

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12447060

Frame : 254/6TC	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> : 124 kg
Protection degree : IP55	Moment of inertia (J) : 0.0530 kgm <sup>2</sup>
Design : B	

Output [HP]	15	10	10	10	15	15	15
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	34.5/17.2	14.5	14.0	13.7	21.0	19.9	19.3
L. R. Amperes [A]	231/116	109	117	116	107	112	118
LRC [A]	6.7x(Code G)	7.5x(Code J)	8.3x(Code K)	8.5x(Code K)	5.1x(Code E)	5.6x(Code F)	6.1x(Code G)
No load current [A]	10.0/5.00	4.90	5.30	5.50	4.90	5.30	5.50
Rated speed [RPM]	3535	2950	2955	2960	2900	2915	2925
Slip [%]	1.81	1.67	1.50	1.33	3.33	2.83	2.50
Rated torque [kgfm]	3.08	2.46	2.46	2.45	3.75	3.73	3.72
Locked rotor torque [%]	200	200	229	250	160	180	200
Breakdown torque [%]	260	310	350	380	200	229	240
Service factor	1.25	1.25	1.25	1.25	1.00	1.00	1.15
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	36s (cold) 20s (hot)	50s (cold) 28s (hot)	45s (cold) 25s (hot)	41s (cold) 23s (hot)	25s (cold) 14s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)
Noise level <sup>2</sup>	72.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%	0.000					
	50%	89.5	90.3	90.1	89.9	89.5	90.2
	75%	91.0	90.5	90.7	90.8	90.2	90.2
	100%	91.0	90.5	90.7	90.8	88.5	89.5
Power Factor	25%	0.00					
	50%	0.77	0.73	0.69	0.67	0.82	0.80
	75%	0.85	0.83	0.80	0.78	0.88	0.87
	100%	0.88	0.87	0.85	0.84	0.90	0.89

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6309 C3	6209 C3	Max. traction : 78 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 202 kgf
Lubrication interval :	19000 h	20000 h	
Lubricant amount :	13 g	9 g	
Lubricant type :	Mobil Polyrex EM		

Notes  
USABLE @208V 38.0A SF 1.15 SFA 43.7A

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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# LOAD PERFORMANCE CURVE

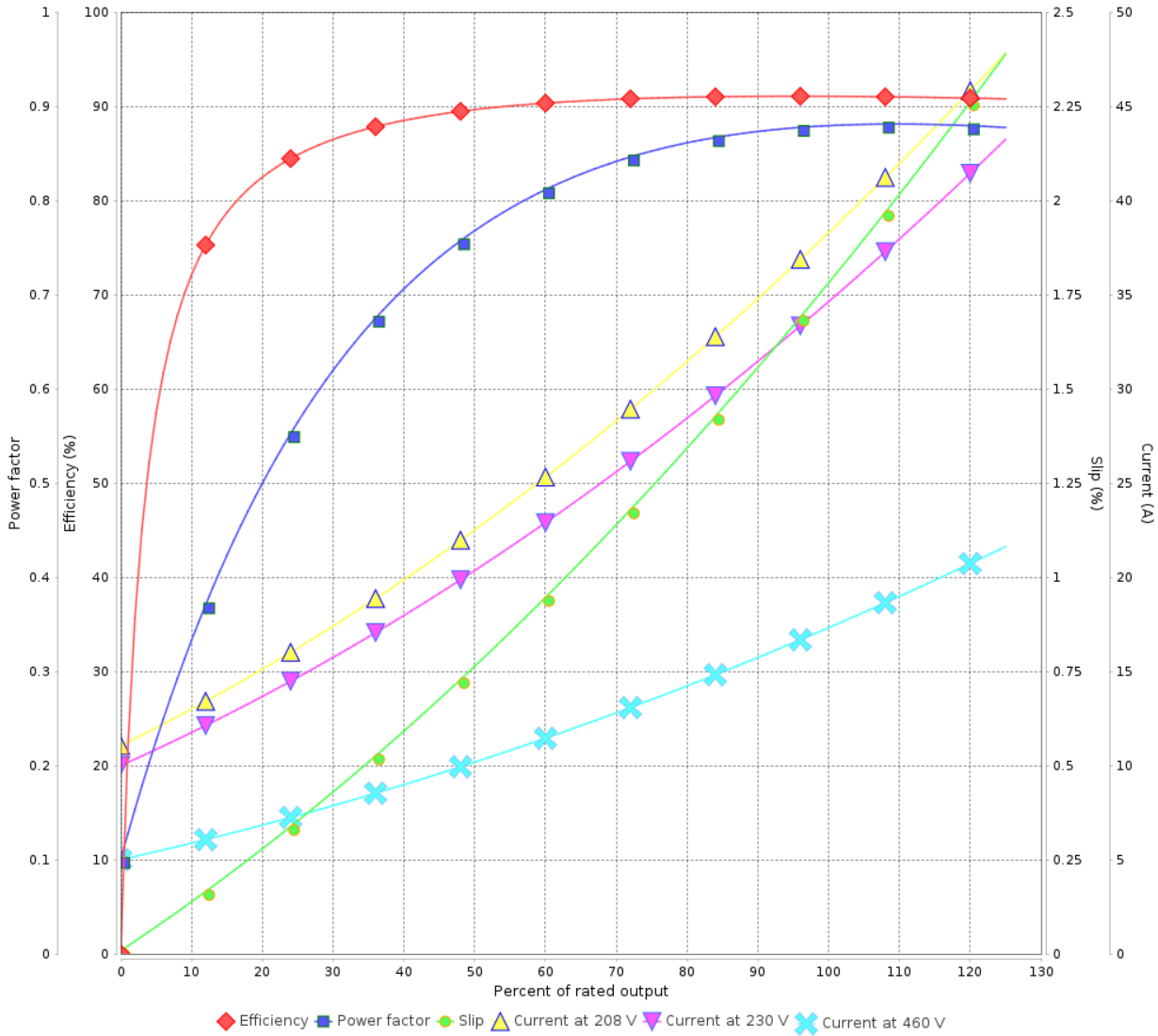
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12447060

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 34.5/17.2 A  
 LRC : 6.7  
 Rated torque : 3.08 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 260 %  
 Rated speed : 3535 rpm

Moment of inertia (J) : 0.0530 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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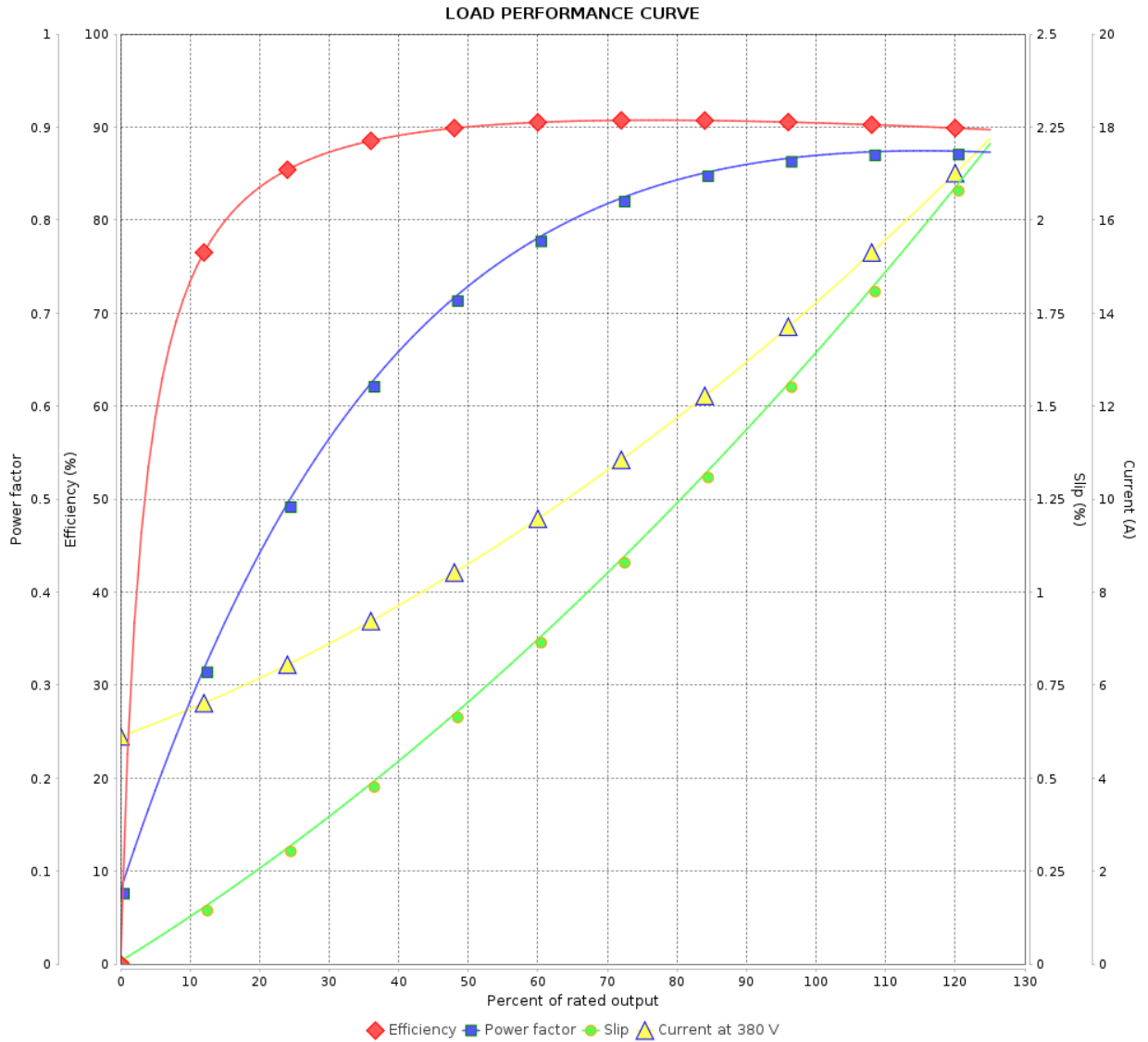
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12447060



Performance : 380 V 50 Hz 2P IE3

Rated current	: 14.5 A	Moment of inertia (J)	: 0.0530 kgm <sup>2</sup>
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 2.46 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2950 rpm	Design	: B

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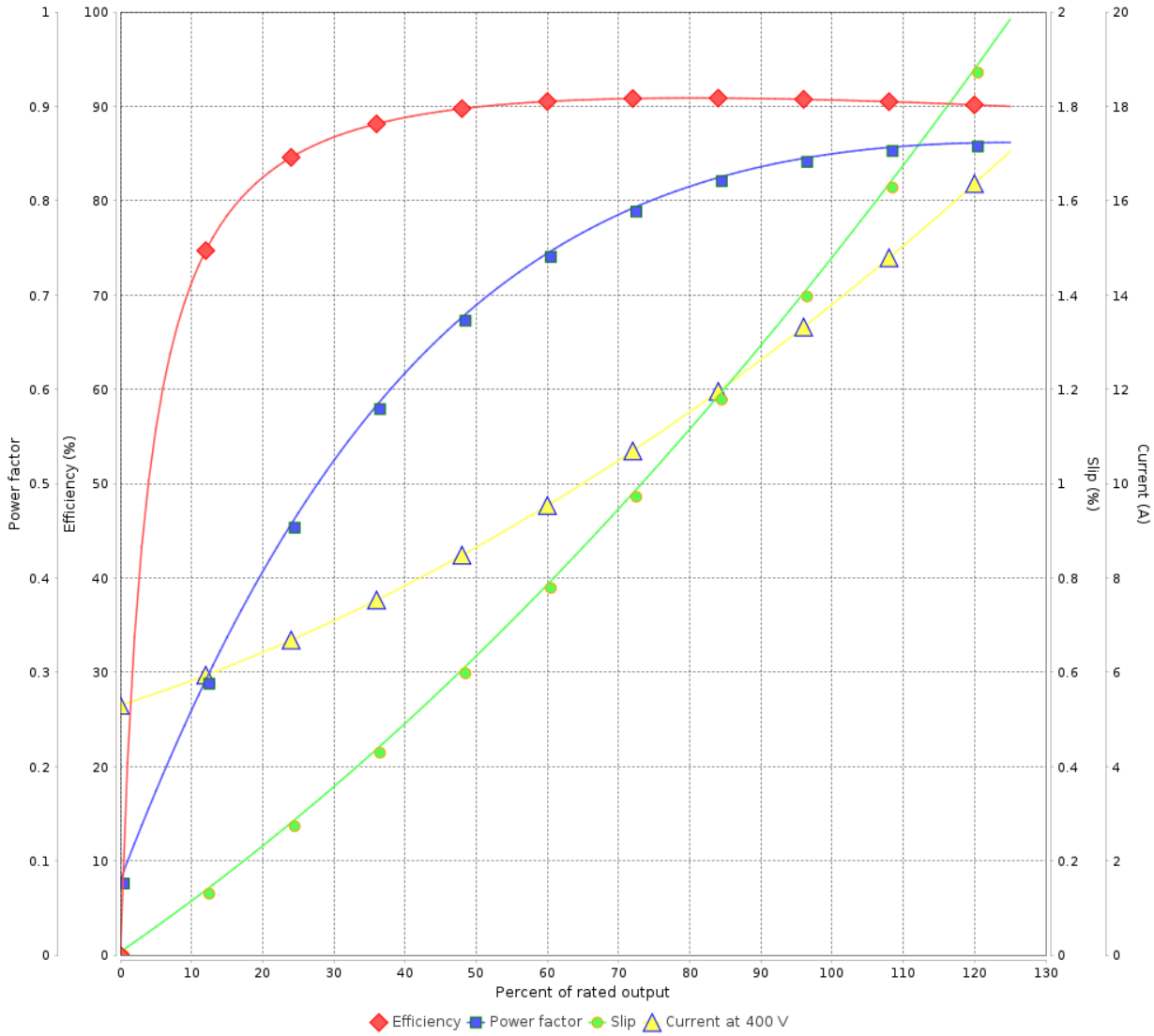
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12447060

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Performance : 400 V 50 Hz 2P IE3

Rated current	: 14.0 A	Moment of inertia (J)	: 0.0530 kgm <sup>2</sup>
LRC	: 8.3	Duty cycle	: Cont.(S1)
Rated torque	: 2.46 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2955 rpm	Design	: B

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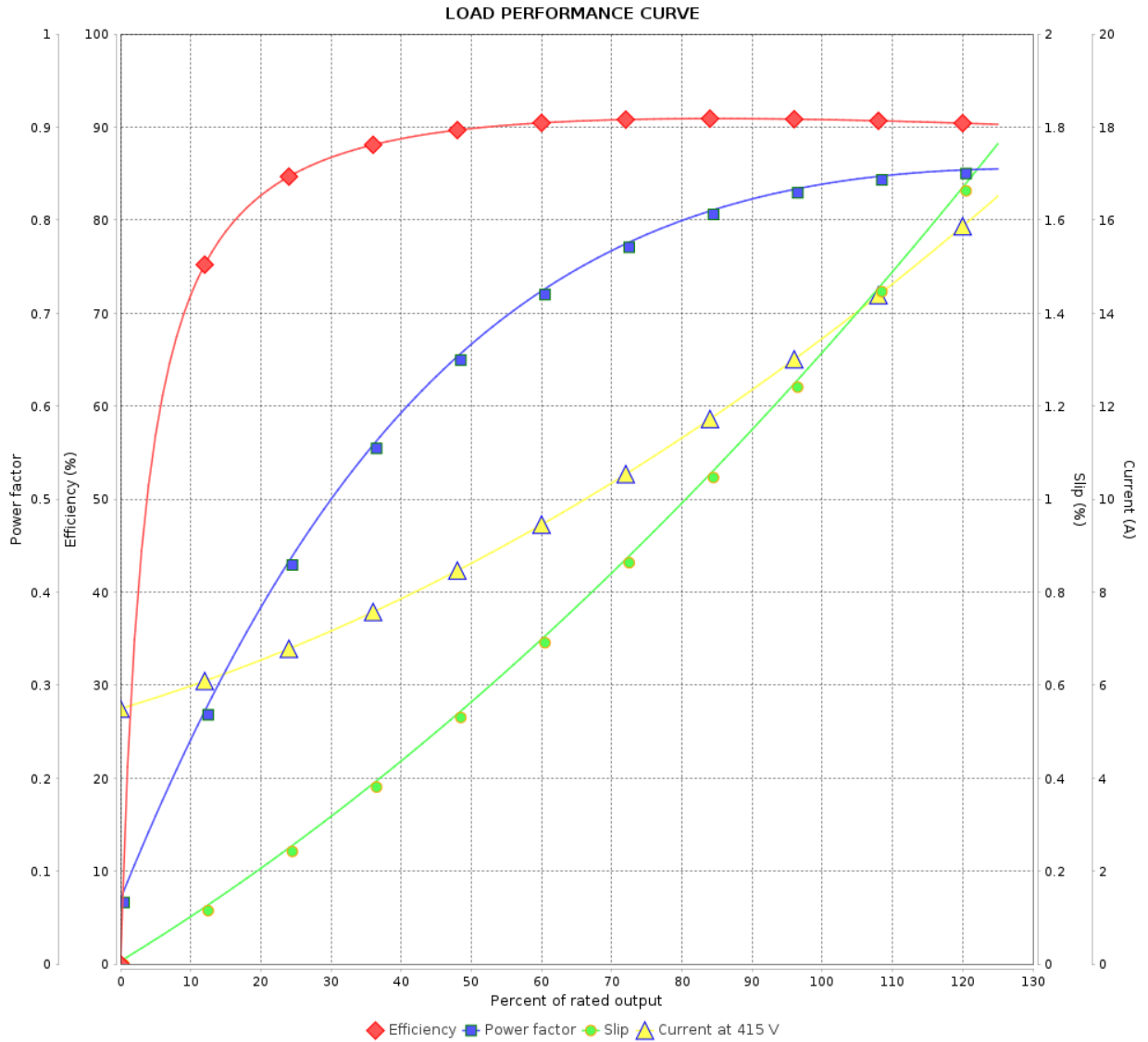
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12447060



Performance : 415 V 50 Hz 2P IE3

Rated current : 13.7 A  
 LRC : 8.5  
 Rated torque : 2.45 kgfm  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 2960 rpm

Moment of inertia (J) : 0.0530 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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## Three Phase Induction Motor - Squirrel Cage

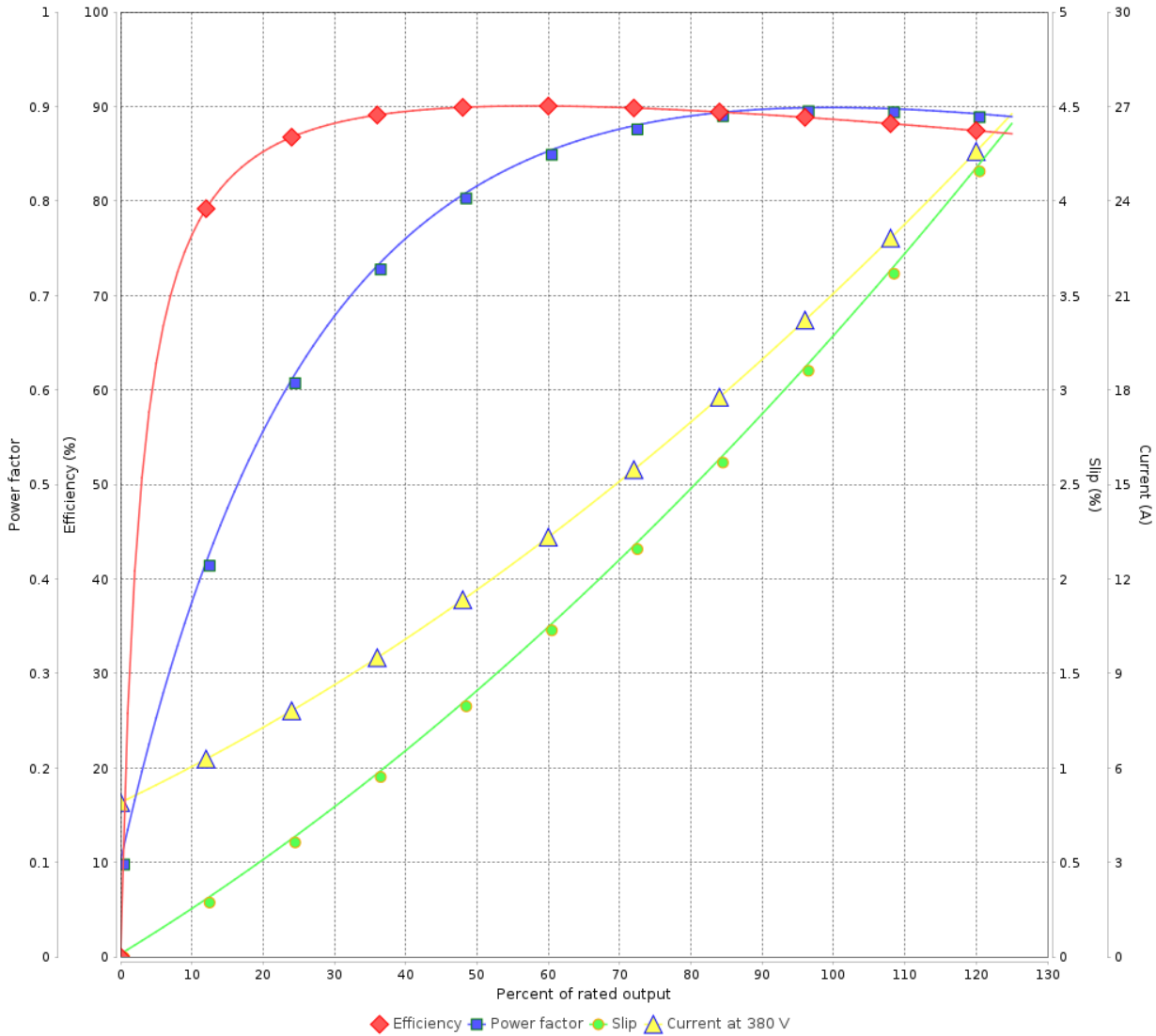


Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12447060

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 2P IE1

Rated current : 21.0 A  
 LRC : 5.1  
 Rated torque : 3.75 kgfm  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0530 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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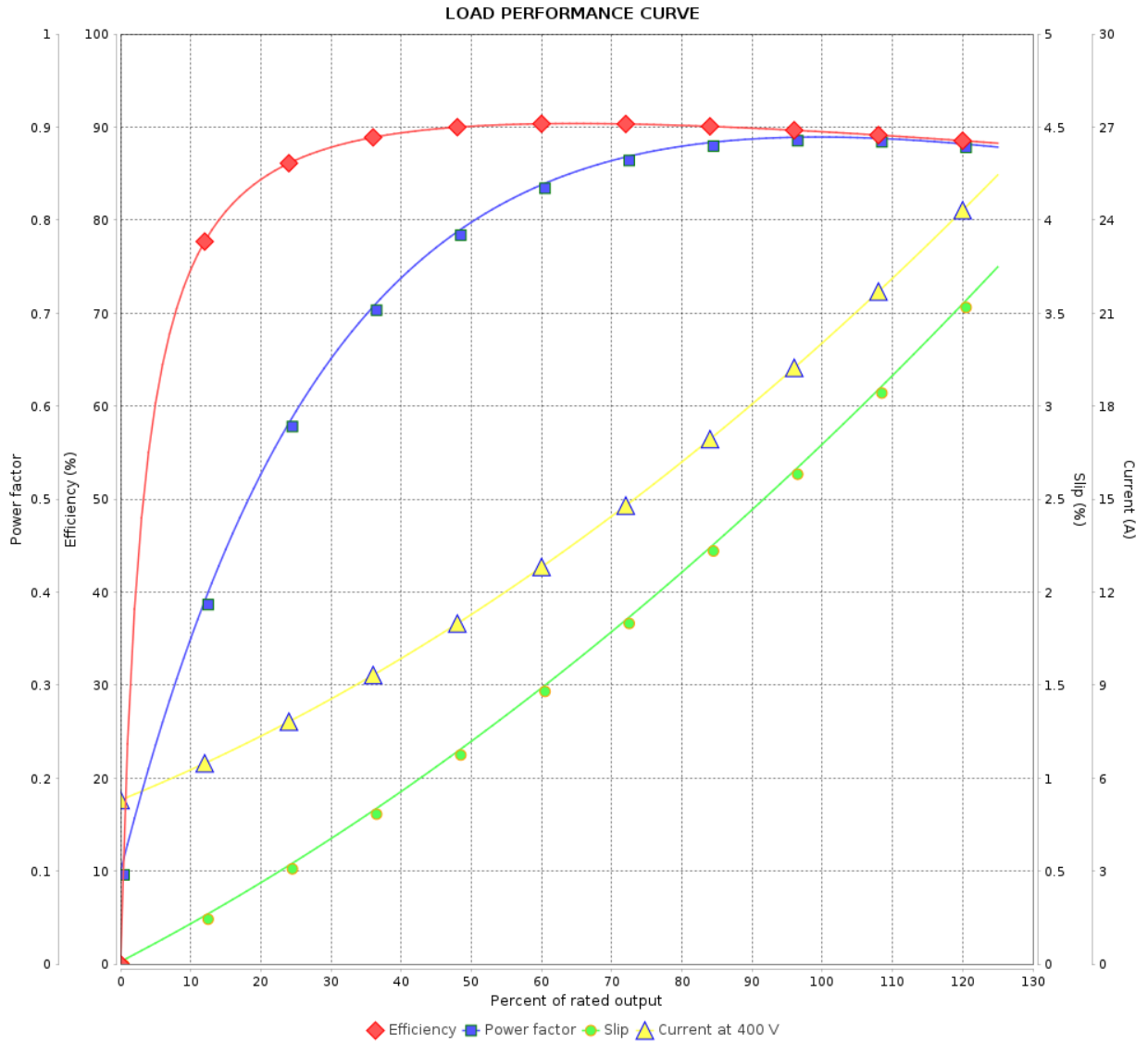
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12447060



Performance : 400 V 50 Hz 2P IE2

Rated current	: 19.9 A	Moment of inertia (J)	: 0.0530 kgm <sup>2</sup>
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 3.73 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2915 rpm	Design	: B

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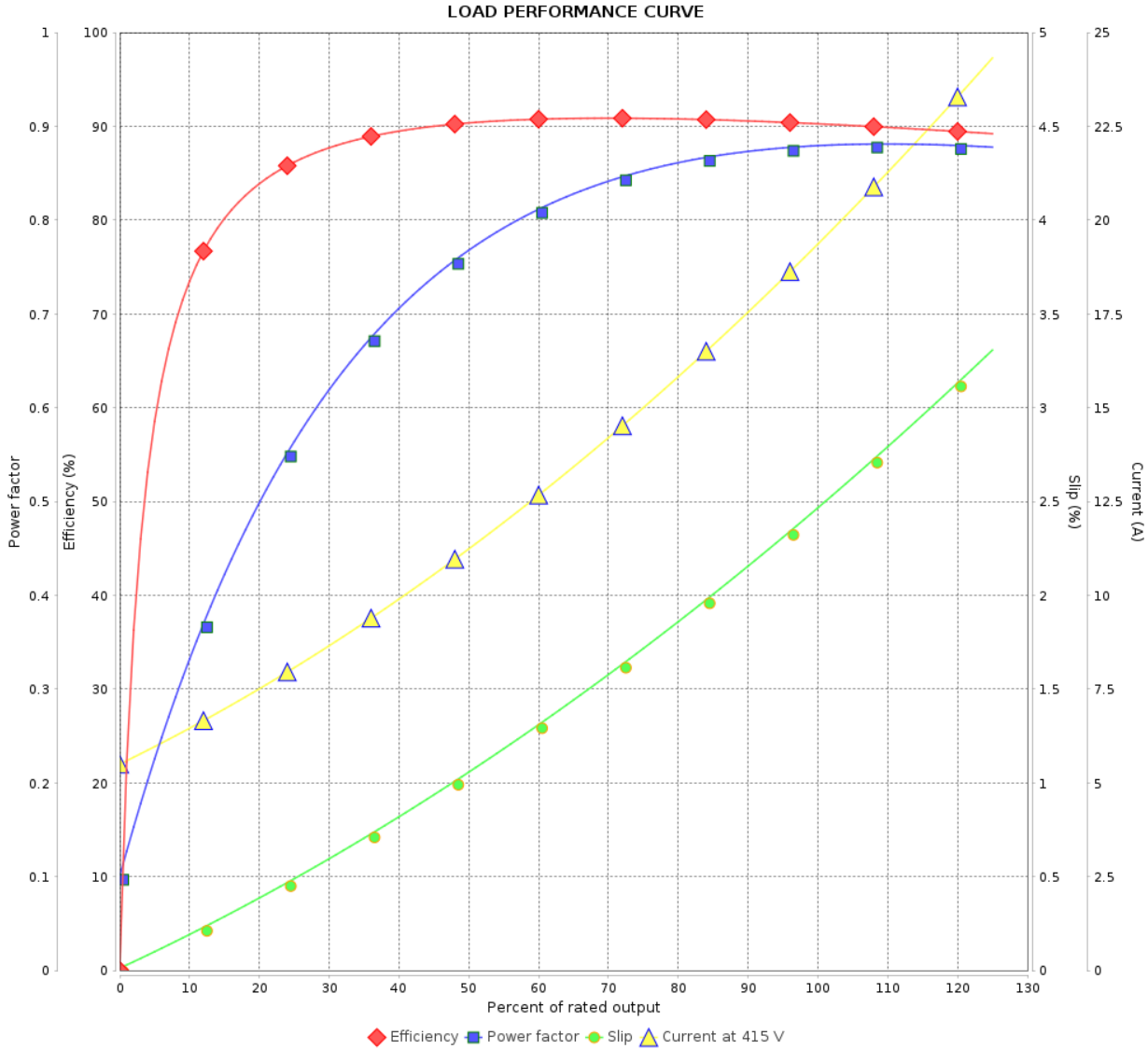
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12447060



Performance : 415 V 50 Hz 2P IE2

Rated current	: 19.3 A	Moment of inertia (J)	: 0.0530 kgm <sup>2</sup>
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 3.72 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 2925 rpm	Design	: B

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