

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943378

Frame	: 404/5T	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>2</sup>	: 0.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 1.69 kgm <sup>2</sup>
Design	: B		

Output [HP]	60	50	50	50	60	60	60
Poles	8	8	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	73.0	72.9	70.9	69.2	89.2	85.0	82.9
L. R. Amperes [A]	475	445	475	505	455	485	514
LRC [A]	6.5x(Code H)	6.1x(Code G)	6.7x(Code H)	7.3x(Code J)	5.1x(Code E)	5.7x(Code F)	6.2x(Code G)
No load current [A]	30.0	29.7	32.0	33.9	29.7	32.0	33.9
Rated speed [RPM]	880	725	730	730	720	725	725
Slip [%]	2.22	3.33	2.67	2.67	4.00	3.33	3.33
Rated torque [kgfm]	49.5	50.1	49.7	49.7	60.5	60.1	60.1
Locked rotor torque [%]	180	180	210	229	150	170	190
Breakdown torque [%]	270	250	290	310	210	240	260
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	23s (cold) 13s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)
Noise level <sup>2</sup>	60.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%						
	50%	93.0	92.4	91.9	91.9	92.4	92.4
	75%	93.0	92.1	92.1	92.2	91.7	91.7
	100%	93.0	91.8	91.8	91.8	90.2	91.0
Power Factor	25%						
	50%	0.68	0.67	0.64	0.61	0.74	0.71
	75%	0.78	0.79	0.77	0.74	0.82	0.80
	100%	0.83	0.84	0.82	0.81	0.85	0.84

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	7.3	7.3	7.3	7.3	7.3	7.3
	P2 (0,5;1,0)	6.4	6.4	6.4	6.4	6.4	6.4
	P3 (0,25;1,0)	6.4	6.4	6.4	6.4	6.4	6.4
	P4 (0,9;0,5)	3.1	3.1	3.1	3.1	3.1	3.1
	P5 (0,5;0,5)	2.3	2.3	2.3	2.3	2.3	2.3
	P6 (0,5;0,25)	1.3	1.3	1.3	1.3	1.3	1.3
	P7 (0,25;0,25)	1.0	1.0	1.0	1.0	1.0	1.0

Bearing type	: Drive end 6316 C3      Non drive end 6314 C3	Foundation loads Max. traction : 1538 kgf Max. compression : 1538 kgf
Sealing	: Taconite Labyrinth      Taconite Labyrinth	
Lubrication interval	: 20000 h      20000 h	
Lubricant amount	: 34 g      27 g	
Lubricant type	: Mobil Polyrex EM	

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## Three Phase Induction Motor - Squirrel Cage



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

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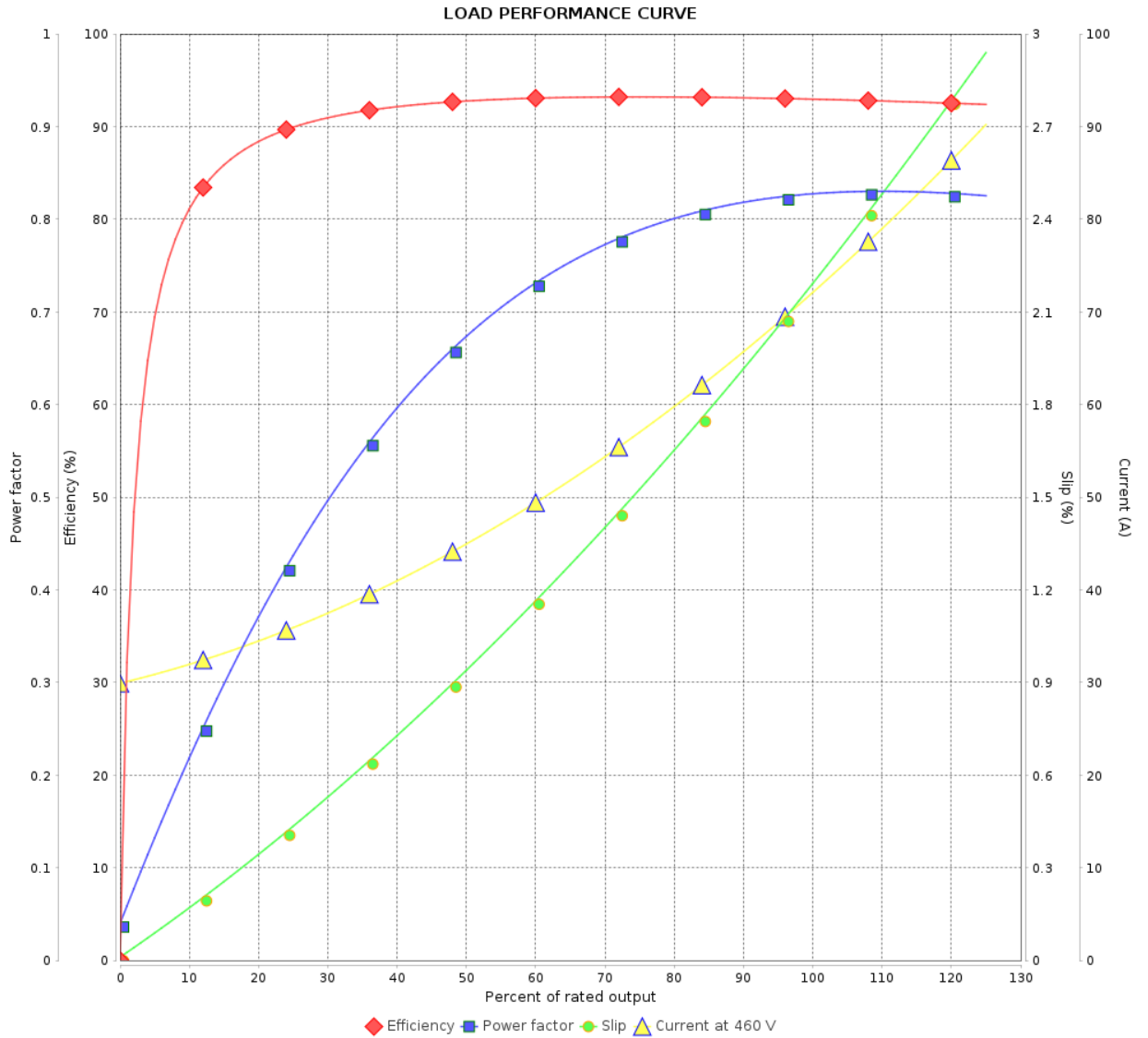
# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943378



Performance : 460 V 60 Hz 8P

Rated current	: 73.0 A	Moment of inertia (J)	: 1.69 kgm <sup>2</sup>
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 49.5 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

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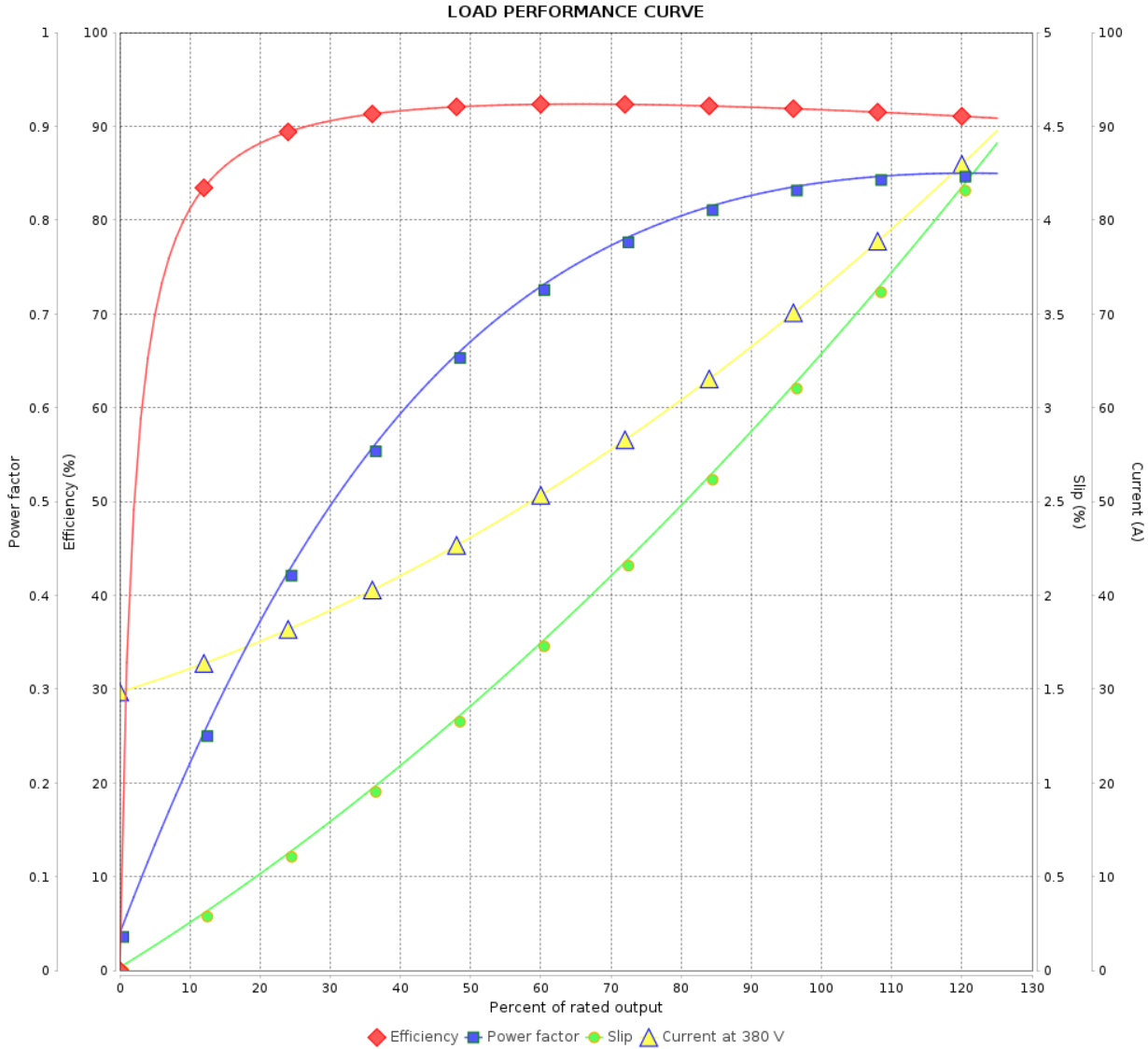
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Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943378



Performance : 380 V 50 Hz 8P IE3

Rated current	: 72.9 A	Moment of inertia (J)	: 1.69 kgm <sup>2</sup>
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 50.1 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 725 rpm	Design	: B

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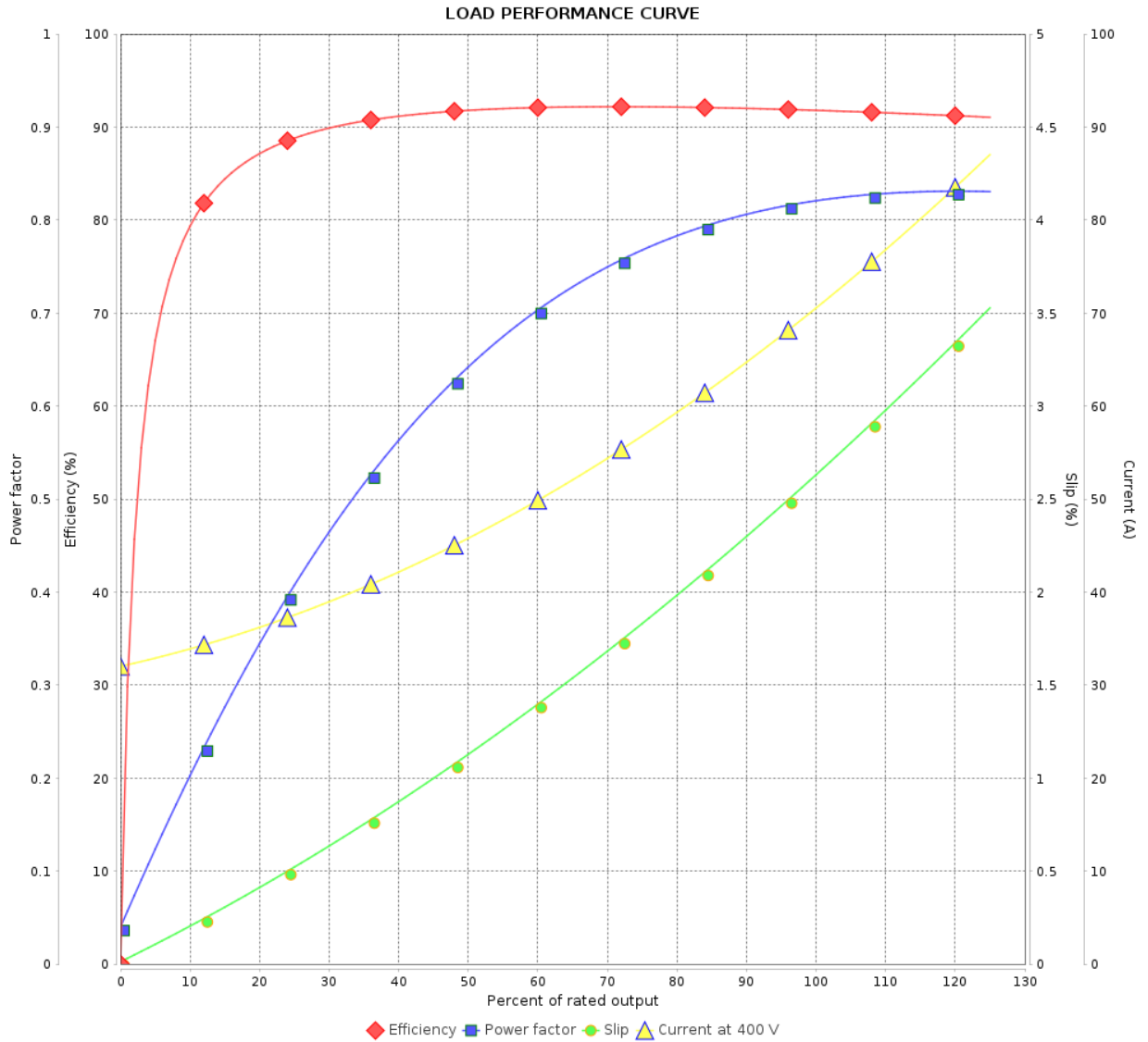
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11943378



Performance : 400 V 50 Hz 8P IE3

Rated current : 70.9 A  
 LRC : 6.7  
 Rated torque : 49.7 kgfm  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 730 rpm

Moment of inertia (J) : 1.69 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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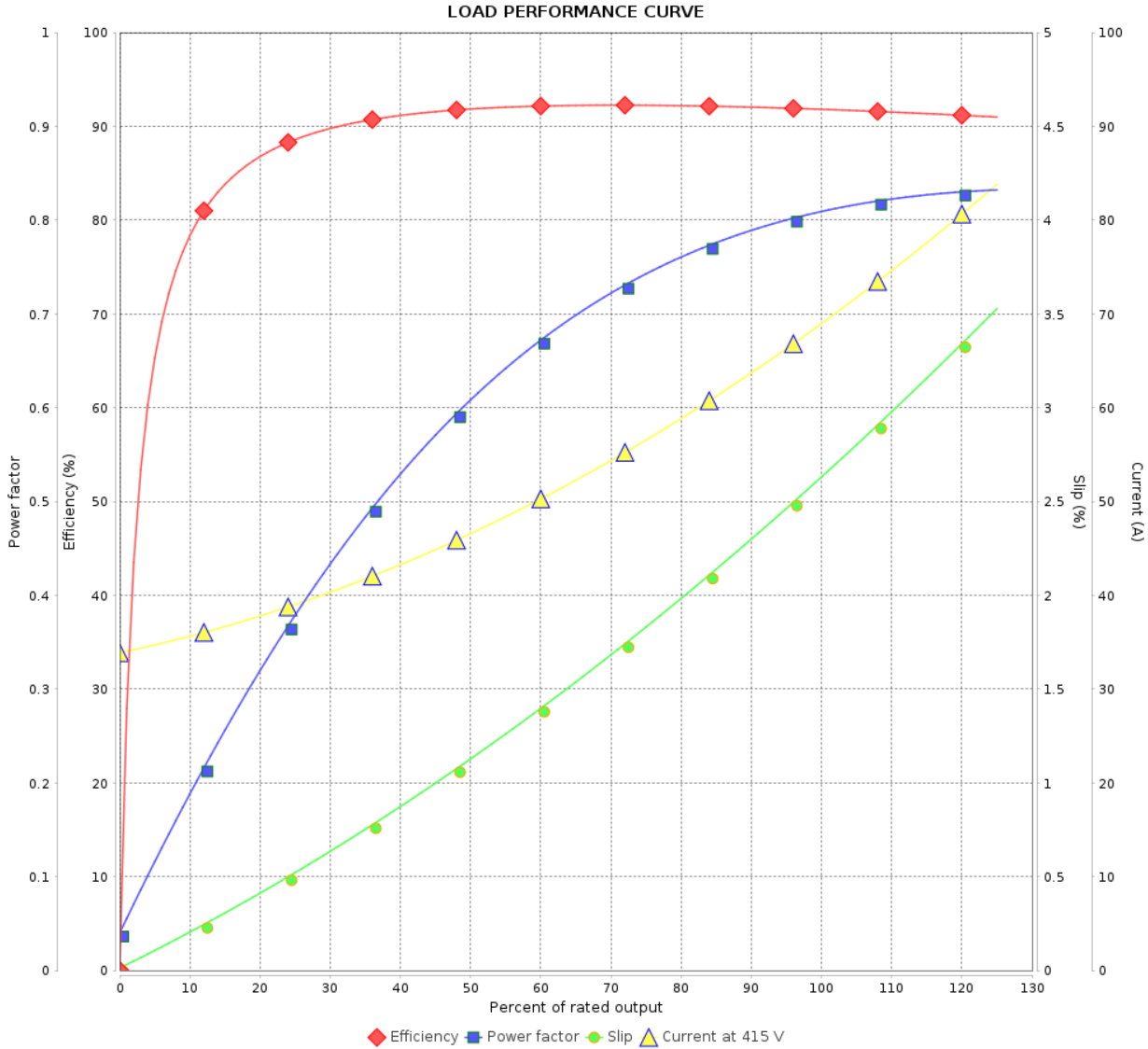
# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943378



Performance : 415 V 50 Hz 8P IE3

Rated current	: 69.2 A	Moment of inertia (J)	: 1.69 kgm <sup>2</sup>
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 49.7 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 730 rpm	Design	: B

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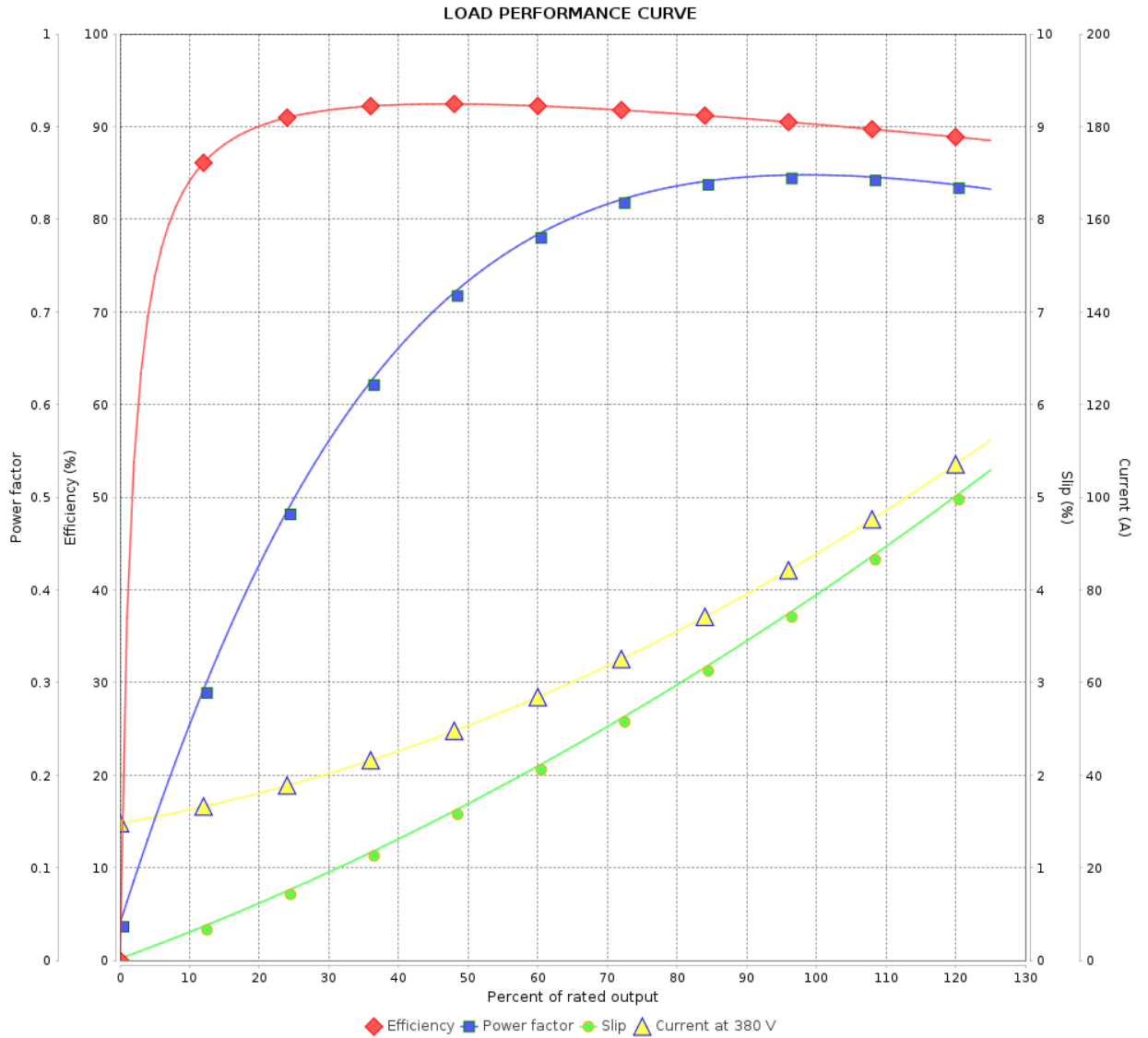
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase

Product code : 11943378



Performance : 380 V 50 Hz 8P IE1

Rated current : 89.2 A  
 LRC : 5.1  
 Rated torque : 60.5 kgfm  
 Locked rotor torque : 150 %  
 Breakdown torque : 210 %  
 Rated speed : 720 rpm

Moment of inertia (J) : 1.69 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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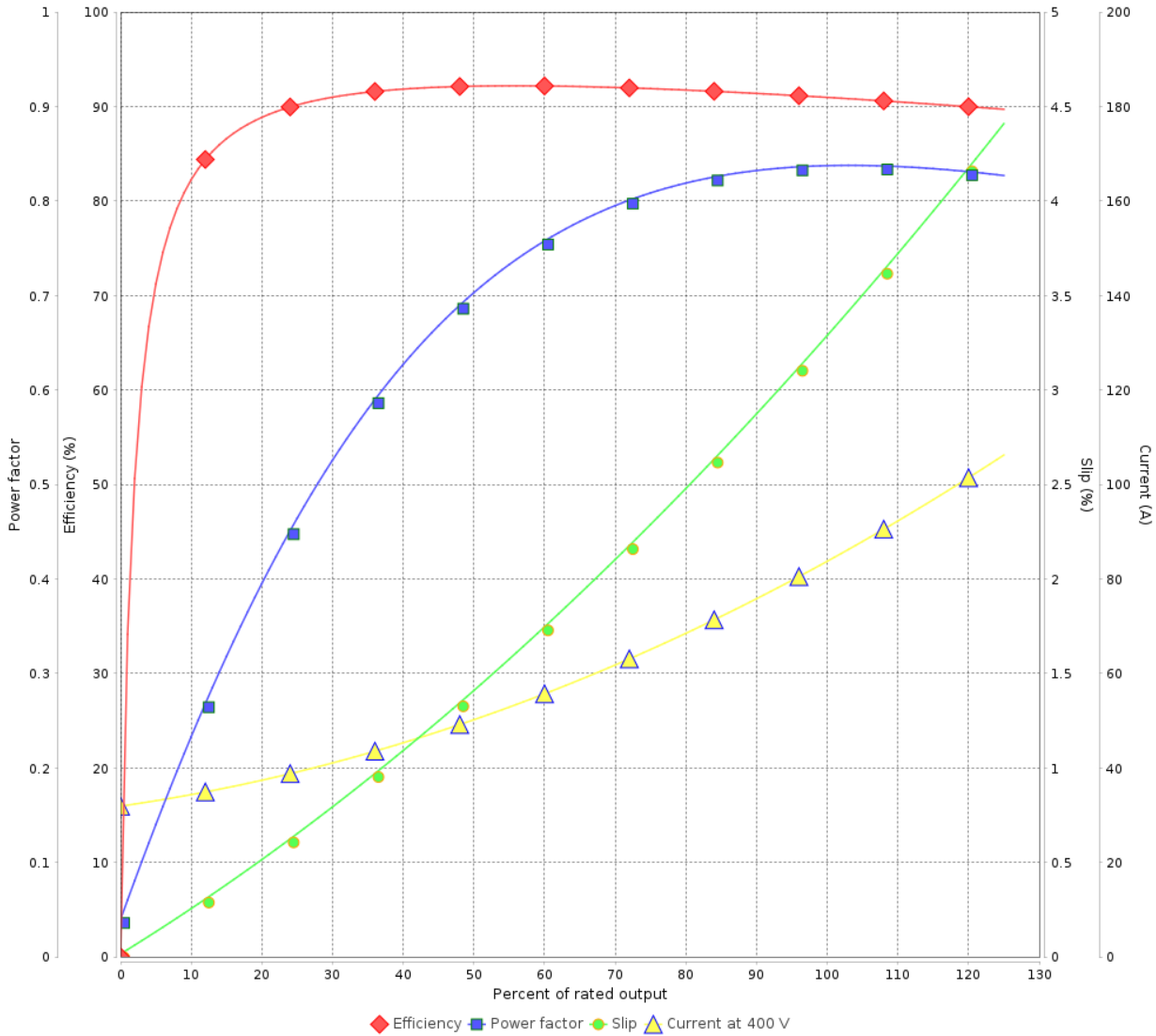
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943378

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 8P IE2

Rated current	: 85.0 A	Moment of inertia (J)	: 1.69 kgm <sup>2</sup>
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 60.1 kgfm	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

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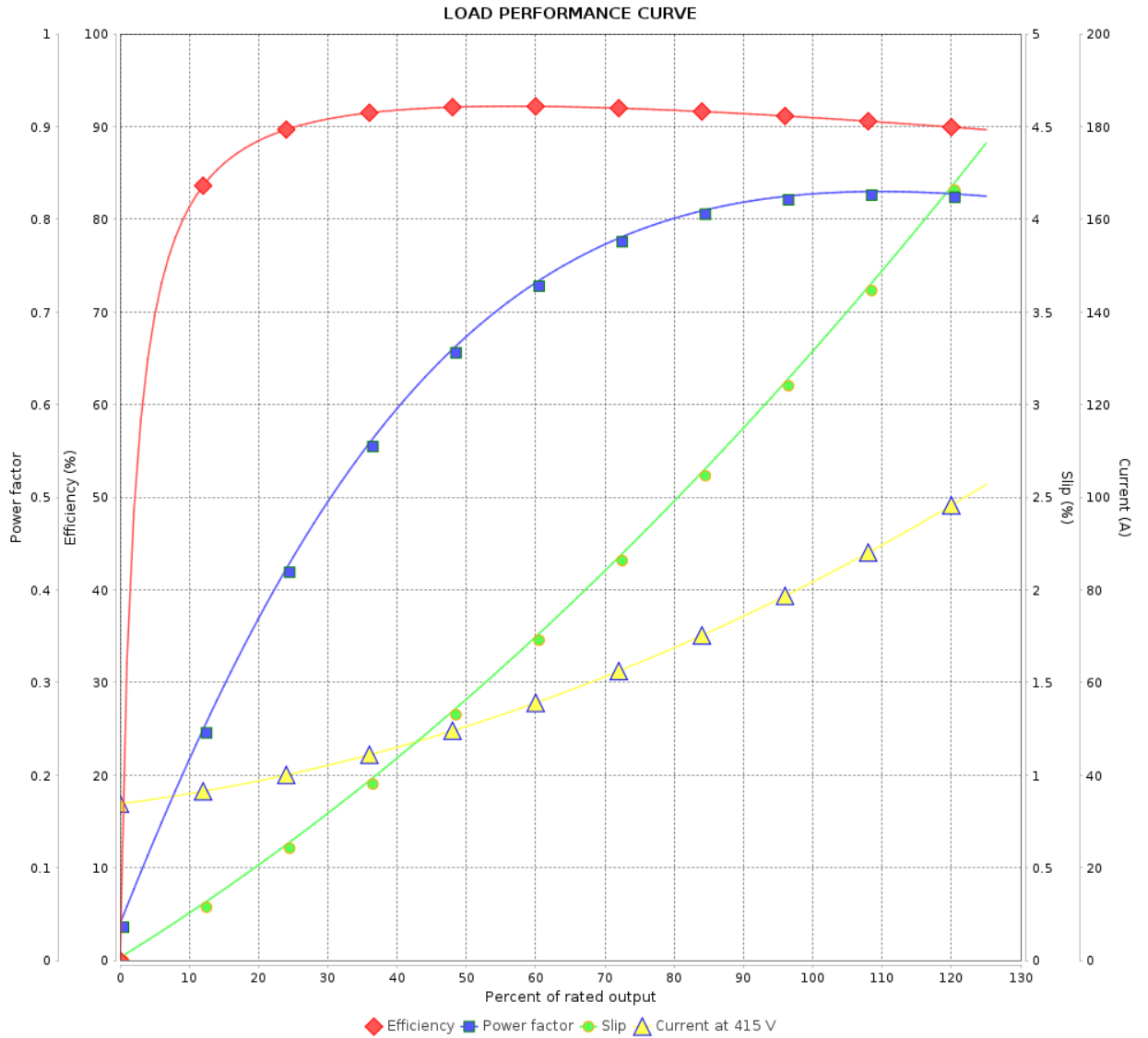
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency  
Three-Phase

Product code : 11943378



Performance : 415 V 50 Hz 8P IE2

Rated current : 82.9 A  
 LRC : 6.2  
 Rated torque : 60.1 kgfm  
 Locked rotor torque : 190 %  
 Breakdown torque : 260 %  
 Rated speed : 725 rpm

Moment of inertia (J) : 1.69 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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