

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11431460

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> : 26.0 kg
Protection degree : IP56	Moment of inertia (J) : 0.0066 kgm <sup>2</sup>
Design : B	

Output [HP]	2	1.5	1.5	1.5	2	2	2
Poles	4	4	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	2.79	2.57	2.57	2.56	3.33	3.22	3.14
L. R. Amperes [A]	23.2	21.1	22.4	21.5	20.0	21.3	22.9
LRC [A]	8.3x(Code L)	8.2x(Code L)	8.7x(Code M)	8.4x(Code M)	6.0x(Code H)	6.6x(Code J)	7.3x(Code K)
No load current [A]	1.63	1.61	1.80	1.97	1.61	1.80	1.97
Rated speed [RPM]	1750	1460	1465	1465	1435	1440	1450
Slip [%]	2.78	2.67	2.33	2.33	4.33	4.00	3.33
Rated torque [kgfm]	0.829	0.746	0.743	0.743	1.01	1.01	1.00
Locked rotor torque [%]	270	290	320	350	220	229	250
Breakdown torque [%]	320	330	380	409	240	260	290
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	18s (cold) 10s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)	27s (cold) 15s (hot)	23s (cold) 13s (hot)	21s (cold) 12s (hot)	21s (cold) 12s (hot)
Noise level <sup>2</sup>	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)
Efficiency (%)	25%						
	50%	85.5	84.0	82.0	81.4	85.5	84.0
	75%	86.5	84.2	83.5	83.1	84.0	84.0
	100%	86.5	84.5	84.5	84.1	82.5	84.0
Power Factor	25%						
	50%	0.57	0.55	0.50	0.47	0.66	0.60
	75%	0.70	0.69	0.64	0.61	0.78	0.72
	100%	0.78	0.77	0.73	0.71	0.83	0.79

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

Losses (%)	P1 (0,9;1,0)	15.0	15.0	15.0	15.0	15.0	15.0
	P2 (0,5;1,0)	12.8	12.8	12.8	12.8	12.8	12.8
	P3 (0,25;1,0)	12.1	12.1	12.1	12.1	12.1	12.1
	P4 (0,9;0,5)	8.4	8.4	8.4	8.4	8.4	8.4
	P5 (0,5;0,5)	6.0	6.0	6.0	6.0	6.0	6.0
	P6 (0,5;0,25)	4.7	4.7	4.7	4.7	4.7	4.7
	P7 (0,25;0,25)	3.5	3.5	3.5	3.5	3.5	3.5

Bearing type : 6205 C3	Non drive end : 6204 C3	Foundation loads
Sealing : Inpro/Seal	Inpro/Seal	Max. traction : 70 kgf
Lubrication interval : 20000 h	20000 h	Max. compression : 96 kgf
Lubricant amount : 4 g	4 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

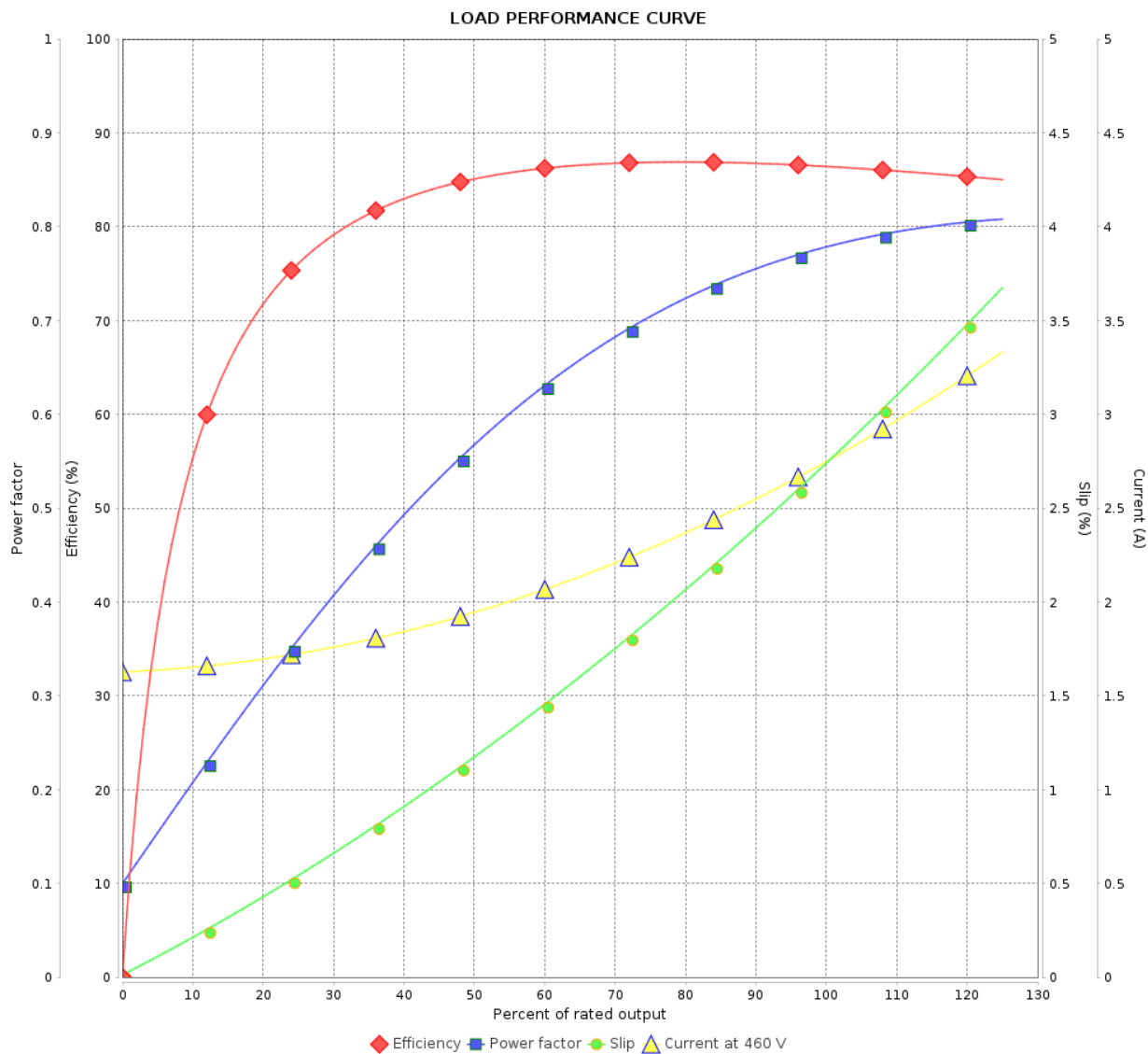
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 460 V 60 Hz 4P

Rated current : 2.79 A  
LRC : 8.3  
Rated torque : 0.829 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 320 %  
Rated speed : 1750 rpm

Moment of inertia (J) : 0.0066 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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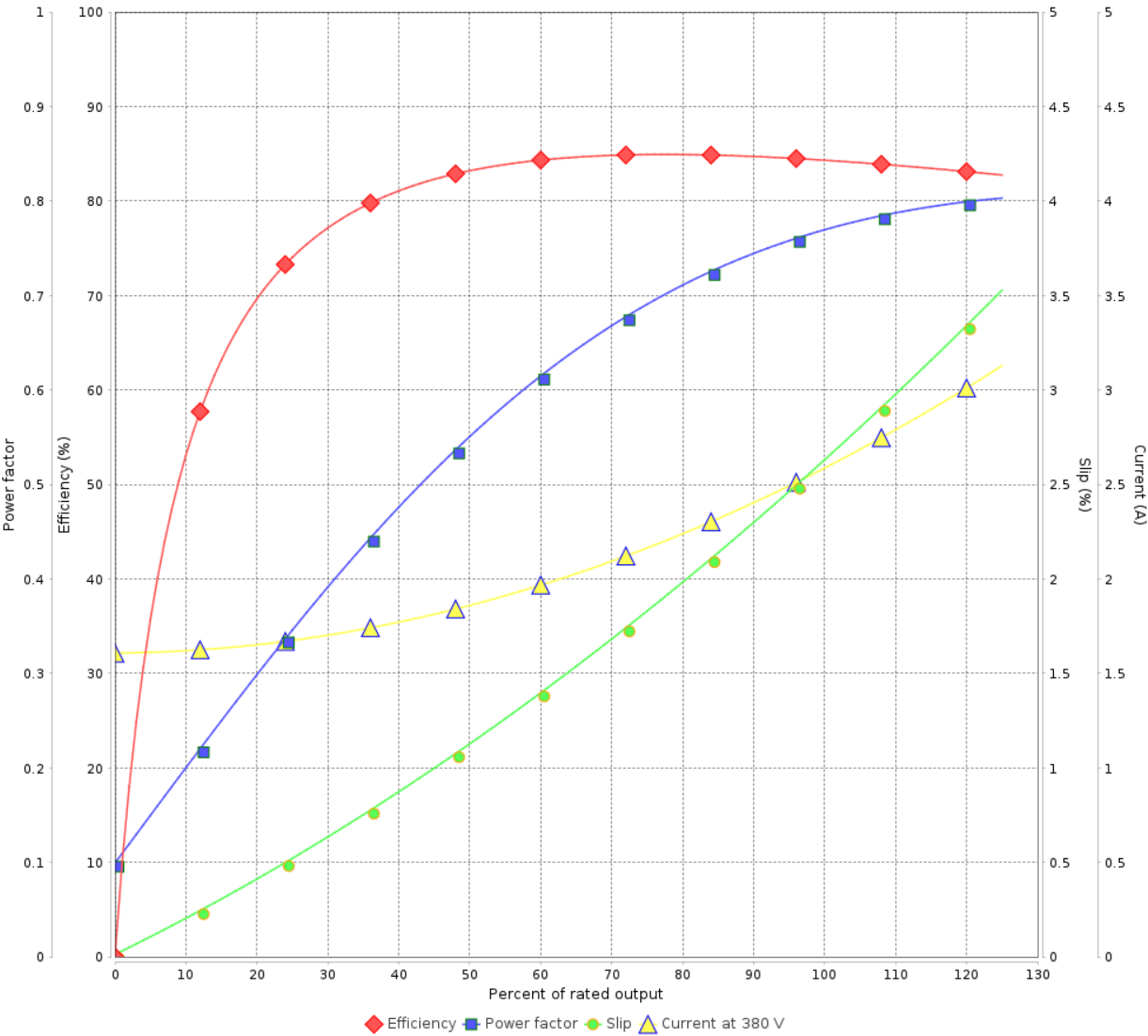
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 11431460

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.0066 kgm <sup>2</sup>
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.746 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

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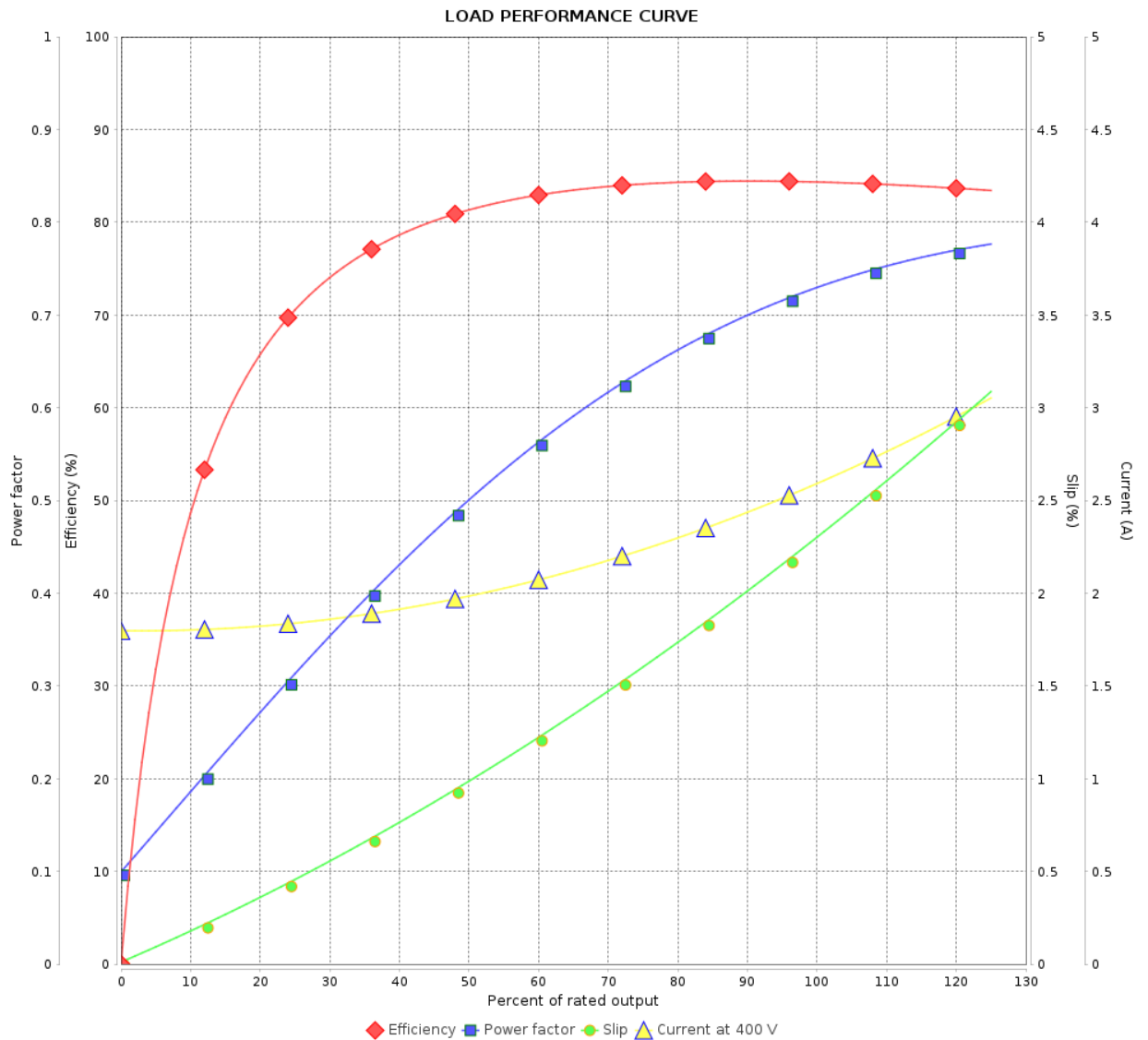
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 400 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.0066 kgm <sup>2</sup>
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 0.743 kgfm	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.25
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

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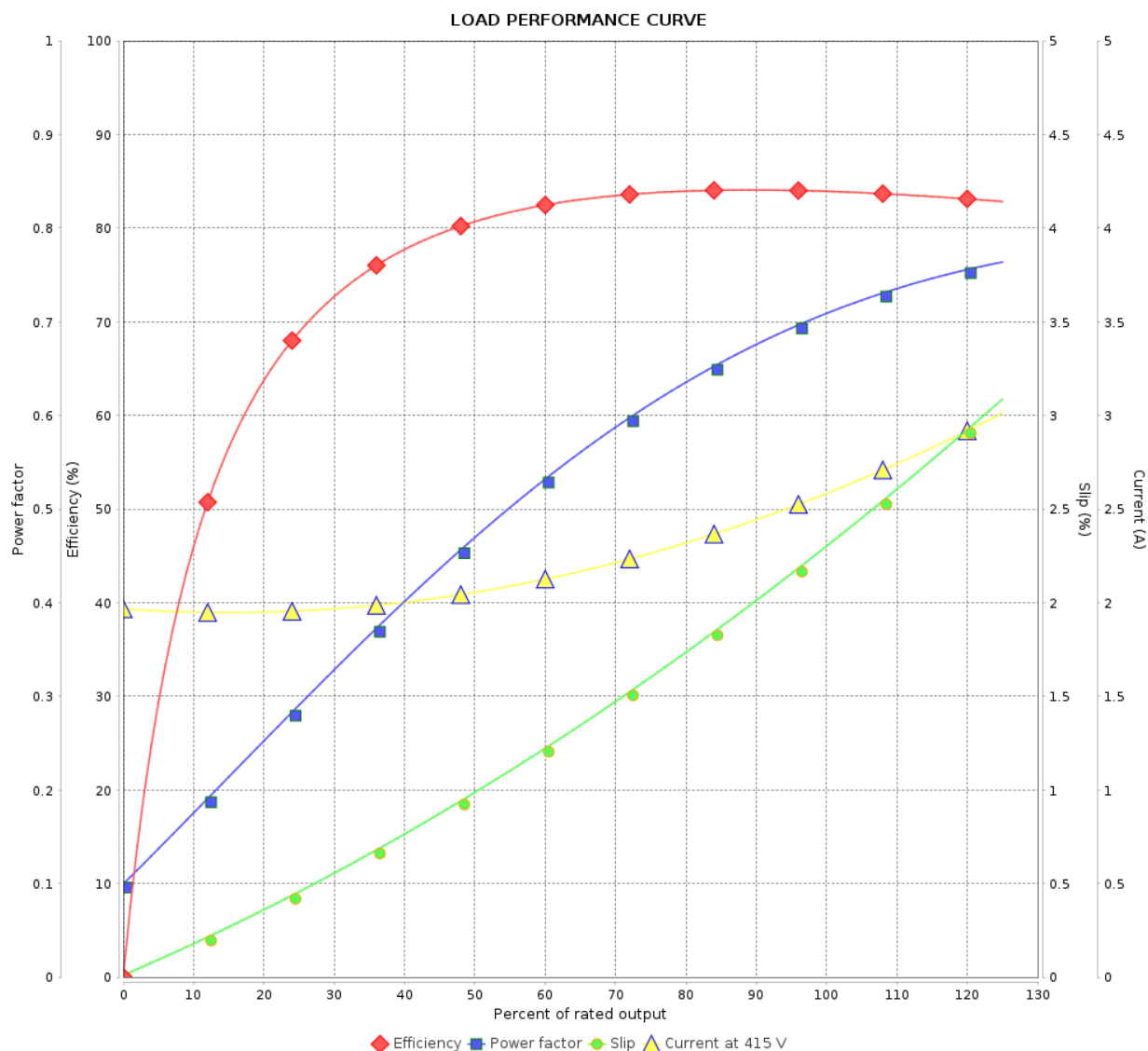
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 415 V 50 Hz 4P IE3

Rated current : 2.56 A  
LRC : 8.4  
Rated torque : 0.743 kgfm  
Locked rotor torque : 350 %  
Breakdown torque : 409 %  
Rated speed : 1465 rpm

Moment of inertia (J) : 0.0066 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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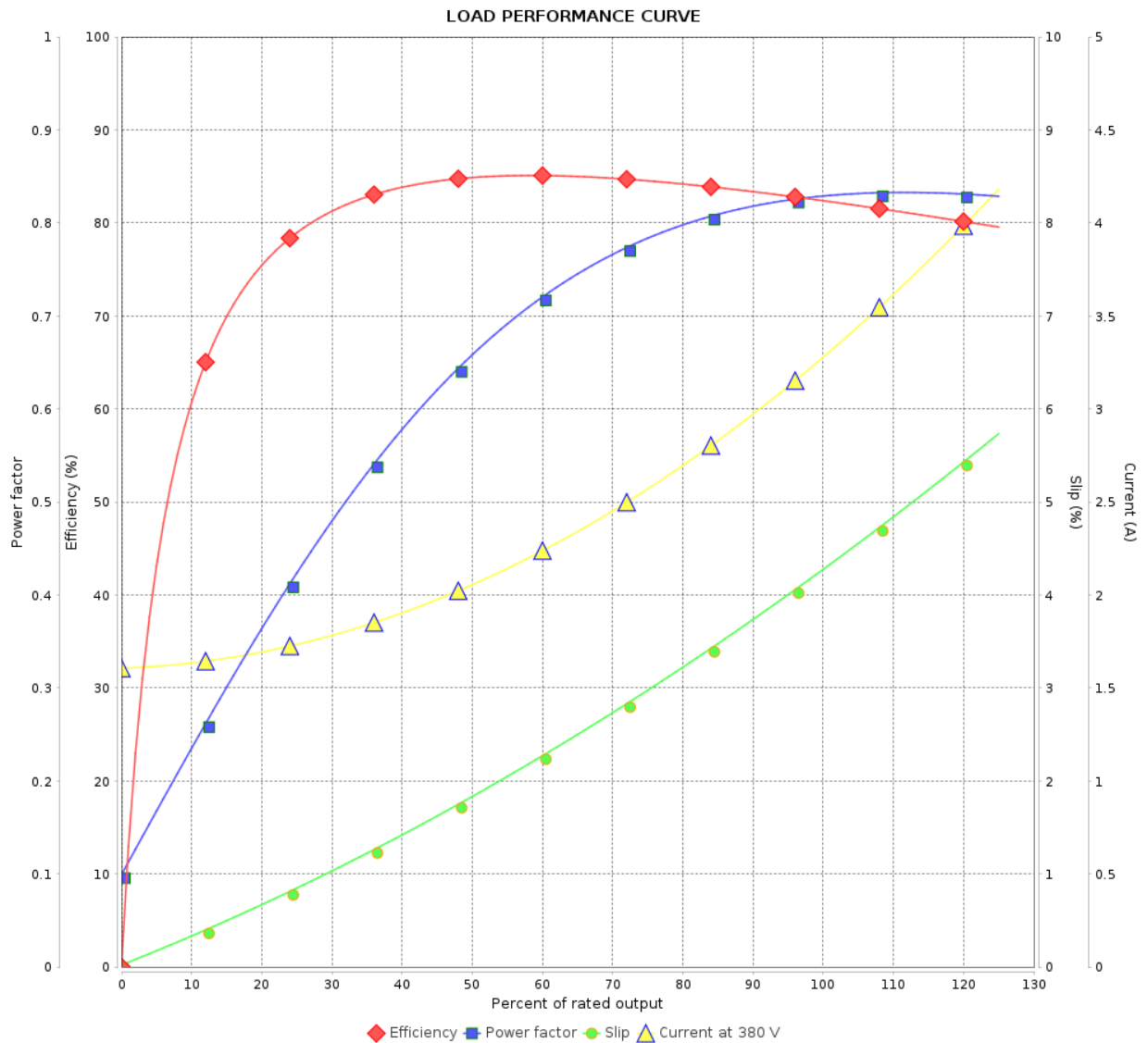
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 380 V 50 Hz 4P IE1

Rated current : 3.33 A  
LRC : 6.0  
Rated torque : 1.01 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 1435 rpm

Moment of inertia (J) : 0.0066 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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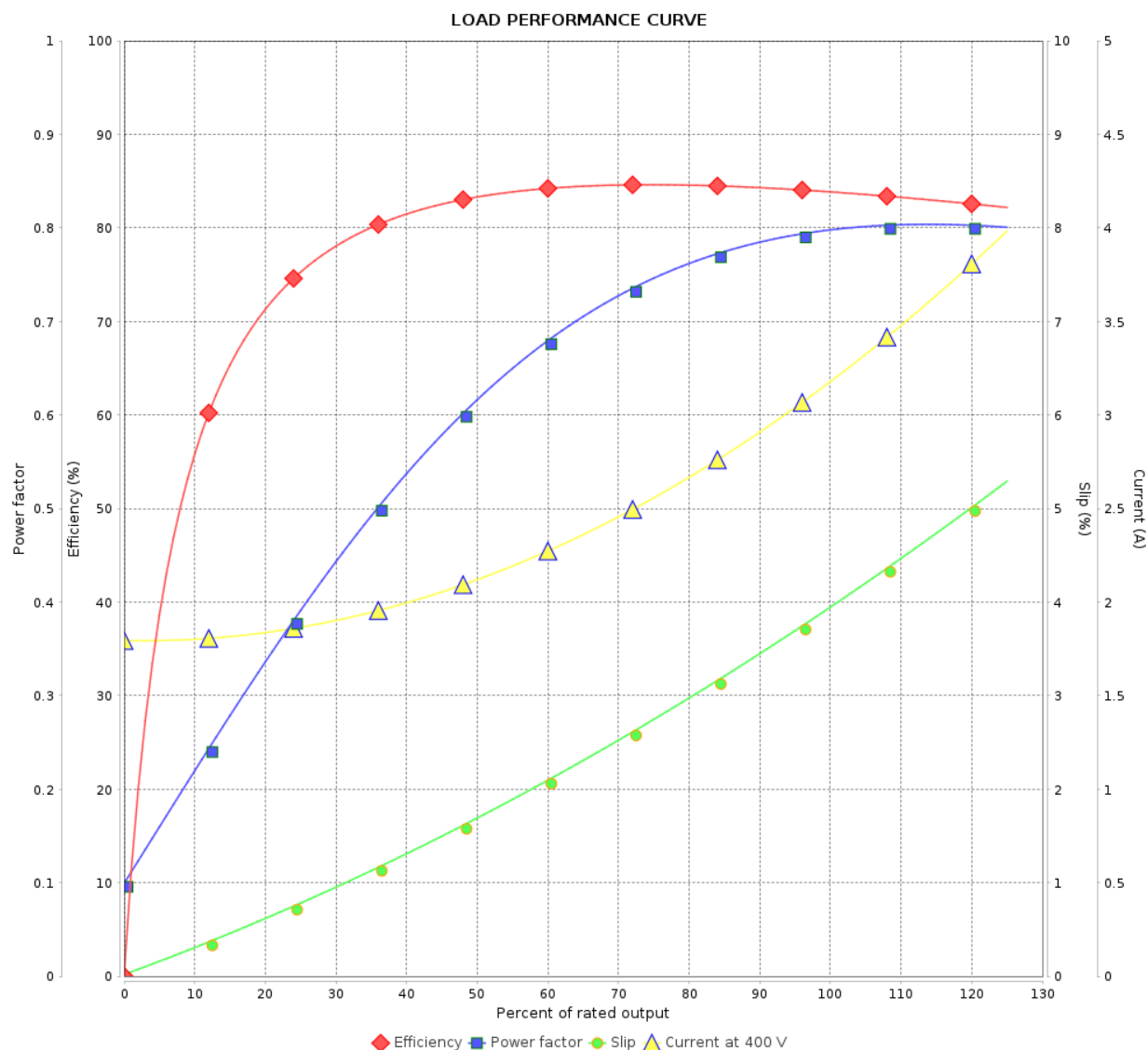
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 400 V 50 Hz 4P IE2

Rated current : 3.22 A  
LRC : 6.6  
Rated torque : 1.01 kgfm  
Locked rotor torque : 229 %  
Breakdown torque : 260 %  
Rated speed : 1440 rpm

Moment of inertia (J) : 0.0066 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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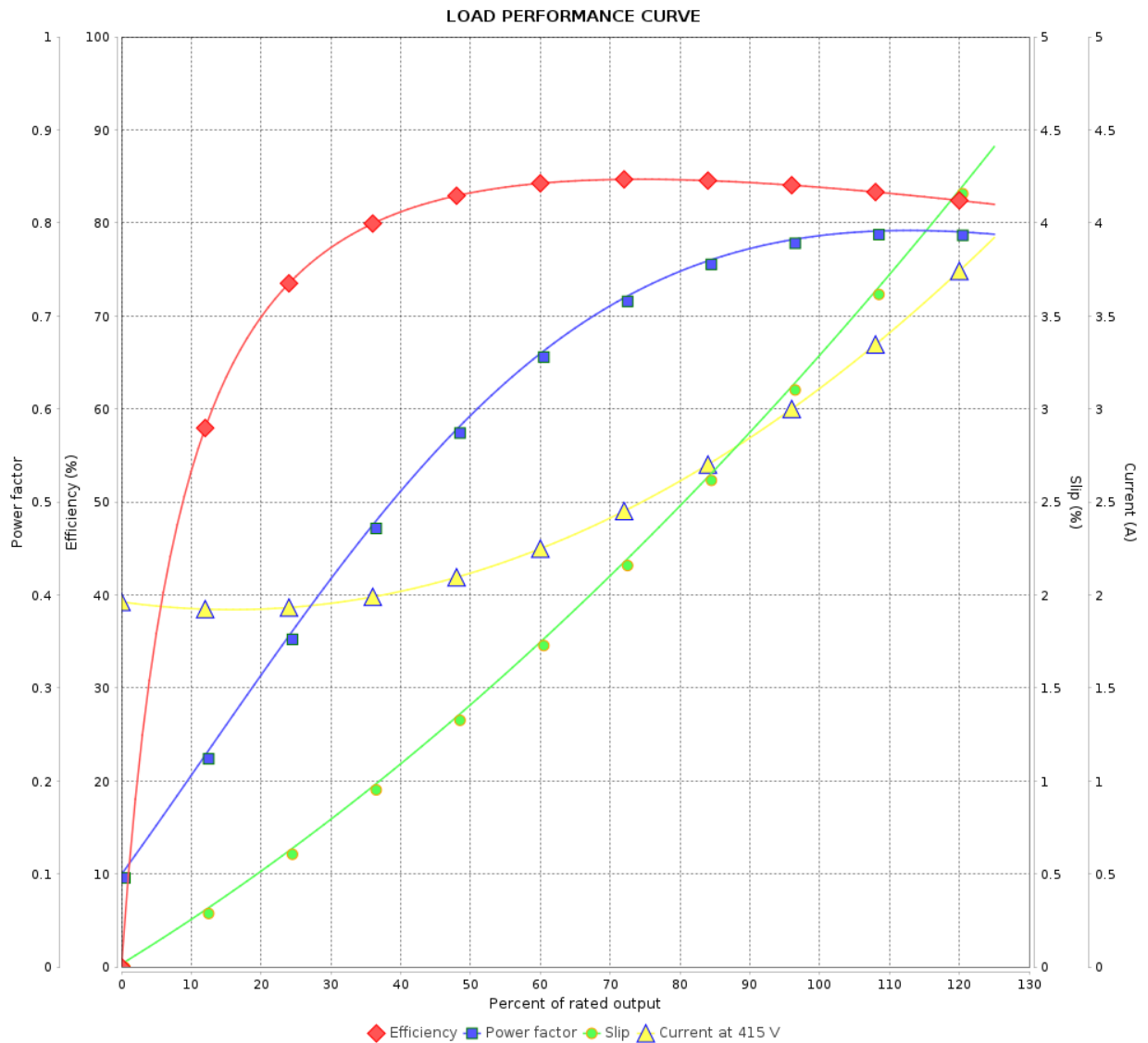
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 11431460



Performance : 415 V 50 Hz 4P IE2

Rated current : 3.14 A  
LRC : 7.3  
Rated torque : 1.00 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 290 %  
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0066 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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