

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12378662

Frame : 182/4T	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> : 34.7 kg
Protection degree : IP55	Moment of inertia (J) : 0.0080 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]	7.52/3.76	3.28	3.24	3.24	4.44	4.32	4.26
L. R. Amperes [A]	64.7/32.3	31.8	35.0	36.0	31.1	32.8	35.4
LRC [A]	8.6x(Code K)	9.7x(Code M)	10.8x(Code N)	11.1x(Code P)	7.0x(Code H)	7.6x(Code J)	8.3x(Code K)
No load current [A]	3.20/1.60	1.50	1.65	1.80	1.50	1.70	1.80
Rated speed [RPM]	3515	2935	2940	2945	2890	2900	2910
Slip [%]	2.36	2.17	2.00	1.83	3.67	3.33	3.00
Rated torque [kgfm]	0.619	0.495	0.494	0.493	0.753	0.751	0.748
Locked rotor torque [%]	250	280	320	350	190	210	229
Breakdown torque [%]	380	420	470	509	270	300	330
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	46s (cold) 26s (hot)	52s (cold) 29s (hot)	43s (cold) 24s (hot)	48s (cold) 27s (hot)	41s (cold) 23s (hot)	43s (cold) 24s (hot)	34s (cold) 19s (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%						
	50%	82.0	81.0	80.6	79.7	84.0	84.0
	75%	86.0	84.5	84.5	84.1	85.5	85.5
	100%	86.5	85.8	85.8	85.9	85.5	85.5
Power Factor	25%						
	50%	0.70	0.63	0.58	0.55	0.76	0.71
	75%	0.80	0.75	0.71	0.67	0.84	0.81
	100%	0.85	0.81	0.78	0.75	0.88	0.86

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

Losses (%)	P1 (0,9;1,0)	14.6	14.6	14.6	14.6	14.6	14.6
	P2 (0,5;1,0)	10.7	10.7	10.7	10.7	10.7	10.7
	P3 (0,25;1,0)	9.4	9.4	9.4	9.4	9.4	9.4
	P4 (0,9;0,5)	8.3	8.3	8.3	8.3	8.3	8.3
	P5 (0,5;0,5)	4.5	4.5	4.5	4.5	4.5	4.5
	P6 (0,5;0,25)	3.1	3.1	3.1	3.1	3.1	3.1
	P7 (0,25;0,25)	1.8	1.8	1.8	1.8	1.8	1.8

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6207 ZZ	6206 ZZ	Max. traction : 34 kgf
Sealing :	V'Ring	V'Ring	Max. compression : 69 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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes  
USABLE @208V 8.01A SF 1.15 SFA 9.21A

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# LOAD PERFORMANCE CURVE

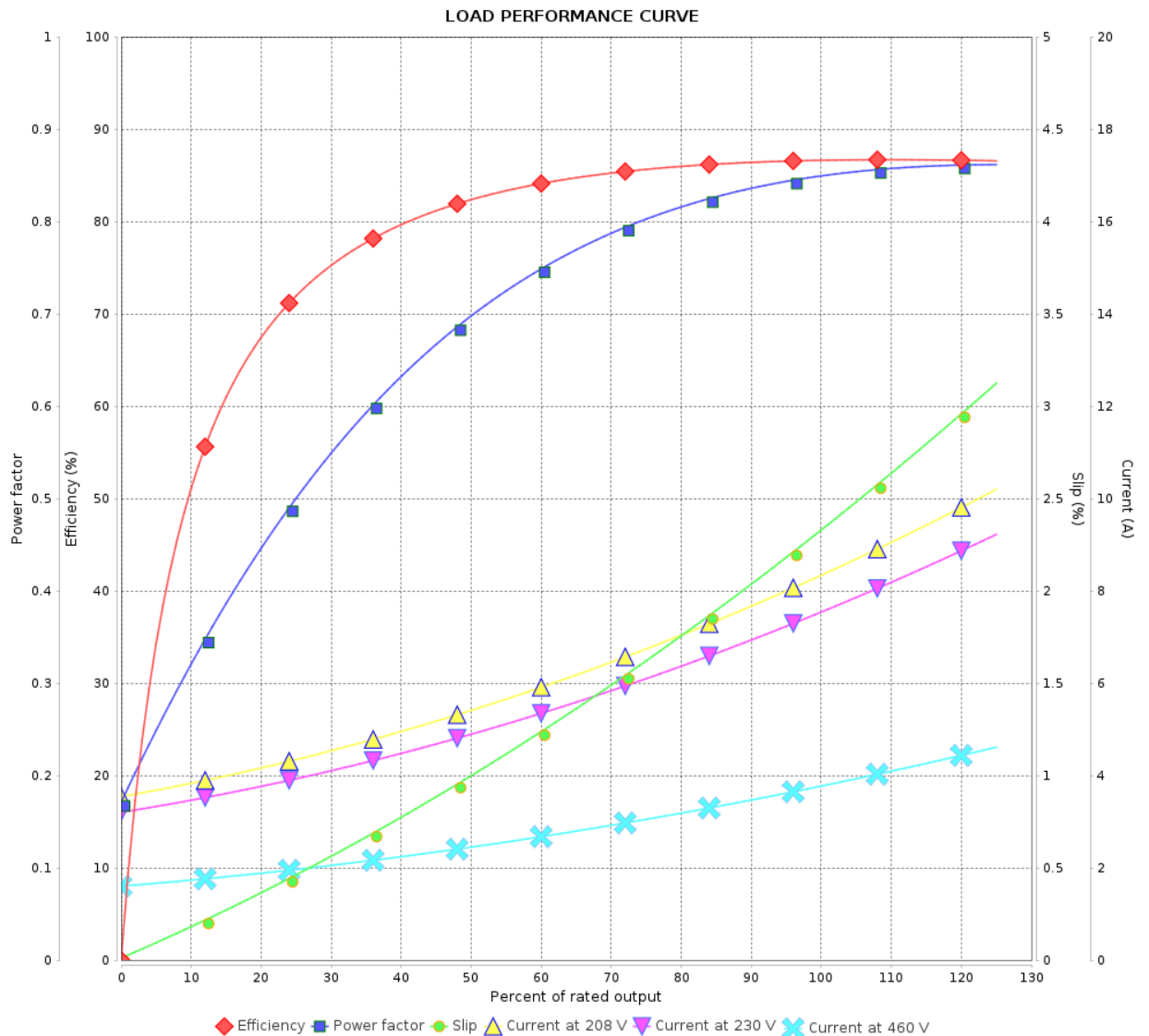
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 230/460 V 60 Hz 2P

Rated current : 7.52/3.76 A  
LRC : 8.6  
Rated torque : 0.619 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 380 %  
Rated speed : 3515 rpm

Moment of inertia (J) : 0.0080 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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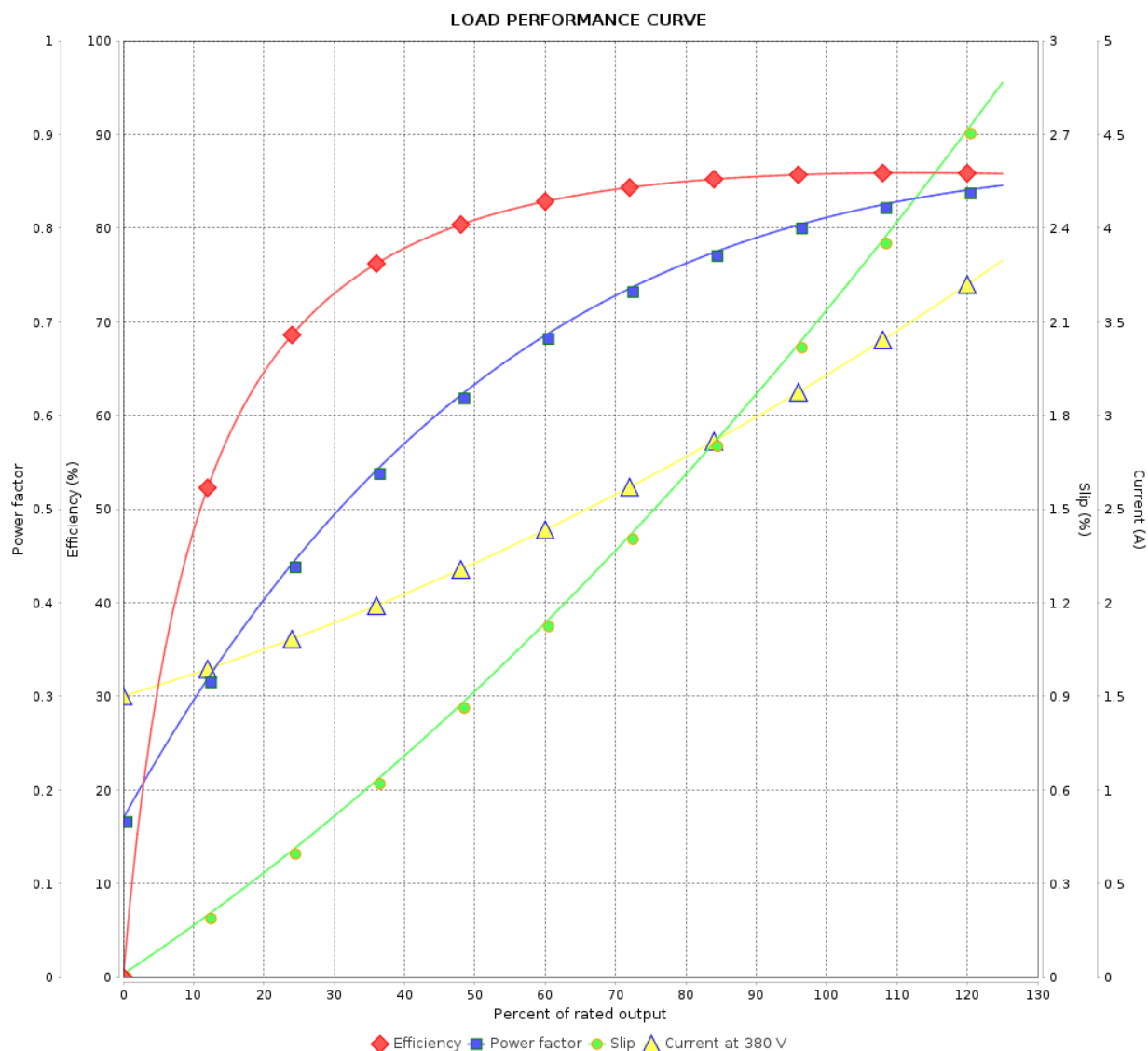
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 380 V 50 Hz 2P IE3

Rated current : 3.28 A  
LRC : 9.7  
Rated torque : 0.495 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 420 %  
Rated speed : 2935 rpm

Moment of inertia (J) : 0.0080 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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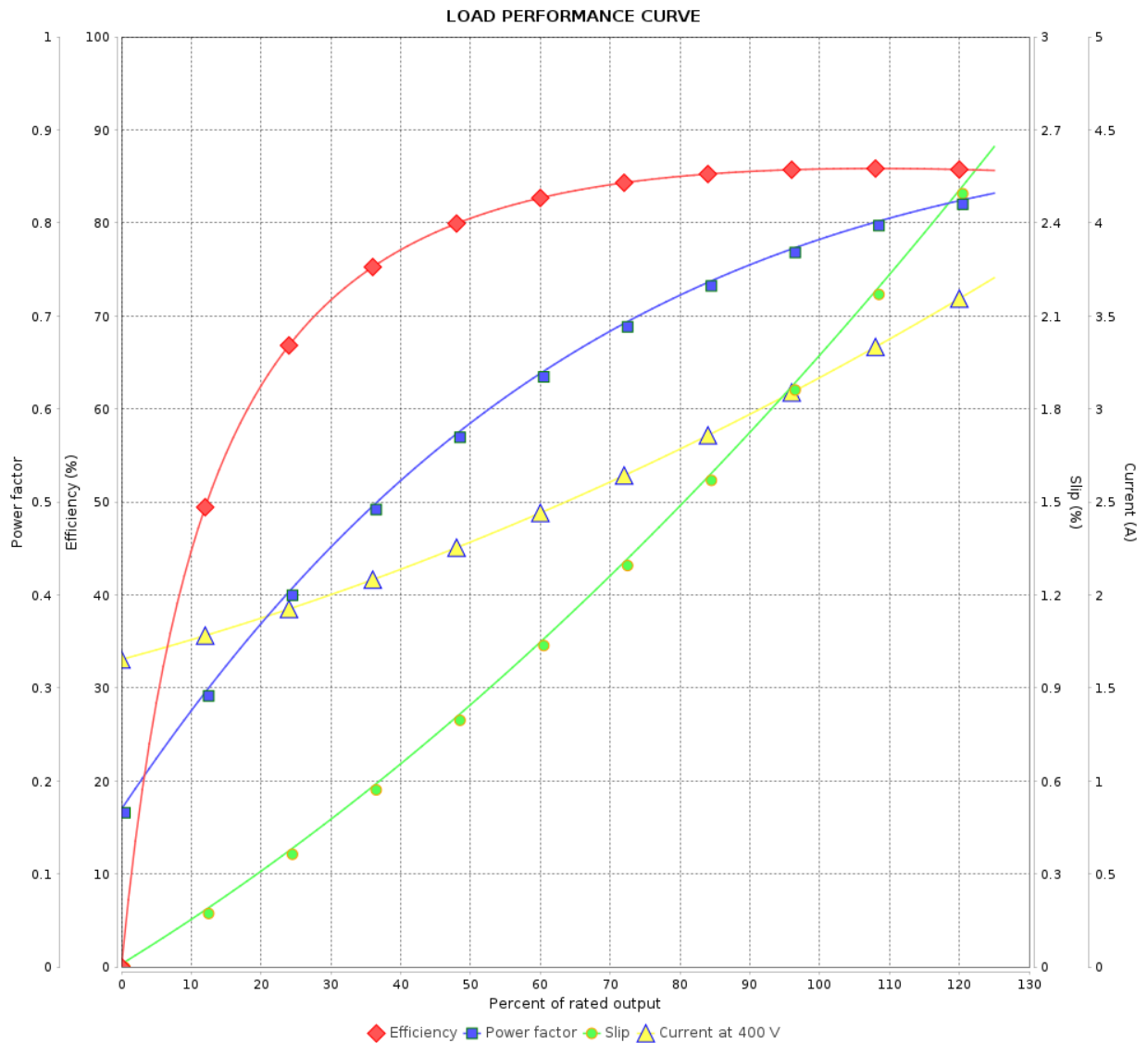
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 400 V 50 Hz 2P IE3

Rated current : 3.24 A  
LRC : 10.8  
Rated torque : 0.494 kgfm  
Locked rotor torque : 320 %  
Breakdown torque : 470 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0080 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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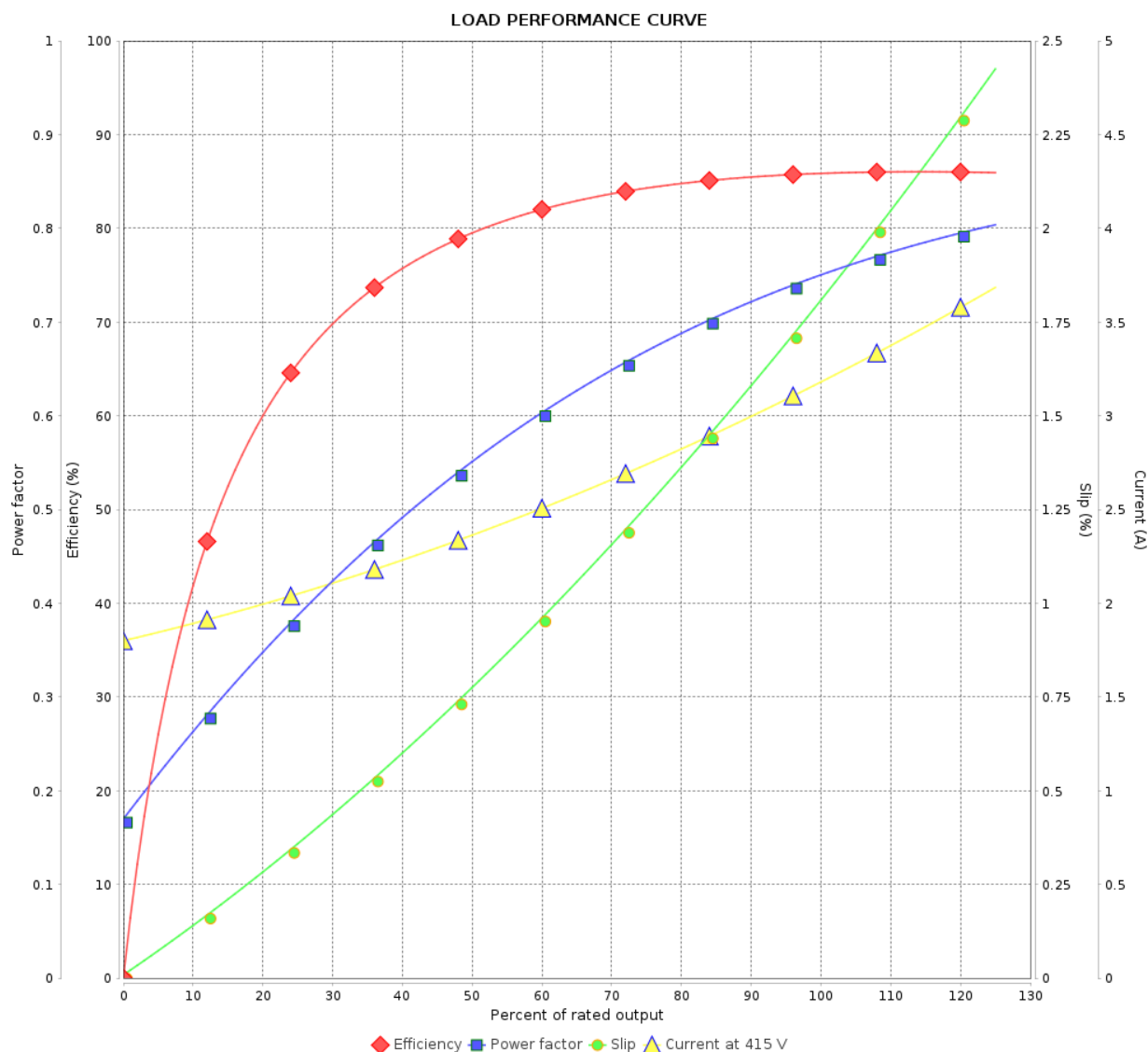
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 415 V 50 Hz 2P IE3

Rated current : 3.24 A  
LRC : 11.1  
Rated torque : 0.493 kgfm  
Locked rotor torque : 350 %  
Breakdown torque : 509 %  
Rated speed : 2945 rpm

Moment of inertia (J) : 0.0080 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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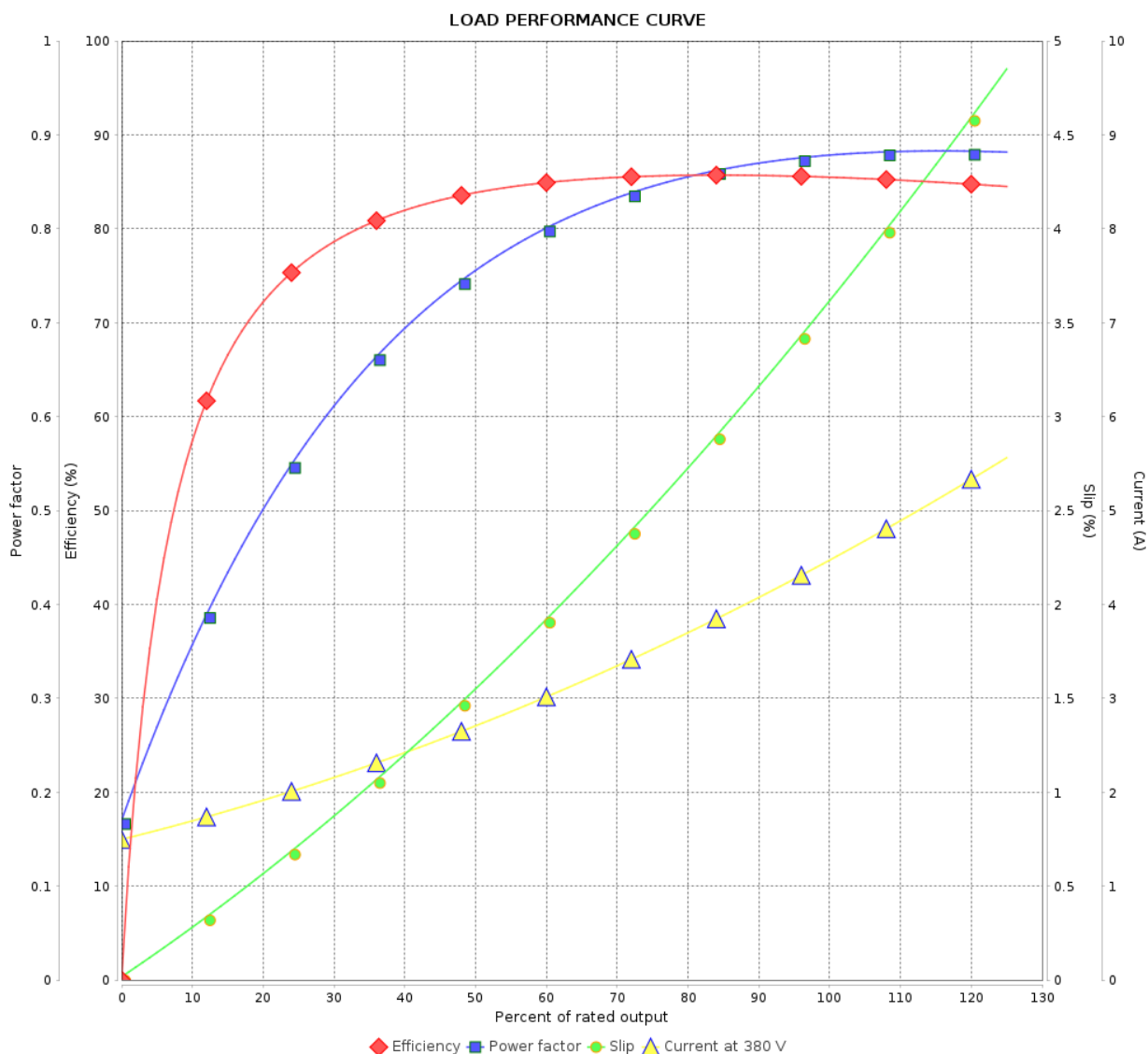
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 380 V 50 Hz 2P IE2

Rated current : 4.44 A  
LRC : 7.0  
Rated torque : 0.753 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 270 %  
Rated speed : 2890 rpm

Moment of inertia (J) : 0.0080 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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# LOAD PERFORMANCE CURVE

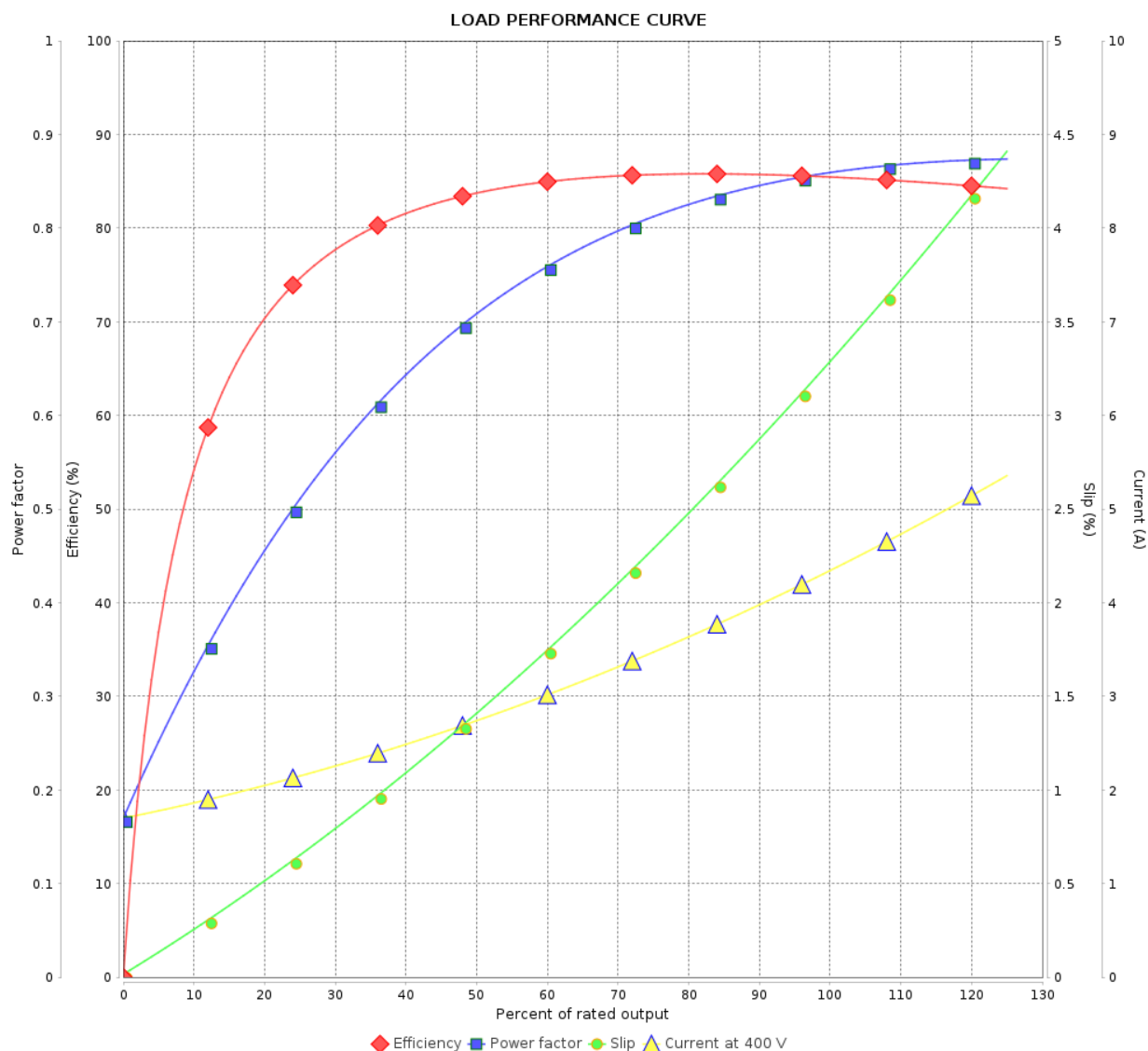
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 400 V 50 Hz 2P IE2

Rated current : 4.32 A  
LRC : 7.6  
Rated torque : 0.751 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 300 %  
Rated speed : 2900 rpm

Moment of inertia (J) : 0.0080 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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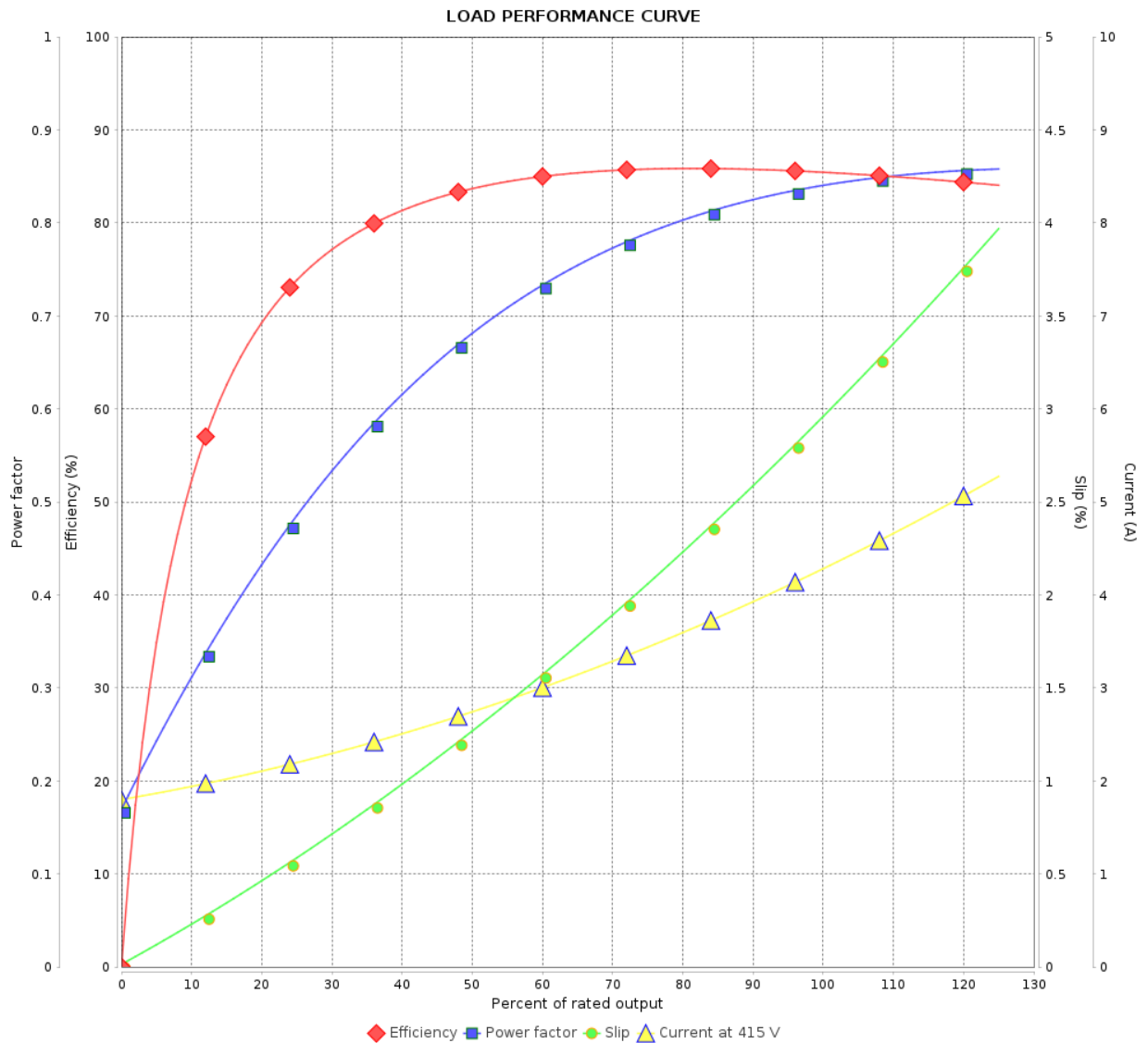
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency  
Three-Phase

Product code : 12378662



Performance : 415 V 50 Hz 2P IE2

Rated current : 4.26 A  
LRC : 8.3  
Rated torque : 0.748 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 330 %  
Rated speed : 2910 rpm

Moment of inertia (J) : 0.0080 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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