

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12373844

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> : 43.0 kg
Protection degree : IP56	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]	460	380	400	415	380	400	415
Rated current [A]	3.63	3.09	3.00	2.96	4.34	4.17	4.07
L. R. Amperes [A]	31.2	29.7	32.1	32.9	29.5	31.7	33.0
LRC [A]	8.6x(Code K)	9.6x(Code L)	10.7x(Code M)	11.1x(Code N)	6.8x(Code H)	7.6x(Code J)	8.1x(Code J)
No load current [A]	1.30	1.25	1.35	1.40	1.25	1.35	1.40
Rated speed [RPM]	3510	2930	2935	2940	2880	2890	2900
Slip [%]	2.50	2.33	2.17	2.00	4.00	3.67	3.33
Rated torque [kgfm]	0.620	0.495	0.495	0.494	0.756	0.753	0.751
Locked rotor torque [%]	250	300	340	370	210	240	260
Breakdown torque [%]	380	430	480	520	290	320	350
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	73s (cold) 41s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (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%	82.5	81.0	80.6	79.7	84.0	84.0
	75%	86.5	84.5	84.5	84.1	86.5	86.5
	100%	86.5	85.8	85.8	85.9	85.5	85.5
Power Factor	25%						
	50%	0.75	0.68	0.65	0.63	0.80	0.77
	75%	0.84	0.79	0.77	0.75	0.87	0.86
	100%	0.88	0.86	0.84	0.82	0.90	0.88

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

Losses (%)	P1 (0,9;1,0)	14.1	14.1	14.1	14.1	14.1	14.1	14.1
	P2 (0,5;1,0)	9.5	9.5	9.5	9.5	9.5	9.5	9.5
	P3 (0,25;1,0)	8.5	8.5	8.5	8.5	8.5	8.5	8.5
	P4 (0,9;0,5)	8.7	8.7	8.7	8.7	8.7	8.7	8.7
	P5 (0,5;0,5)	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	P6 (0,5;0,25)	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	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 :	6207 C3	6206 C3	Max. traction : 33 kgf
Sealing :	Inpro/Seal	Inpro/Seal	Max. compression : 76 kgf
Lubrication interval :	20000 h	20000 h	
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.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	22/10/2024		Page 1 / 9	Revision

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## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 9		Revision
Checked by					
Date	22/10/2024				

# LOAD PERFORMANCE CURVE

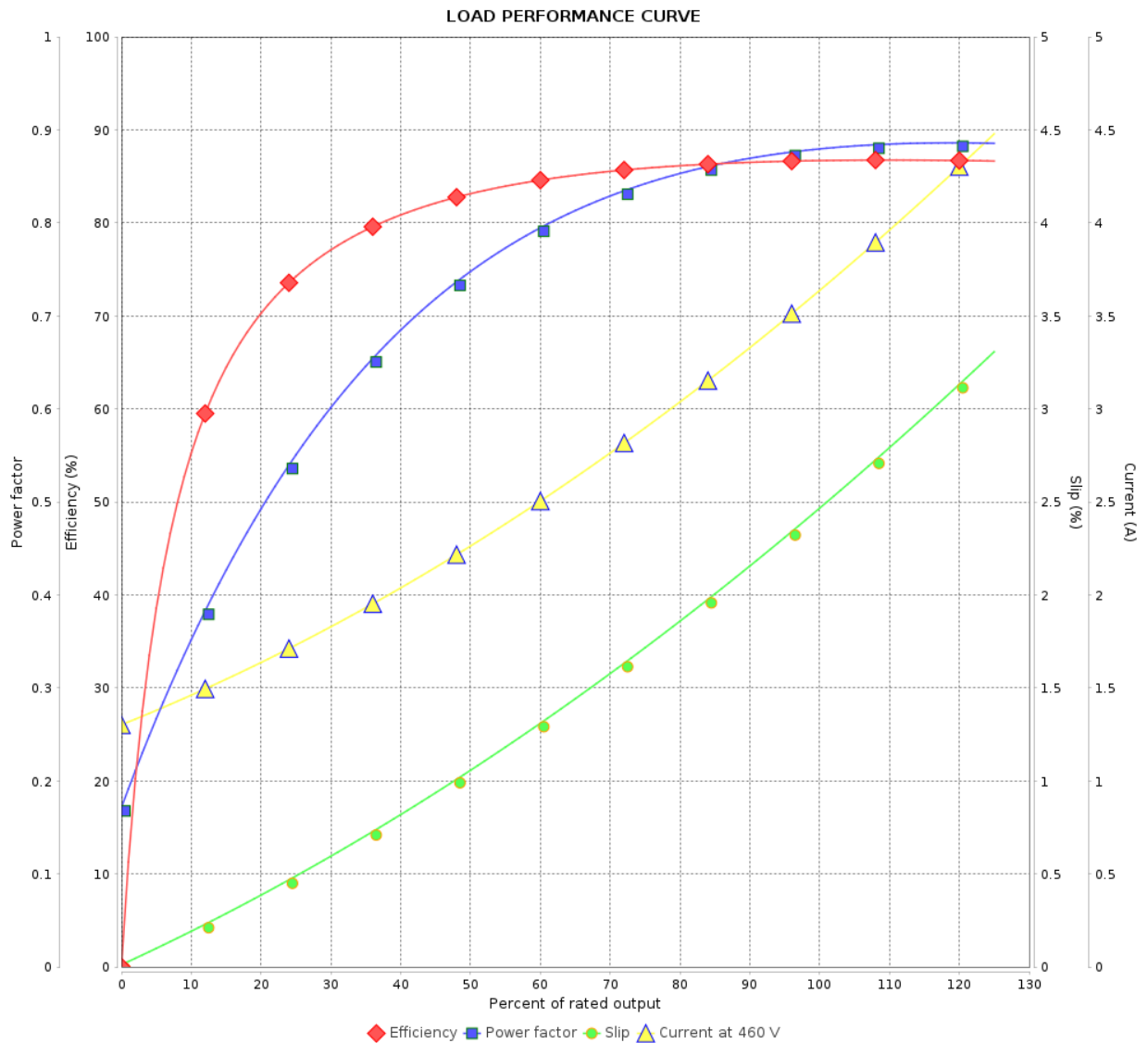
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 460 V 60 Hz 2P

Rated current	: 3.63 A	Moment of inertia (J)	: 0.0080 kgm <sup>2</sup>
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 0.620 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 3510 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 3 / 9Revision		
Checked by				
Date	22/10/2024			

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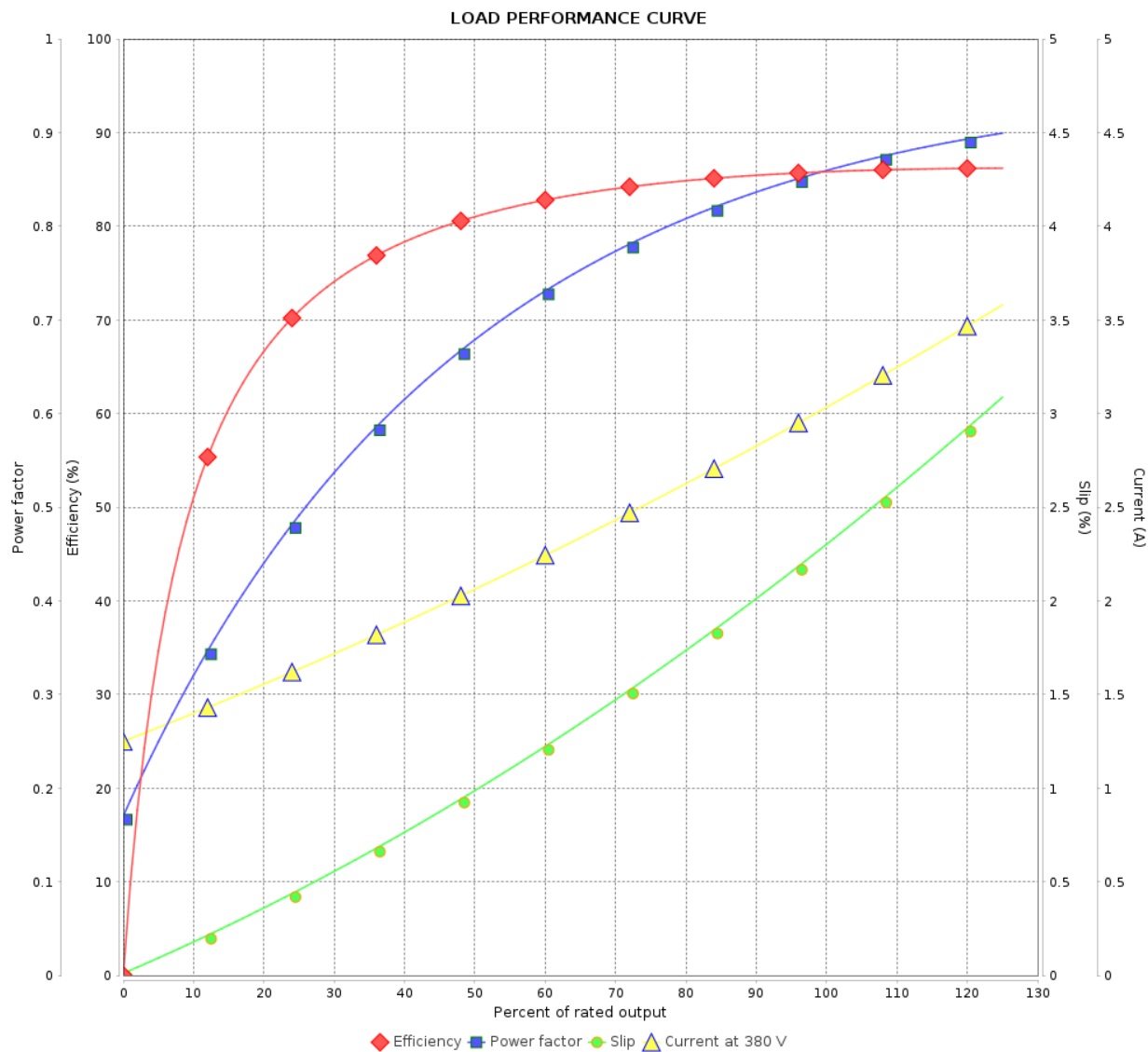
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 380 V 50 Hz 2P IE3

Rated current : 3.09 A  
LRC : 9.6  
Rated torque : 0.495 kgfm  
Locked rotor torque : 300 %  
Breakdown torque : 430 %  
Rated speed : 2930 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

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				4 / 9	
Date					

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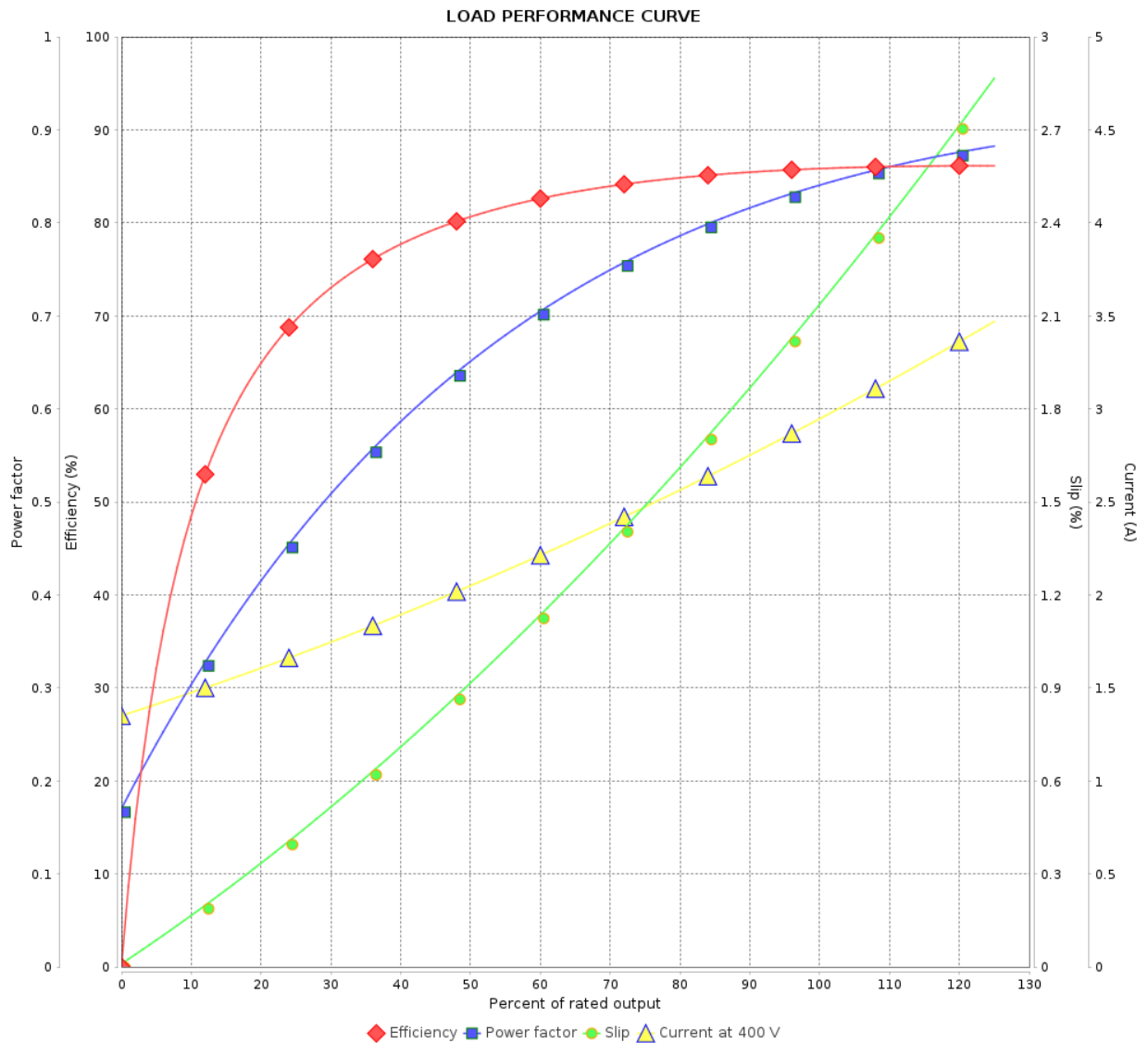
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 400 V 50 Hz 2P IE3

Rated current : 3.00 A  
LRC : 10.7  
Rated torque : 0.495 kgfm  
Locked rotor torque : 340 %  
Breakdown torque : 480 %  
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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 9Revision		
Checked by				
Date	22/10/2024			

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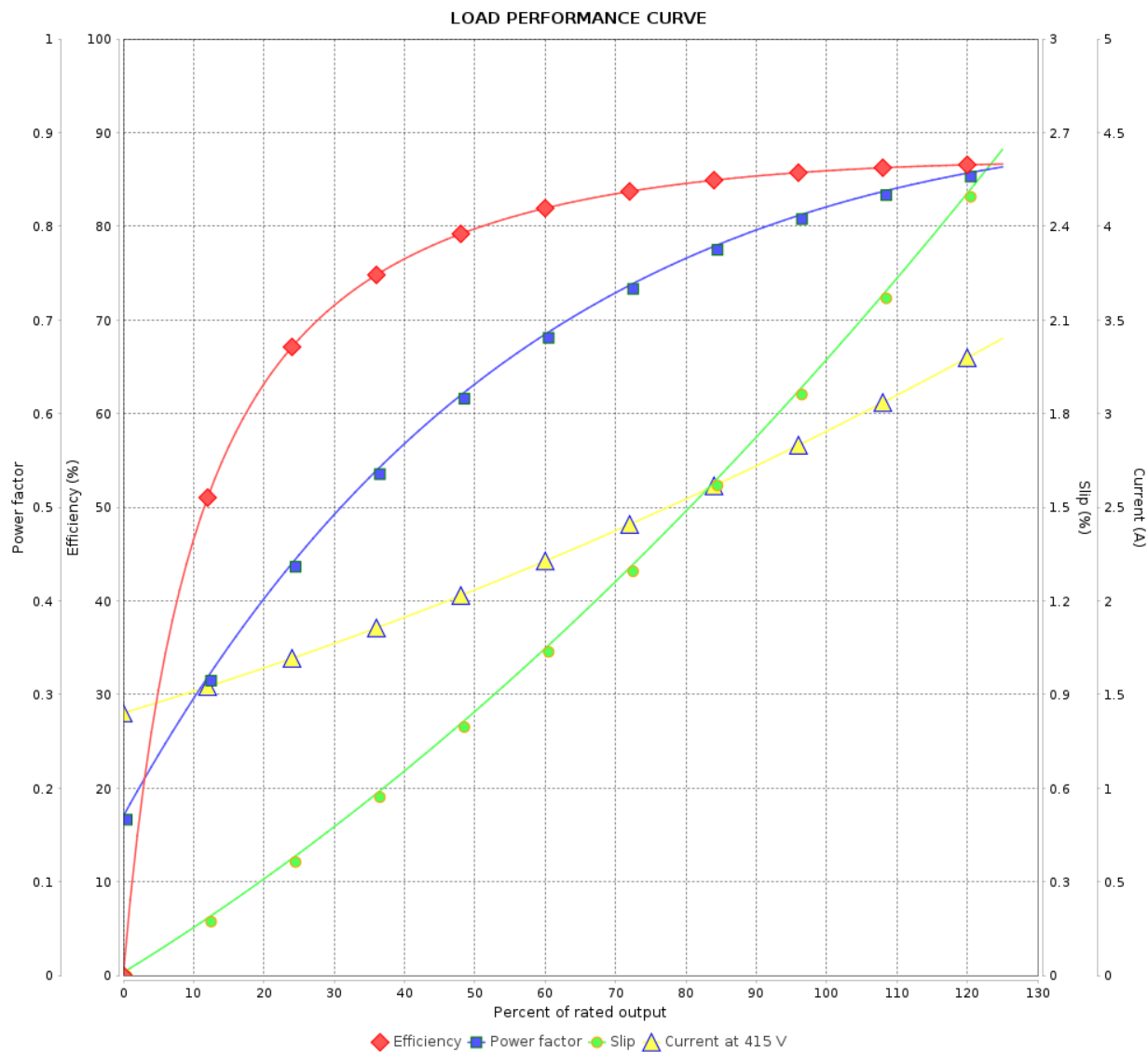
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 415 V 50 Hz 2P IE3

Rated current : 2.96 A  
LRC : 11.1  
Rated torque : 0.494 kgfm  
Locked rotor torque : 370 %  
Breakdown torque : 520 %  
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

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 6 / 9	Revision
Checked by					
Date	22/10/2024				

# LOAD PERFORMANCE CURVE

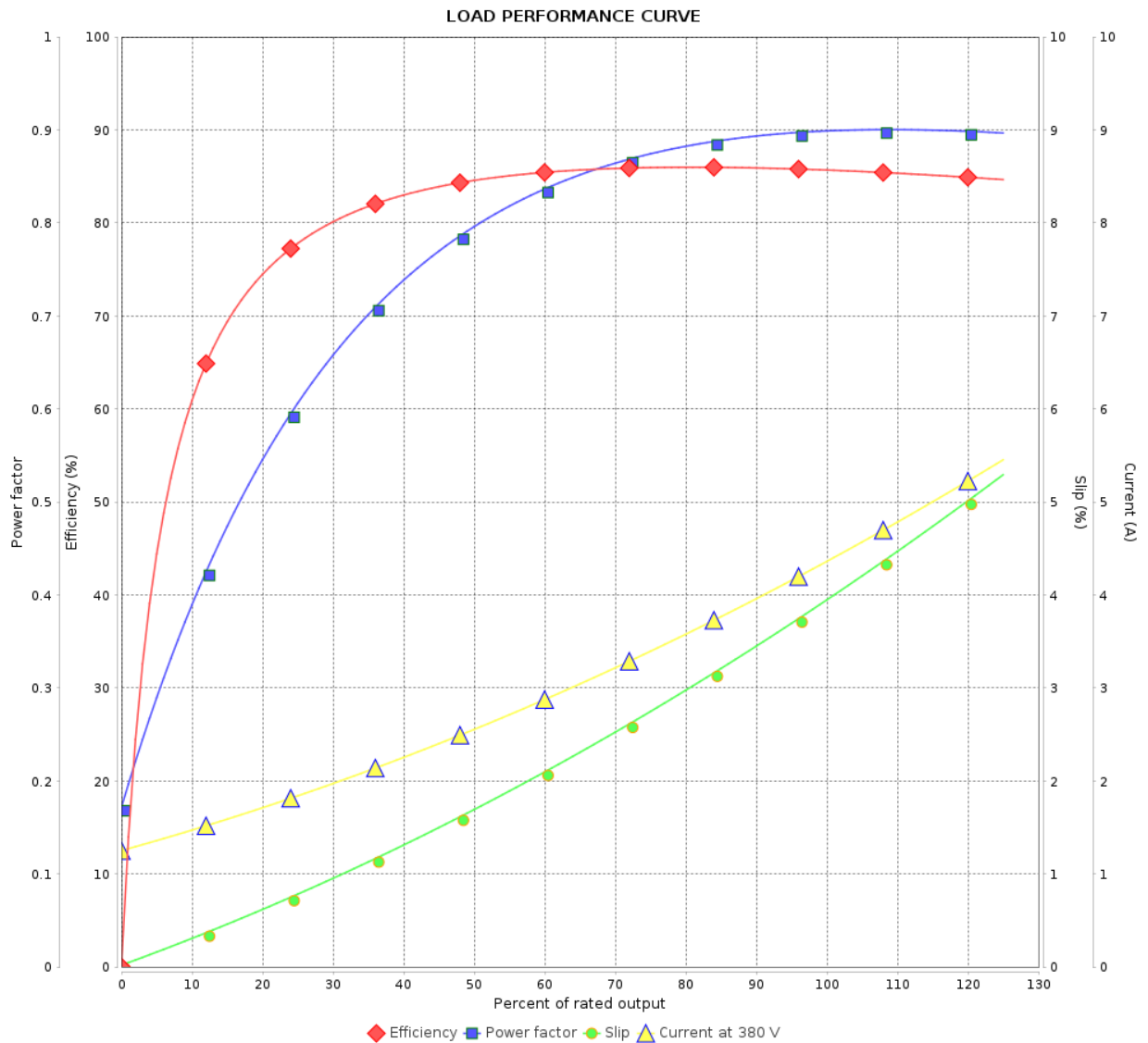
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 380 V 50 Hz 2P IE2

Rated current	: 4.34 A	Moment of inertia (J)	: 0.0080 kgm <sup>2</sup>
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 0.756 kgfm	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 2880 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 9 Revision		
Checked by				
Date	22/10/2024			

# LOAD PERFORMANCE CURVE

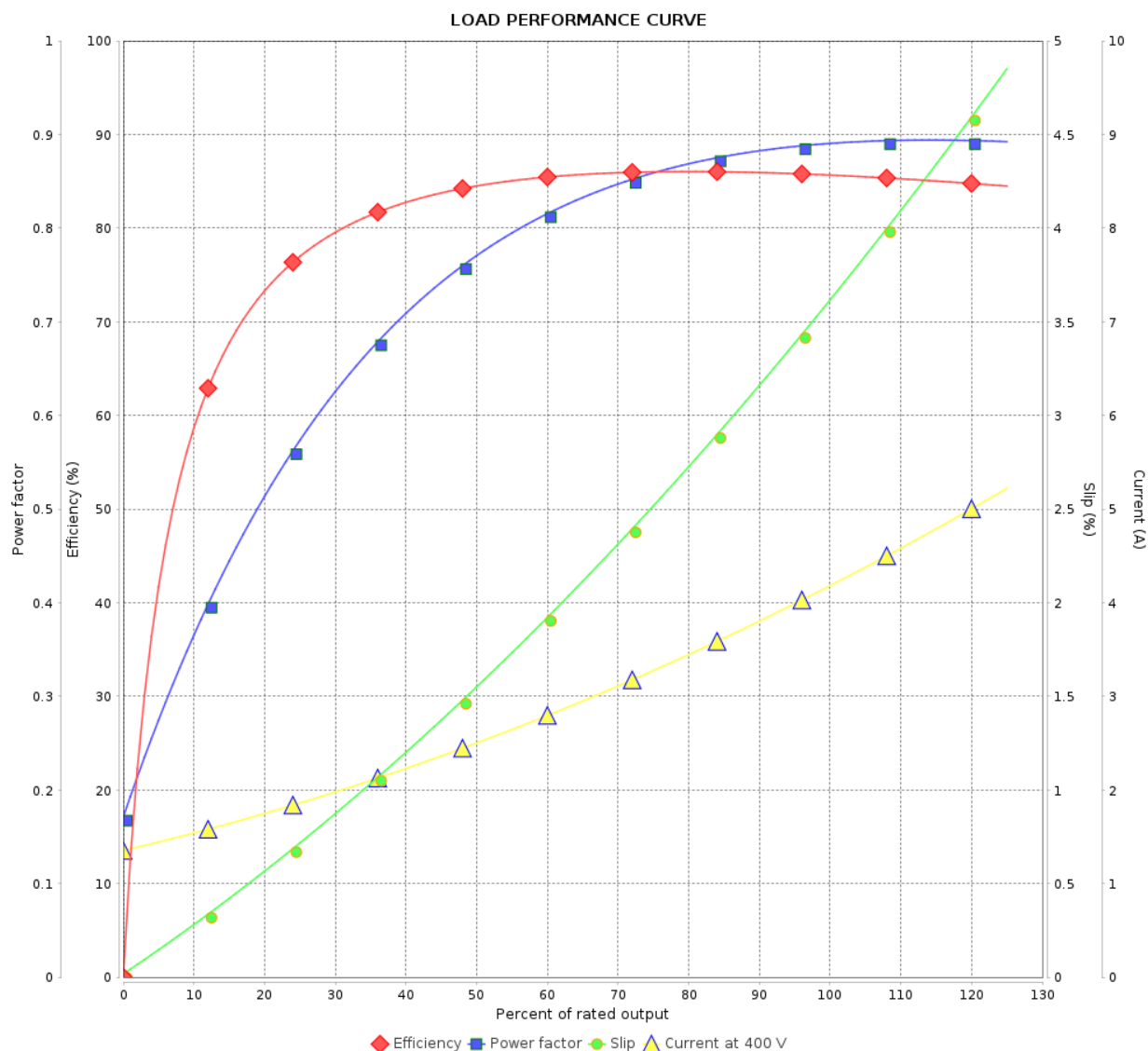
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12373844



Performance : 400 V 50 Hz 2P IE2

Rated current : 4.17 A  
LRC : 7.6  
Rated torque : 0.753 kgfm  
Locked rotor torque : 240 %  
Breakdown torque : 320 %  
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

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 8 / 9	Revision
Checked by					
Date	22/10/2024				

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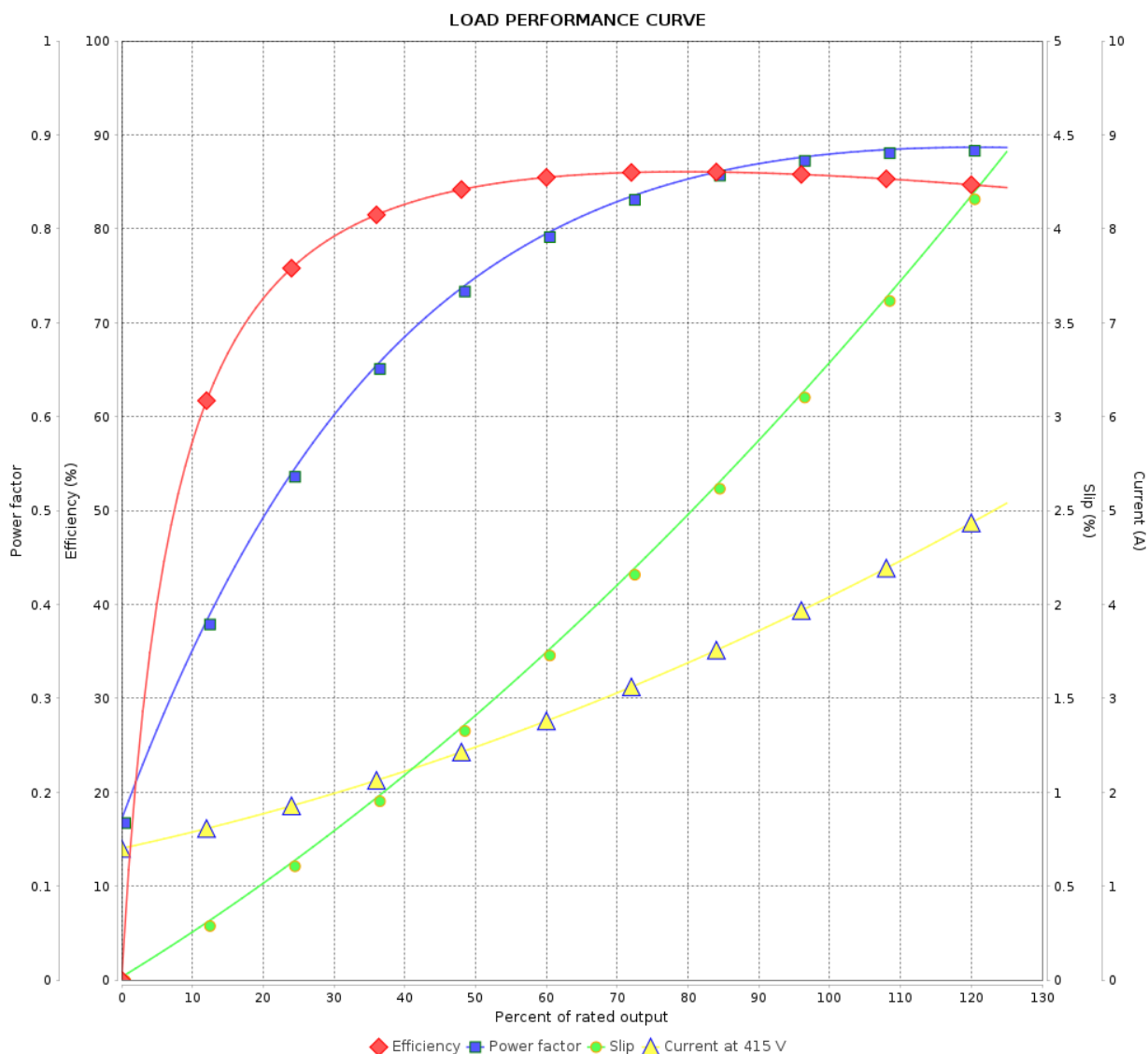
## Three Phase Induction Motor - Squirrel Cage



Customer :

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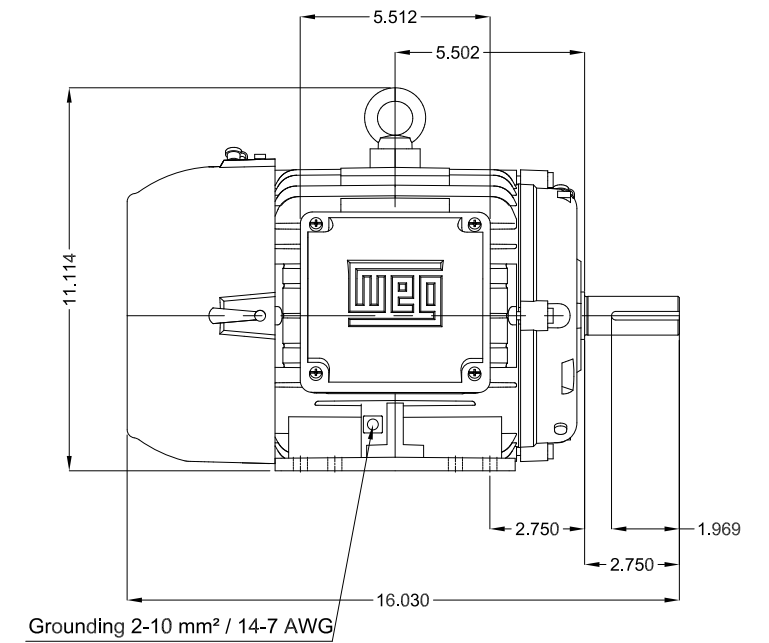


Performance : 415 V 50 Hz 2P IE2

Rated current : 4.07 A  
LRC : 8.1  
Rated torque : 0.751 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 350 %  
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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 9Revision		
Checked by				
Date	22/10/2024			



DE Shaft End



0.250

0.250

1.1250

1.1245

0.984

3 HP    02 Poles    60 Hz										A	
							HYBRISUSER			00	
ECM		LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER		THREE PH. MOTOR   IEEE 841 W22   NEMA PREM. EFF. FRAME 182/4T IP56 TEFC					PREVIEW WDD    00			
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