

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :								
Product line : W22 NEMA Premium Efficiency Three-Phase			Product code : 12911271					
Frame : 444/5TC			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> : 720 kg					
Protection degree : IP55			Moment of inertia (J) : 3.68 kgm <sup>2</sup>					
Design : B								
Output [HP]	100	75	75	75	100	100	100	
Poles	6	6	6	6	6	6	6	
Frequency [Hz]	60	50	50	50	50	50	50	
Rated voltage [V]	230/460	380	400	415	380	400	415	
Rated current [A]	242/121	110	106	105	147	139	135	
L. R. Amperes [A]	1498/749	723	766	809	733	763	812	
LRC [A]	6.2x(Code G)	6.6x(Code H)	7.2x(Code H)	7.7x(Code J)	5.0x(Code E)	5.5x(Code F)	6.0x(Code G)	
No load current [A]	90.0/45.0	45.0	48.0	55.0	45.0	48.0	50.0	
Rated speed [RPM]	1189	990	991	992	984	985	987	
Slip [%]	0.92	1.00	0.90	0.80	1.60	1.50	1.30	
Rated torque [kgfm]	61.0	55.0	54.9	54.9	73.8	73.7	73.5	
Locked rotor torque [%]	220	229	250	270	170	190	200	
Breakdown torque [%]	250	280	310	340	190	229	250	
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K	
Locked rotor time	36s (cold) 20s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level <sup>2</sup>	69.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	65.0 dB(A)	
Efficiency (%)	25%							
	50%	94.5	93.8	93.8	93.7	94.5	94.5	94.0
	75%	95.0	94.3	94.6	94.6	94.0	94.5	94.0
	100%	95.0	94.2	94.5	94.6	93.6	94.0	94.0
Power Factor	25%							
	50%	0.68	0.64	0.60	0.57	0.73	0.70	0.68
	75%	0.78	0.75	0.72	0.71	0.81	0.79	0.77
	100%	0.82	0.81	0.79	0.77	0.83	0.83	0.82
Losses at normative operating points (speed;torque), in percentage of rated output power								
Losses (%)	P1 (0,9;1,0)	5.2	6.1	5.8	5.7	6.8	6.3	6.3
	P2 (0,5;1,0)	4.2	4.9	4.6	4.5	5.4	5.1	5.1
	P3 (0,25;1,0)	3.8	4.5	4.2	4.1	5.0	4.6	4.6
	P4 (0,9;0,5)	2.8	3.2	3.1	3.0	3.6	3.4	3.4
	P5 (0,5;0,5)	1.8	2.2	2.0	2.0	2.4	2.2	2.2
	P6 (0,5;0,25)	1.3	1.5	1.4	1.4	1.7	1.6	1.6
	P7 (0,25;0,25)	0.9	1.0	1.0	0.9	1.1	1.0	1.0
Bearing type		Drive end : 6319 C3	Non drive end : 6316 C3	Foundation loads				
Sealing		: WSeal	: WSeal	Max. traction		: 1248 kgf		
Lubrication interval		: 13000 h	: 16000 h	Max. compression		: 1968 kgf		
Lubricant amount		: 45 g	: 34 g					
Lubricant type		: Mobil Polyrex EM						
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## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 268A SF 1.10 SFA 294A

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

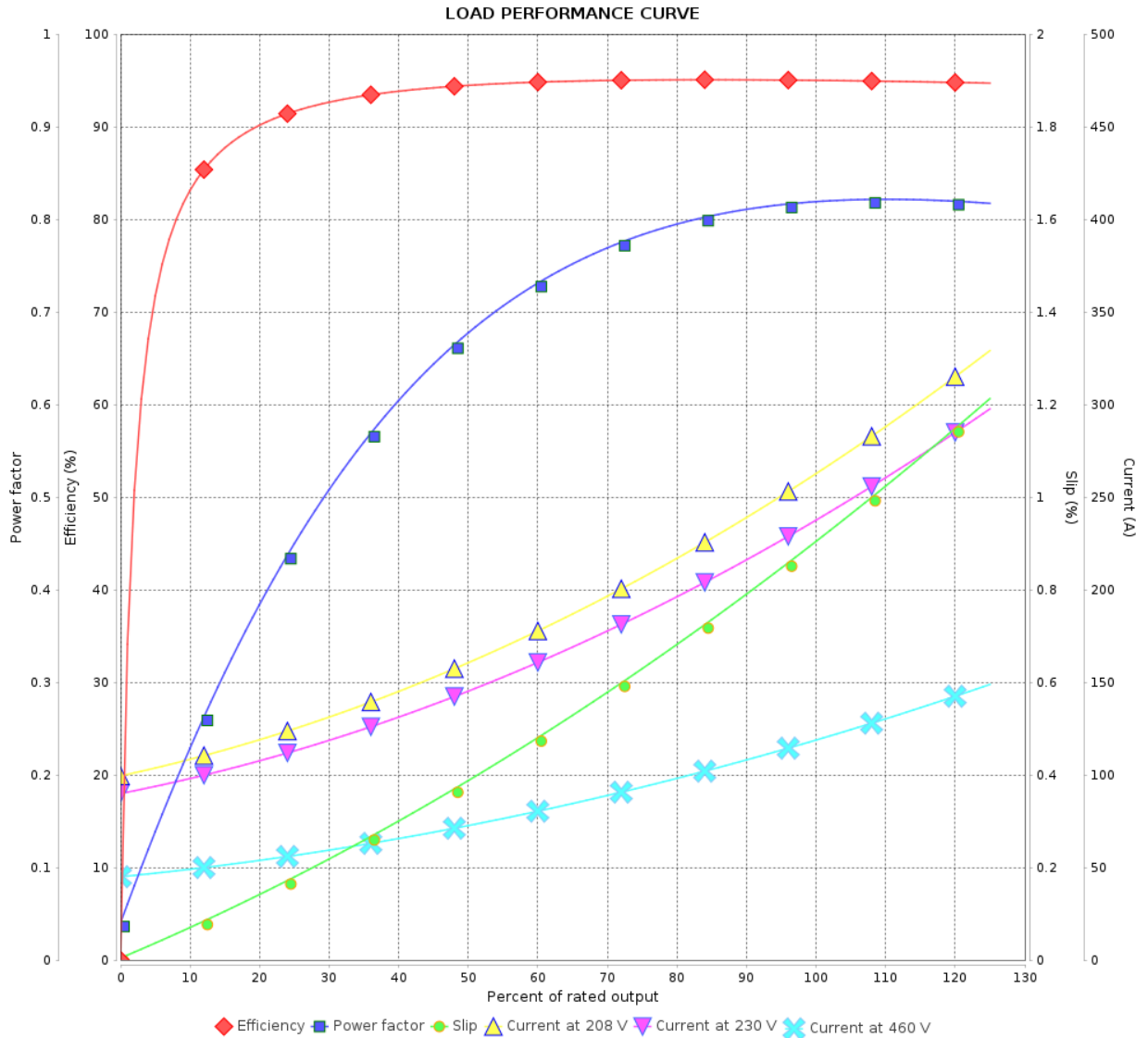
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12911271



Performance : 230/460 V 60 Hz 6P

Rated current : 242/121 A  
 LRC : 6.2  
 Rated torque : 61.0 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1189 rpm

Moment of inertia (J) : 3.68 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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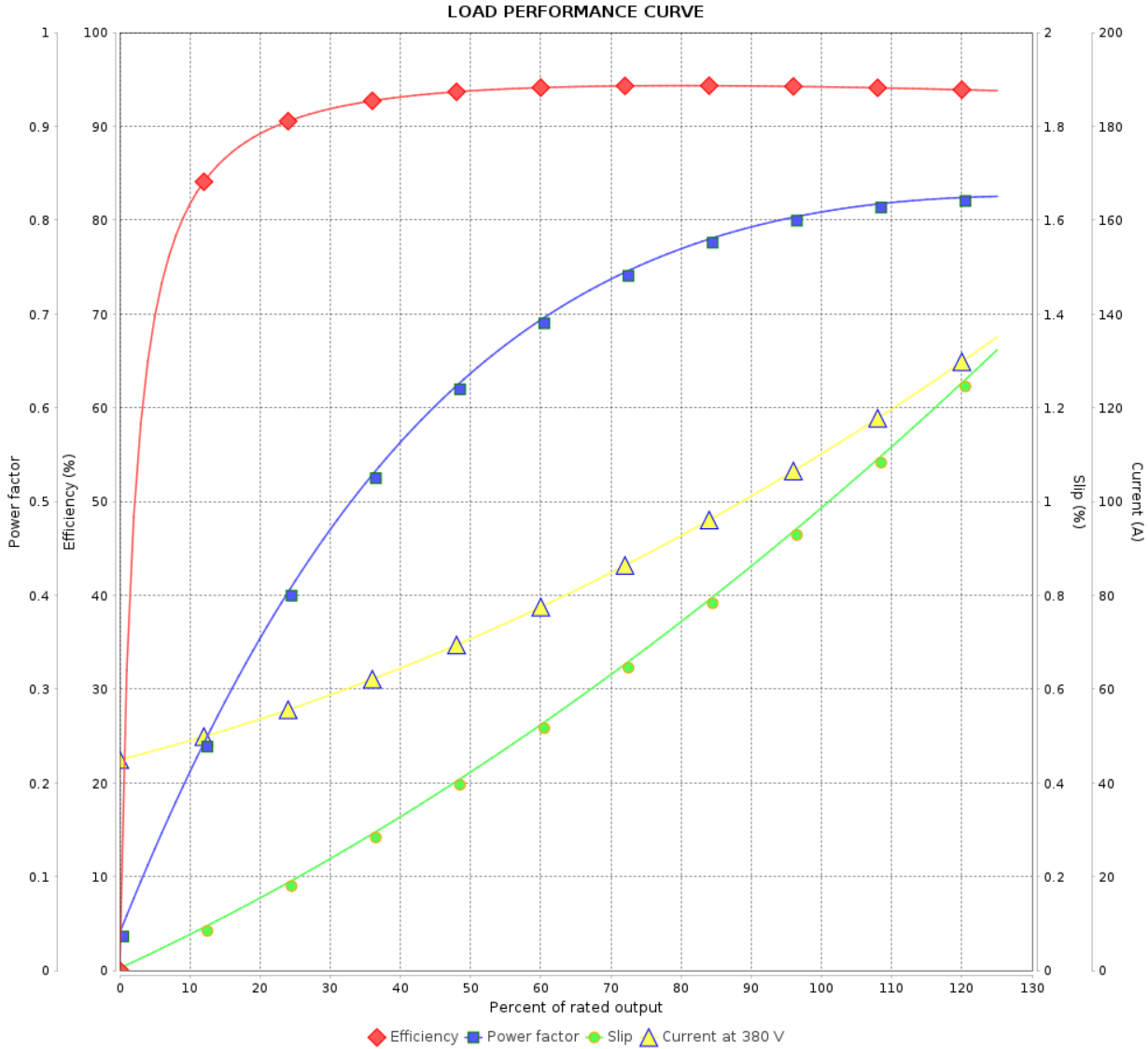
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 380 V 50 Hz 6P IE3

Rated current	: 110 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 55.0 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

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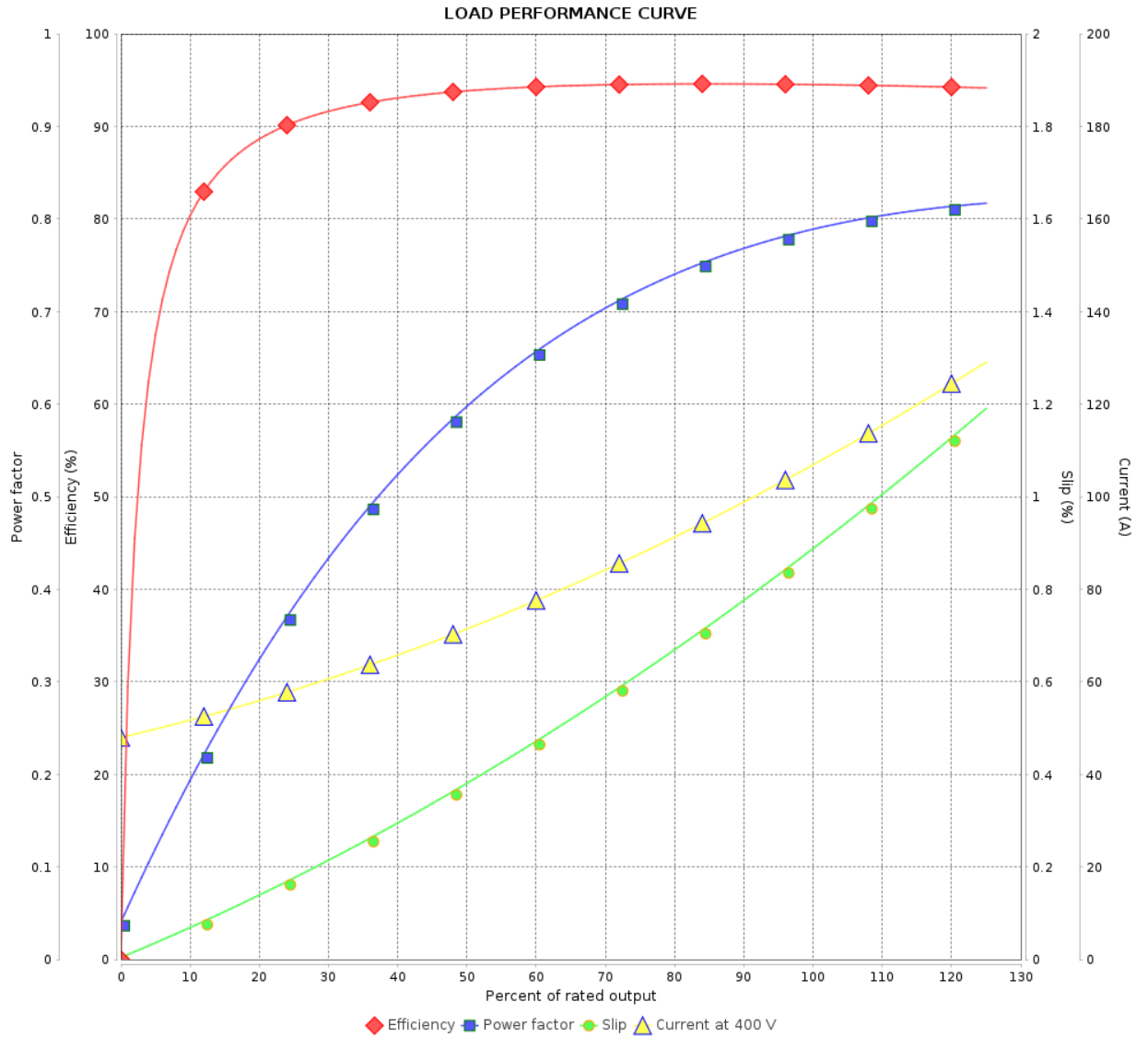
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 400 V 50 Hz 6P IE3

Rated current	: 106 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 54.9 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 991 rpm	Design	: B

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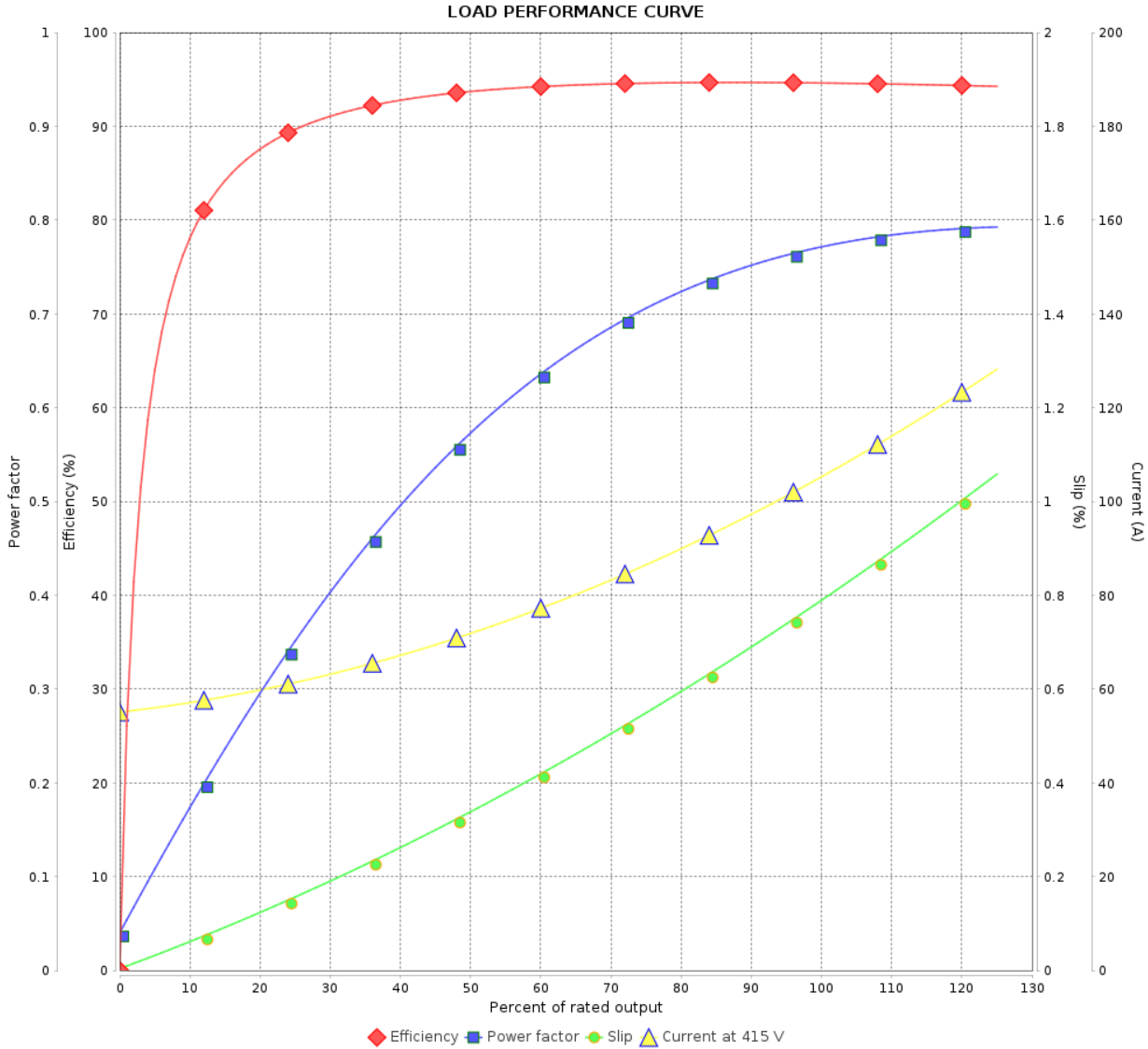
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 415 V 50 Hz 6P IE3

Rated current	: 105 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 54.9 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 992 rpm	Design	: B

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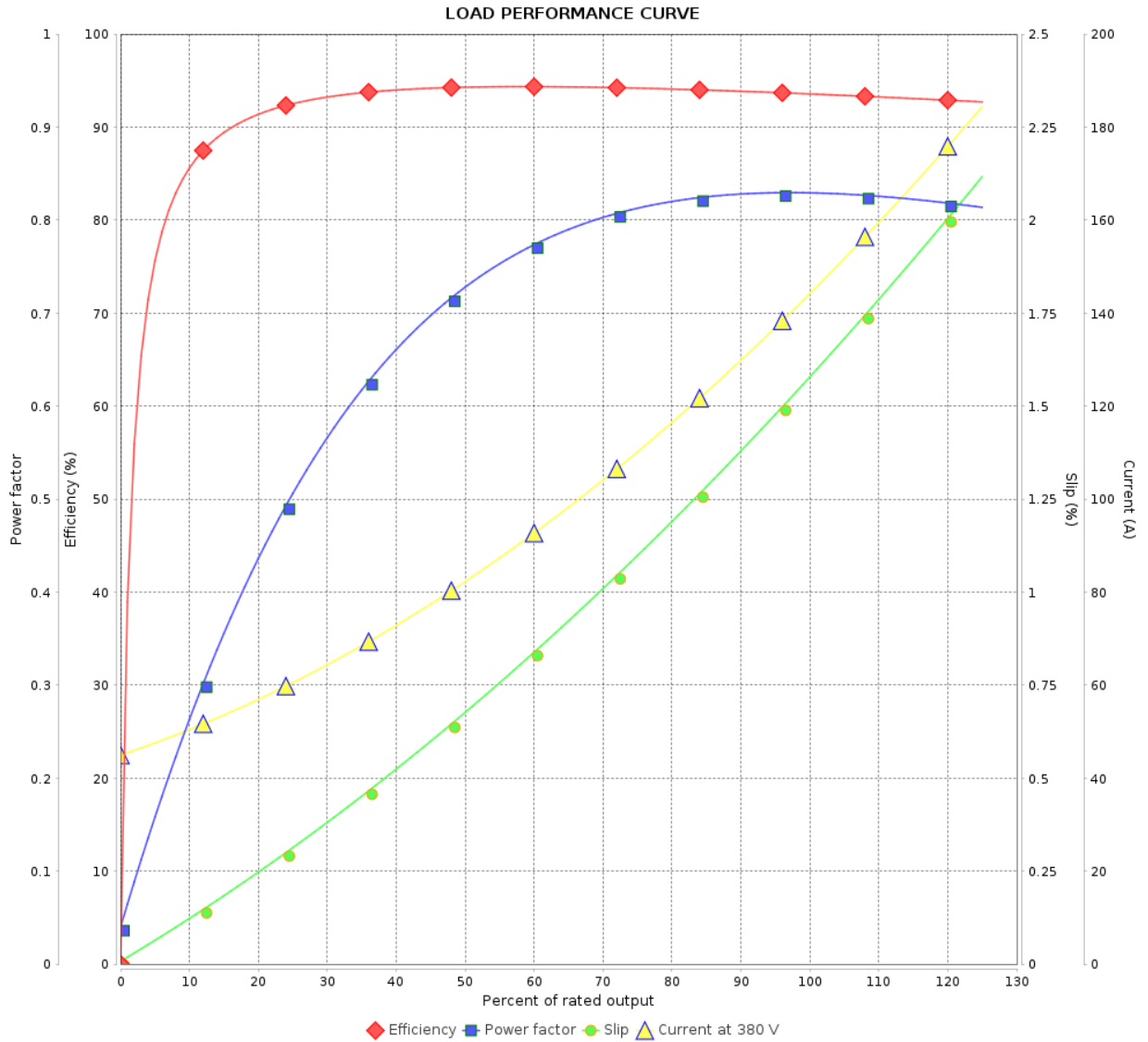
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 380 V 50 Hz 6P IE1

Rated current	: 147 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 5.0	Duty cycle	: Cont.(S1)
Rated torque	: 73.8 kgfm	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 984 rpm	Design	: B

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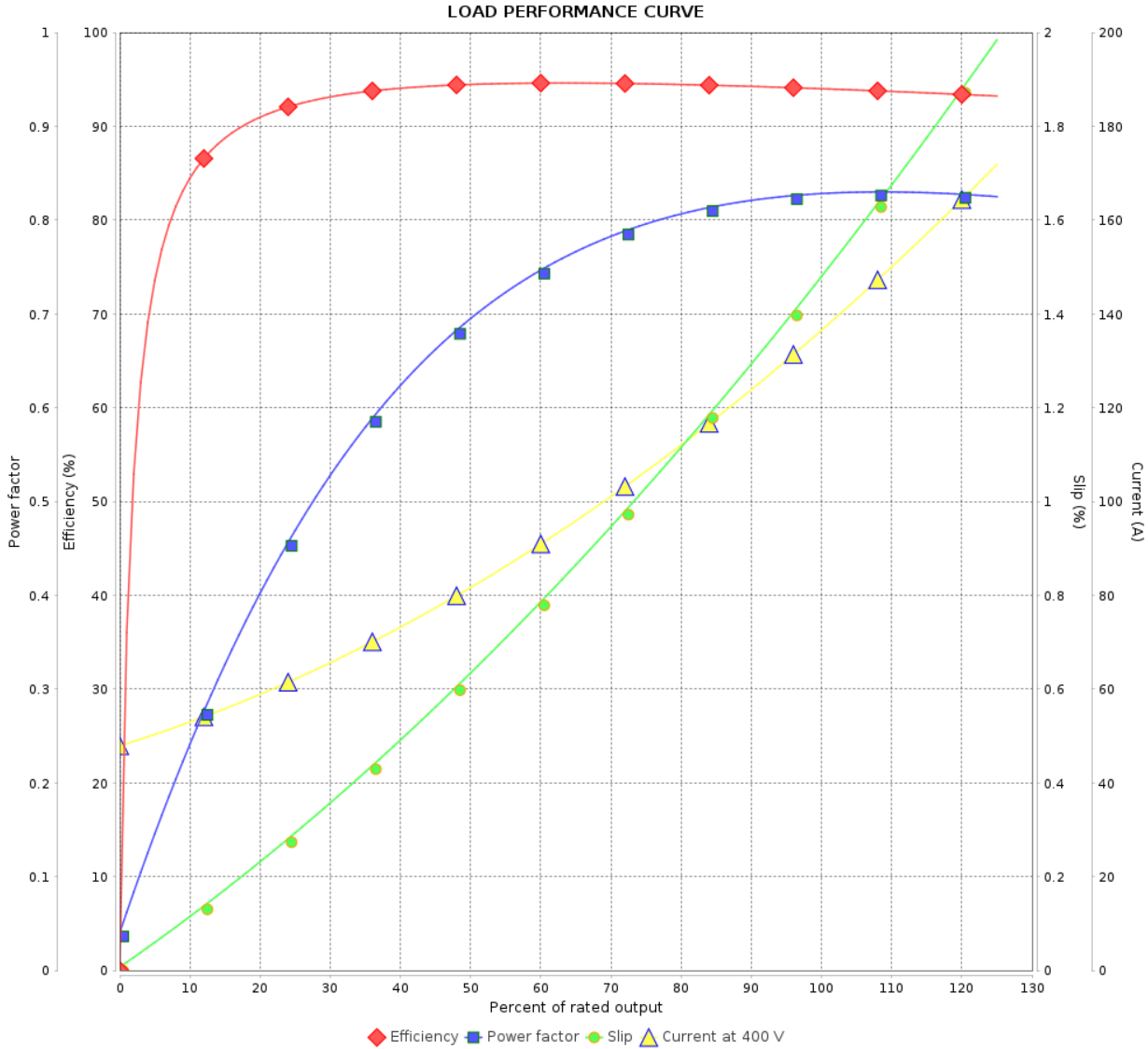
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 400 V 50 Hz 6P IE2

Rated current	: 139 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 73.7 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 985 rpm	Design	: B

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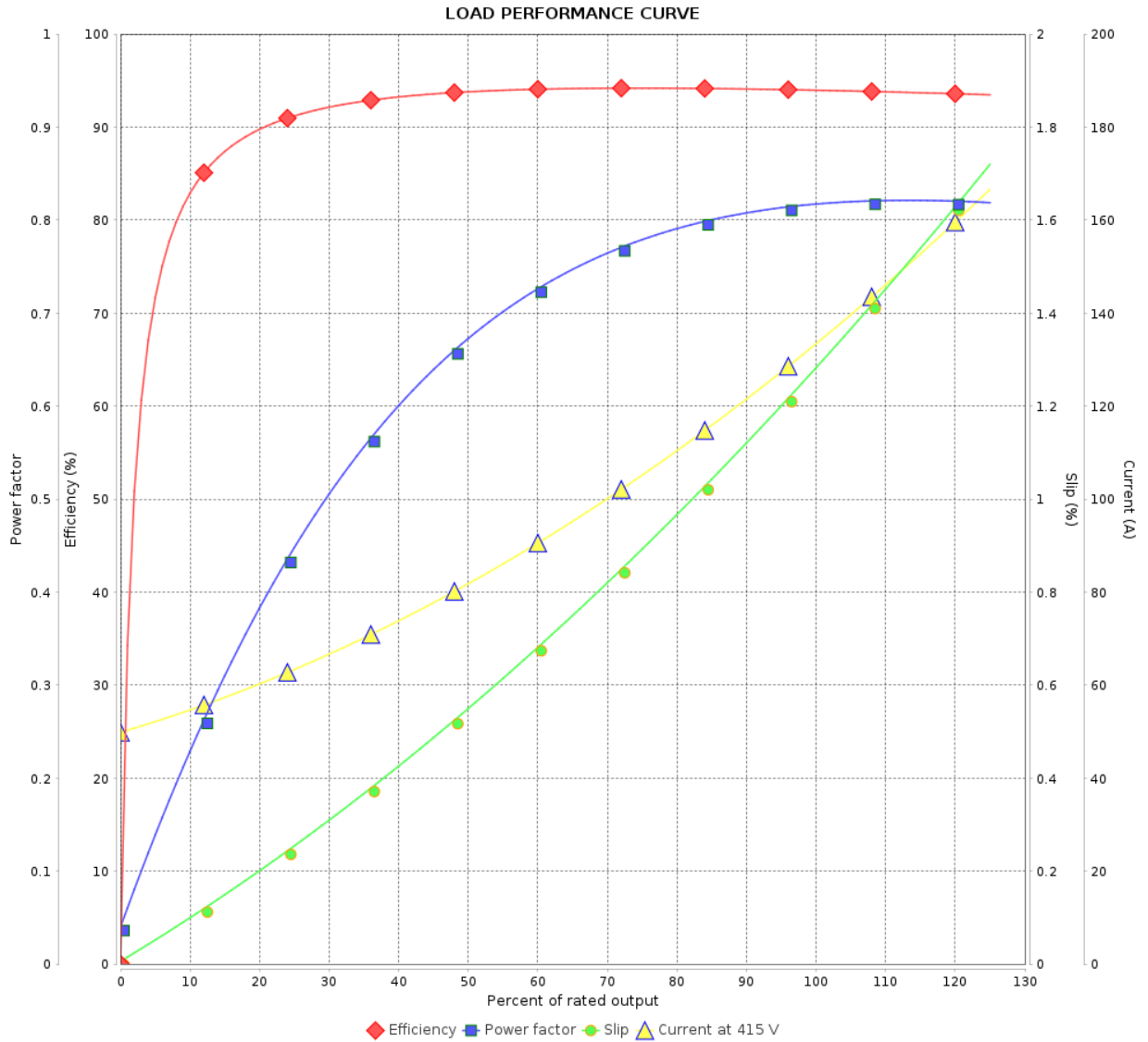
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 12911271



Performance : 415 V 50 Hz 6P IE2

Rated current	: 135 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 73.5 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 987 rpm	Design	: B

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