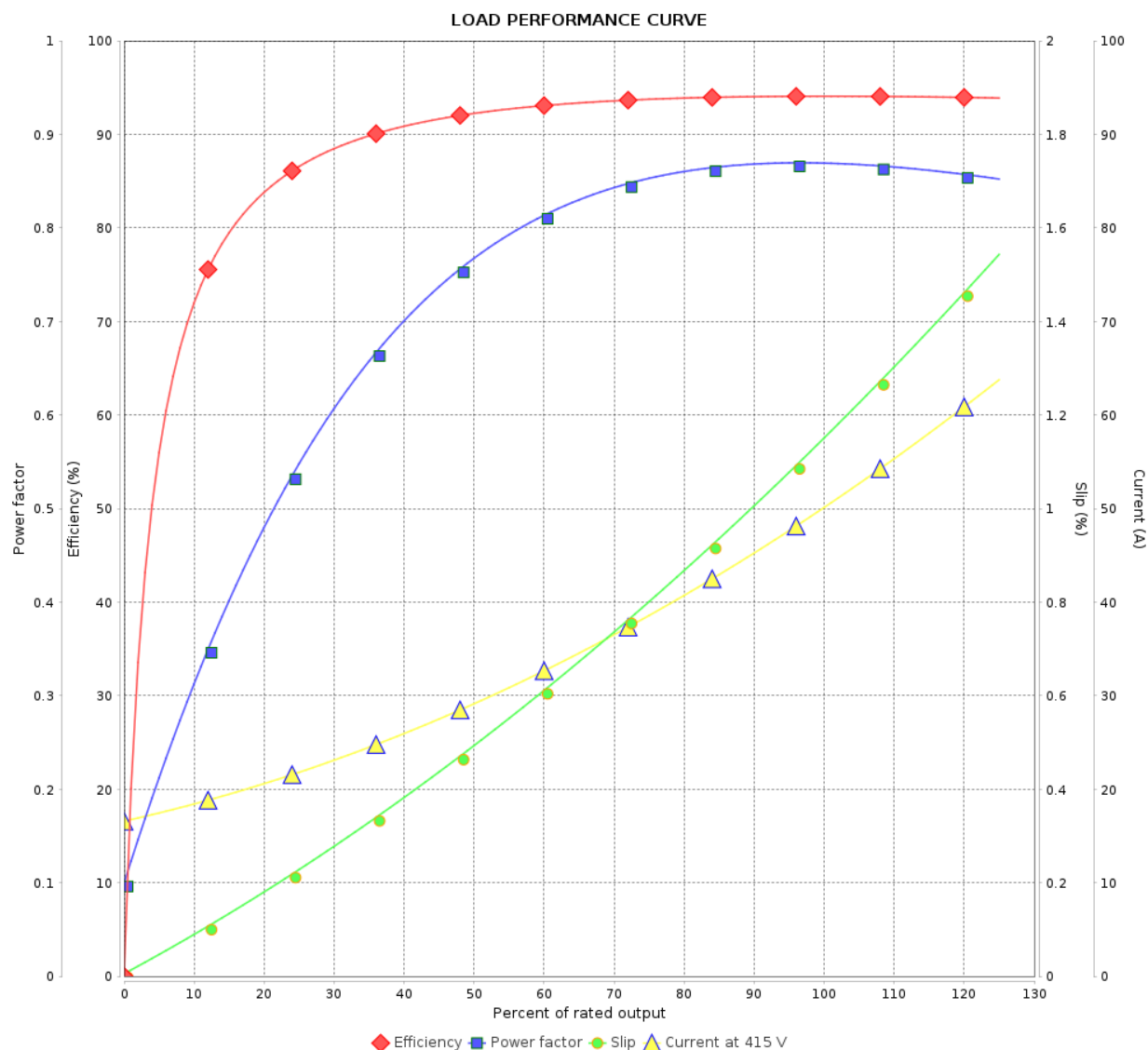
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 2P IE3

Rated current : 51.0 A  
LRC : 7.9  
Rated torque : 9.79 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 300 %  
Rated speed : 2965 rpm

Moment of inertia (J) : 0.2284 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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