

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 11783909

Frame : 143/5T	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> : 24.7 kg
Protection degree : IP55	Moment of inertia (J) : 0.0026 kgm <sup>2</sup>
Design : B	

Output [HP]	3	2	2	2	3	3	3
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]	7.42/3.71	3.24	3.17	3.15	4.44	4.26	4.13
L. R. Amperes [A]	60.1/30.1	27.9	29.2	29.9	27.1	28.5	29.3
LRC [A]	8.1x(Code J)	8.6x(Code L)	9.2x(Code M)	9.5x(Code M)	6.1x(Code G)	6.7x(Code H)	7.1x(Code H)
No load current [A]	2.60/1.30	1.28	1.43	1.55	1.28	1.43	1.55
Rated speed [RPM]	3460	2890	2905	2910	2820	2840	2850
Slip [%]	3.89	3.67	3.17	3.00	6.00	5.33	5.00
Rated torque [kgfm]	0.629	0.502	0.500	0.499	0.772	0.767	0.764
Locked rotor torque [%]	330	400	459	490	260	300	320
Breakdown torque [%]	360	400	459	509	260	300	330
Service factor	1.25	1.25	1.00	1.00	1.25	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	25s (cold) 14s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)	23s (cold) 13s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)	23s (cold) 13s (hot)
Noise level <sup>2</sup>	68.0 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%						
	50%	85.5	81.9	82.0	82.2	84.0	85.0
	75%	86.5	84.0	84.4	84.8	85.0	86.0
	100%	86.5	84.8	85.3	85.9	84.6	86.2
Power Factor	25%						
	50%	0.70	0.63	0.58	0.55	0.76	0.69
	75%	0.81	0.76	0.72	0.69	0.85	0.80
	100%	0.86	0.83	0.80	0.77	0.89	0.86

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

Losses (%)	P1 (0,9;1,0)	14.8	14.8	14.8	14.8	14.8	14.8	14.8
	P2 (0,5;1,0)	12.3	12.3	12.3	12.3	12.3	12.3	12.3
	P3 (0,25;1,0)	11.7	11.7	11.7	11.7	11.7	11.7	11.7
	P4 (0,9;0,5)	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	P5 (0,5;0,5)	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	P6 (0,5;0,25)	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	P7 (0,25;0,25)	1.7	1.7	1.7	1.7	1.7	1.7	1.7

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6205 ZZ	6204 ZZ	Max. traction : 59 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 84 kgf
Lubrication interval :	-	-	
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 :

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# LOAD PERFORMANCE CURVE

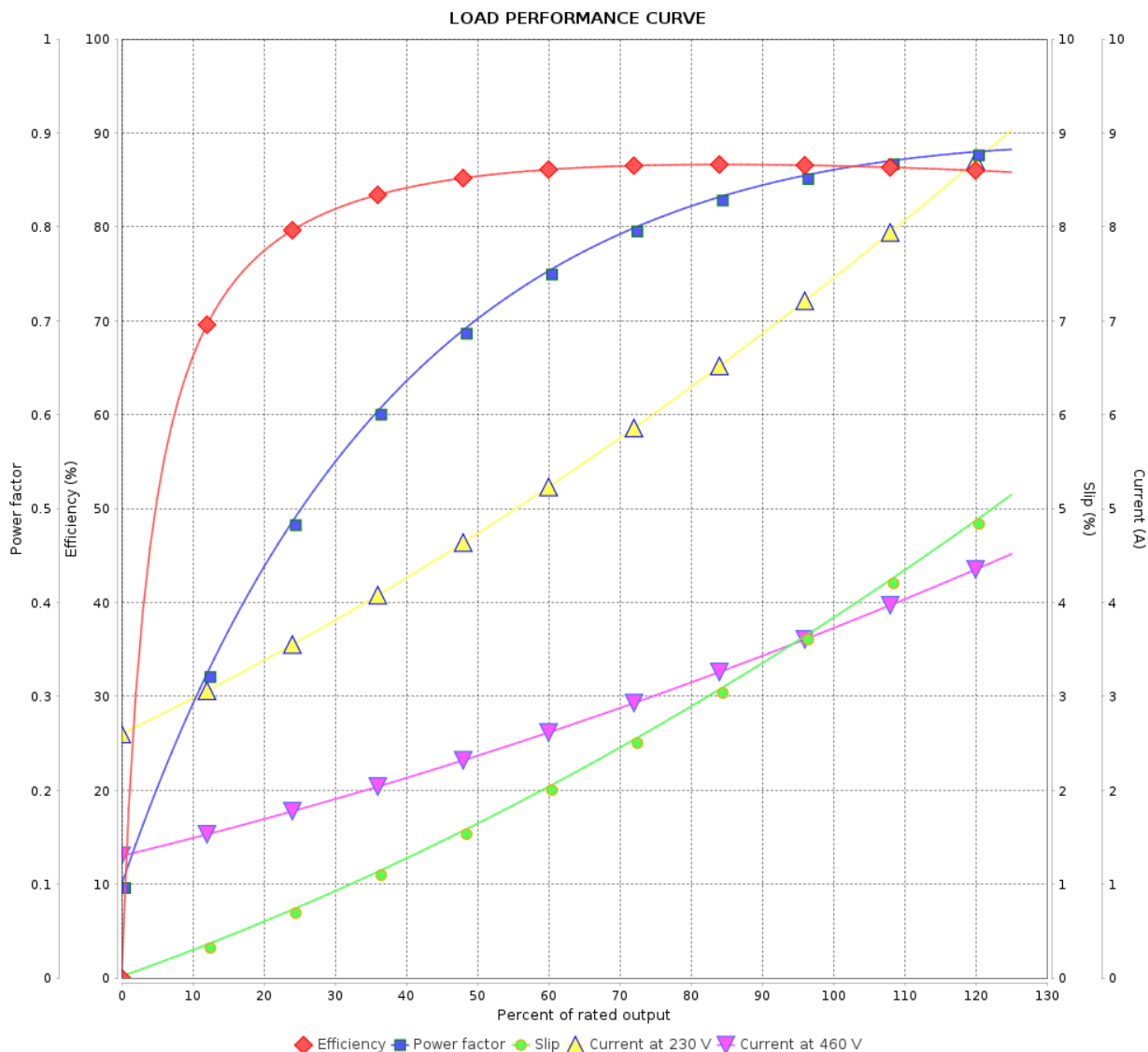
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11783909



Performance : 230/460 V 60 Hz 2P

Rated current : 7.42/3.71 A  
LRC : 8.1  
Rated torque : 0.629 kgfm  
Locked rotor torque : 330 %  
Breakdown torque : 360 %  
Rated speed : 3460 rpm

Moment of inertia (J) : 0.0026 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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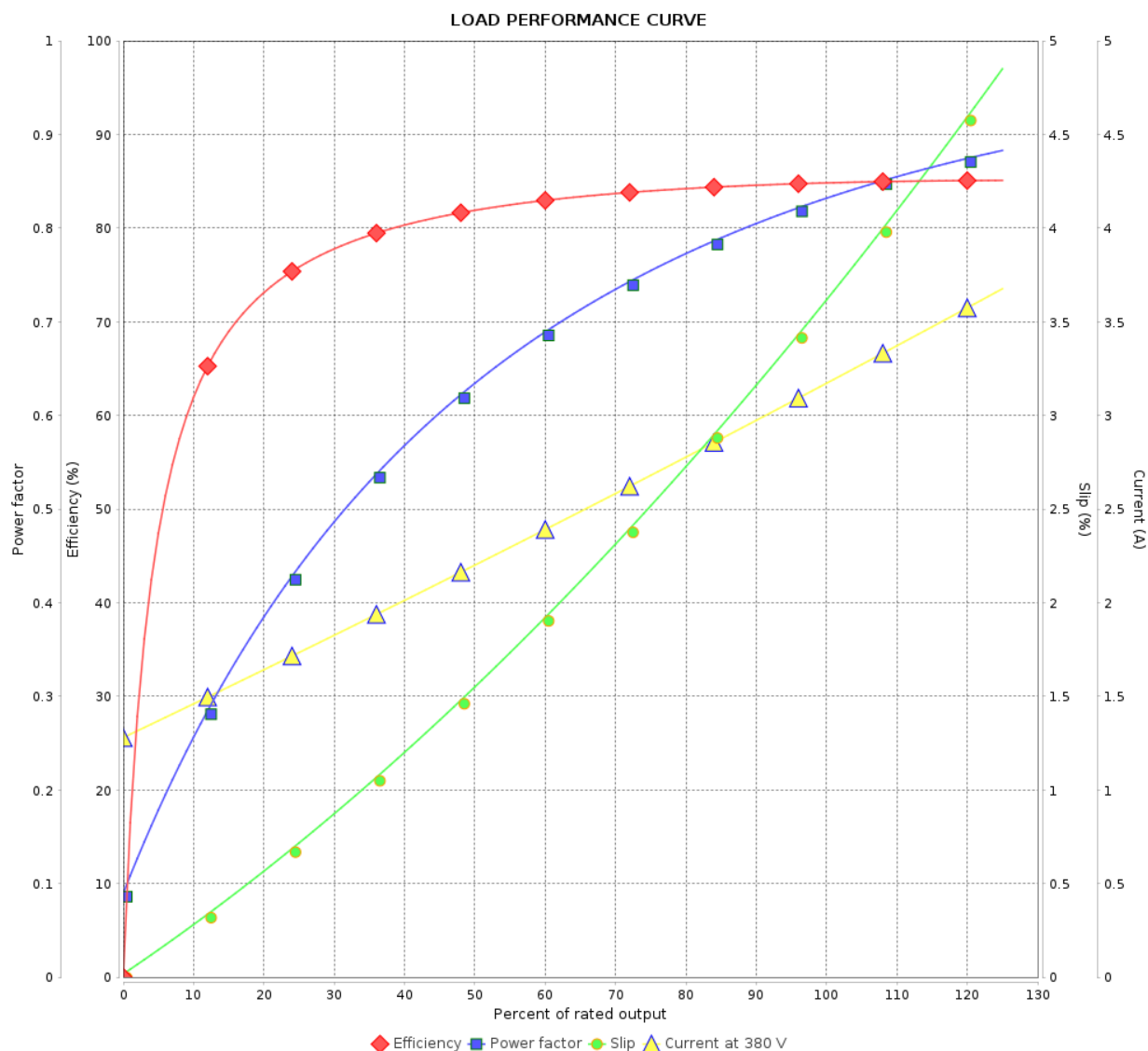
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11783909



Performance : 380 V 50 Hz 2P IE3

Rated current : 3.24 A  
LRC : 8.6  
Rated torque : 0.502 kgfm  
Locked rotor torque : 400 %  
Breakdown torque : 400 %  
Rated speed : 2890 rpm

Moment of inertia (J) : 0.0026 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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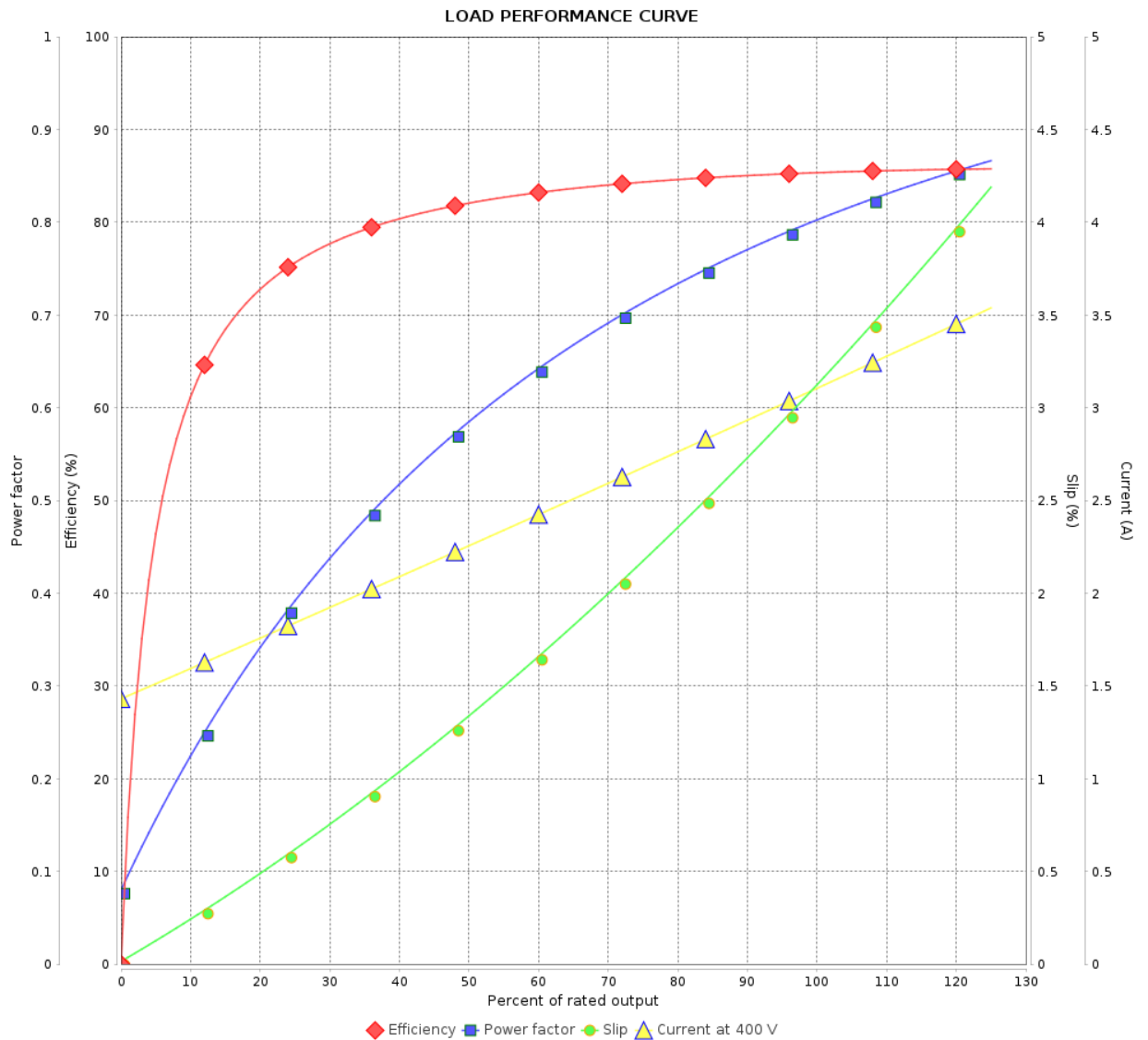
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11783909



Performance : 400 V 50 Hz 2P IE3

Rated current	: 3.17 A	Moment of inertia (J)	: 0.0026 kgm <sup>2</sup>
LRC	: 9.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.500 kgfm	Insulation class	: F
Locked rotor torque	: 459 %	Service factor	: 1.00
Breakdown torque	: 459 %	Temperature rise	: 80 K
Rated speed	: 2905 rpm	Design	: B

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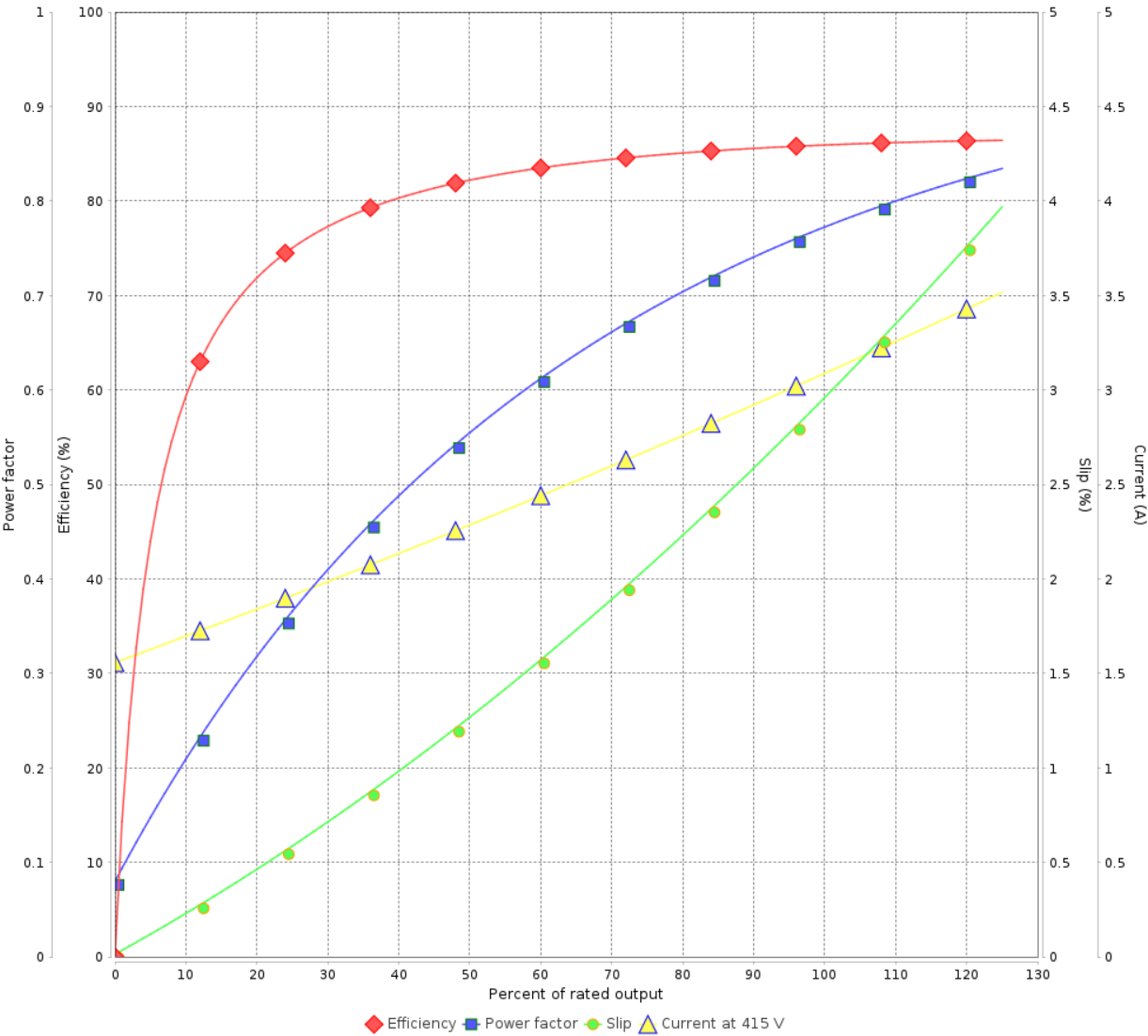
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11783909

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Performance : 415 V 50 Hz 2P IE3

Rated current	: 3.15 A	Moment of inertia (J)	: 0.0026 kgm <sup>2</sup>
LRC	: 9.5	Duty cycle	: Cont.(S1)
Rated torque	: 0.499 kgfm	Insulation class	: F
Locked rotor torque	: 490 %	Service factor	: 1.00
Breakdown torque	: 509 %	Temperature rise	: 80 K
Rated speed	: 2910 rpm	Design	: B

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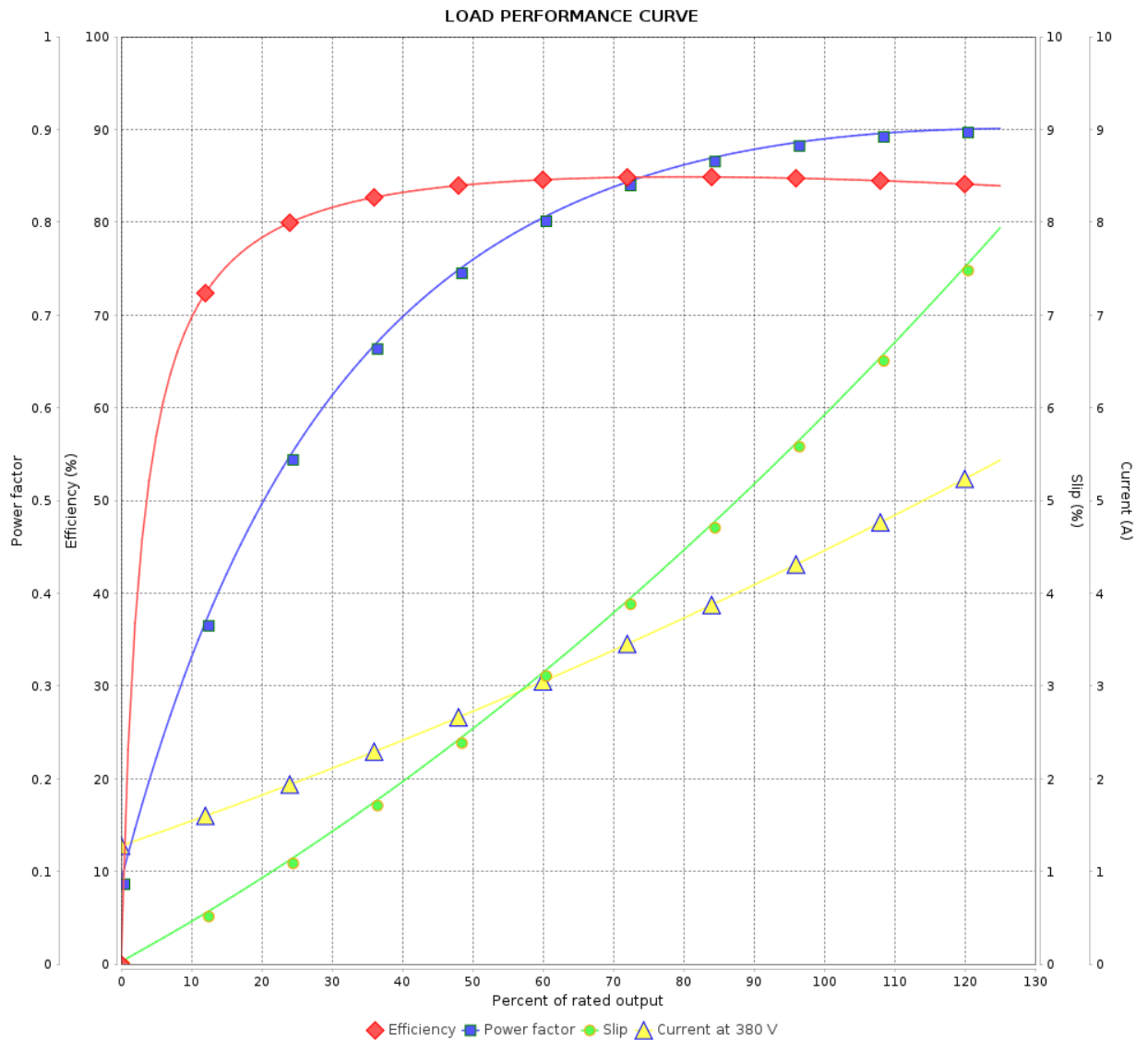
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11783909



Performance : 380 V 50 Hz 2P IE2

Rated current : 4.44 A  
LRC : 6.1  
Rated torque : 0.772 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 260 %  
Rated speed : 2820 rpm

Moment of inertia (J) : 0.0026 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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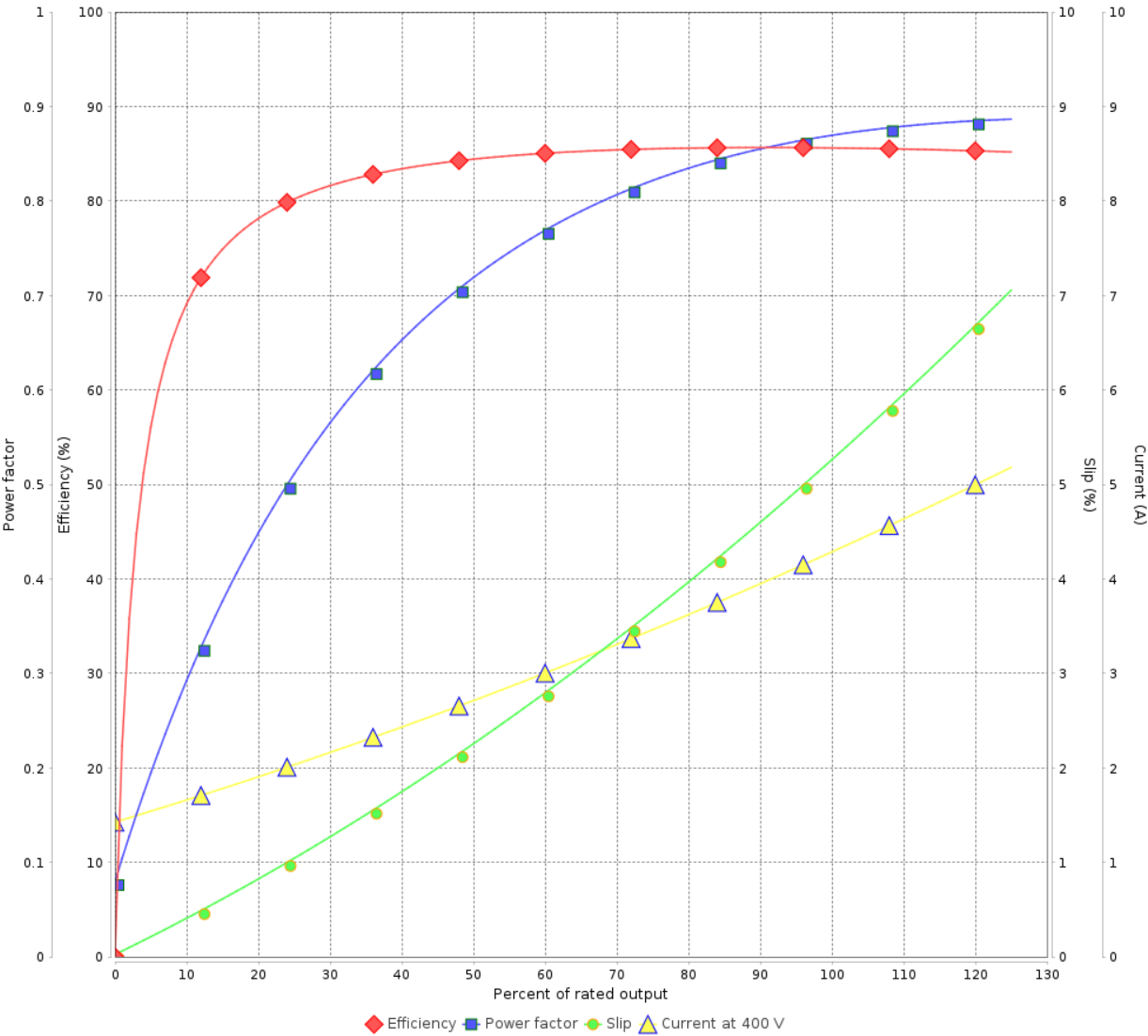
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase      Product code : 11783909

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Performance : 400 V 50 Hz 2P IE2

Rated current	: 4.26 A	Moment of inertia (J)	: 0.0026 kgm <sup>2</sup>
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 0.767 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2840 rpm	Design	: B

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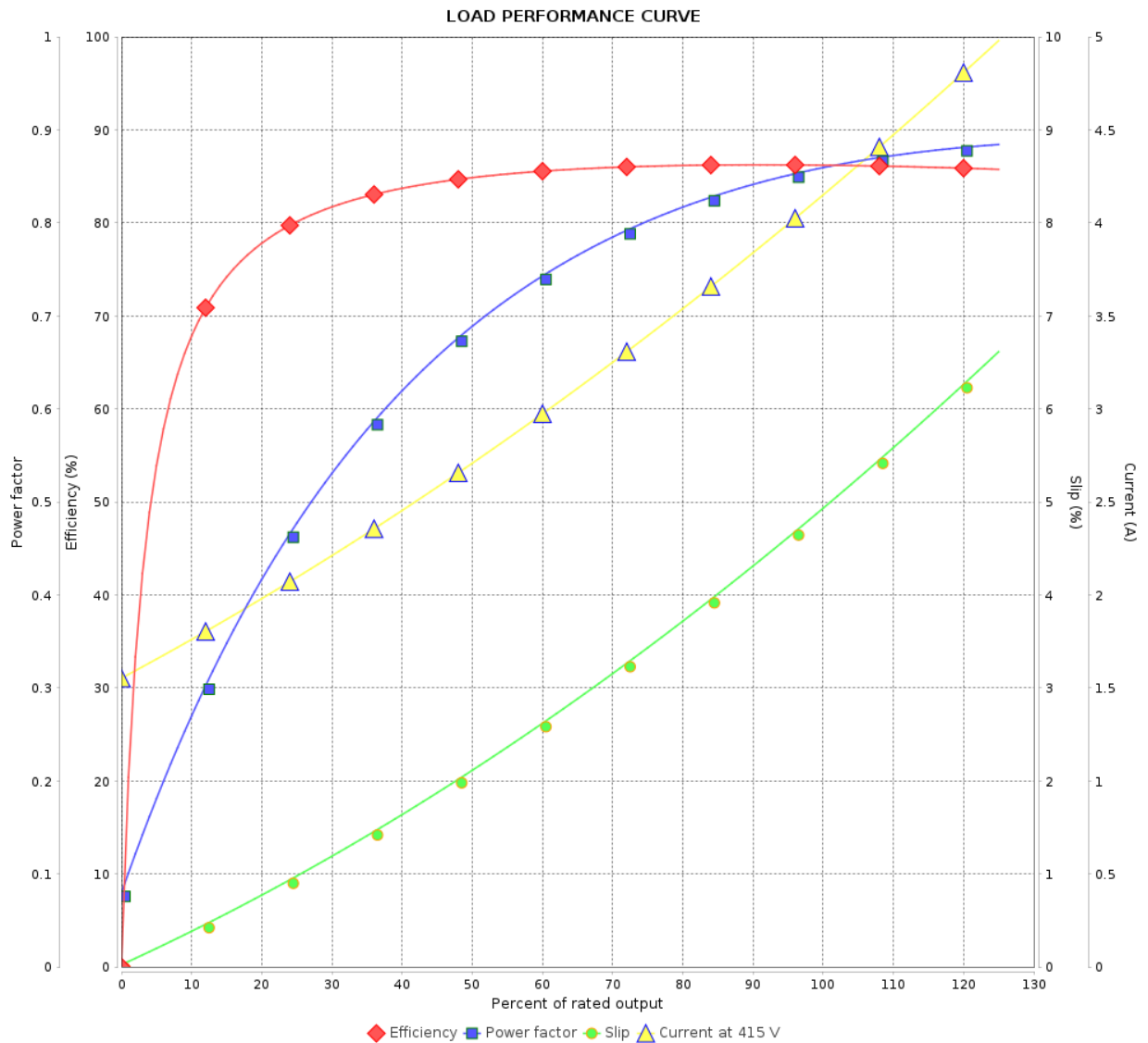
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 11783909



Performance : 415 V 50 Hz 2P IE3

Rated current	: 4.13 A	Moment of inertia (J)	: 0.0026 kgm <sup>2</sup>
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 0.764 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2850 rpm	Design	: B

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