

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 13533148

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>	: 49.1 kg
Protection degree	: IP56	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]	460	380	400	415	380	400	415
Rated current [A]	5.90	5.79	5.57	5.43	7.14	6.78	6.61
L. R. Amperes [A]	44.8	42.8	45.1	48.3	42.1	44.7	47.6
LRC [A]	7.6x(Code J)	7.4x(Code H)	8.1x(Code J)	8.9x(Code K)	5.9x(Code F)	6.6x(Code G)	7.2x(Code H)
No load current [A]	2.00	2.00	2.15	2.25	2.00	2.15	2.25
Rated speed [RPM]	3485	2890	2900	2910	2850	2870	2880
Slip [%]	3.19	3.67	3.33	3.00	5.00	4.33	4.00
Rated torque [kgfm]	1.04	1.00	1.00	0.998	1.27	1.26	1.26
Locked rotor torque [%]	229	229	270	300	180	210	240
Breakdown torque [%]	350	320	370	400	250	290	320
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	45s (cold) 25s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (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%	86.5	86.3	86.3	86.1	87.5	87.5
	75%	88.5	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%						
	50%	0.76	0.74	0.71	0.68	0.81	0.76
	75%	0.85	0.85	0.83	0.81	0.88	0.87
	100%	0.89	0.90	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	12.4	12.4	12.4	12.4	12.4	12.4
	P2 (0,5;1,0)	9.9	9.9	9.9	9.9	9.9	9.9	9.9
	P3 (0,25;1,0)	8.9	8.9	8.9	8.9	8.9	8.9	8.9
	P4 (0,9;0,5)	6.2	6.2	6.2	6.2	6.2	6.2	6.2
	P5 (0,5;0,5)	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	P6 (0,5;0,25)	2.3	2.3	2.3	2.3	2.3	2.3	2.3
	P7 (0,25;0,25)	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Bearing type	: 6207 C3	Non drive end	6206 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 60 kgf
Lubrication interval	: 20000 h	20000 h		Max. compression	: 109 kgf
Lubricant amount	: 7 g	5 g			
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

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# LOAD PERFORMANCE CURVE

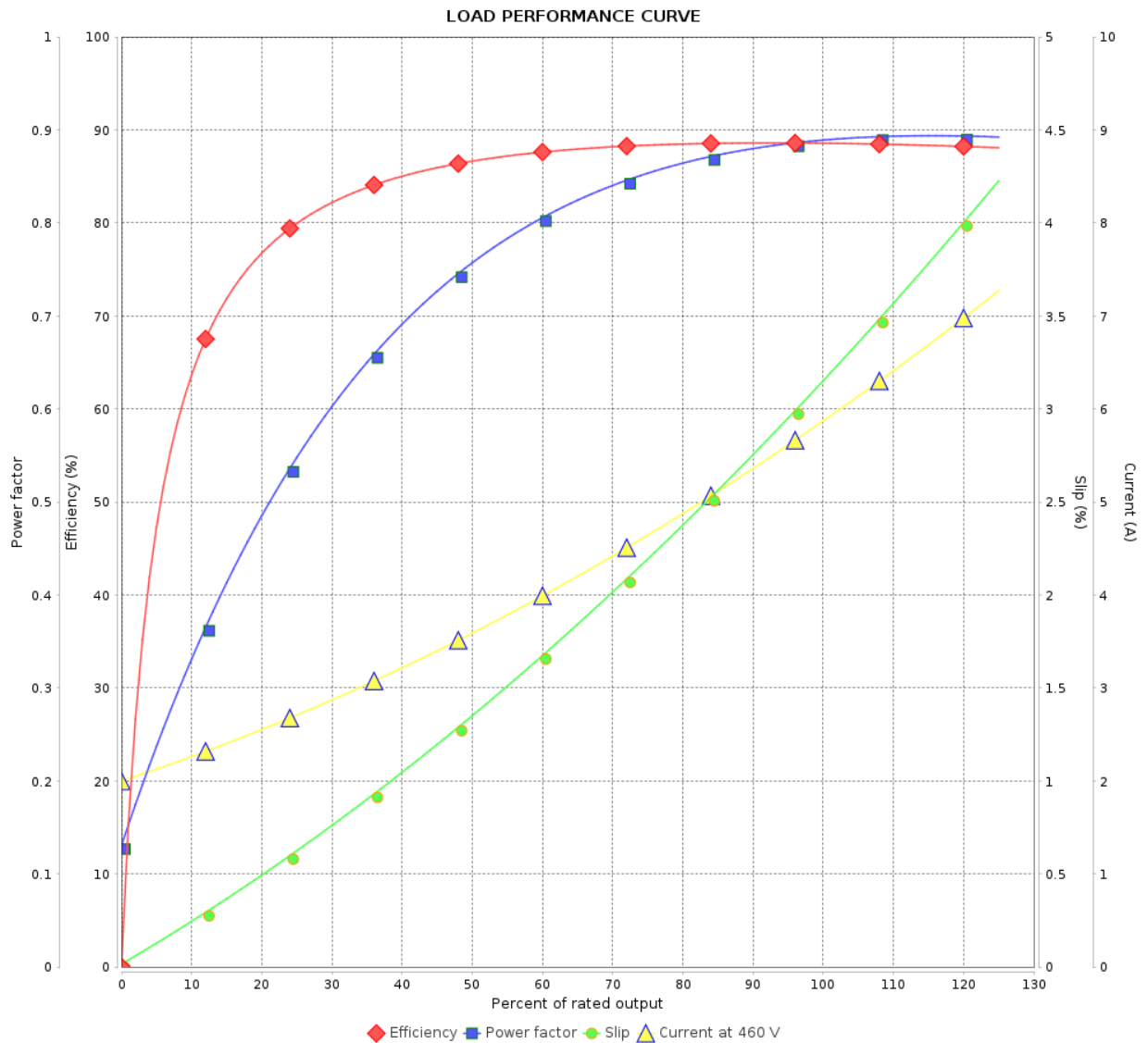
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 460 V 60 Hz 2P

Rated current : 5.90 A  
LRC : 7.6  
Rated torque : 1.04 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 350 %  
Rated speed : 3485 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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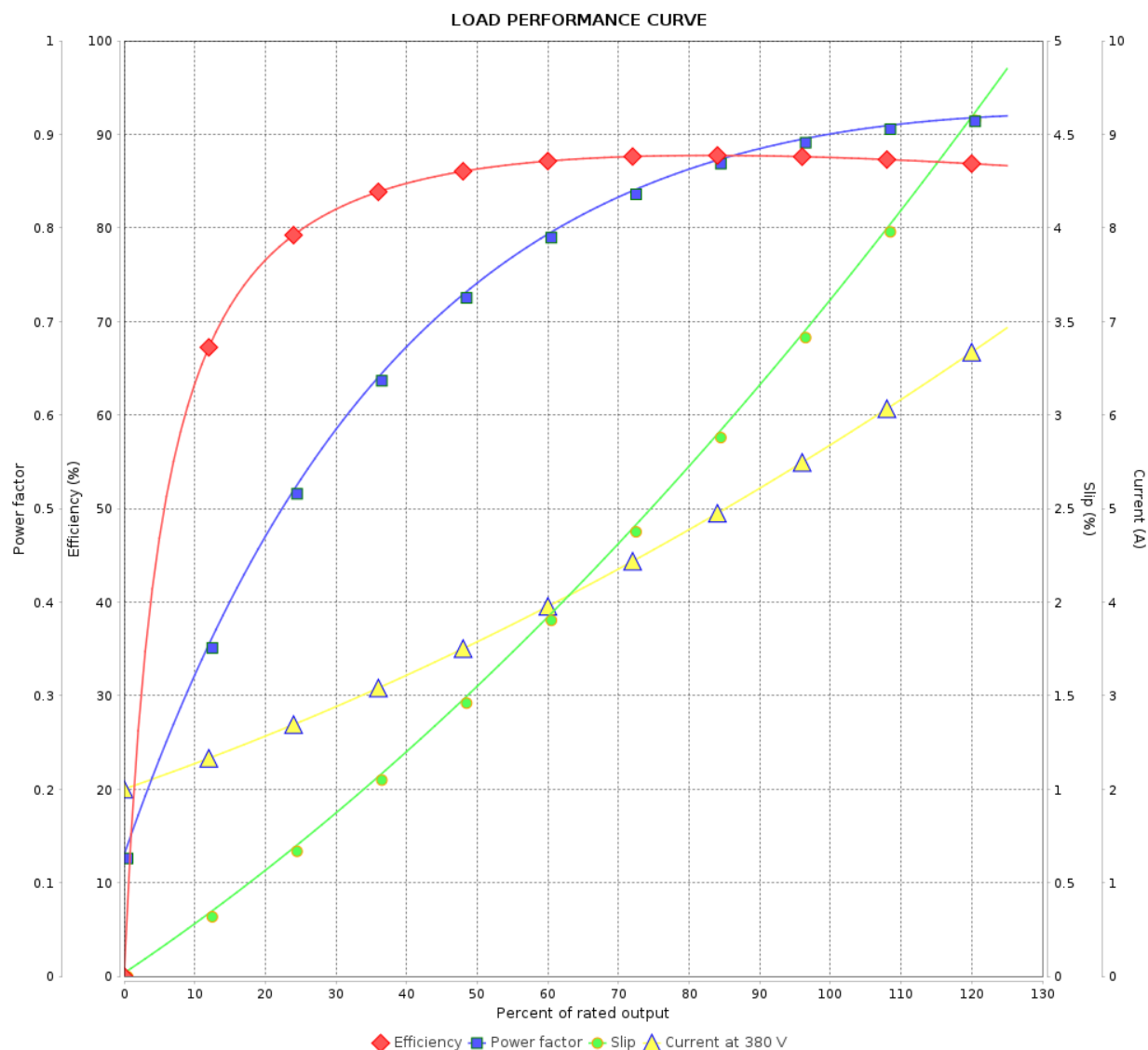
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 380 V 50 Hz 2P IE3

Rated current : 5.79 A  
LRC : 7.4  
Rated torque : 1.00 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 320 %  
Rated speed : 2890 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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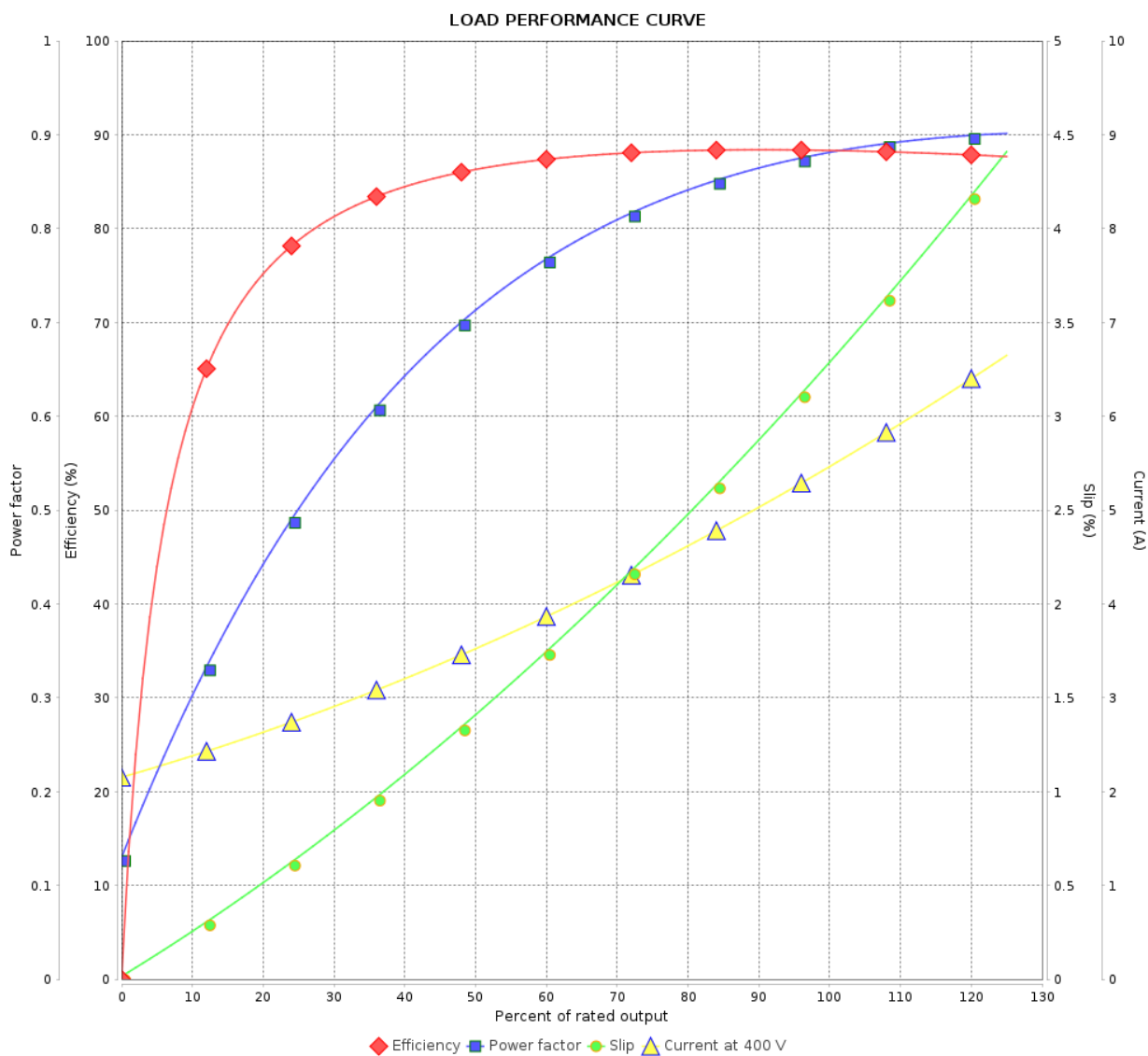
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 400 V 50 Hz 2P IE3

Rated current : 5.57 A  
LRC : 8.1  
Rated torque : 1.00 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 370 %  
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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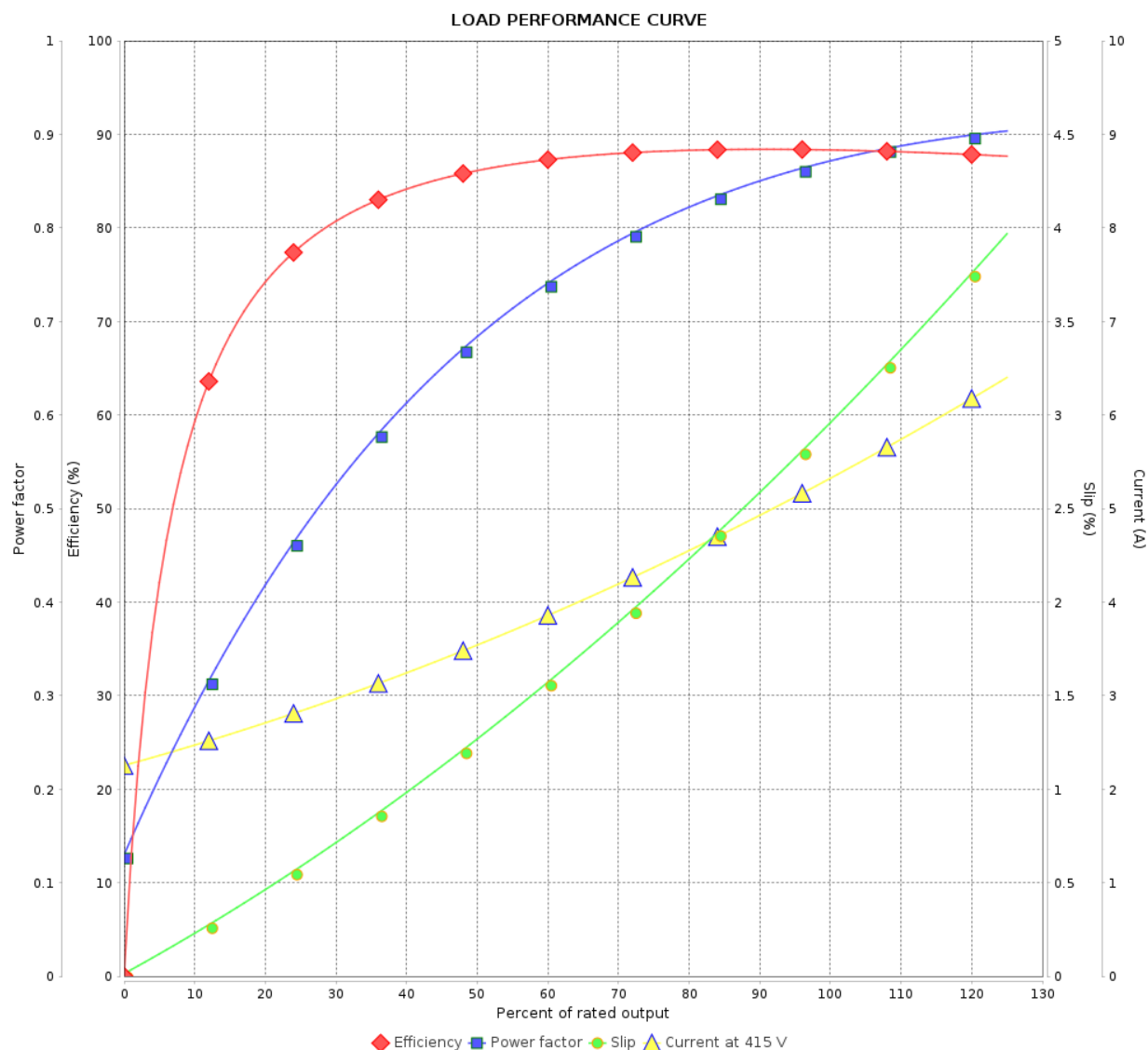
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 415 V 50 Hz 2P IE3

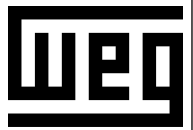
Rated current : 5.43 A  
LRC : 8.9  
Rated torque : 0.998 kgfm  
Locked rotor torque : 300 %  
Breakdown torque : 400 %  
Rated speed : 2910 rpm

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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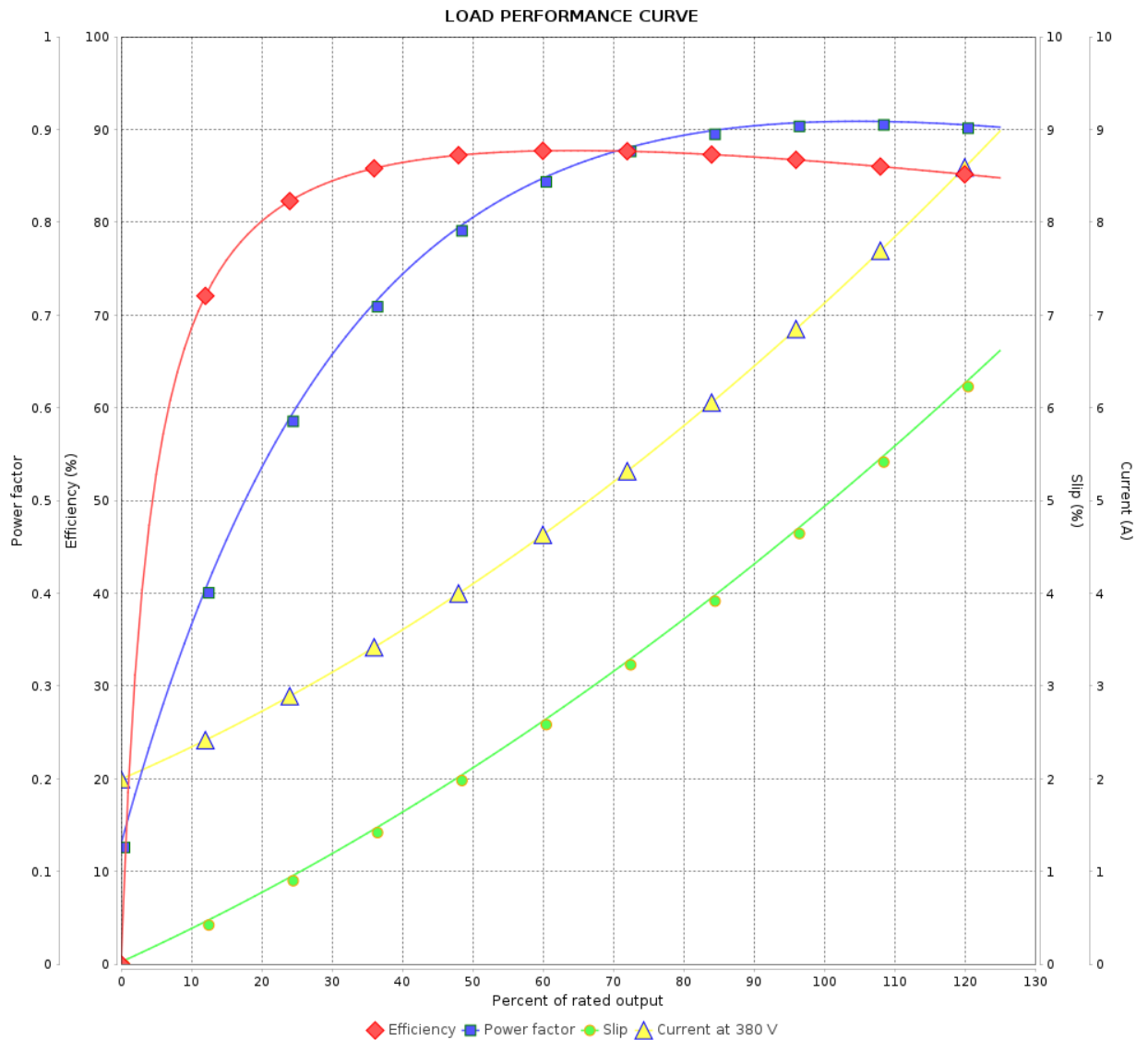
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 380 V 50 Hz 2P IE2

Rated current : 7.14 A  
LRC : 5.9  
Rated torque : 1.27 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 250 %  
Rated speed : 2850 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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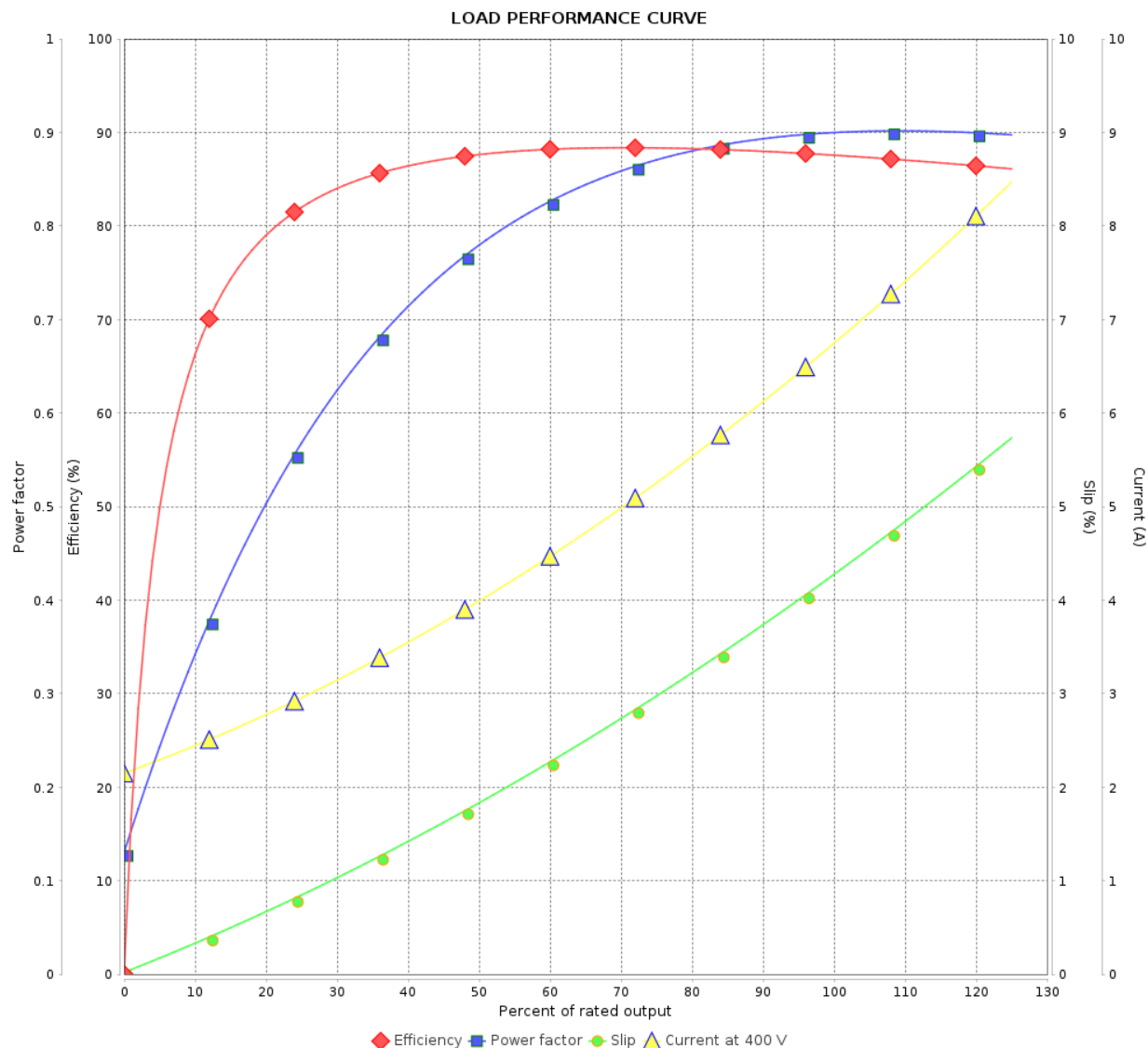
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 400 V 50 Hz 2P IE2

Rated current : 6.78 A  
LRC : 6.6  
Rated torque : 1.26 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 290 %  
Rated speed : 2870 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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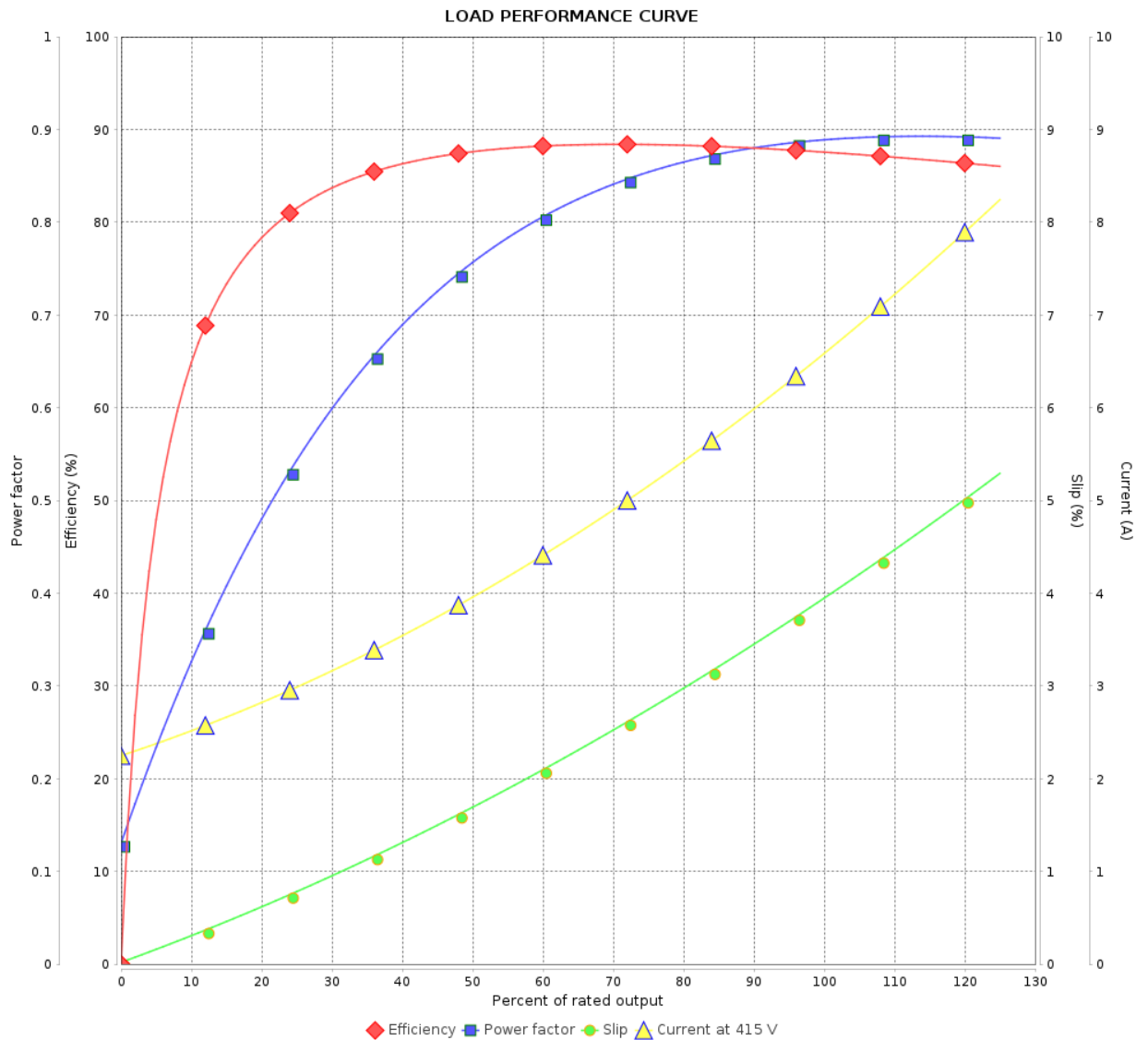
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13533148



Performance : 415 V 50 Hz 2P IE2

Rated current : 6.61 A  
LRC : 7.2  
Rated torque : 1.26 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 320 %  
Rated speed : 2880 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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