

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :							
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	13438854				
Frame	: 504/5TC	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>	: 1189 kg				
Protection degree	: IP55	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>				
Design	: B						
Output [HP]	250	200	200	200	250	250	250
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	554/277	270	257	250	339	322	309
L. R. Amperes [A]	3601/1801	1593	1696	1775	1729	1803	1885
LRC [A]	6.5x(Code G)	5.9x(Code F)	6.6x(Code G)	7.1x(Code H)	5.1x(Code E)	5.6x(Code E)	6.1x(Code F)
No load current [A]	170/85.0	71.2	76.2	80.0	84.0	90.0	95.0
Rated speed [RPM]	1785	1490	1490	1490	1480	1485	1485
Slip [%]	0.83	0.67	0.67	0.67	1.33	1.00	1.00
Rated torque [kgfm]	102	97.4	97.4	97.4	123	122	122
Locked rotor torque [%]	229	200	220	240	180	200	220
Breakdown torque [%]	220	220	250	270	180	200	220
Service factor	1.15	1.15	1.15	1.15	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)	66s (cold) 37s (hot)	61s (cold) 34s (hot)	57s (cold) 32s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)
Noise level <sup>2</sup>	75.0 dB(A)	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)	71.0 dB(A)
Efficiency (%)	25%						
	50%	95.8	95.2	95.1	95.0	95.8	95.8
	75%	96.2	95.8	95.8	95.8	95.8	95.8
	100%	96.2	95.8	95.8	95.8	95.4	95.8
Power Factor	25%						
	50%	0.78	0.81	0.79	0.77	0.82	0.80
	75%	0.85	0.87	0.86	0.85	0.86	0.86
	100%	0.87	0.88	0.88	0.87	0.87	0.87
Losses at normative operating points (speed;torque), in percentage of rated output power							
Losses (%)	P1 (0,9;1,0)	4.4	4.4	4.4	4.4	4.4	4.4
	P2 (0,5;1,0)	3.4	3.4	3.4	3.4	3.4	3.4
	P3 (0,25;1,0)	2.9	2.9	2.9	2.9	2.9	2.9
	P4 (0,9;0,5)	2.4	2.4	2.4	2.4	2.4	2.4
	P5 (0,5;0,5)	1.6	1.6	1.6	1.6	1.6	1.6
	P6 (0,5;0,25)	1.2	1.2	1.2	1.2	1.2	1.2
	P7 (0,25;0,25)	0.7	0.7	0.7	0.7	0.7	0.7
Bearing type	: Drive end 6319 C3	Non drive end 6316 C3	Foundation loads				
Sealing	: WSeal	WSeal	Max. traction : 1521 kgf				
Lubrication interval	: 8000 h	10000 h	Max. compression : 2710 kgf				
Lubricant amount	: 45 g	34 g					
Lubricant type	: Mobil Polyrex EM						
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end.				These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.			
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## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 613A SF 1.00 SFA 613A

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# LOAD PERFORMANCE CURVE

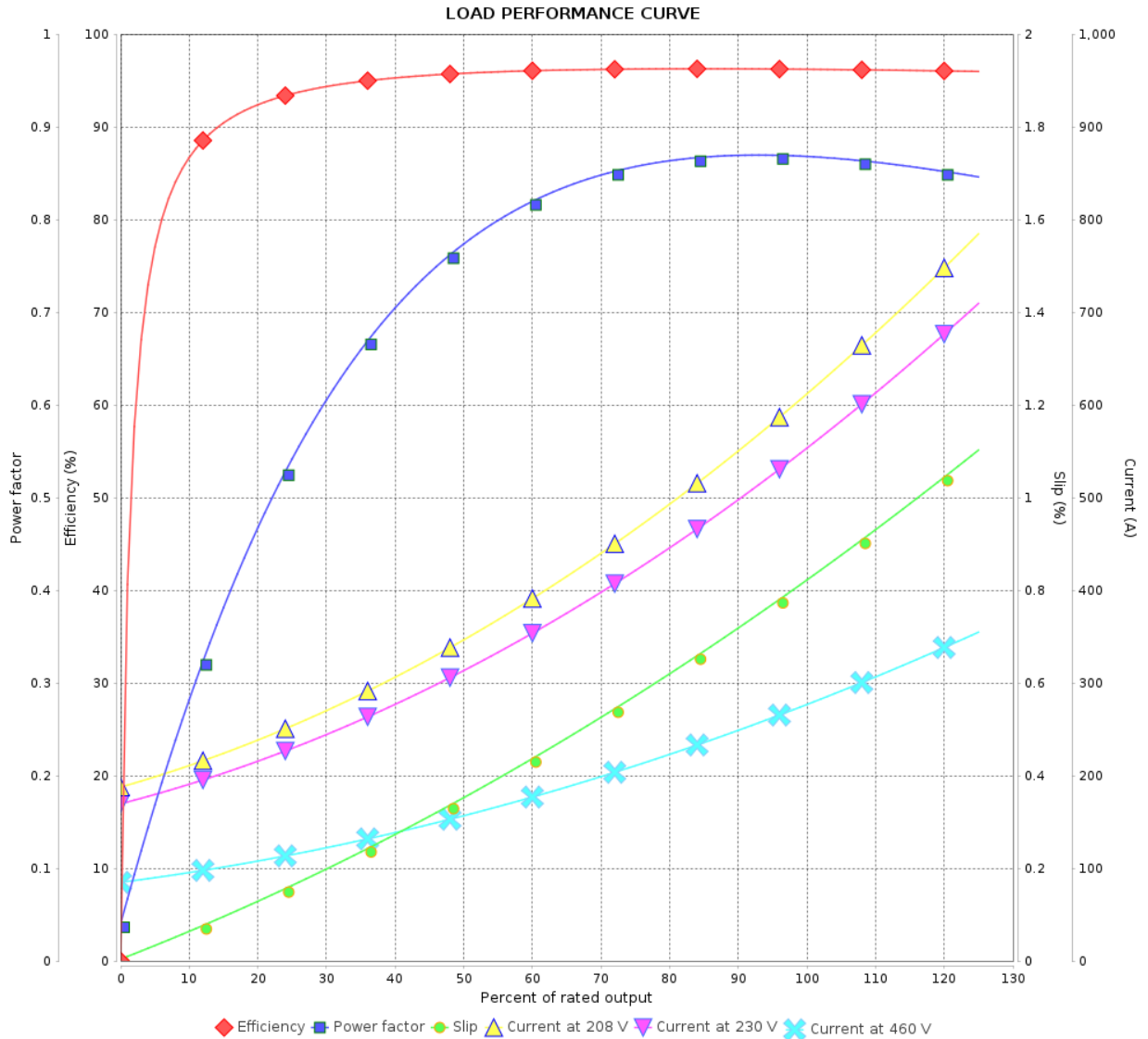
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 230/460 V 60 Hz 4P

Rated current : 554/277 A  
 LRC : 6.5  
 Rated torque : 102 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 220 %  
 Rated speed : 1785 rpm

Moment of inertia (J) : 3.77 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

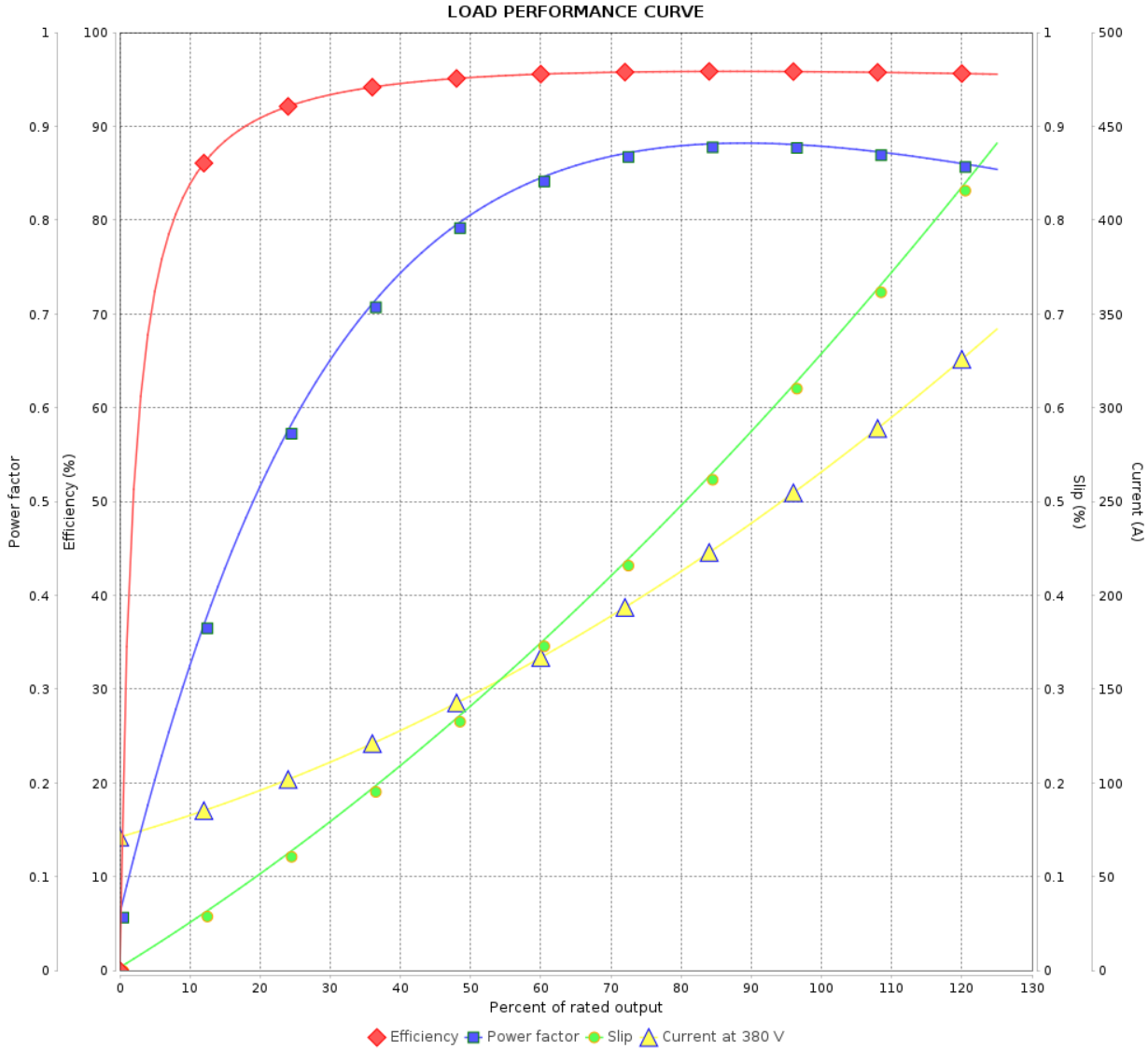
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 380 V 50 Hz 4P IE3

Rated current	: 270 A	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 97.4 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

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# LOAD PERFORMANCE CURVE

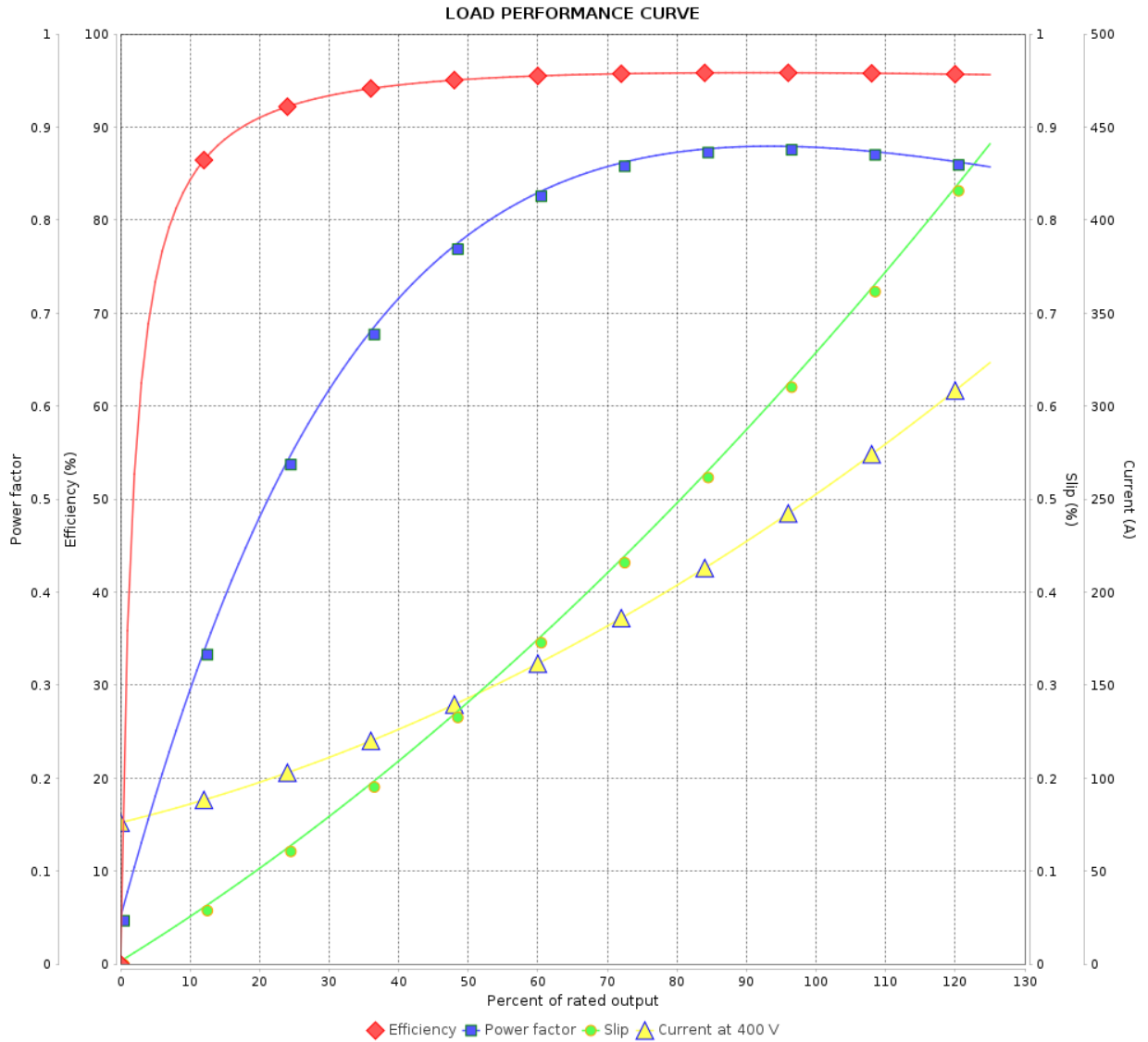
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 400 V 50 Hz 4P IE3

Rated current : 257 A  
 LRC : 6.6  
 Rated torque : 97.4 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1490 rpm

Moment of inertia (J) : 3.77 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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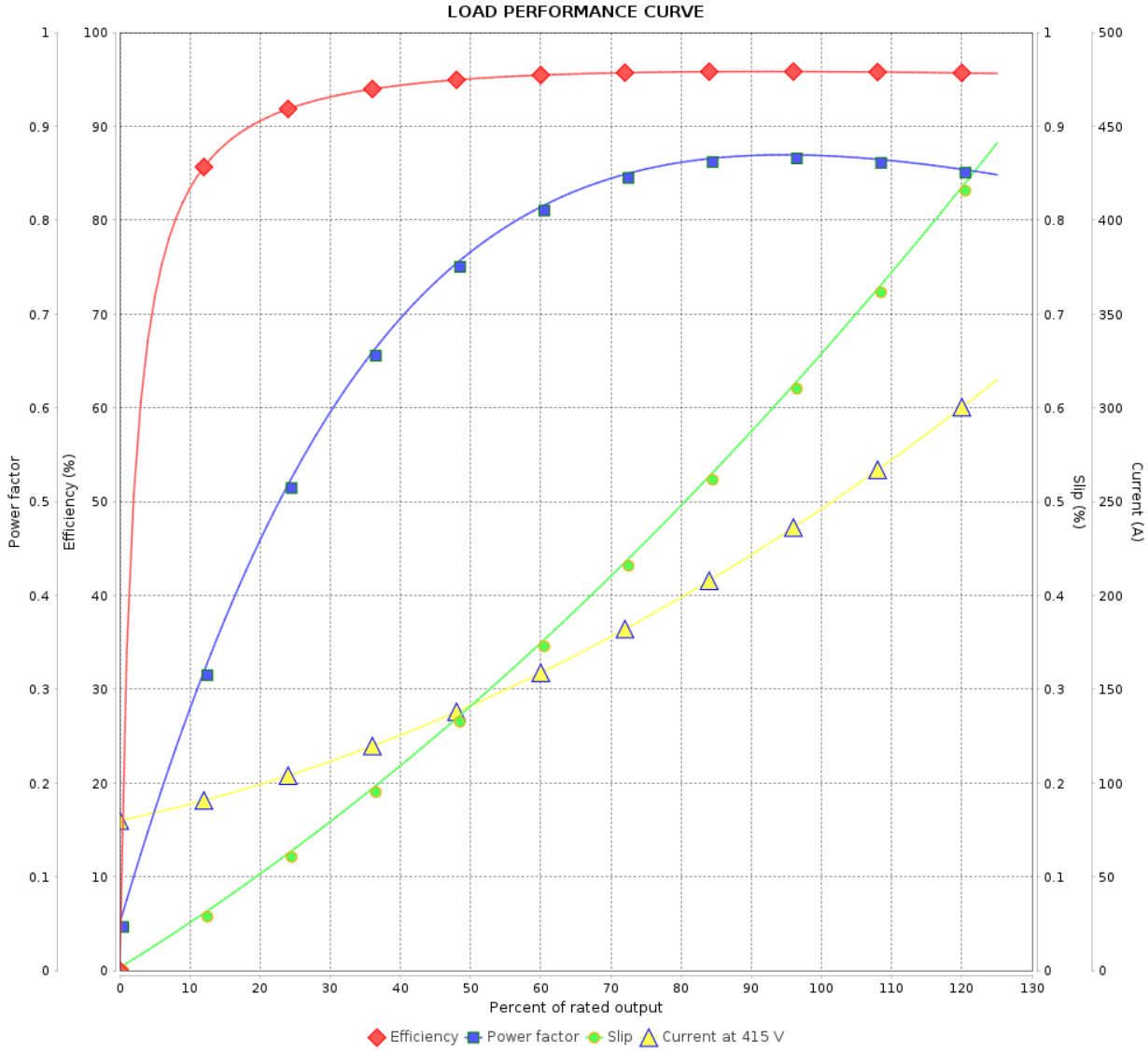
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 415 V 50 Hz 4P IE3

Rated current	: 250 A	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 97.4 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1490 rpm	Design	: B

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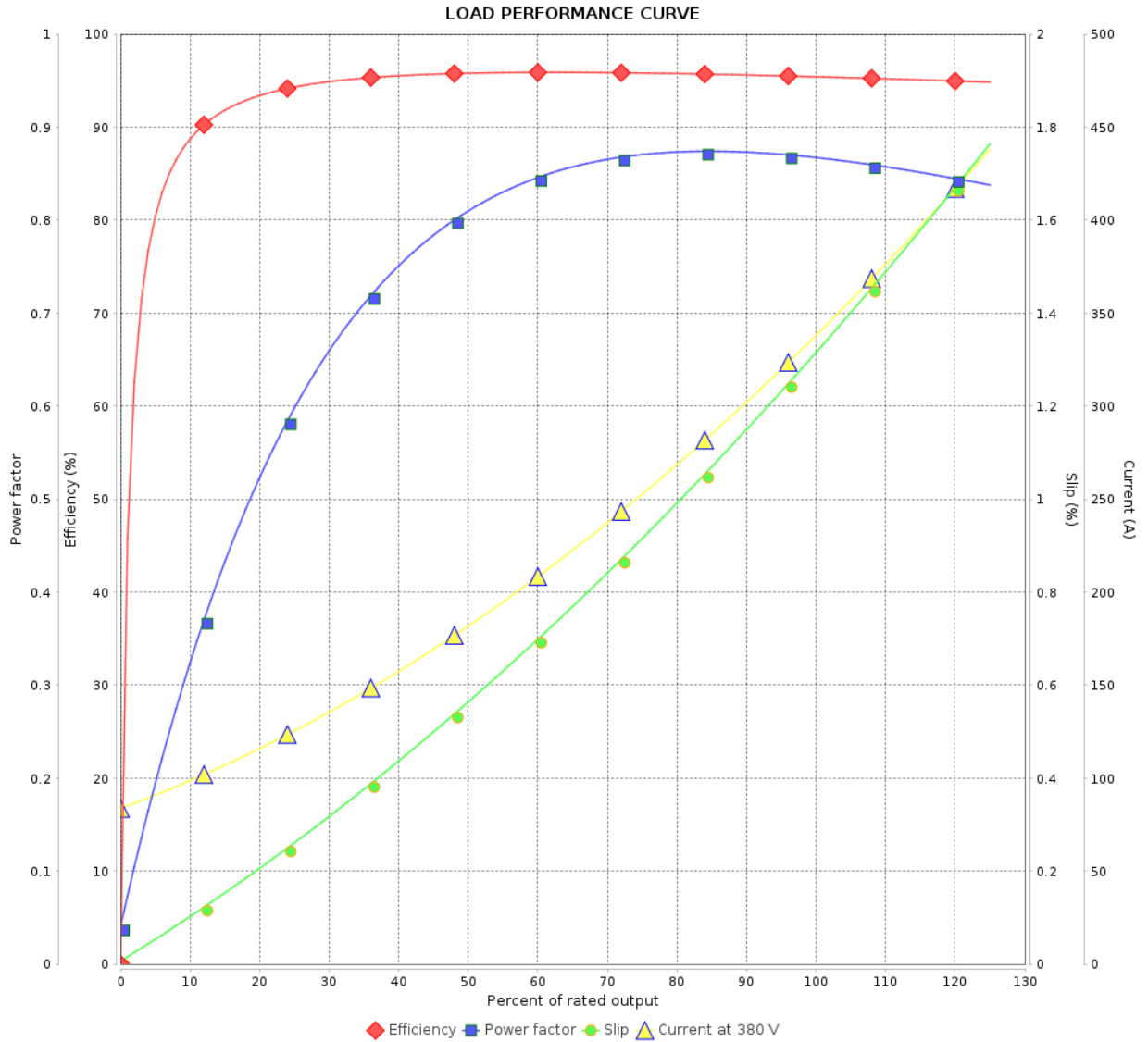
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 380 V 50 Hz 4P IE2

Rated current : 339 A  
 LRC : 5.1  
 Rated torque : 123 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 180 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 3.77 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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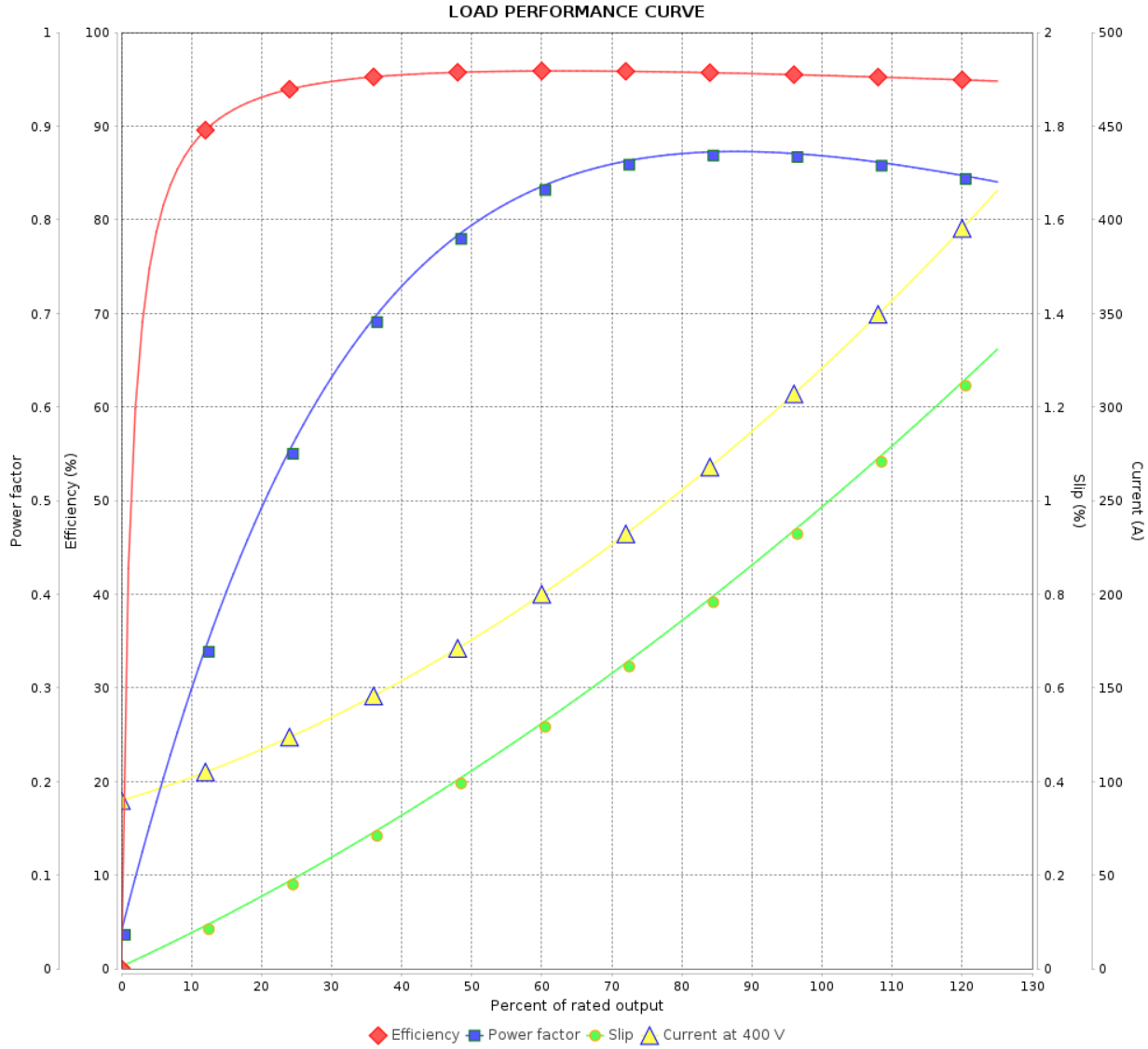
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 400 V 50 Hz 4P IE2

Rated current	: 322 A	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 122 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1485 rpm	Design	: B

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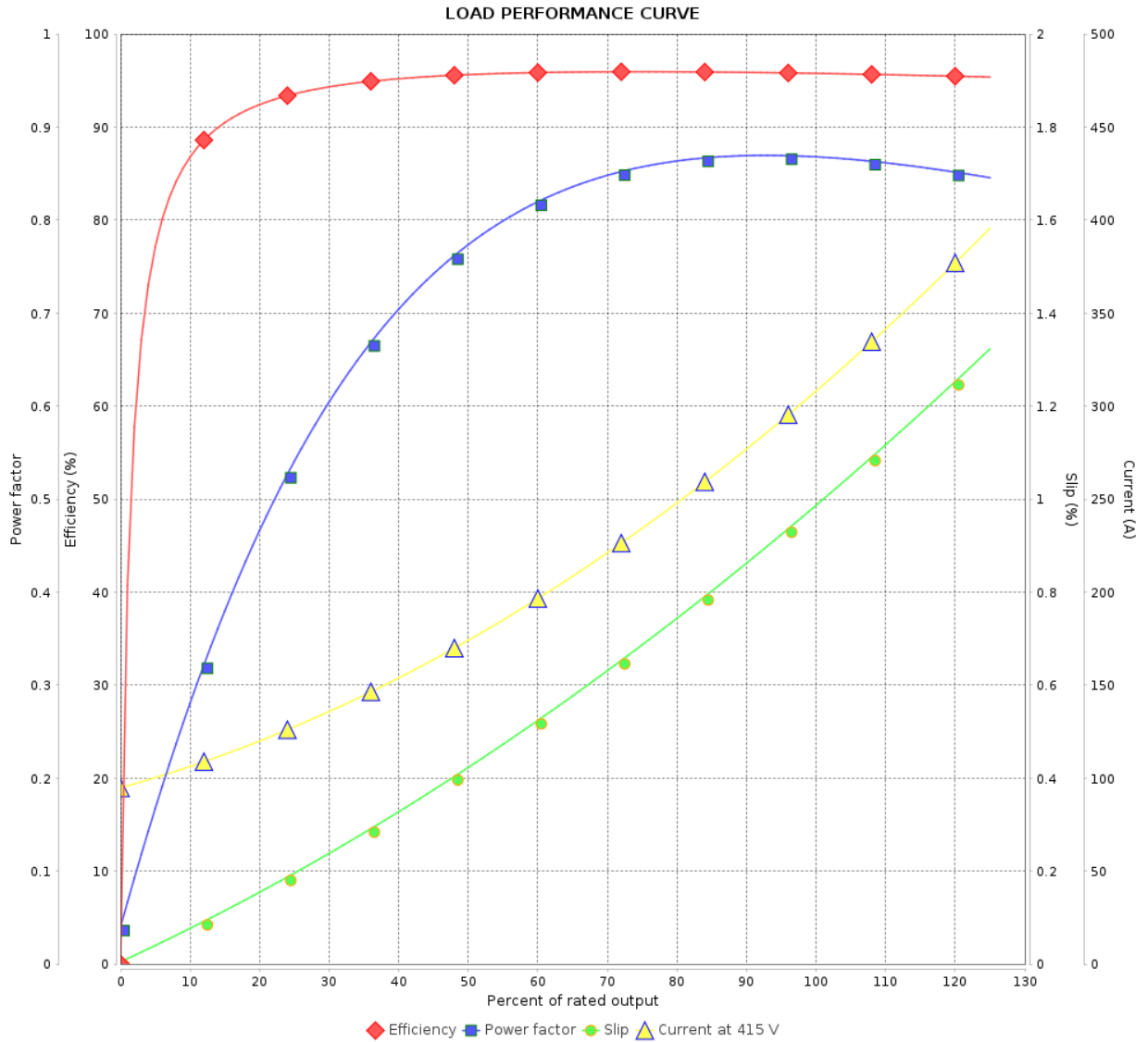
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 13438854



Performance : 415 V 50 Hz 4P IE2

Rated current : 309 A  
 LRC : 6.1  
 Rated torque : 122 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 220 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 3.77 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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