

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11941263

Frame : 213/5TC	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> : 87.4 kg
Protection degree : IP55	Moment of inertia (J) : 0.0636 kgm <sup>2</sup>
Design : B	

Output [HP]	10	7.5	7.5	7.5	10	10	10
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	12.4	11.2	11.0	10.9	15.0	14.2	13.8
L. R. Amperes [A]	79.4	75.0	78.1	81.7	76.5	79.5	82.8
LRC [A]	6.4x(Code H)	6.7x(Code H)	7.1x(Code J)	7.5x(Code K)	5.1x(Code G)	5.6x(Code G)	6.0x(Code H)
No load current [A]	5.65	5.60	6.00	6.35	5.60	6.00	6.35
Rated speed [RPM]	1765	1465	1470	1470	1450	1455	1460
Slip [%]	1.94	2.33	2.00	2.00	3.33	3.00	2.67
Rated torque [kgfm]	4.11	3.70	3.69	3.69	5.01	4.99	4.97
Locked rotor torque [%]	200	200	240	260	150	180	190
Breakdown torque [%]	295	300	340	360	220	250	270
Service factor	1.25	1.15	1.15	1.15	1.15	1.15	1.15
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	58.0 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%	91.0	90.0	89.2	88.7	90.3	90.3
	75%	91.7	90.0	89.9	89.8	90.2	90.2
	100%	91.7	89.8	90.1	90.3	88.5	90.2
Power Factor	25%						
	50%	0.66	0.62	0.58	0.55	0.73	0.69
	75%	0.77	0.76	0.73	0.70	0.82	0.78
	100%	0.83	0.83	0.80	0.78	0.86	0.84

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

Losses (%)	P1 (0,9;1,0)	8.8	8.8	8.8	8.8	8.8	8.8
	P2 (0,5;1,0)	7.3	7.3	7.3	7.3	7.3	7.3
	P3 (0,25;1,0)	7.0	7.0	7.0	7.0	7.0	7.0
	P4 (0,9;0,5)	4.6	4.6	4.6	4.6	4.6	4.6
	P5 (0,5;0,5)	3.2	3.2	3.2	3.2	3.2	3.2
	P6 (0,5;0,25)	2.3	2.3	2.3	2.3	2.3	2.3
	P7 (0,25;0,25)	1.6	1.6	1.6	1.6	1.6	1.6

Bearing type	: 6308 C3	Non drive end 6207 C3	Foundation loads
Sealing	: Taconite	Taconite	Max. traction : 204 kgf
	Labyrinth	Labyrinth	Max. compression : 292 kgf
Lubrication interval	: 20000 h	20000 h	
Lubricant amount	: 11 g	7 g	
Lubricant type	: Mobil Polyrex EM		

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Subject to change without notice

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

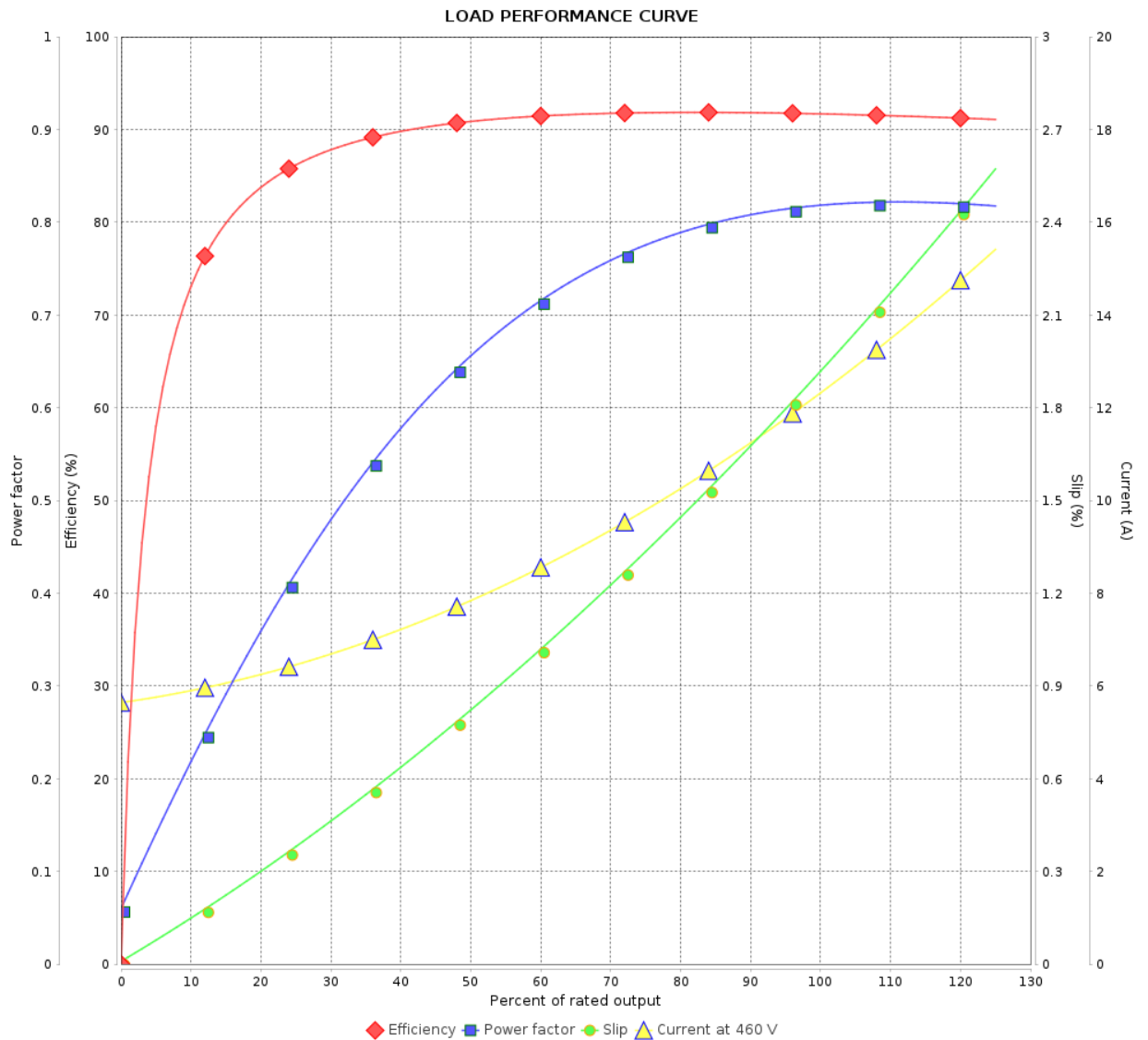
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 460 V 60 Hz 4P

Rated current	: 12.4 A	Moment of inertia (J)	: 0.0636 kgm <sup>2</sup>
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 4.11 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 295 %	Temperature rise	: 80 K
Rated speed	: 1765 rpm	Design	: B

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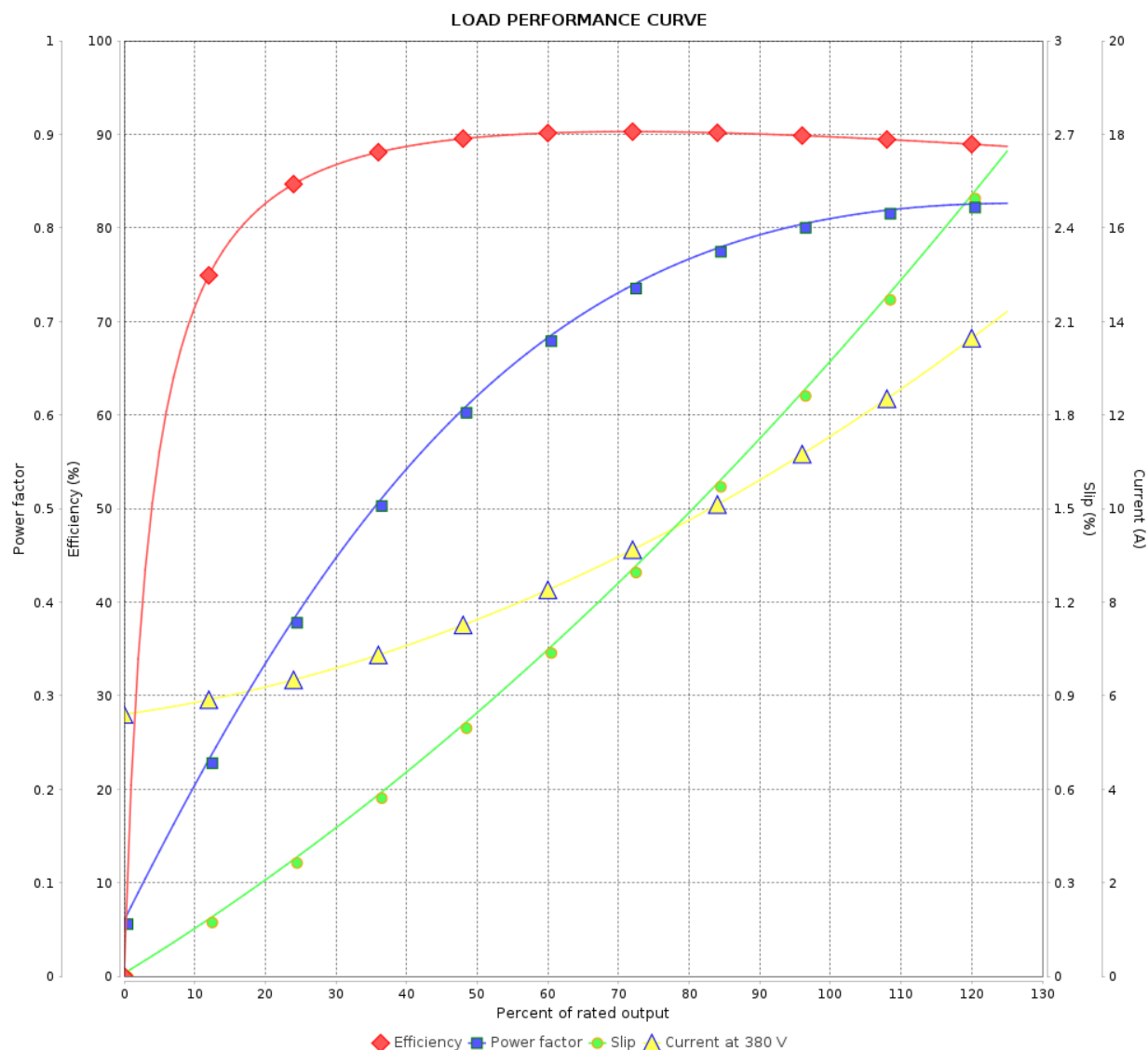
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 380 V 50 Hz 4P IE3

Rated current : 11.2 A  
LRC : 6.7  
Rated torque : 3.70 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 300 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.0636 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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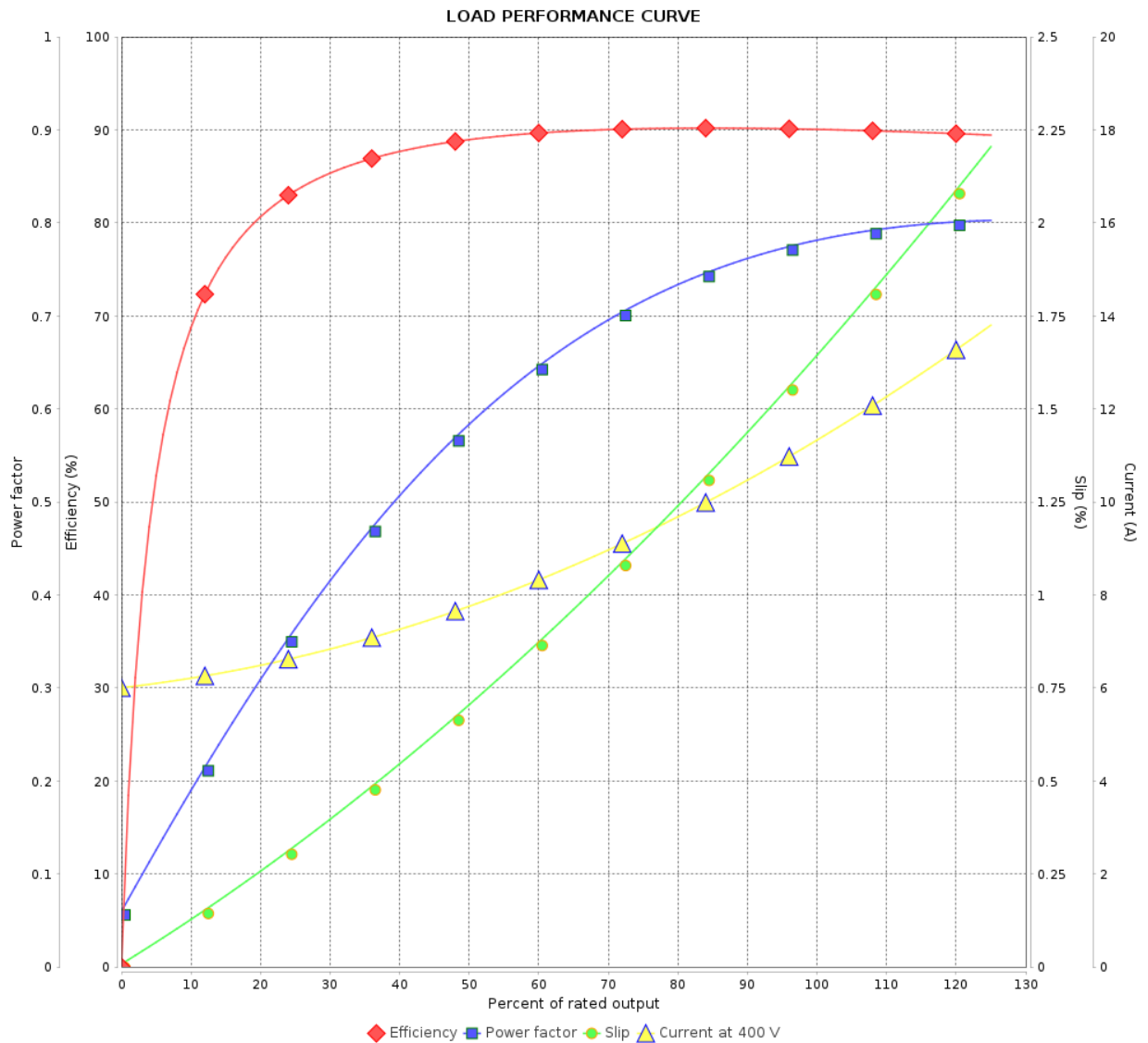
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 400 V 50 Hz 4P IE3

Rated current : 11.0 A  
LRC : 7.1  
Rated torque : 3.69 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 340 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.0636 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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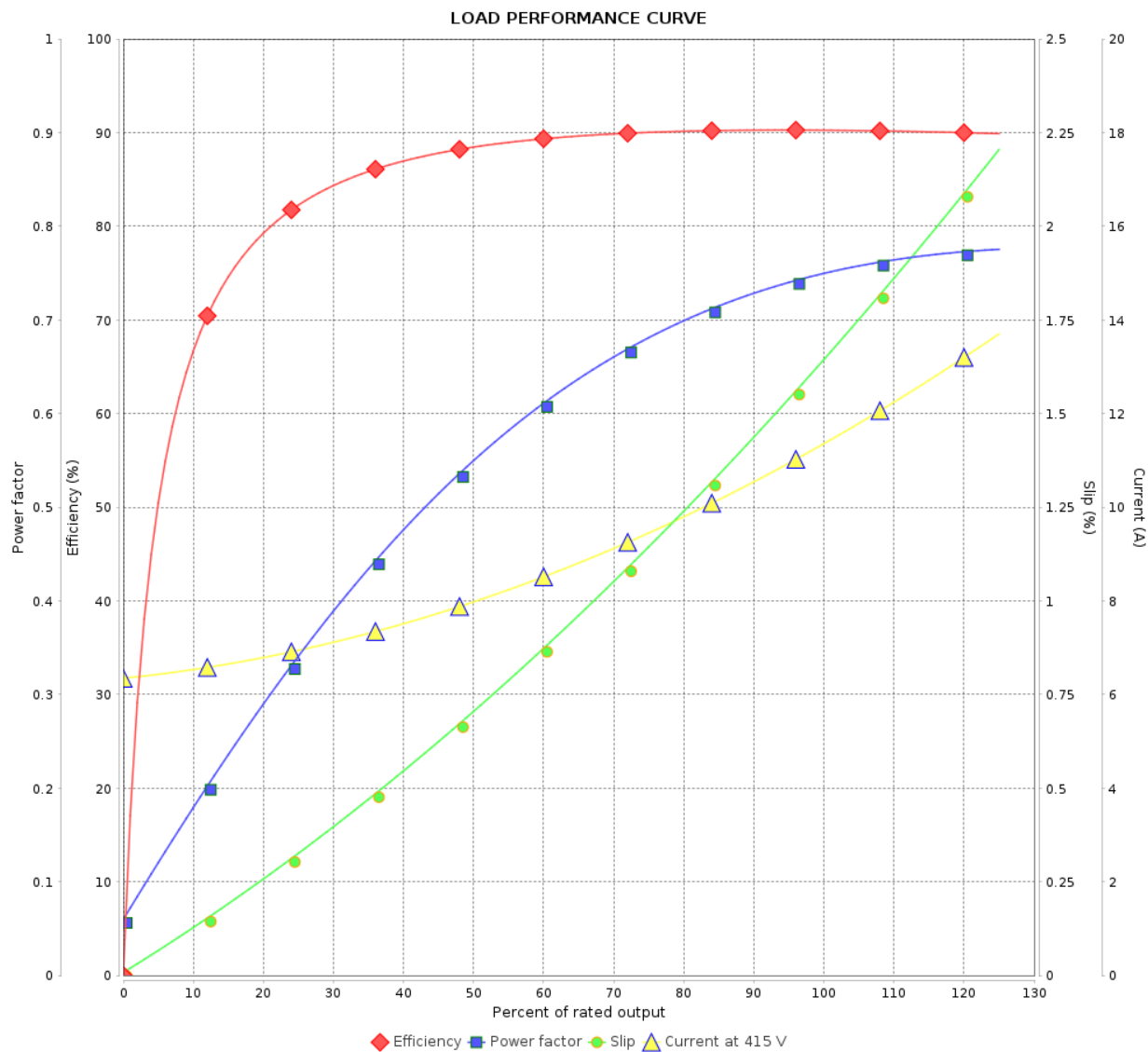
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 415 V 50 Hz 4P IE3

Rated current : 10.9 A  
LRC : 7.5  
Rated torque : 3.69 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 360 %  
Rated speed : 1470 rpm

Moment of inertia (J) : 0.0636 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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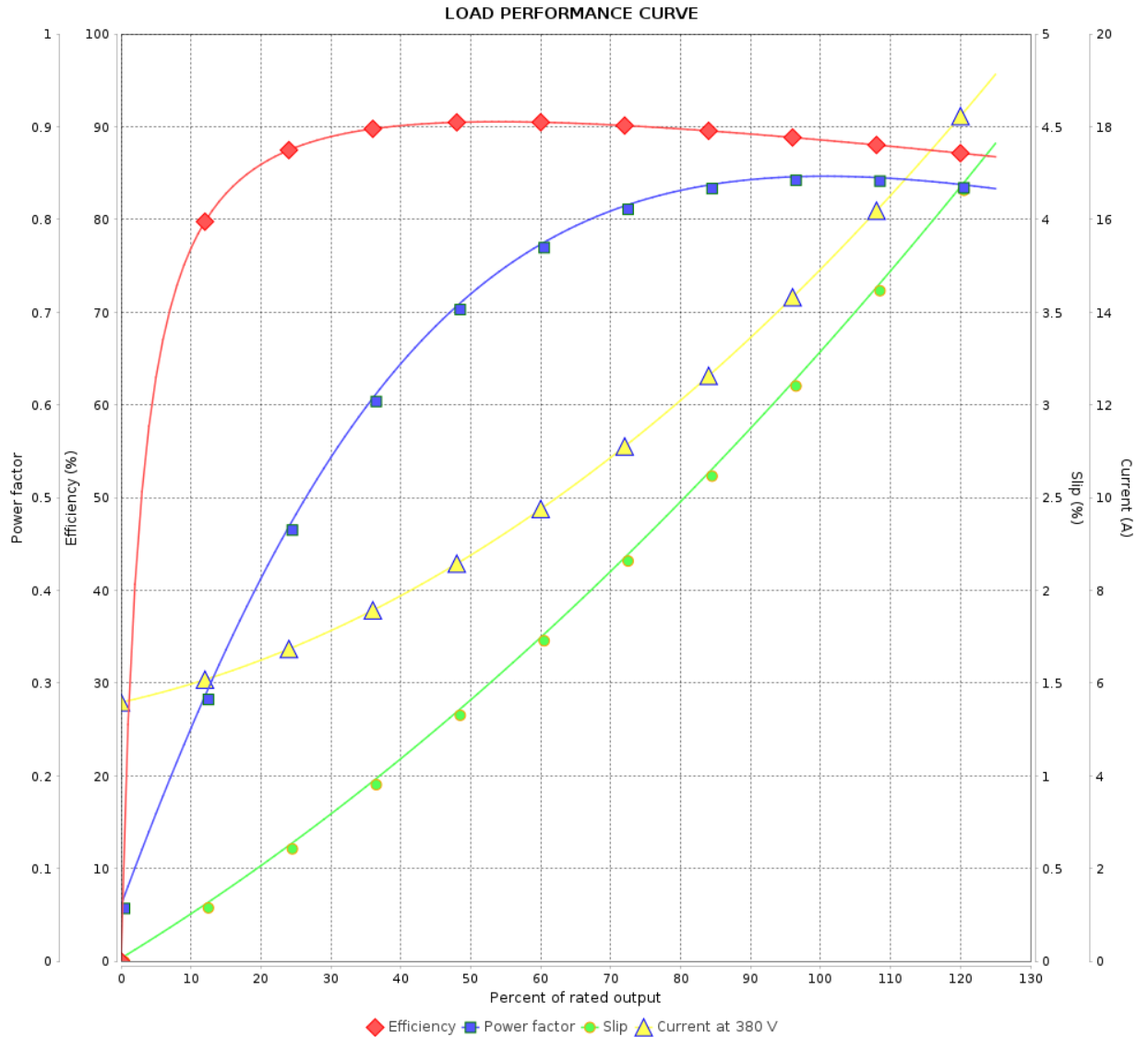
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 380 V 50 Hz 4P IE1

Rated current : 15.0 A  
LRC : 5.1  
Rated torque : 5.01 kgfm  
Locked rotor torque : 150 %  
Breakdown torque : 220 %  
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0636 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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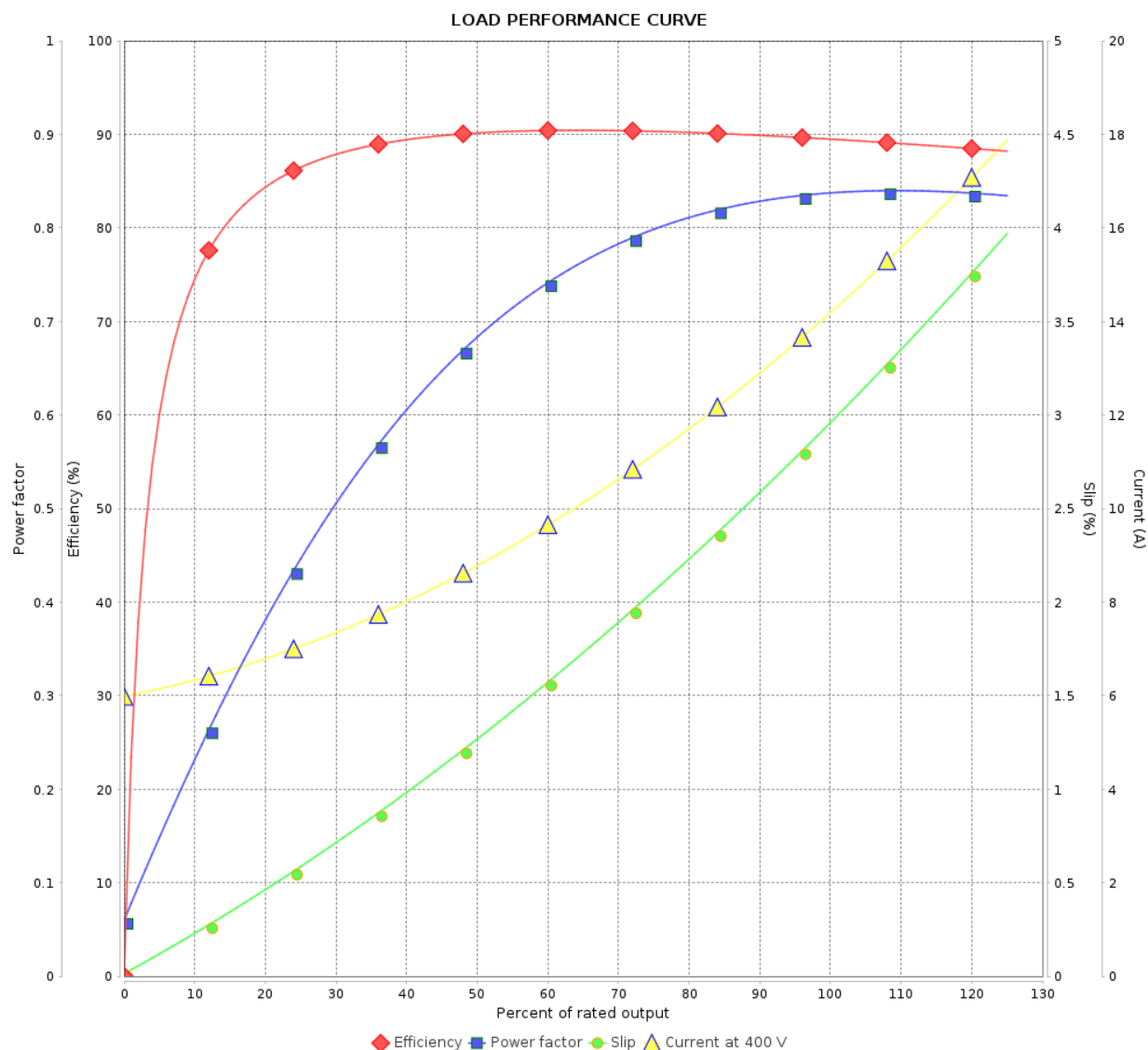
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 400 V 50 Hz 4P IE2

Rated current : 14.2 A  
LRC : 5.6  
Rated torque : 4.99 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 250 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0636 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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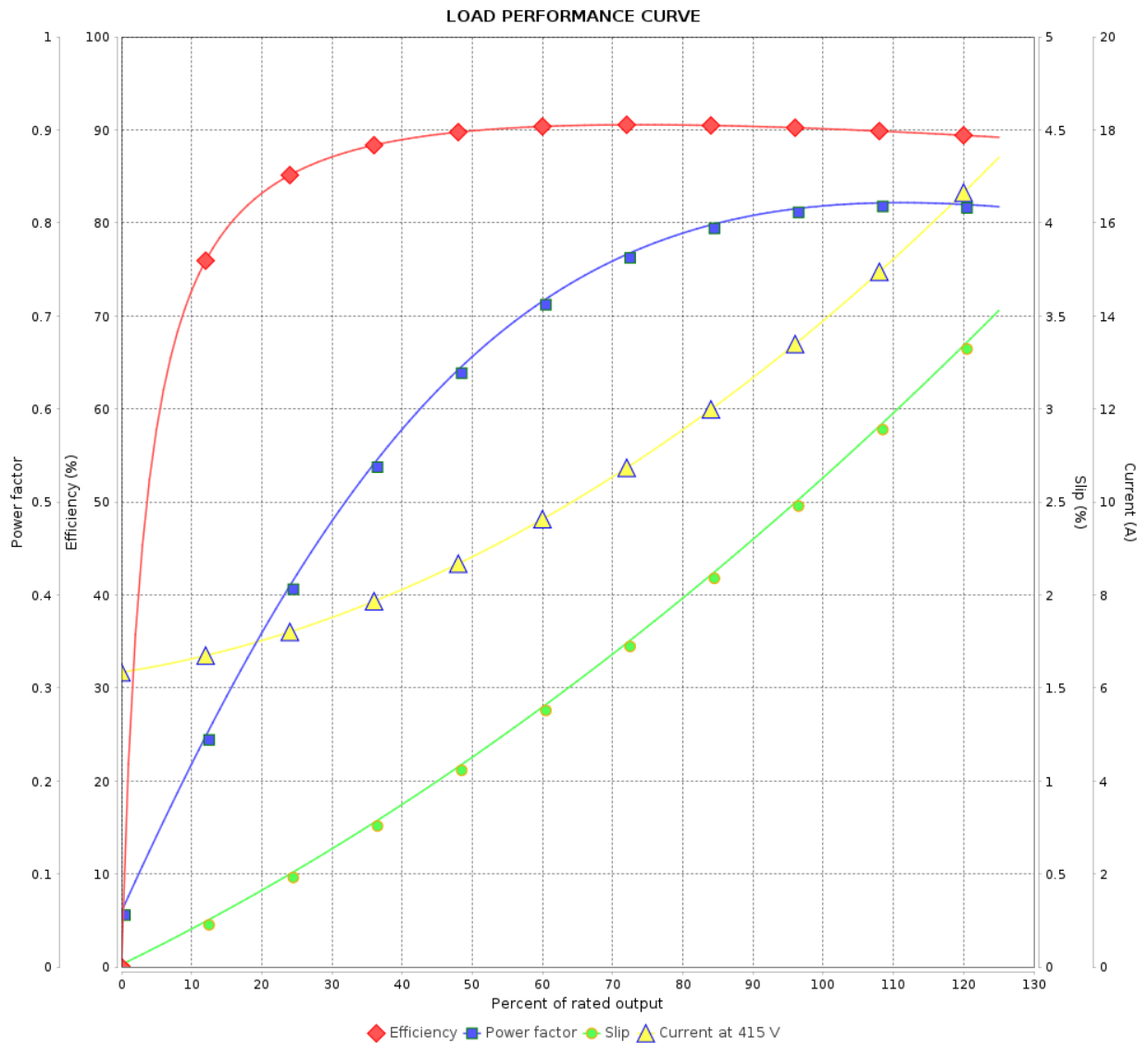
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941263



Performance : 415 V 50 Hz 4P IE2

Rated current : 13.8 A  
LRC : 6.0  
Rated torque : 4.97 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 270 %  
Rated speed : 1460 rpm

Moment of inertia (J) : 0.0636 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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