

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11941786

Frame	: 324/6TC	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>	: 0.0 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.5023 kgm <sup>2</sup>
Design	: B		

Output [HP]	25	20	20	20	25	25	25
Poles	8	8	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	35.9	35.3	35.6	36.4	42.3	41.4	41.1
L. R. Amperes [A]	187	177	192	200	178	190	197
LRC [A]	5.2x(Code G)	5.0x(Code G)	5.4x(Code H)	5.5x(Code J)	4.2x(Code E)	4.6x(Code F)	4.8x(Code G)
No load current [A]	20.0	19.6	22.2	24.6	19.6	22.2	24.6
Rated speed [RPM]	880	730	730	735	725	725	730
Slip [%]	2.22	2.67	2.67	2.00	3.33	3.33	2.67
Rated torque [kgfm]	20.6	19.9	19.9	19.7	25.0	25.0	24.9
Locked rotor torque [%]	200	190	210	240	150	170	190
Breakdown torque [%]	229	229	250	280	180	200	220
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	105 K	80 K	80 K
Locked rotor time	41s (cold) 23s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)
Noise level <sup>2</sup>	56.0 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%	89.5	89.3	87.2	86.2	89.5	87.5
	75%	91.0	90.1	89.1	88.6	90.2	89.5
	100%	91.0	89.6	89.6	89.6	88.5	89.5
Power Factor	25%						
	50%	0.51	0.51	0.46	0.42	0.58	0.49
	75%	0.64	0.64	0.59	0.55	0.70	0.62
	100%	0.71	0.71	0.67	0.64	0.75	0.70

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

Losses (%)	P1 (0,9;1,0)	9.5	9.5	9.5	9.5	9.5	9.5
	P2 (0,5;1,0)	7.4	7.4	7.4	7.4	7.4	7.4
	P3 (0,25;1,0)	6.5	6.5	6.5	6.5	6.5	6.5
	P4 (0,9;0,5)	5.8	5.8	5.8	5.8	5.8	5.8
	P5 (0,5;0,5)	3.9	3.9	3.9	3.9	3.9	3.9
	P6 (0,5;0,25)	3.1	3.1	3.1	3.1	3.1	3.1
	P7 (0,25;0,25)	2.2	2.2	2.2	2.2	2.2	2.2

Bearing type	: 6312 C3	Non drive end	6212 C3	Foundation loads	
Sealing	: Taconite		Taconite	Max. traction	: 688 kgf
	: Labyrinth		Labyrinth	Max. compression	: 688 kgf
Lubrication interval	: 20000 h		20000 h		
Lubricant amount	: 21 g		13 g		
Lubricant type	: Mobil Polyrex EM				

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## Three Phase Induction Motor - Squirrel Cage



Customer

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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

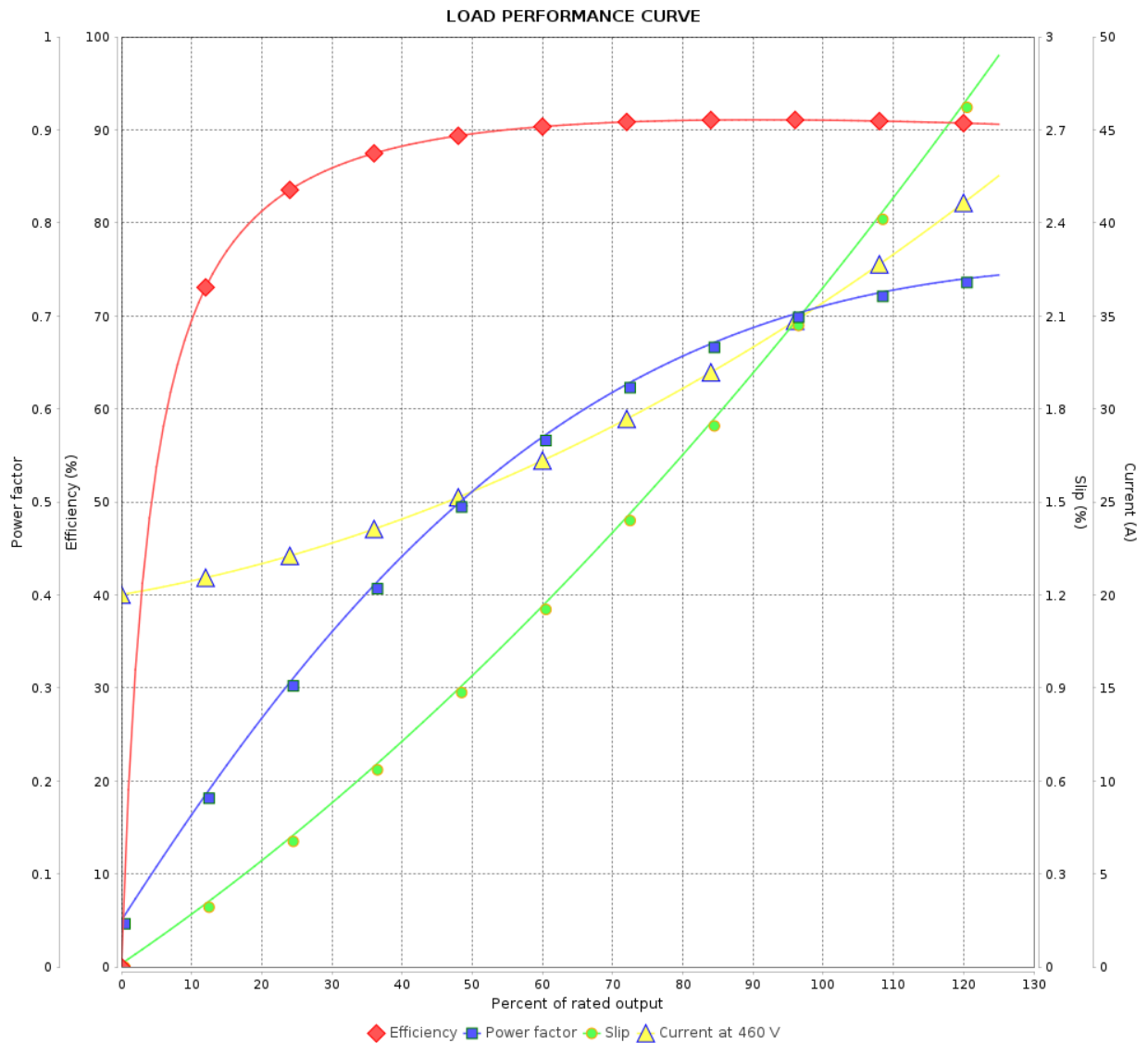
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 460 V 60 Hz 8P

Rated current	: 35.9 A	Moment of inertia (J)	: 0.5023 kgm <sup>2</sup>
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 20.6 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

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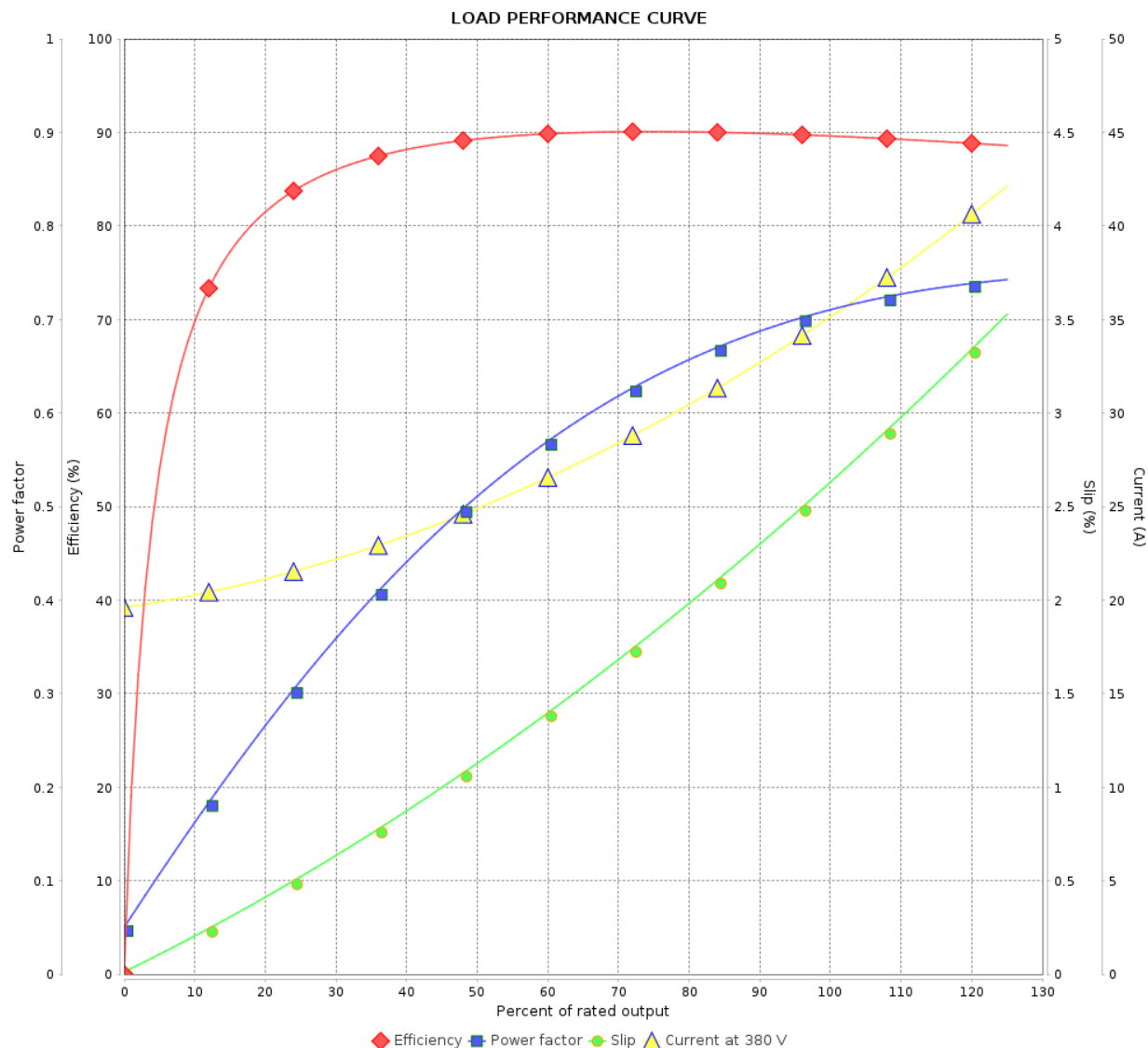
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 380 V 50 Hz 8P IE3

Rated current : 35.3 A  
LRC : 5.0  
Rated torque : 19.9 kgfm  
Locked rotor torque : 190 %  
Breakdown torque : 229 %  
Rated speed : 730 rpm

Moment of inertia (J) : 0.5023 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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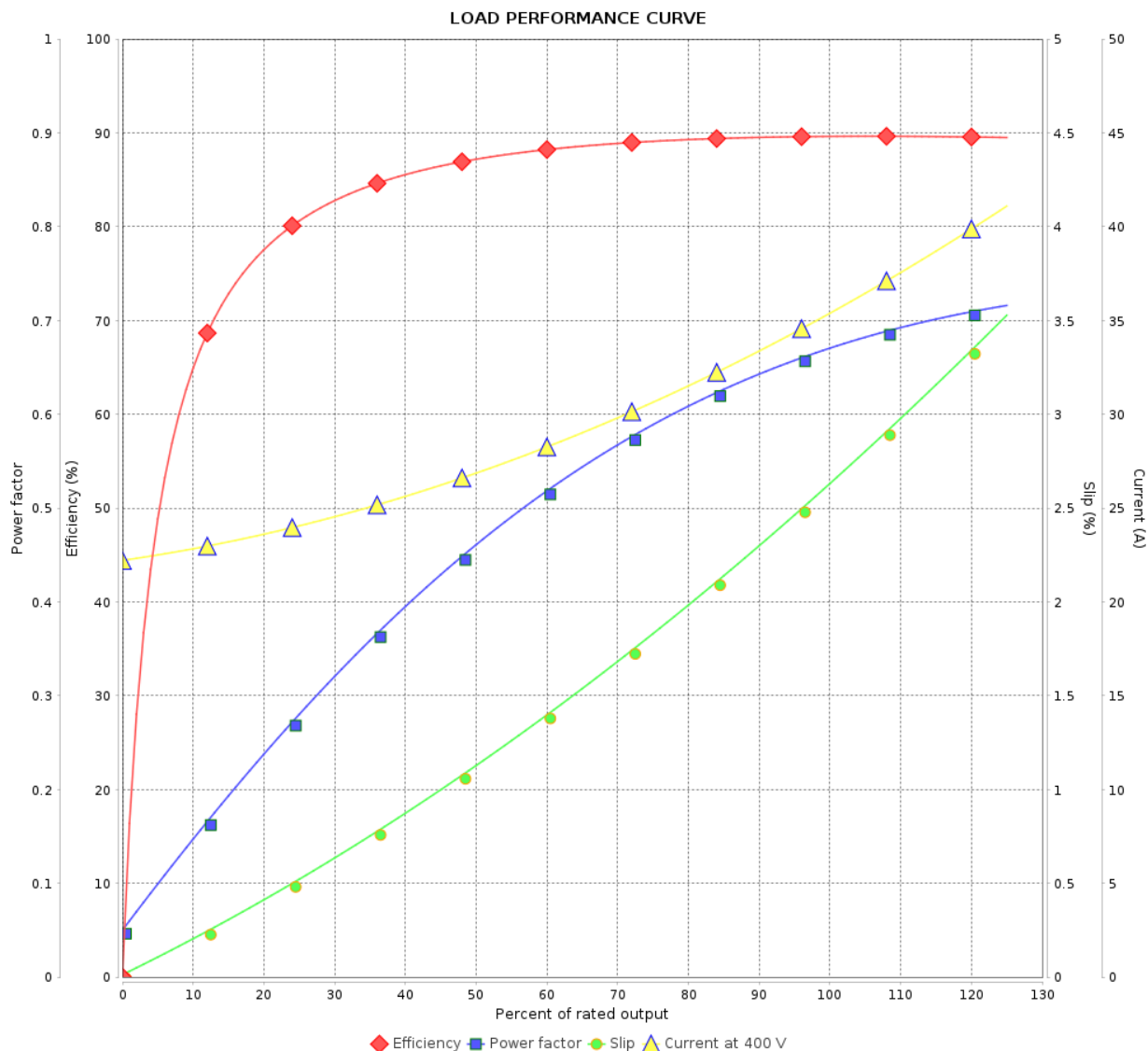
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 400 V 50 Hz 8P IE3

Rated current : 35.6 A  
LRC : 5.4  
Rated torque : 19.9 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 250 %  
Rated speed : 730 rpm

Moment of inertia (J) : 0.5023 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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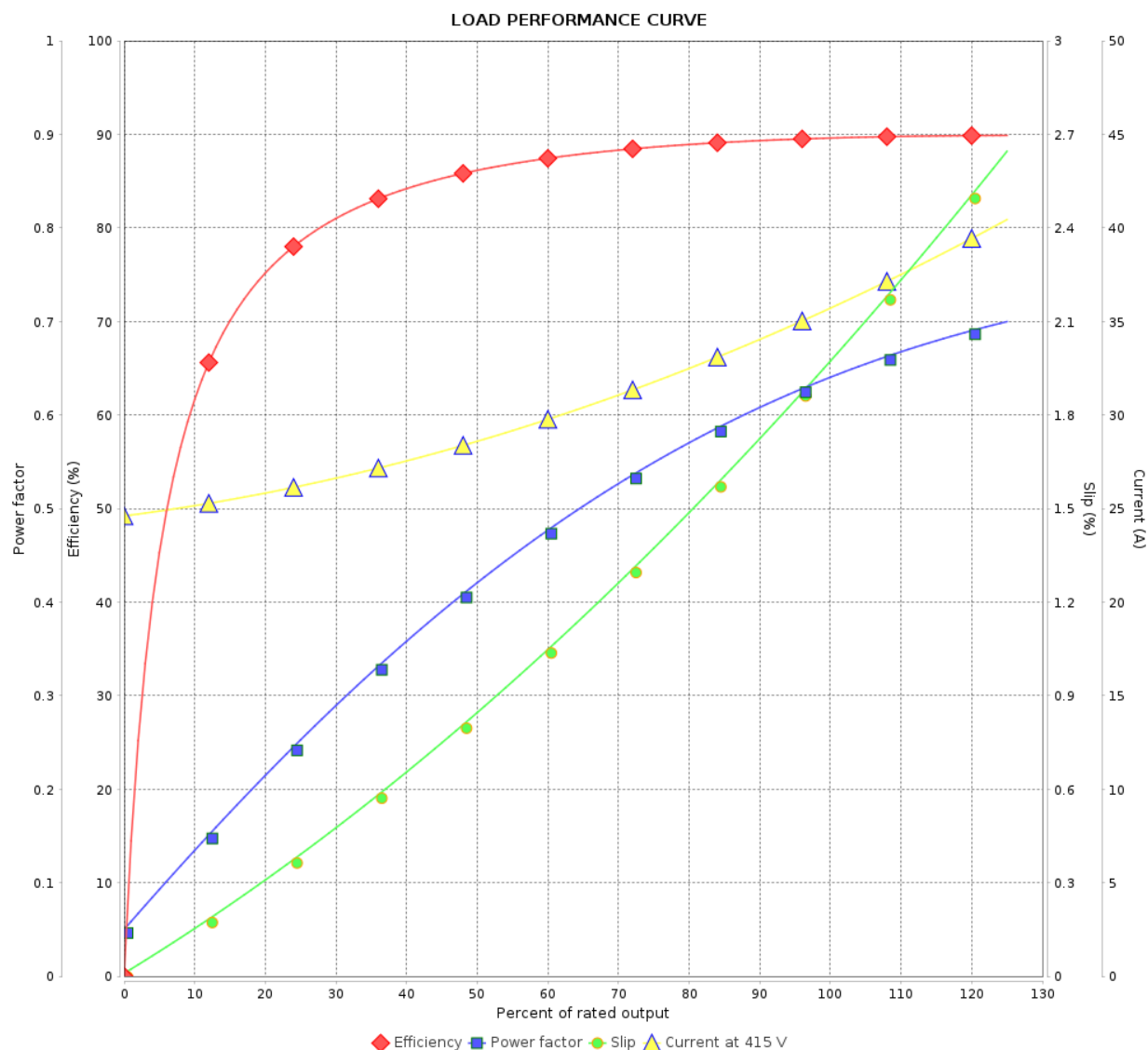
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 415 V 50 Hz 8P IE3

Rated current : 36.4 A  
LRC : 5.5  
Rated torque : 19.7 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 280 %  
Rated speed : 735 rpm

Moment of inertia (J) : 0.5023 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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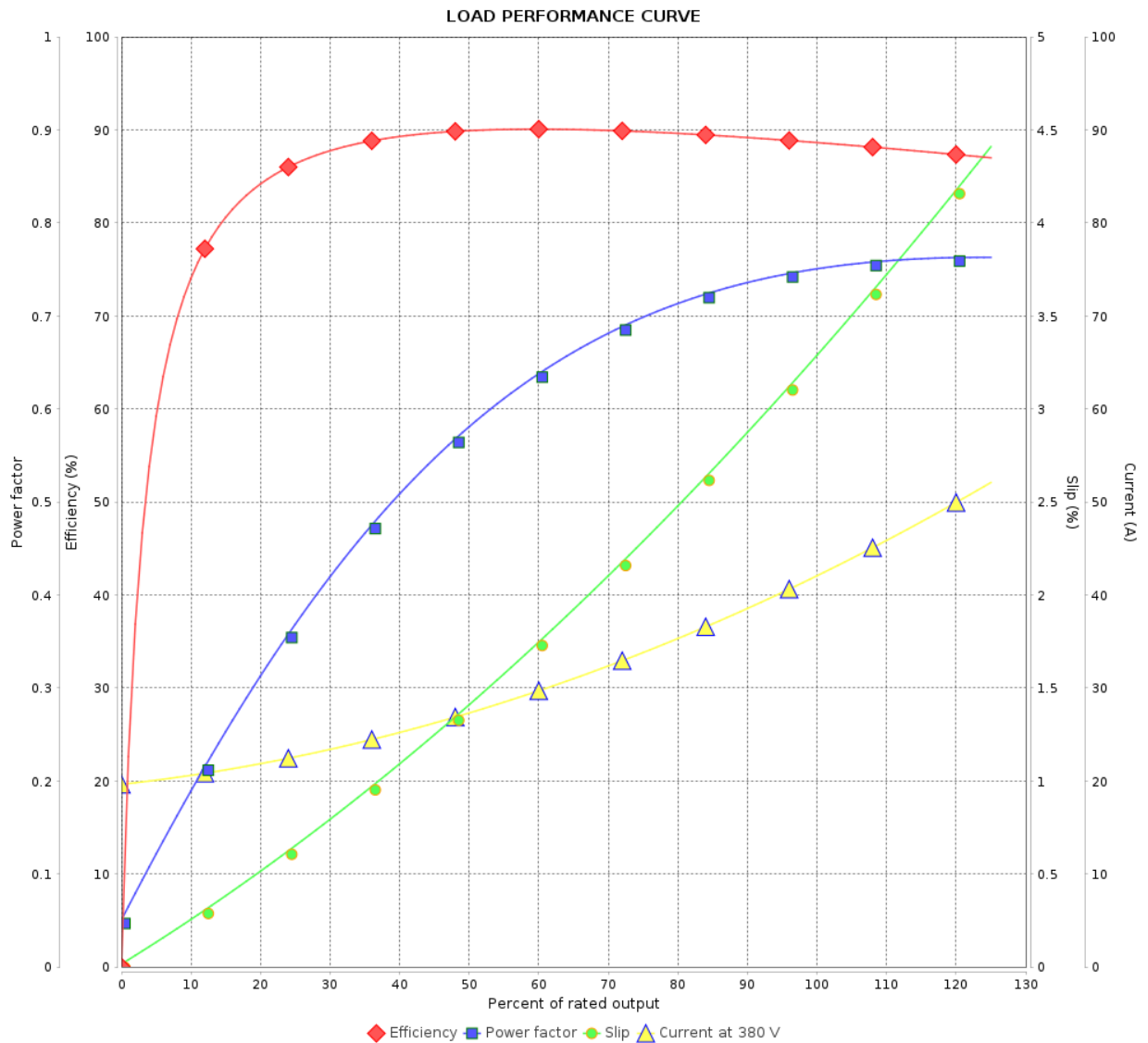
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 380 V 50 Hz 8P IE1

Rated current : 42.3 A  
LRC : 4.2  
Rated torque : 25.0 kgfm  
Locked rotor torque : 150 %  
Breakdown torque : 180 %  
Rated speed : 725 rpm

Moment of inertia (J) : 0.5023 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 105 K  
Design : B

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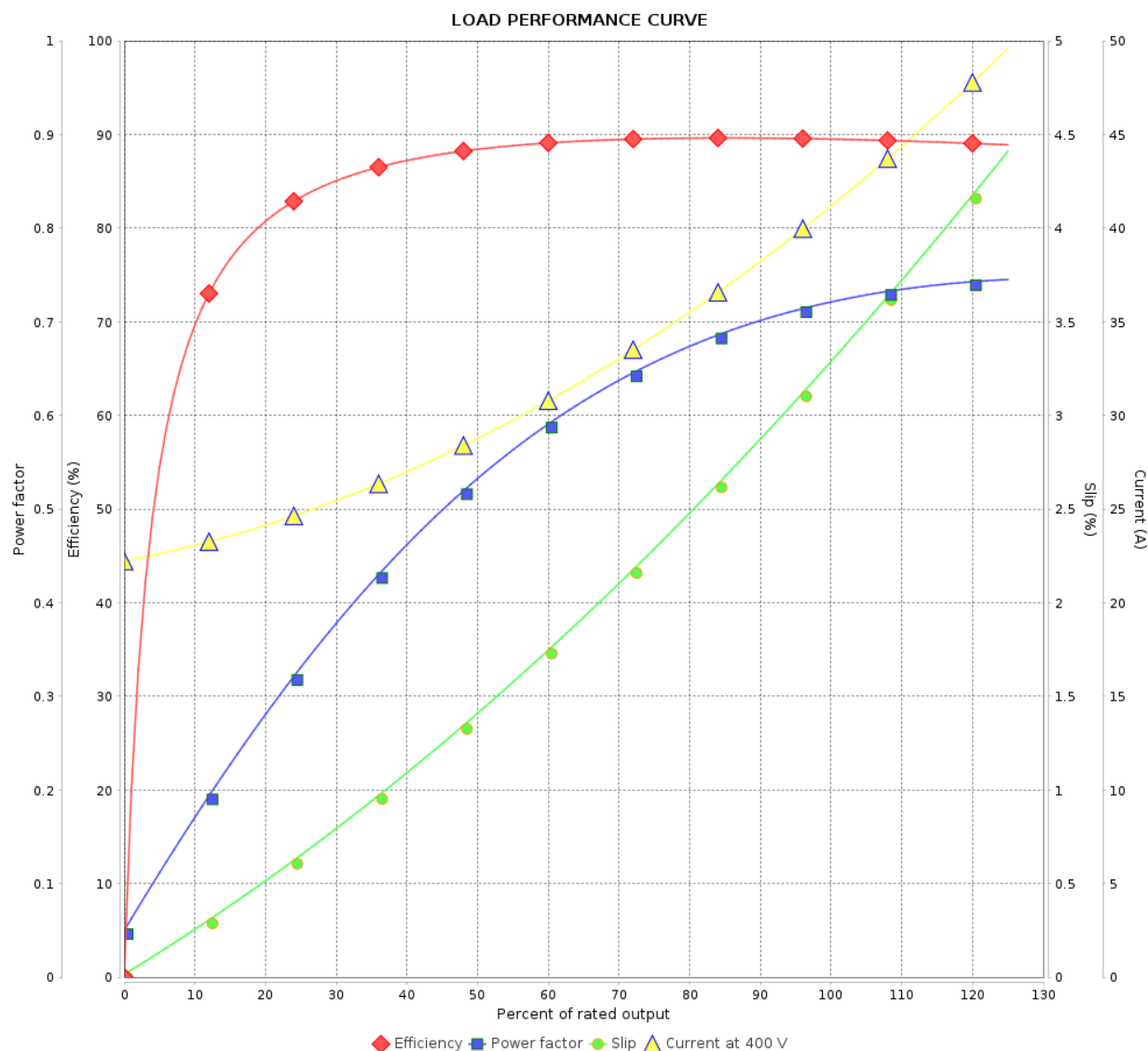
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 400 V 50 Hz 8P IE2

Rated current : 41.4 A  
LRC : 4.6  
Rated torque : 25.0 kgfm  
Locked rotor torque : 170 %  
Breakdown torque : 200 %  
Rated speed : 725 rpm

Moment of inertia (J) : 0.5023 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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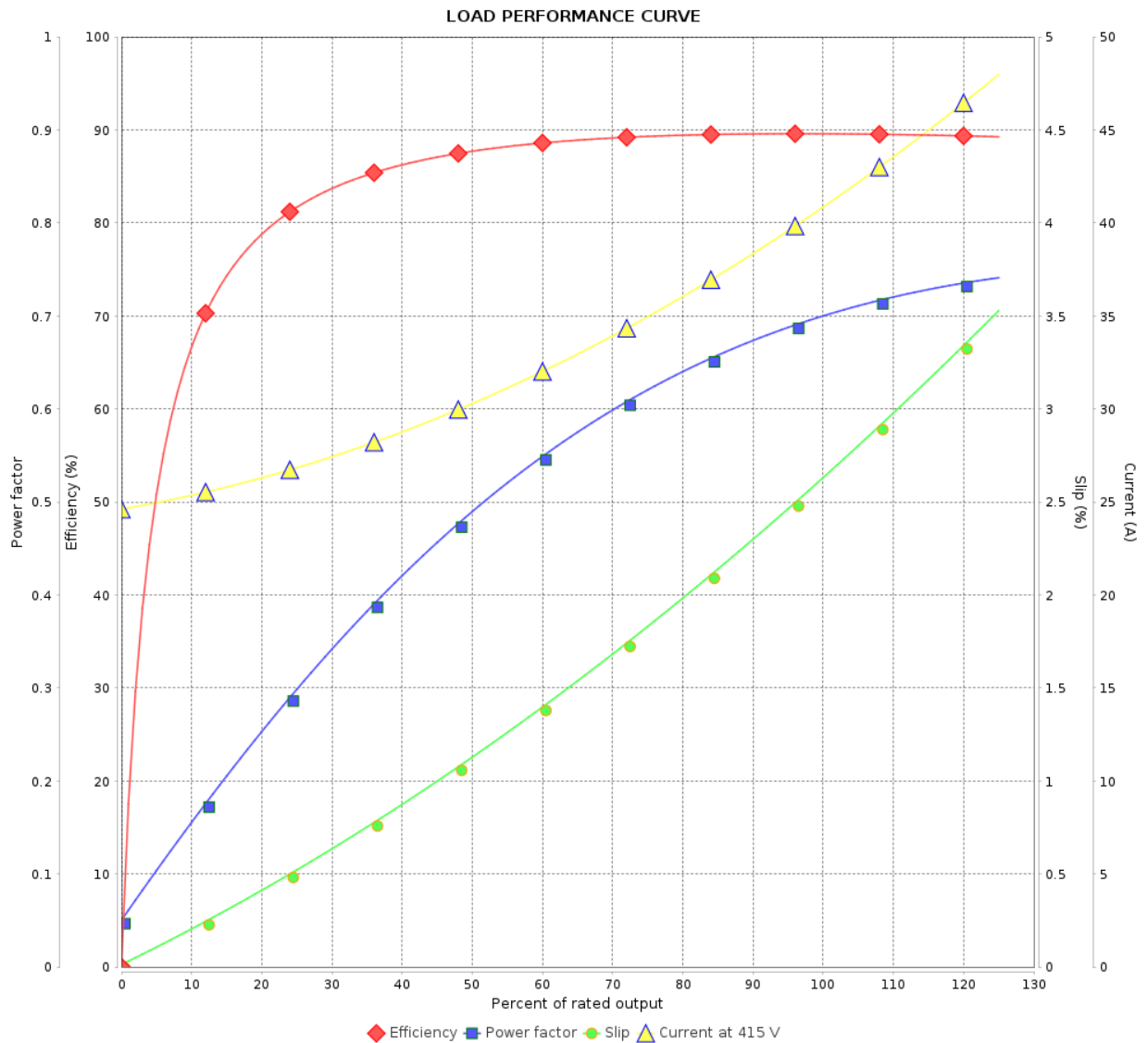
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11941786



Performance : 415 V 50 Hz 8P IE2

Rated current	: 41.1 A	Moment of inertia (J)	: 0.5023 kgm <sup>2</sup>
LRC	: 4.8	Duty cycle	: Cont.(S1)
Rated torque	: 24.9 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 730 rpm	Design	: B

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