

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943602

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>2</sup>	: 0.0 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]	460	380	400	415	380	400	415
Rated current [A]	121	107	104	102	145	139	135
L. R. Amperes [A]	714	674	718	755	682	723	770
LRC [A]	5.9x(Code G)	6.3x(Code G)	6.9x(Code H)	7.4x(Code J)	4.7x(Code E)	5.2x(Code F)	5.7x(Code G)
No load current [A]	42.0	41.4	44.9	47.7	41.4	44.9	47.7
Rated speed [RPM]	1185	985	990	990	980	985	985
Slip [%]	1.25	1.50	1.00	1.00	2.00	1.50	1.50
Rated torque [kgfm]	61.0	54.9	54.9	54.8	73.7	73.5	73.5
Locked rotor torque [%]	220	229	250	270	170	190	200
Breakdown torque [%]	229	250	280	310	180	200	220
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
	75%	95.0	94.3	94.6	94.6	94.0	94.5
	100%	95.0	94.2	94.5	94.6	93.6	94.0
Power Factor	25%						
	50%	0.68	0.64	0.60	0.57	0.74	0.71
	75%	0.78	0.77	0.74	0.71	0.82	0.80
	100%	0.82	0.83	0.81	0.79	0.84	0.83

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

Losses (%)	P1 (0,9;1,0)	5.7	6.7	6.3	6.2	7.4	6.9	6.9
	P2 (0,5;1,0)	4.4	5.3	5.0	4.9	6.1	5.6	5.6
	P3 (0,25;1,0)	3.9	4.8	4.5	4.4	5.5	5.1	5.1
	P4 (0,9;0,5)	3.2	3.7	3.5	3.4	4.0	3.8	3.8
	P5 (0,5;0,5)	2.1	2.4	2.3	2.3	2.7	2.5	2.5
	P6 (0,5;0,25)	1.6	1.8	1.7	1.7	2.0	1.9	1.9
	P7 (0,25;0,25)	1.0	1.2	1.1	1.1	1.3	1.2	1.2

Bearing type	: Drive end	6319 C3	Non drive end	6316 C3	Foundation loads	Max. traction	: 1418 kgf
	: Sealing	Taconite	Taconite	Max. compression		: 1418 kgf	
Lubrication interval	: Labyrinth	13000 h	Labyrinth	16000 h			
	: Lubricant amount	45 g	34 g				
Lubricant type	: Mobil Polyrex EM						

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## Three Phase Induction Motor - Squirrel Cage



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

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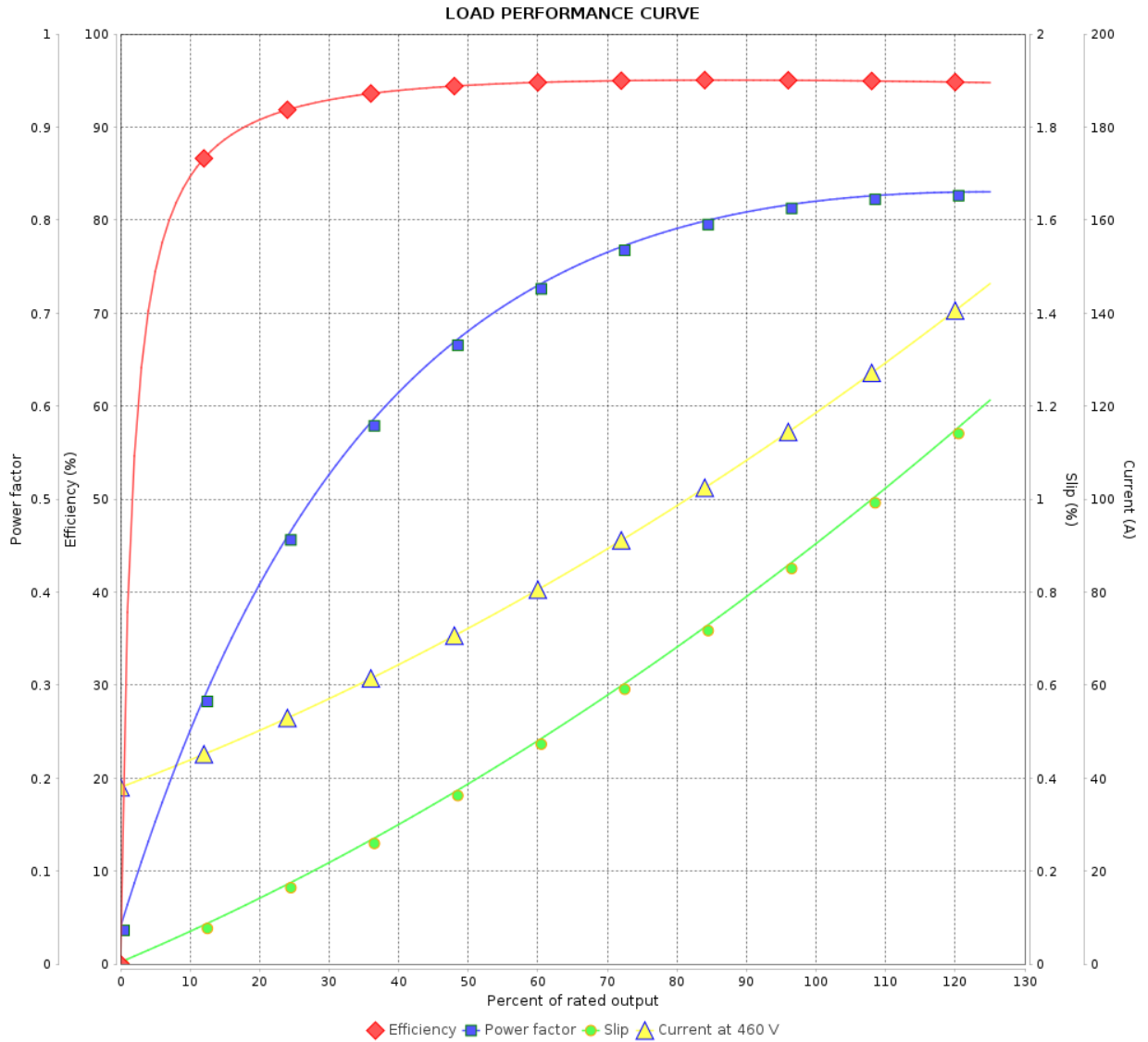
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## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943602



Performance : 460 V 60 Hz 6P

Rated current : 121 A  
 LRC : 5.9  
 Rated torque : 61.0 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 229 %  
 Rated speed : 1185 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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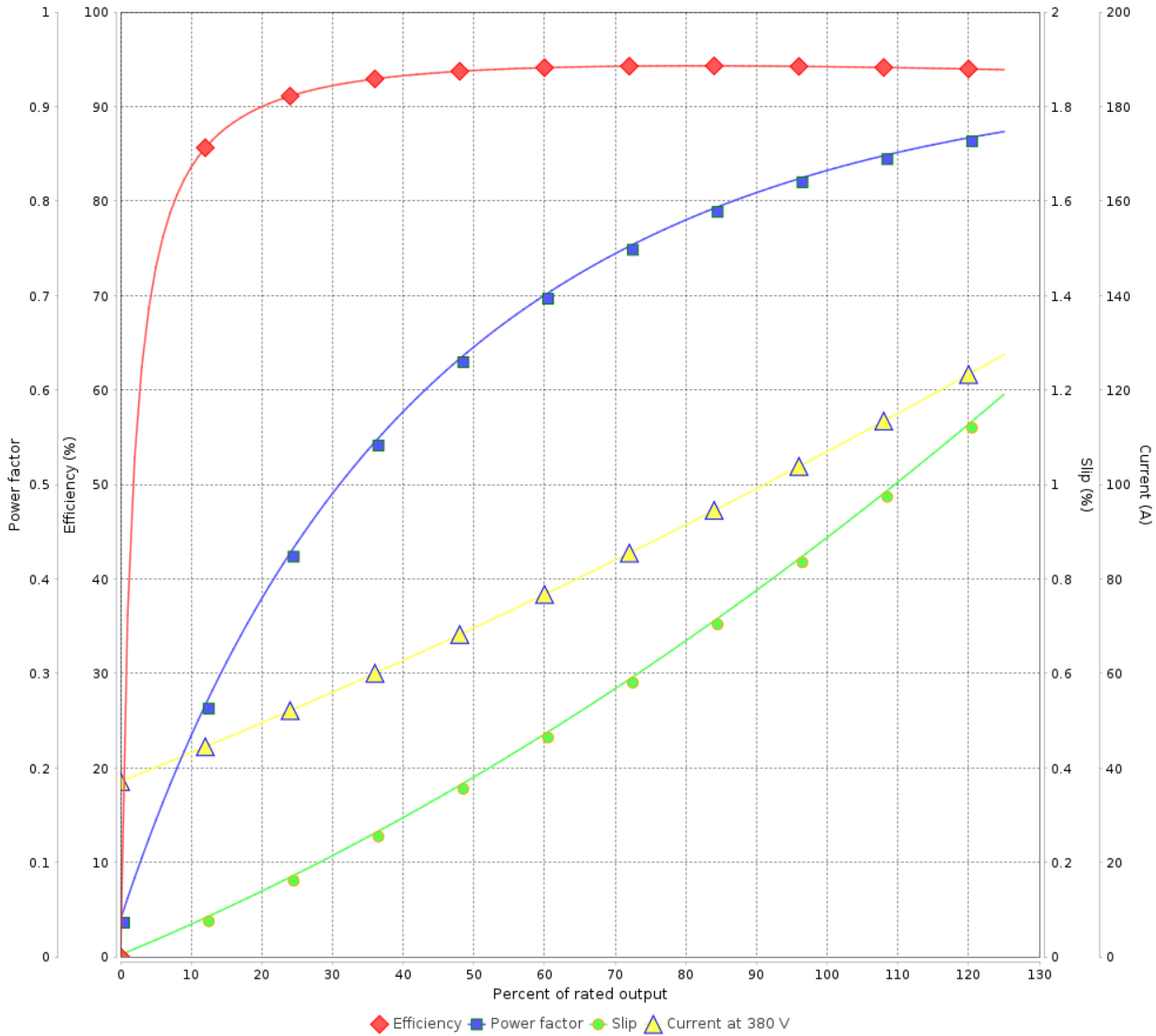
Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 6P IE3

Rated current	: 107 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 54.9 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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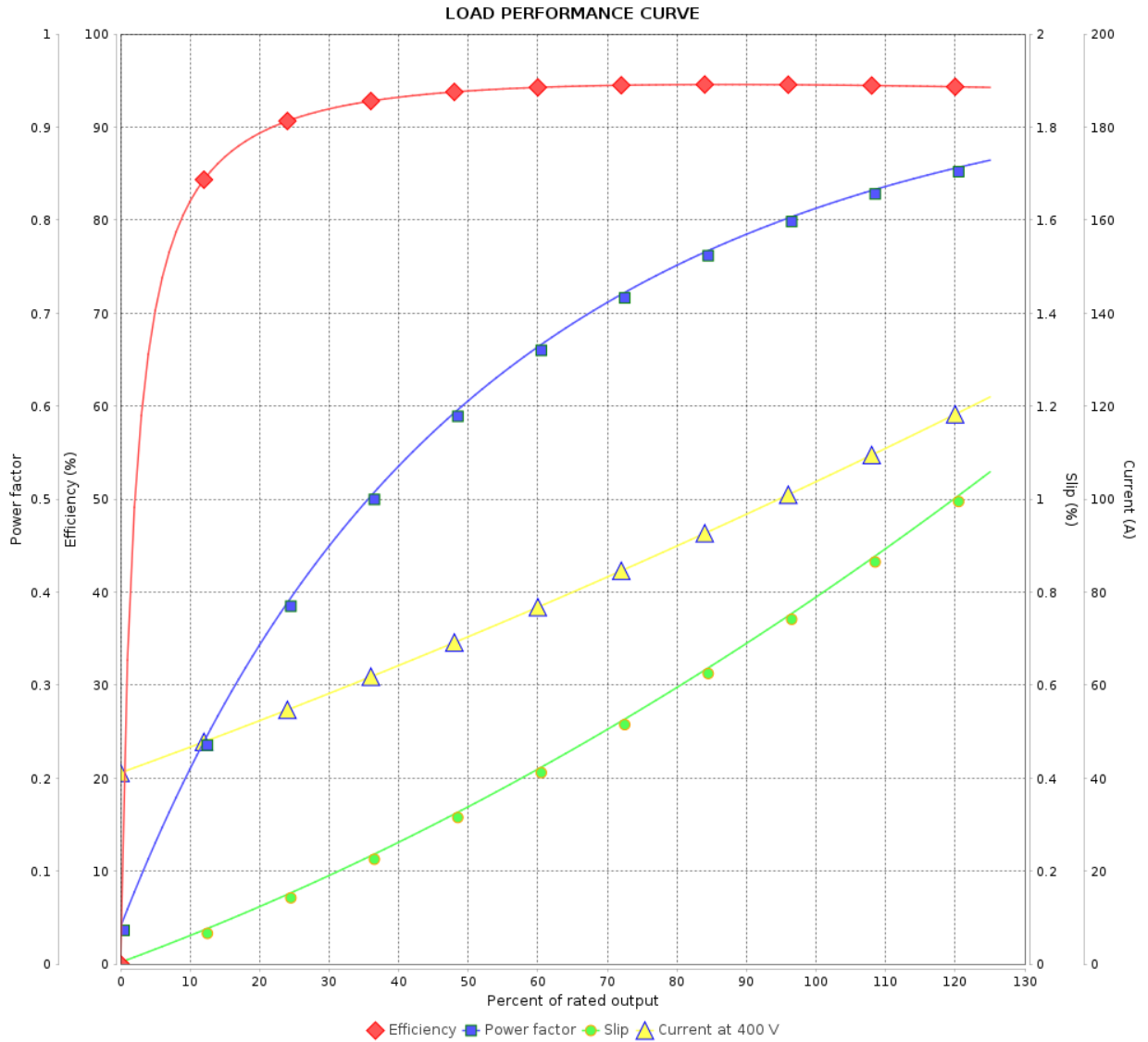
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## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943602



Performance : 400 V 50 Hz 6P IE3

Rated current	: 104 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 54.9 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

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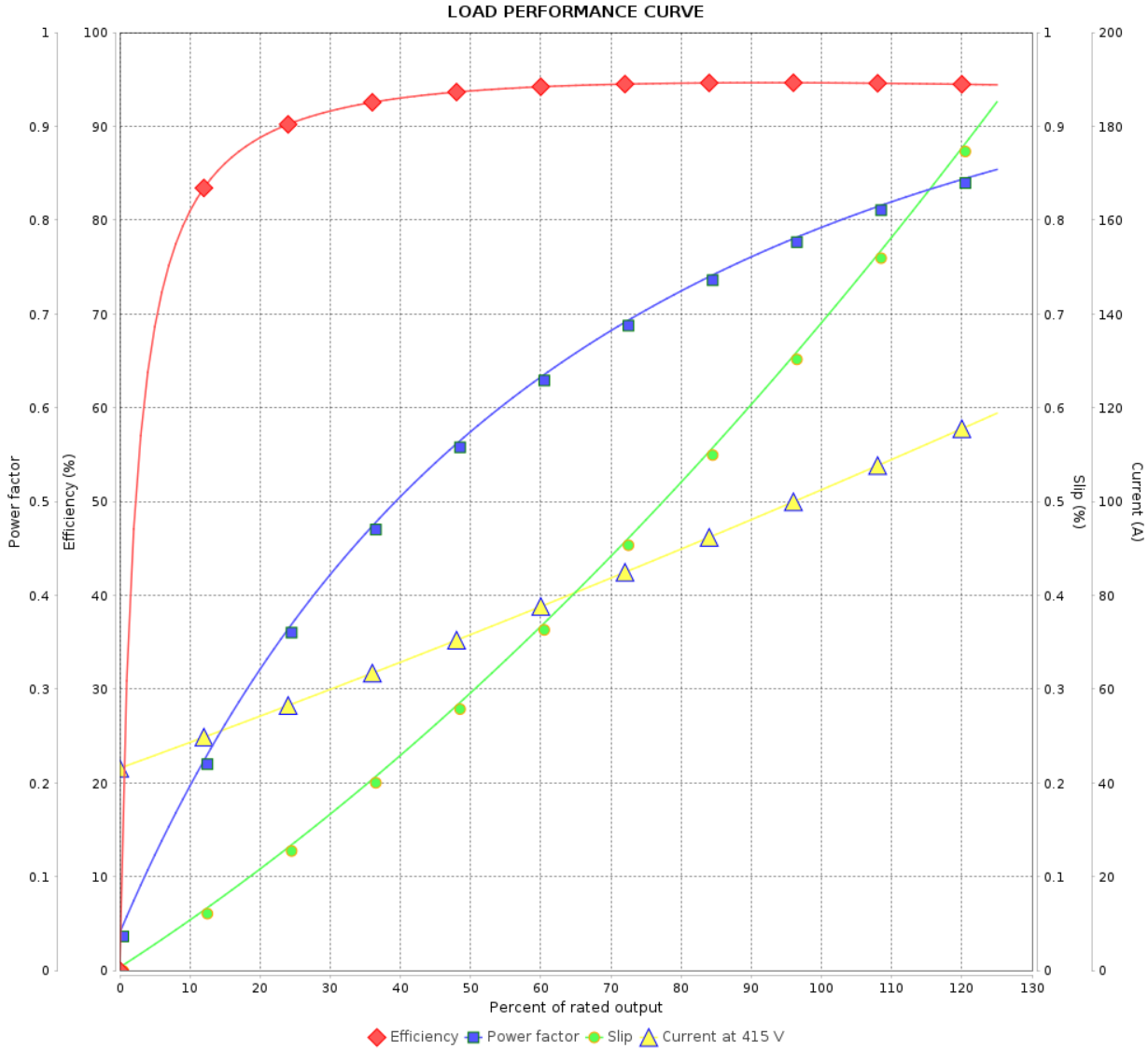
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Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 6P IE3

Rated current	: 102 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 54.8 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 990 rpm	Design	: B

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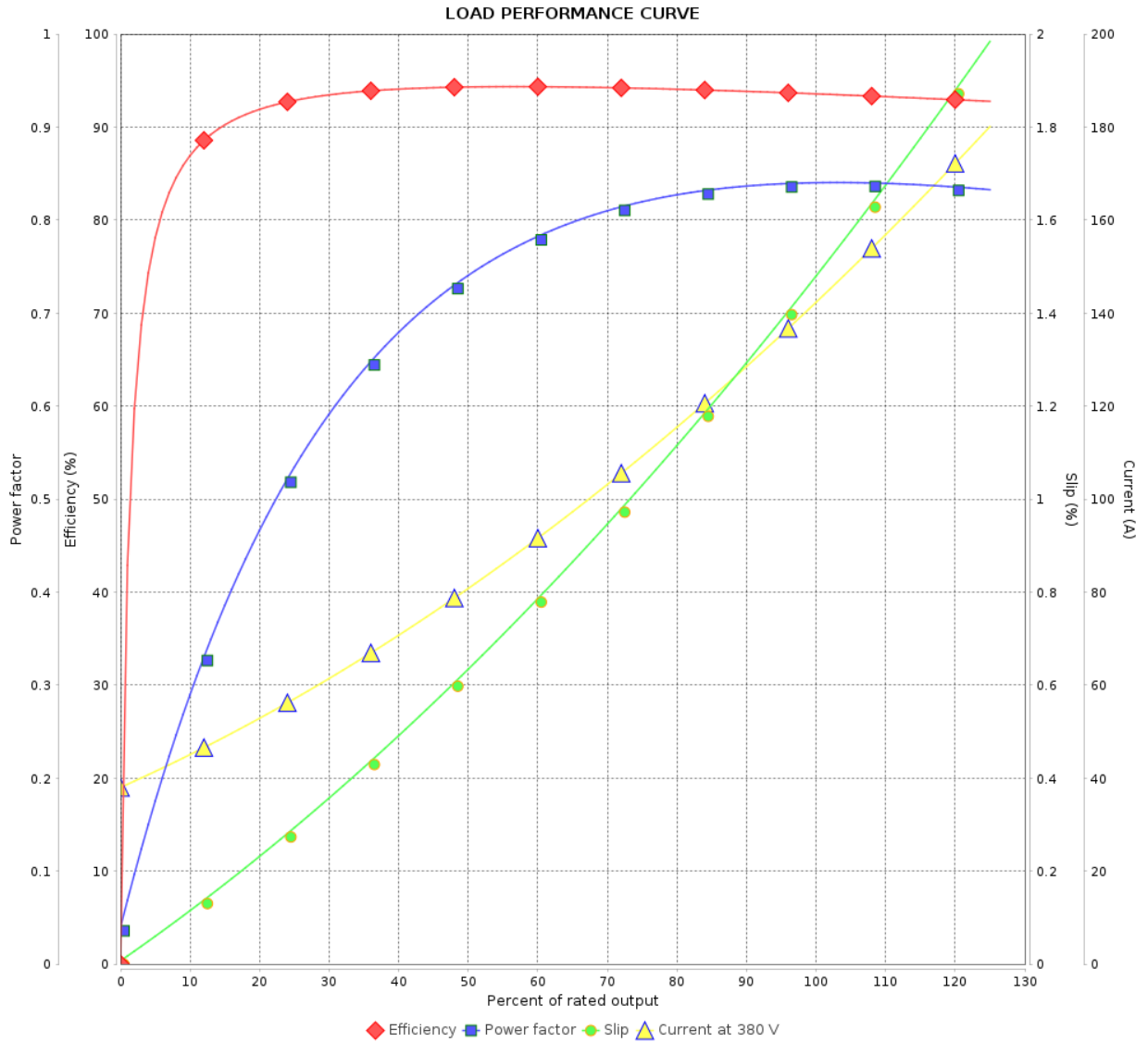
## Three Phase Induction Motor - Squirrel Cage



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

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Performance : 380 V 50 Hz 6P IE1

Rated current : 145 A  
 LRC : 4.7  
 Rated torque : 73.7 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 180 %  
 Rated speed : 980 rpm

Moment of inertia (J) : 3.68 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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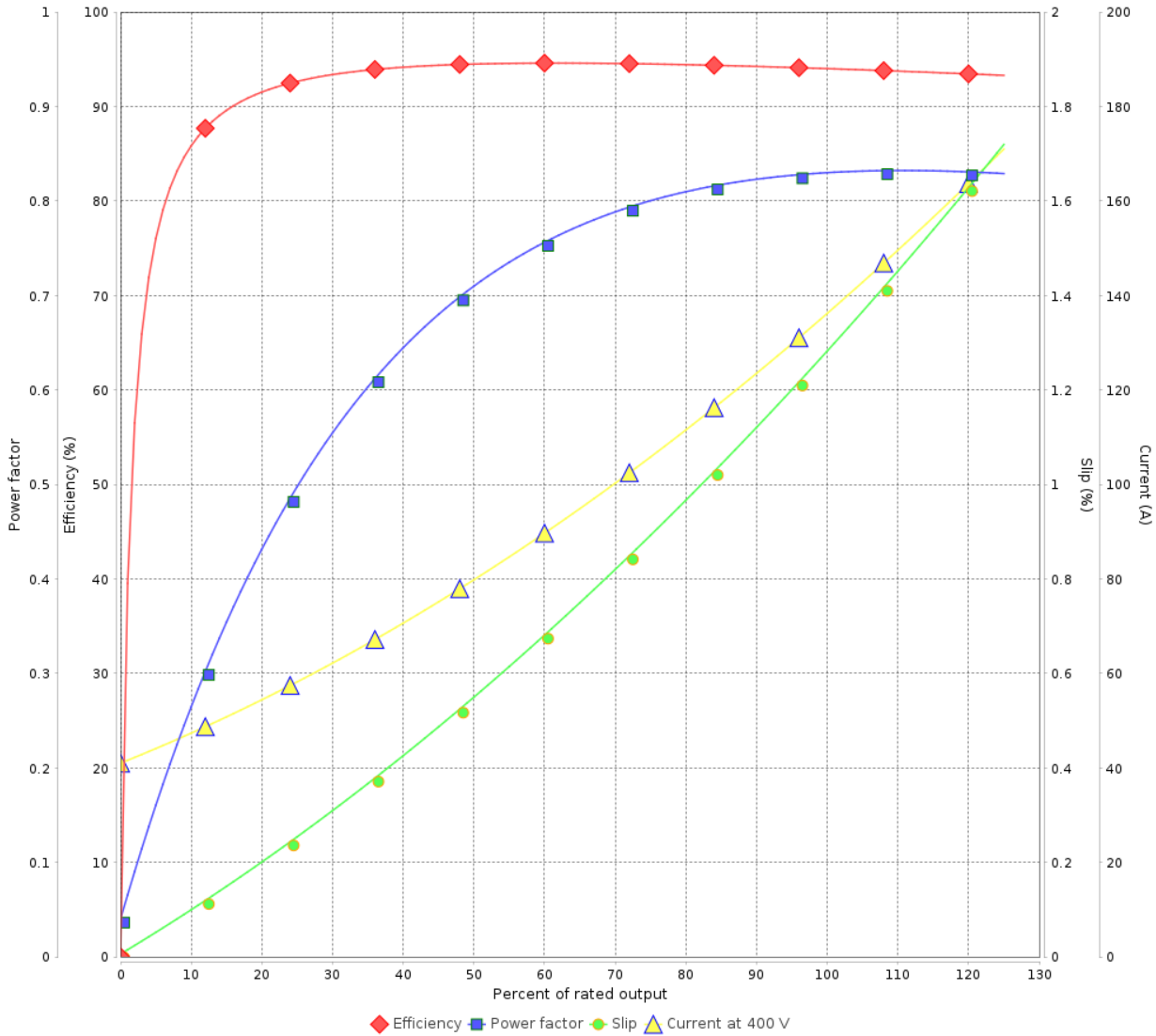
Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 6P IE2

Rated current	: 139 A	Moment of inertia (J)	: 3.68 kgm <sup>2</sup>
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 73.5 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 985 rpm	Design	: B

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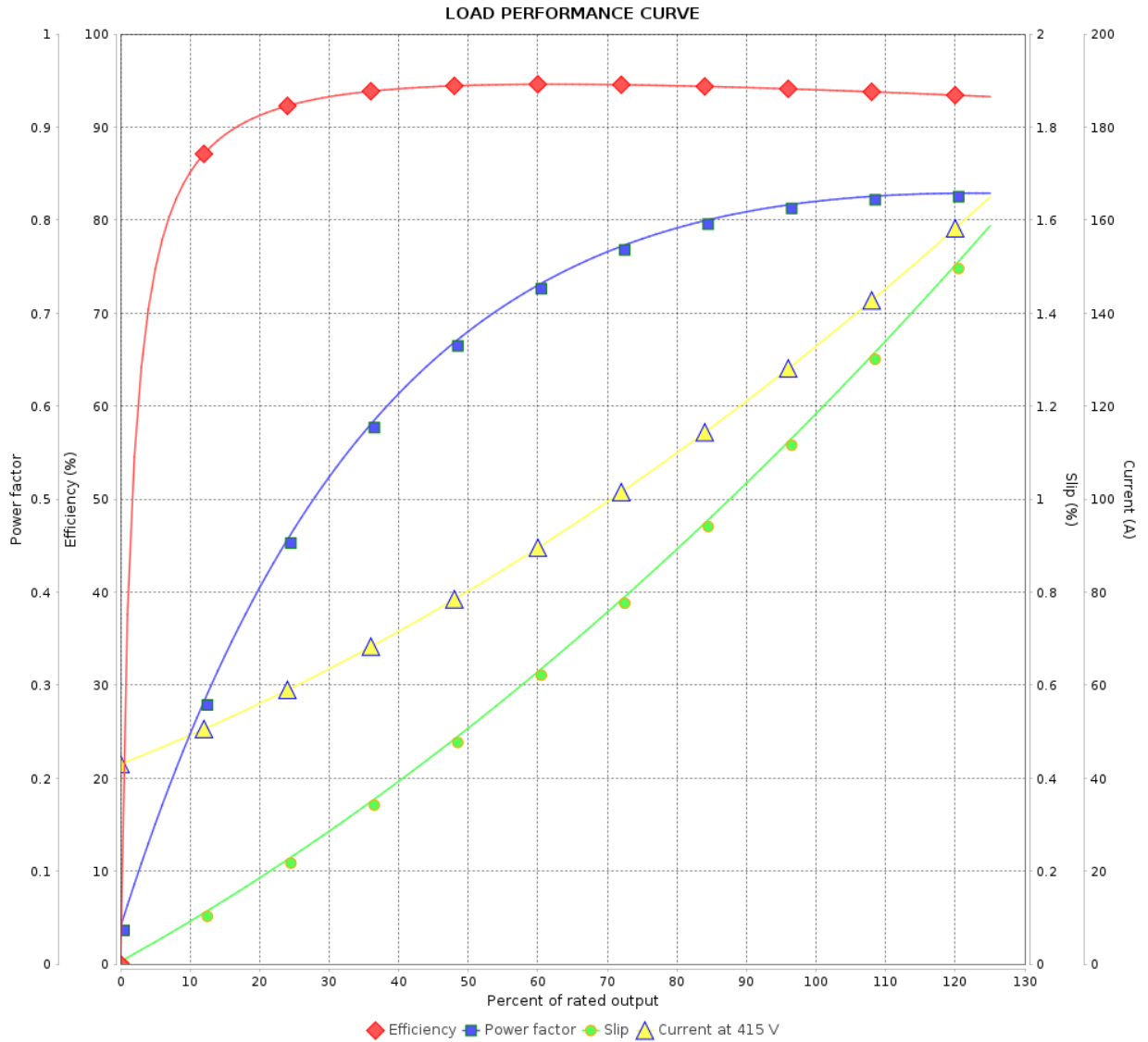
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## Three Phase Induction Motor - Squirrel Cage



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

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Performance : 415 V 50 Hz 6P IE2

Rated current : 135 A	Moment of inertia (J) : 3.68 kgm <sup>2</sup>
LRC : 5.7	Duty cycle : Cont.(S1)
Rated torque : 73.5 kgfm	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 220 %	Temperature rise : 105 K
Rated speed : 985 rpm	Design : B

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