

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11441757

Frame	: 182/4TC	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>	: 43.3 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0094 kgm <sup>2</sup>
Design	: B		

Output [HP]	5	4	4	4	5	5	5
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	11.8/5.90	5.85	5.57	5.43	7.14	6.78	6.61
L. R. Amperes [A]	89.7/44.8	44.5	46.8	50.5	42.8	46.1	49.6
LRC [A]	7.6x(Code J)	7.6x(Code J)	8.4x(Code K)	9.3x(Code L)	6.0x(Code G)	6.8x(Code H)	7.5x(Code J)
No load current [A]	4.00/2.00	1.90	2.00	2.10	1.90	2.00	2.10
Rated speed [RPM]	3500	2900	2915	2920	2860	2880	2895
Slip [%]	2.78	3.33	2.83	2.67	4.67	4.00	3.50
Rated torque [kgfm]	1.04	1.00	0.996	0.994	1.27	1.26	1.25
Locked rotor torque [%]	229	220	250	270	180	200	220
Breakdown torque [%]	350	310	350	380	240	270	300
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	30s (cold) 17s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)	23s (cold) 13s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)
Noise level <sup>2</sup>	66.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%	83.7			85.9		
	50%	86.5	86.3	86.3	86.1	87.5	87.5
	75%	88.3	87.7	88.2	88.2	87.5	88.5
	100%	88.5	87.5	88.3	88.3	86.5	87.5
Power Factor	25%	0.56			0.63		
	50%	0.76	0.74	0.71	0.68	0.81	0.78
	75%	0.85	0.85	0.83	0.81	0.88	0.87
	100%	0.89	0.89	0.88	0.87	0.91	0.90

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

Losses (%)	P1 (0,9;1,0)	12.4	13.7	12.7	12.7	14.9	13.7	13.7
	P2 (0,5;1,0)	10.3	11.3	10.5	10.5	12.3	11.3	11.3
	P3 (0,25;1,0)	9.8	10.8	10.0	10.0	11.8	10.8	10.8
	P4 (0,9;0,5)	6.2	6.8	6.3	6.3	7.5	6.8	6.8
	P5 (0,5;0,5)	3.9	4.3	4.0	4.0	4.7	4.3	4.3
	P6 (0,5;0,25)	2.5	2.7	2.5	2.5	3.0	2.7	2.7
	P7 (0,25;0,25)	1.6	1.8	1.6	1.6	1.9	1.8	1.8

Bearing type	: Drive end 6207 ZZ Non drive end 6206 ZZ	Foundation loads	
Sealing	: V'Ring V'Ring	Max. traction	: 57 kgf
Lubrication interval	: - -	Max. compression	: 100 kgf
Lubricant amount	: - -		
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 13.1A SF 1.15 SFA 15.0A

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# LOAD PERFORMANCE CURVE

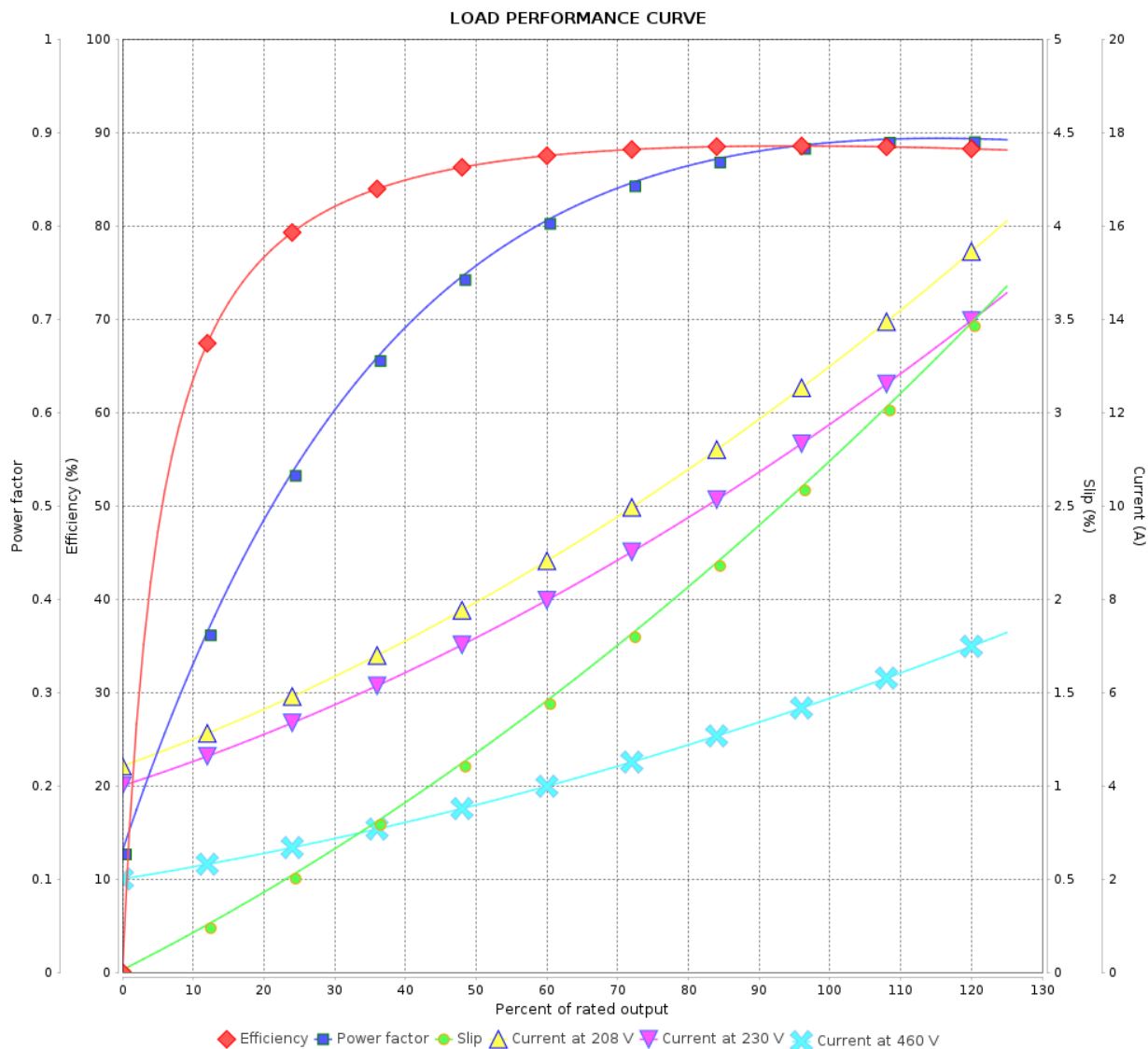
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 230/460 V 60 Hz 2P

Rated current : 11.8/5.90 A  
LRC : 7.6  
Rated torque : 1.04 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 350 %  
Rated speed : 3500 rpm

Moment of inertia (J) : 0.0094 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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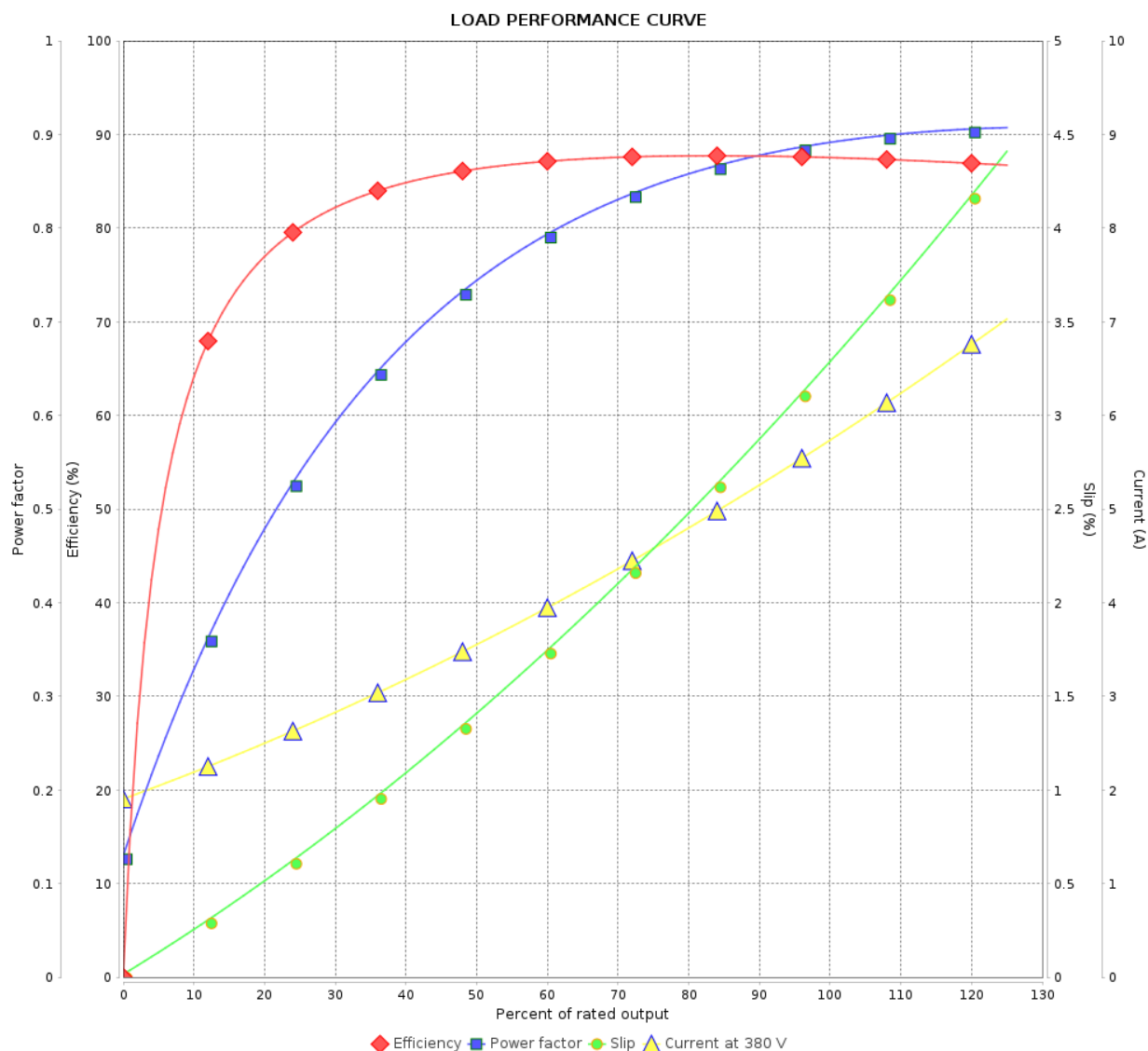
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 380 V 50 Hz 2P IE3

Rated current : 5.85 A  
LRC : 7.6  
Rated torque : 1.00 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 310 %  
Rated speed : 2900 rpm

Moment of inertia (J) : 0.0094 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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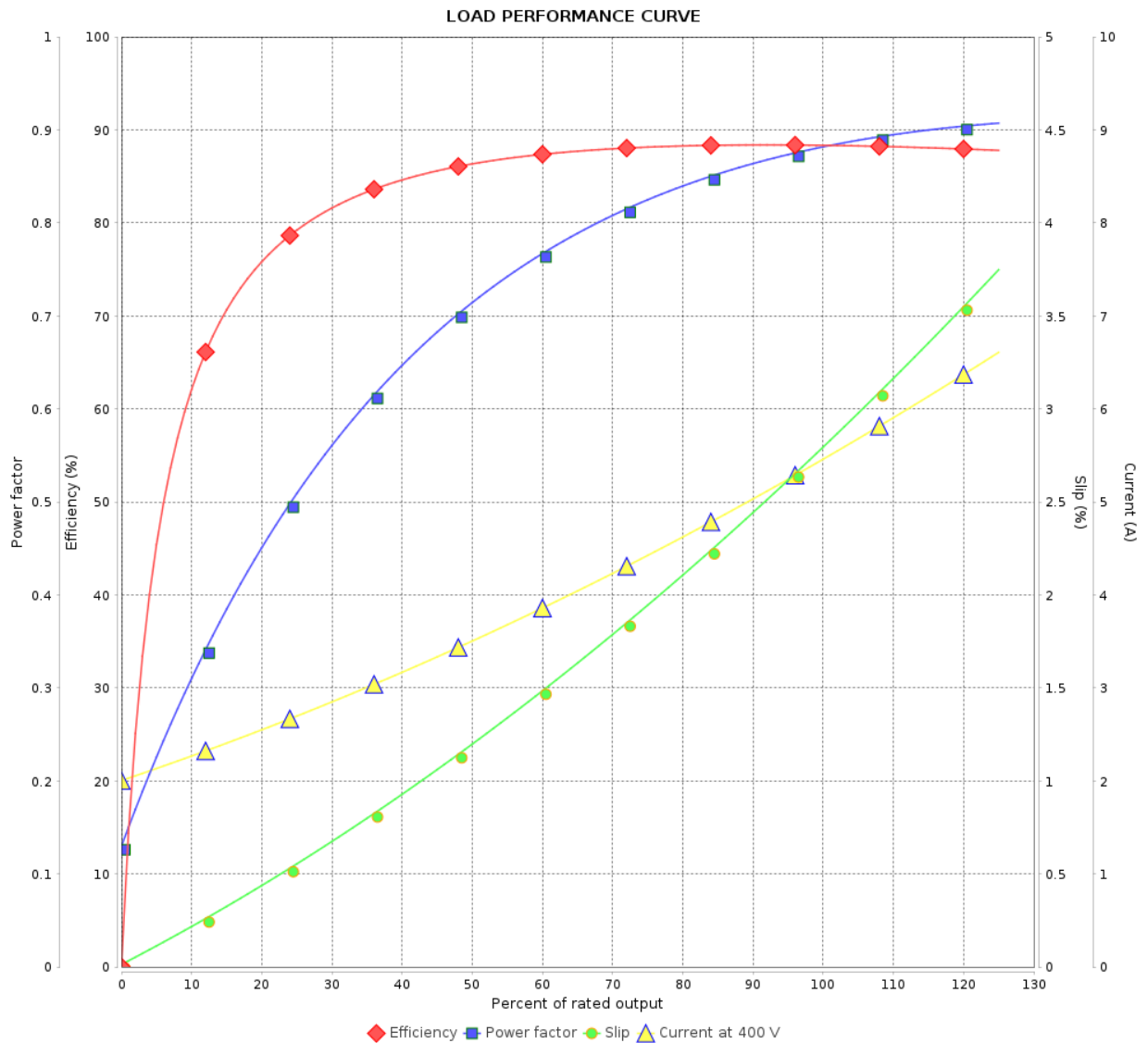
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 400 V 50 Hz 2P IE3

Rated current	: 5.57 A	Moment of inertia (J)	: 0.0094 kgm <sup>2</sup>
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 0.996 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 2915 rpm	Design	: B

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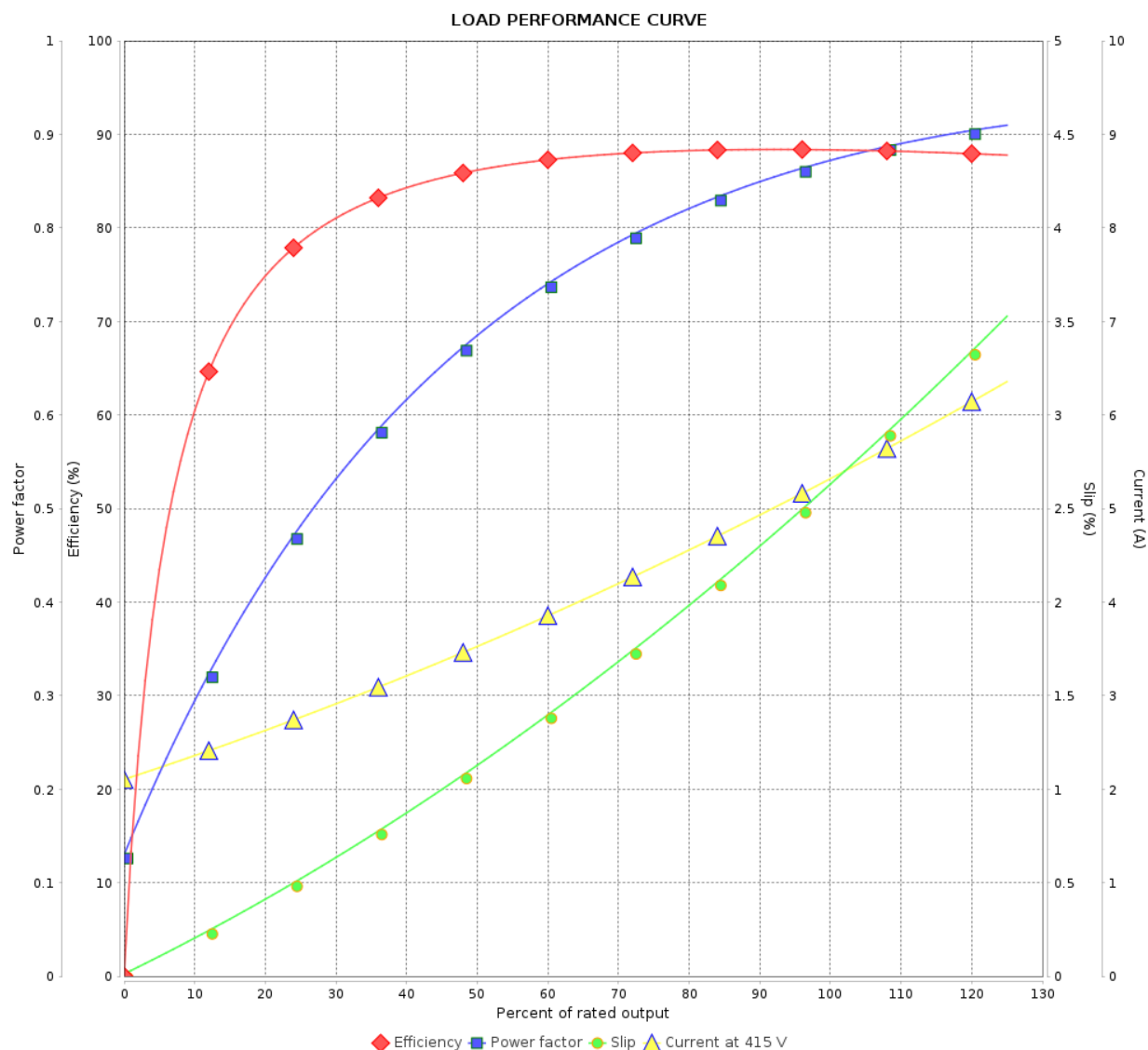
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 415 V 50 Hz 2P IE3

Rated current : 5.43 A  
LRC : 9.3  
Rated torque : 0.994 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 380 %  
Rated speed : 2920 rpm

Moment of inertia (J) : 0.0094 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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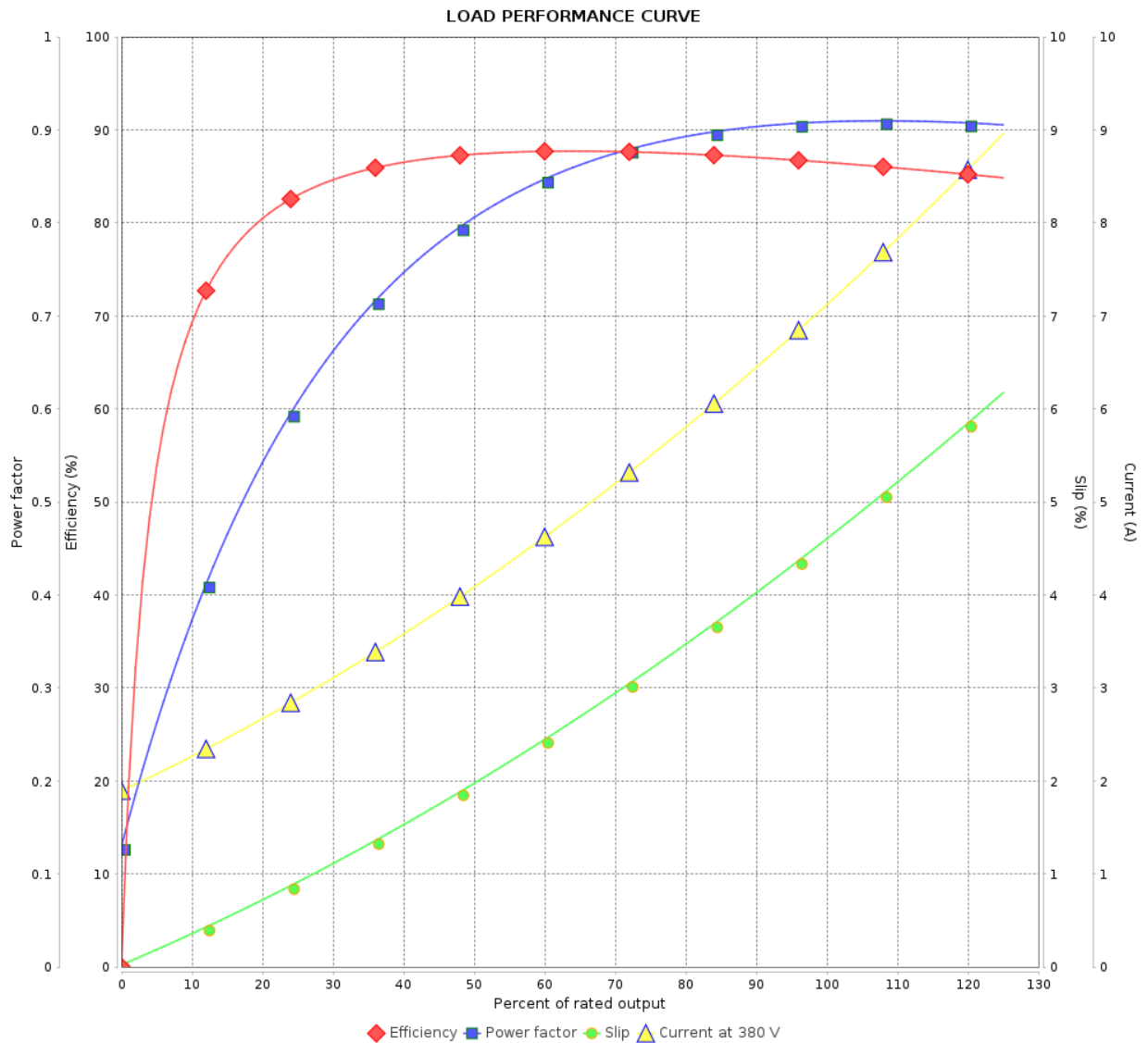
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 380 V 50 Hz 2P IE2

Rated current : 7.14 A  
LRC : 6.0  
Rated torque : 1.27 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 240 %  
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0094 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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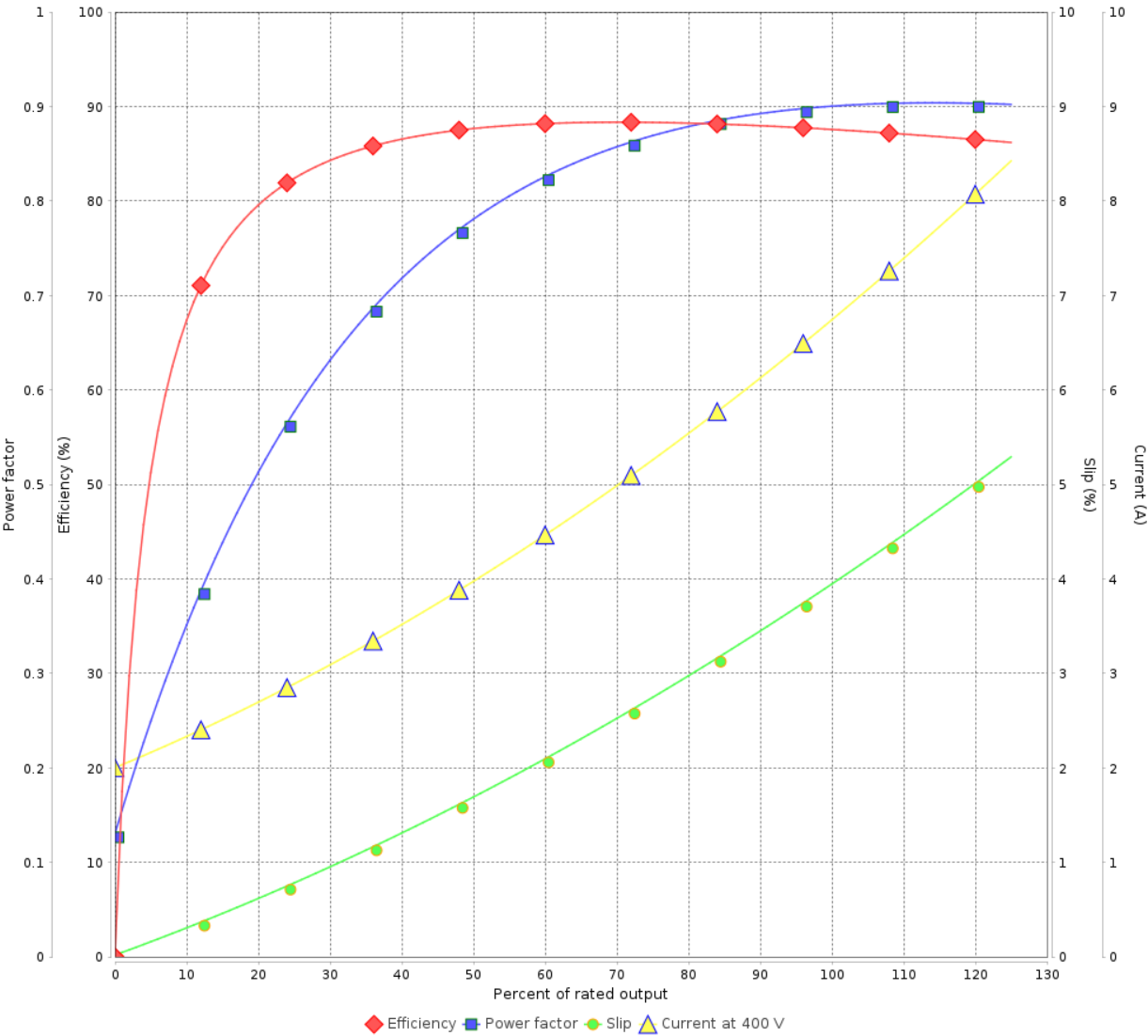
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11441757

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Performance : 400 V 50 Hz 2P IE2

Rated current	: 6.78 A	Moment of inertia (J)	: 0.0094 kgm <sup>2</sup>
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 1.26 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2880 rpm	Design	: B

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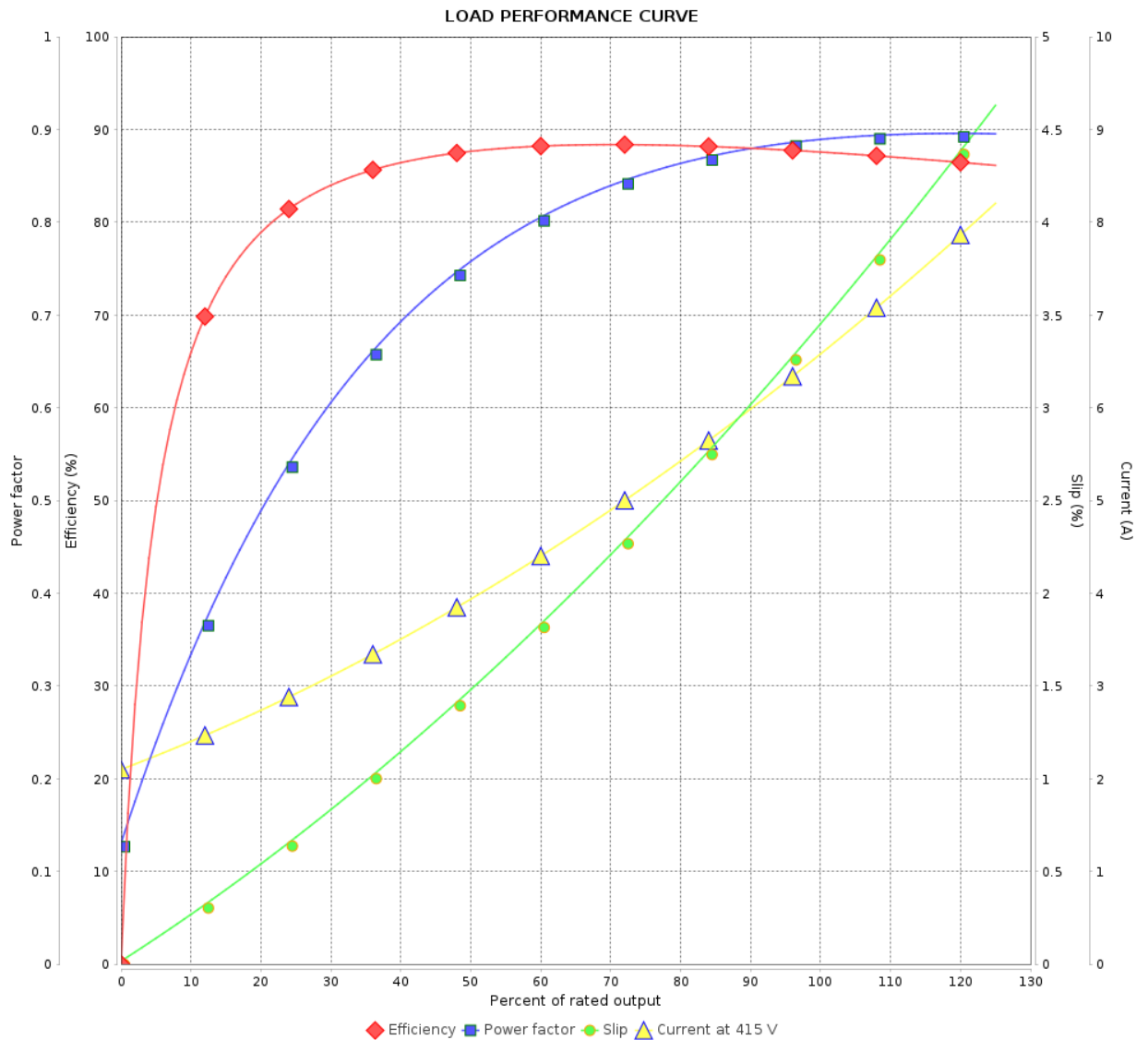
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11441757



Performance : 415 V 50 Hz 2P IE2

Rated current : 6.61 A  
LRC : 7.5  
Rated torque : 1.25 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 300 %  
Rated speed : 2895 rpm

Moment of inertia (J) : 0.0094 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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