

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11943364

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>3</sup>	: 0.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 1.55 kgm <sup>2</sup>
Design	: B		

Output [HP]	60	50	50	50	60	60	60
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]	69.5	70.1	67.3	64.8	85.1	80.3	78.3
L. R. Amperes [A]	452	421	444	467	426	442	470
LRC [A]	6.5x(Code G)	6.0x(Code F)	6.6x(Code G)	7.2x(Code H)	5.0x(Code E)	5.5x(Code F)	6.0x(Code G)
No load current [A]	23.0	23.0	24.0	25.0	23.0	24.0	25.0
Rated speed [RPM]	1185	985	985	985	975	980	985
Slip [%]	1.25	1.50	1.50	1.50	2.50	2.00	1.50
Rated torque [kgfm]	36.7	36.8	36.8	36.8	44.7	44.4	44.2
Locked rotor torque [%]	200	180	220	229	150	180	190
Breakdown torque [%]	229	220	240	260	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	80 K	80 K
Locked rotor time	36s (cold) 20s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)
Noise level <sup>2</sup>	68.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)
Efficiency (%)	25%						
	50%	94.1	93.3	93.3	93.3	93.6	93.6
	75%	94.5	93.4	93.7	93.7	93.0	93.6
	100%	94.5	93.3	93.4	93.4	92.4	93.0
Power Factor	25%						
	50%	0.74	0.73	0.70	0.67	0.79	0.77
	75%	0.82	0.83	0.82	0.79	0.85	0.84
	100%	0.86	0.86	0.85	0.85	0.87	0.86

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

Losses (%)	P1 (0,9;1,0)	6.3	7.8	7.7	7.7	9.0	8.2	8.2
	P2 (0,5;1,0)	5.0	6.4	6.3	6.3	7.6	6.8	6.8
	P3 (0,25;1,0)	4.5	5.9	5.8	5.8	7.0	6.3	6.3
	P4 (0,9;0,5)	3.5	4.2	4.1	4.1	4.7	4.4	4.4
	P5 (0,5;0,5)	2.3	2.9	2.8	2.8	3.3	3.0	3.0
	P6 (0,5;0,25)	1.7	2.1	2.1	2.1	2.4	2.2	2.2
	P7 (0,25;0,25)	1.1	1.4	1.4	1.4	1.6	1.5	1.5

Bearing type	: 6316 C3	Non drive end	6314 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 958 kgf
	: Labyrinth		Labyrinth	Max. compression	: 958 kgf
Lubrication interval	: 16000 h		17000 h		
Lubricant amount	: 34 g		27 g		
Lubricant type	: Mobil Polyrex EM				

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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

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

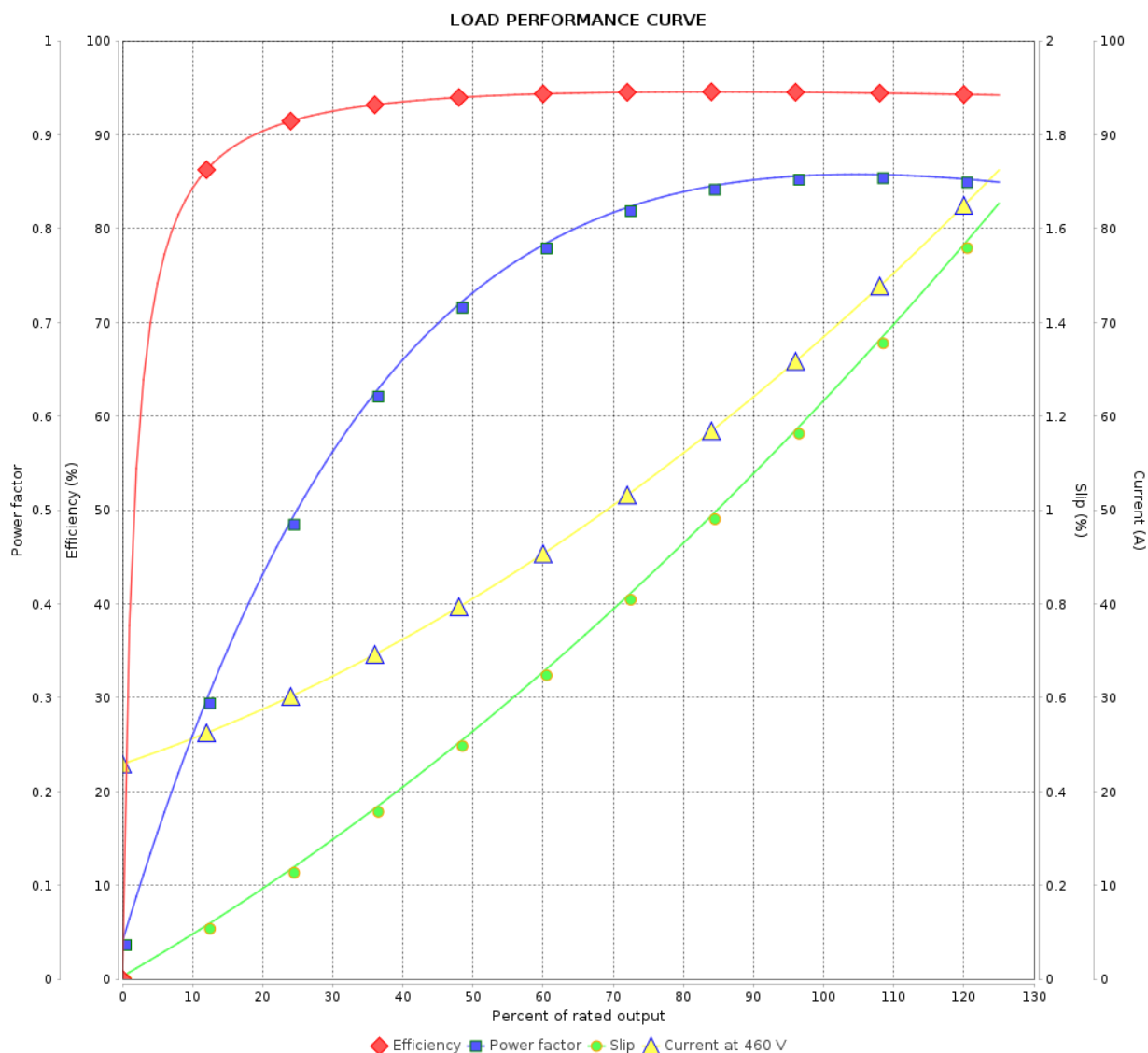
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 460 V 60 Hz 6P

Rated current : 69.5 A  
LRC : 6.5  
Rated torque : 36.7 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 229 %  
Rated speed : 1185 rpm

Moment of inertia (J) : 1.55 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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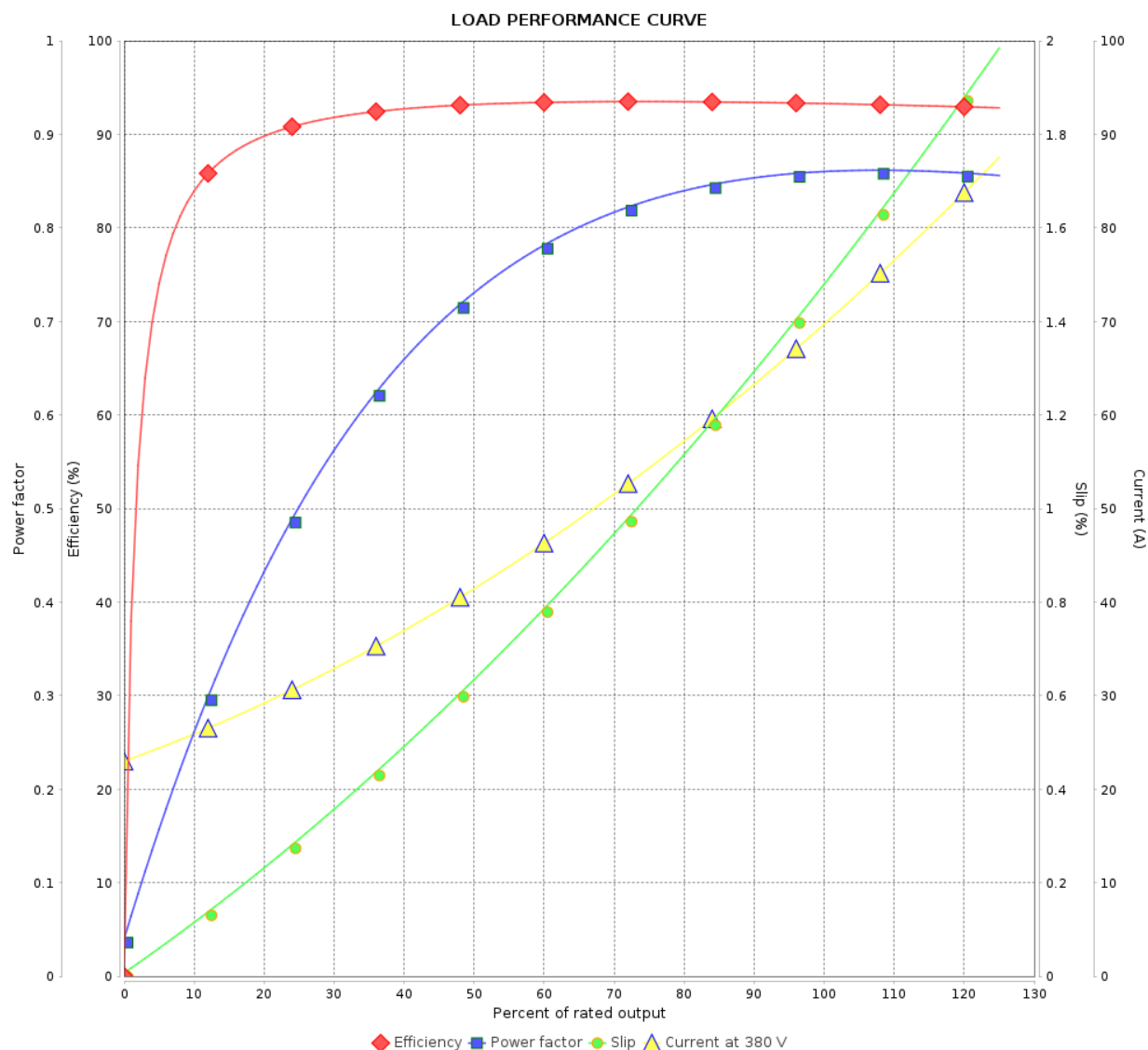
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 380 V 50 Hz 6P IE3

Rated current	: 70.1 A	Moment of inertia (J)	: 1.55 kgm <sup>2</sup>
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 36.8 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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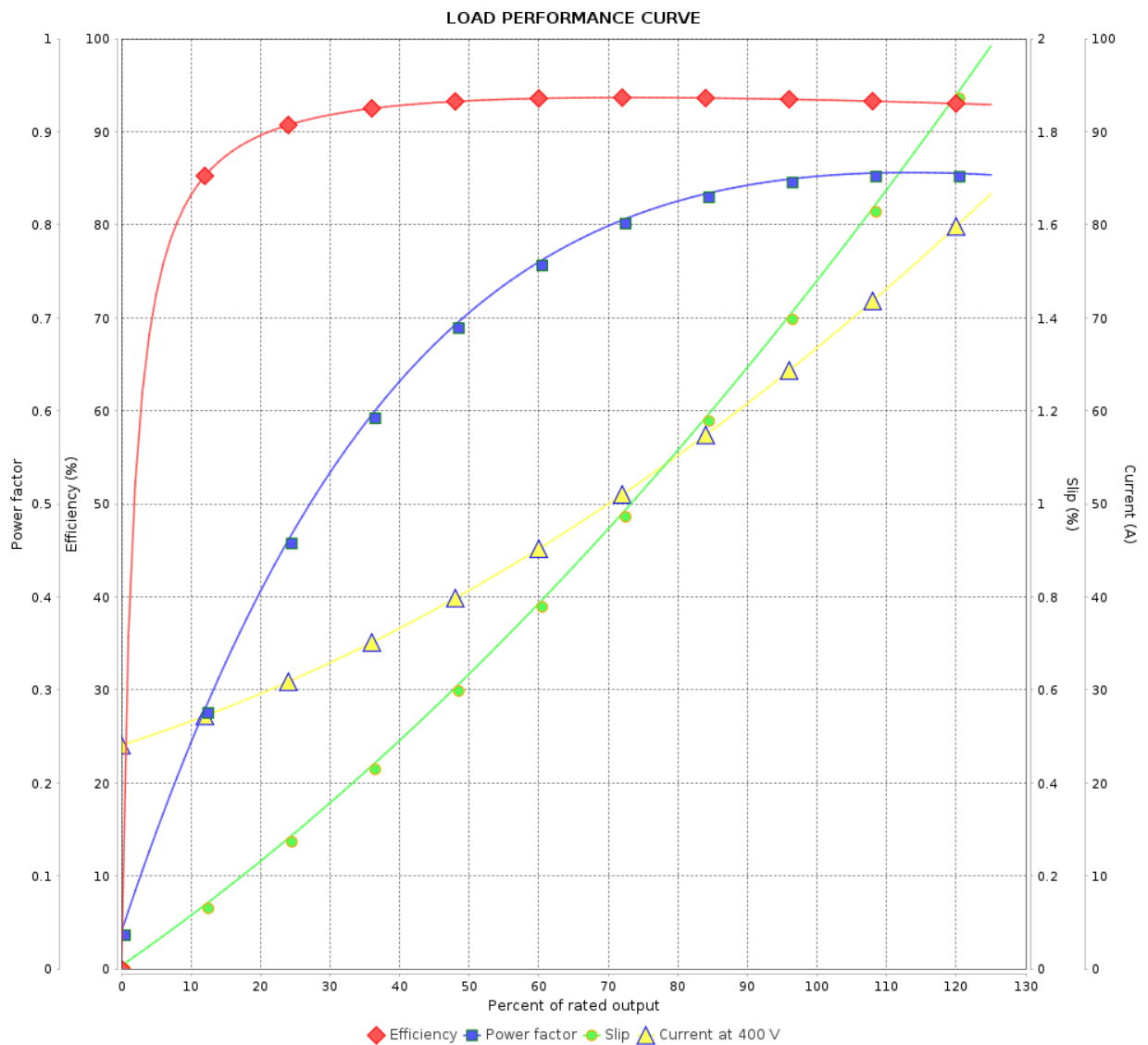
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 400 V 50 Hz 6P IE3

Rated current : 67.3 A  
LRC : 6.6  
Rated torque : 36.8 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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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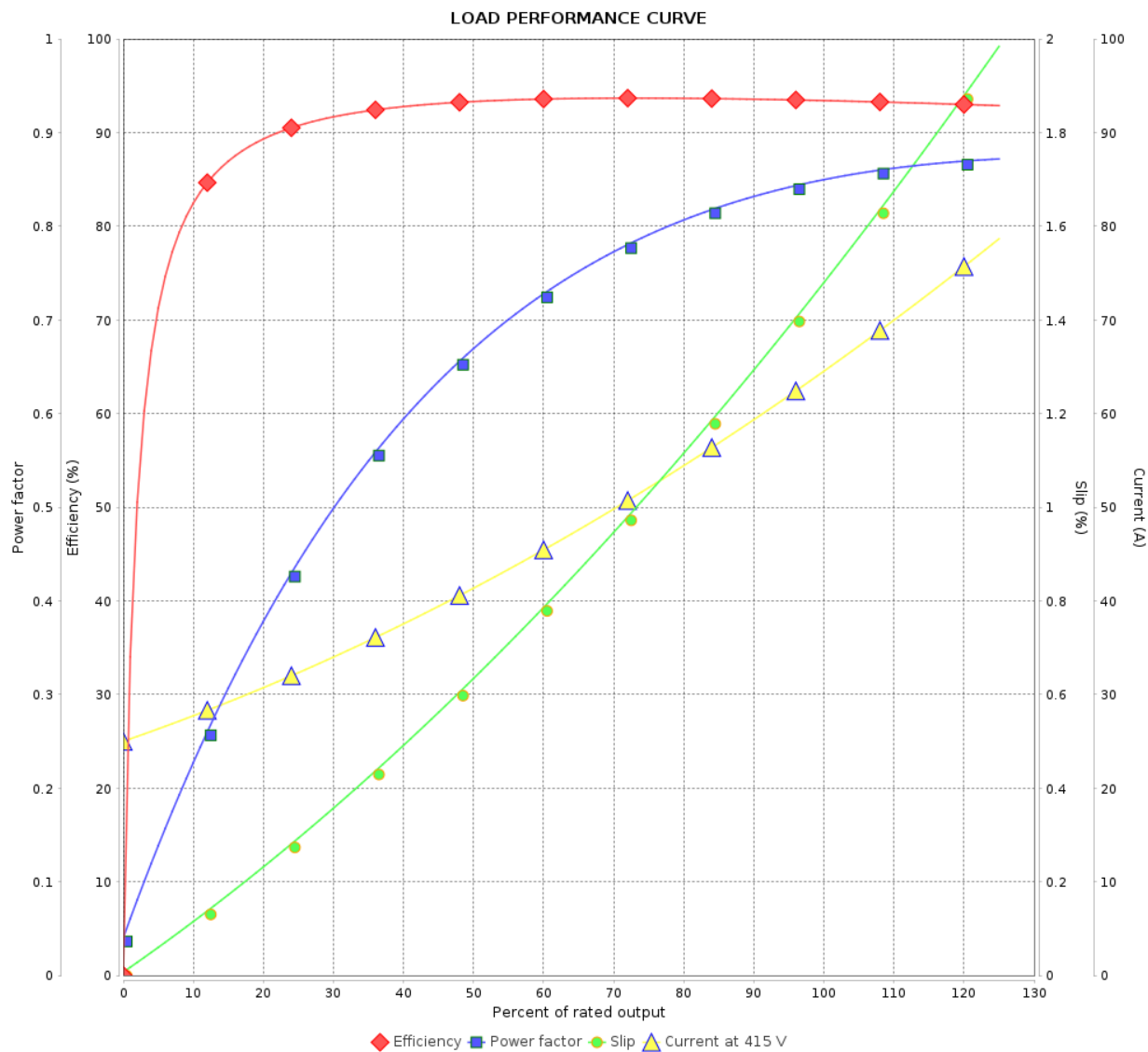
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 415 V 50 Hz 6P IE3

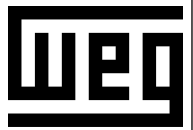
Rated current : 64.8 A  
LRC : 7.2  
Rated torque : 36.8 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 260 %  
Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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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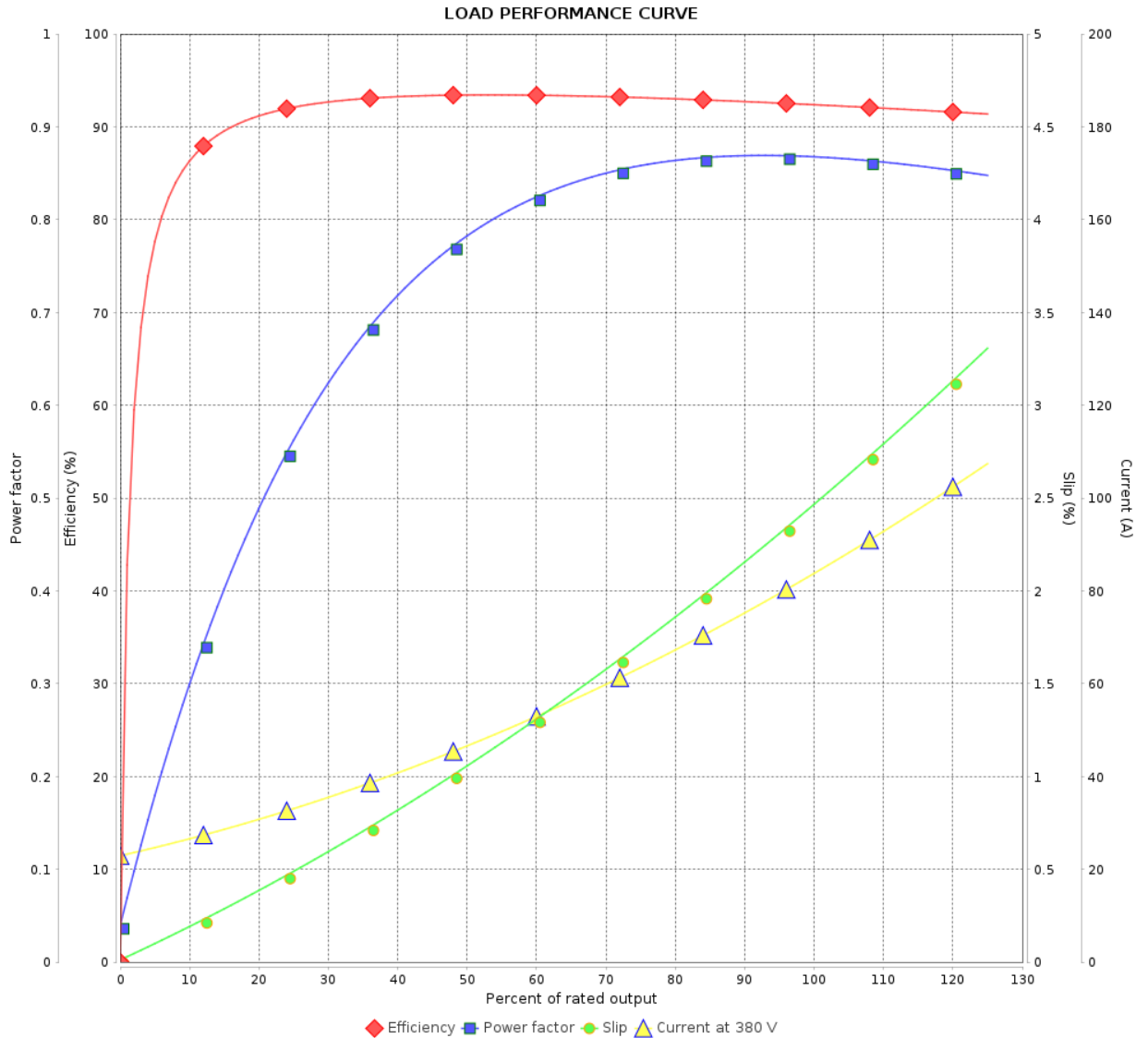
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 380 V 50 Hz 6P IE1

Rated current : 85.1 A  
LRC : 5.0  
Rated torque : 44.7 kgfm  
Locked rotor torque : 150 %  
Breakdown torque : 180 %  
Rated speed : 975 rpm

Moment of inertia (J) : 1.55 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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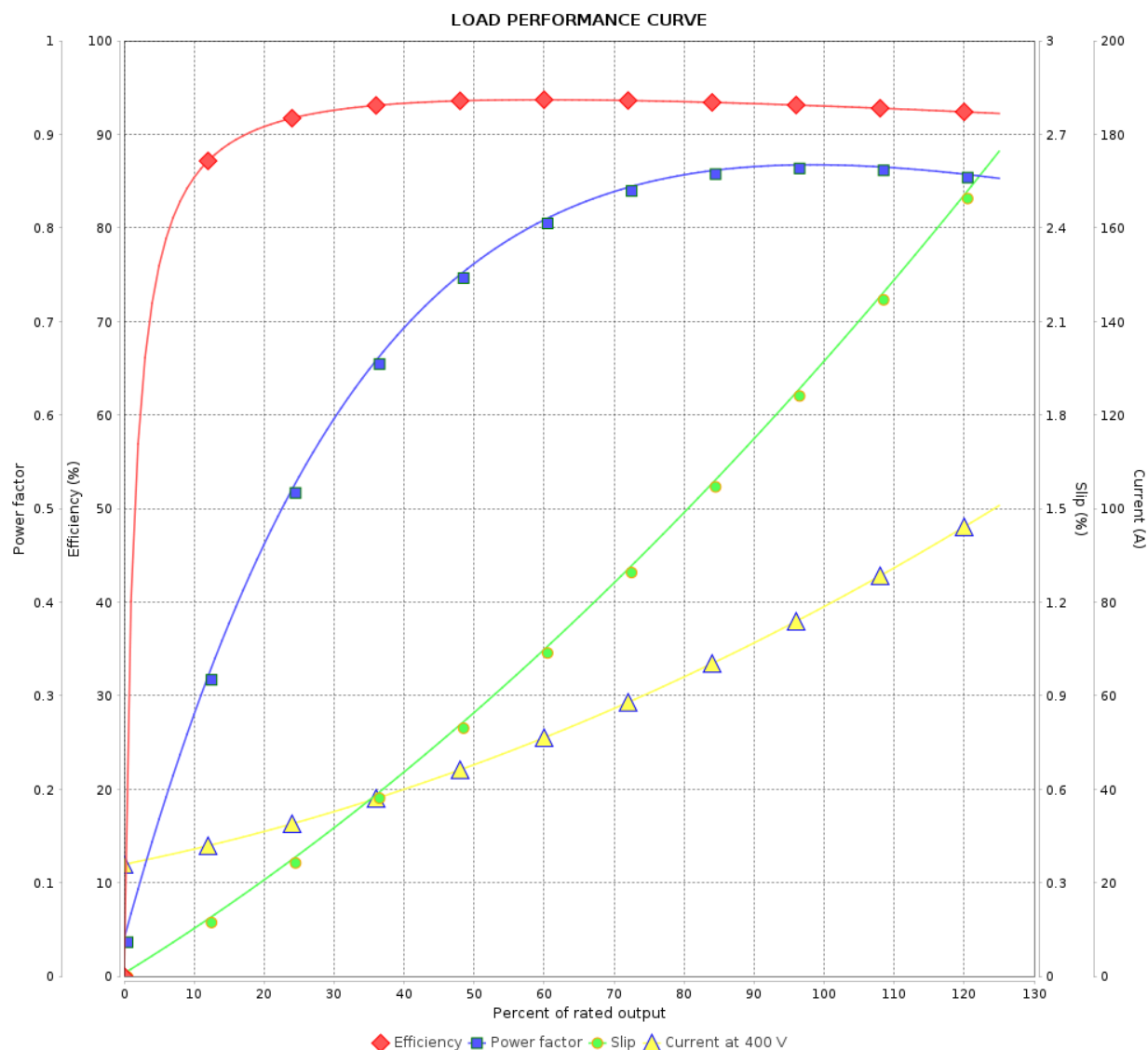
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 400 V 50 Hz 6P IE2

Rated current	: 80.3 A	Moment of inertia (J)	: 1.55 kgm <sup>2</sup>
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 44.4 kgfm	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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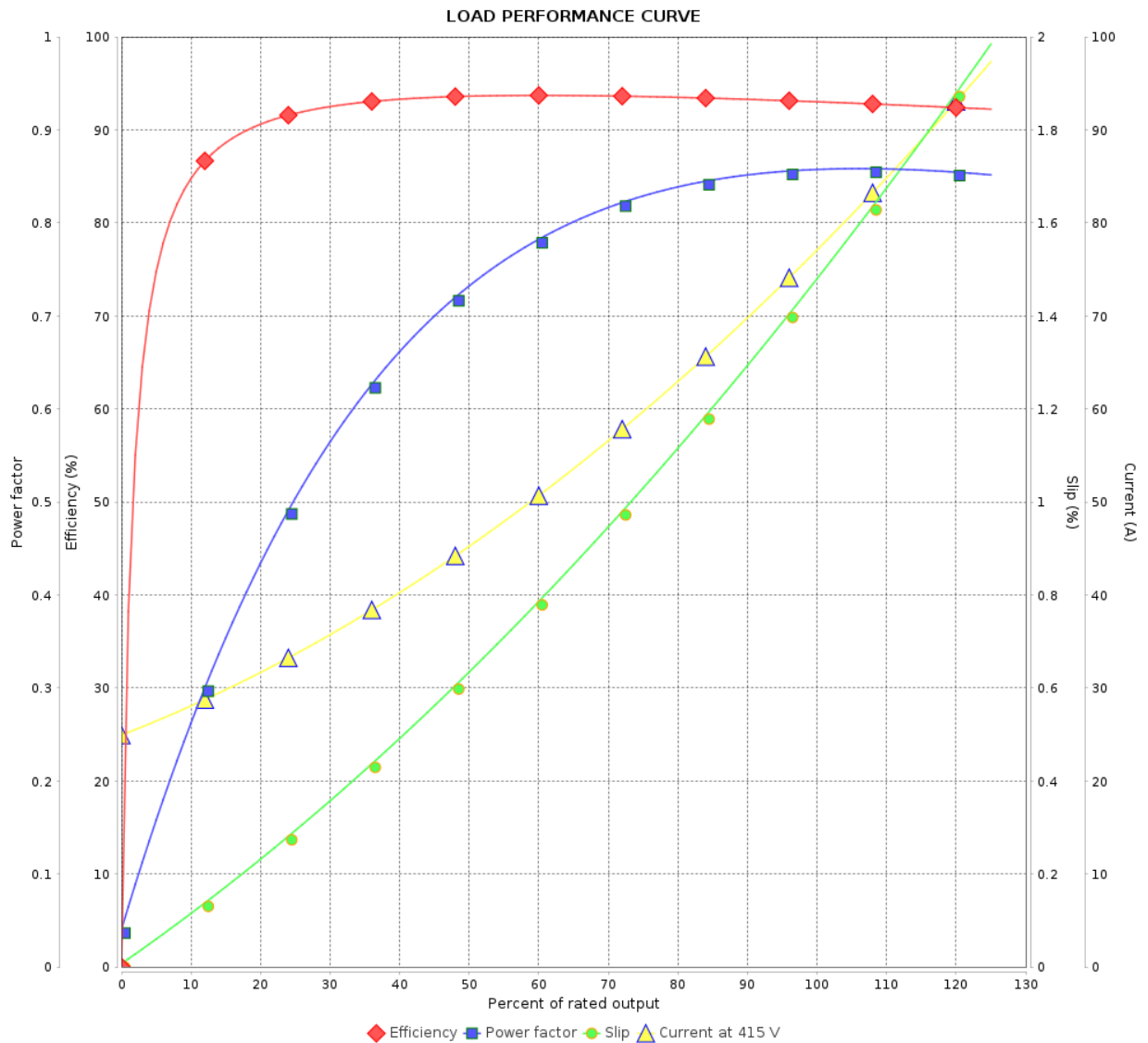
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11943364



Performance : 415 V 50 Hz 6P IE2

Rated current : 78.3 A  
LRC : 6.0  
Rated torque : 44.2 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 220 %  
Rated speed : 985 rpm

Moment of inertia (J) : 1.55 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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