

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12378984

Frame	: 213/5T	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>	: 68.1 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.0197 kgm <sup>2</sup>
Design	: B		

Output [HP]	7.5	5	5	5	7.5	7.5	7.5
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]	8.97	7.59	7.38	7.27	10.7	10.3	10.1
L. R. Amperes [A]	64.6	62.2	67.2	70.5	61.2	66.0	69.3
LRC [A]	7.2x(Code H)	8.2x(Code K)	9.1x(Code L)	9.7x(Code M)	5.7x(Code F)	6.4x(Code G)	6.9x(Code H)
No load current [A]	3.20	3.00	3.20	3.50	3.00	3.20	3.50
Rated speed [RPM]	3525	2940	2950	2950	2895	2905	2915
Slip [%]	2.08	2.00	1.67	1.67	3.50	3.17	2.83
Rated torque [kgfm]	1.54	1.23	1.23	1.23	1.88	1.87	1.87
Locked rotor torque [%]	210	250	270	300	160	180	200
Breakdown torque [%]	290	360	400	430	229	260	280
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	105 K	105 K	80 K
Locked rotor time	39s (cold) 22s (hot)	54s (cold) 30s (hot)	52s (cold) 29s (hot)	46s (cold) 26s (hot)	36s (cold) 20s (hot)	34s (cold) 19s (hot)	34s (cold) 19s (hot)
Noise level <sup>2</sup>	68.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)	63.0 dB(A)
Efficiency (%)	25%						
	50%	87.5	86.7	86.4	86.1	88.5	87.5
	75%	89.5	88.2	88.3	88.5	88.5	88.5
	100%	89.5	88.2	88.3	88.5	87.5	88.5
Power Factor	25%						
	50%	0.74	0.68	0.66	0.62	0.80	0.76
	75%	0.83	0.80	0.76	0.73	0.86	0.85
	100%	0.86	0.84	0.82	0.80	0.89	0.86

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

Losses (%)	P1 (0,9;1,0)	11.2	12.8	12.7	12.4	13.6	13.6	12.4
	P2 (0,5;1,0)	8.7	9.9	9.8	9.6	10.6	10.6	9.6
	P3 (0,25;1,0)	7.6	8.7	8.6	8.4	9.2	9.2	8.4
	P4 (0,9;0,5)	6.0	6.9	6.8	6.7	7.3	7.3	6.7
	P5 (0,5;0,5)	3.6	4.1	4.0	4.0	4.3	4.3	4.0
	P6 (0,5;0,25)	2.4	2.8	2.7	2.7	2.9	2.9	2.7
	P7 (0,25;0,25)	1.5	1.7	1.7	1.6	1.8	1.8	1.6

Bearing type	: 6308 C3	Non drive end	6207 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 62 kgf
Lubrication interval	: 20000 h	20000 h		Max. compression	: 130 kgf
Lubricant amount	: 11 g	7 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				Page 1 / 9	Revision
Checked by					
Date	22/10/2024				

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Notes

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

# LOAD PERFORMANCE CURVE

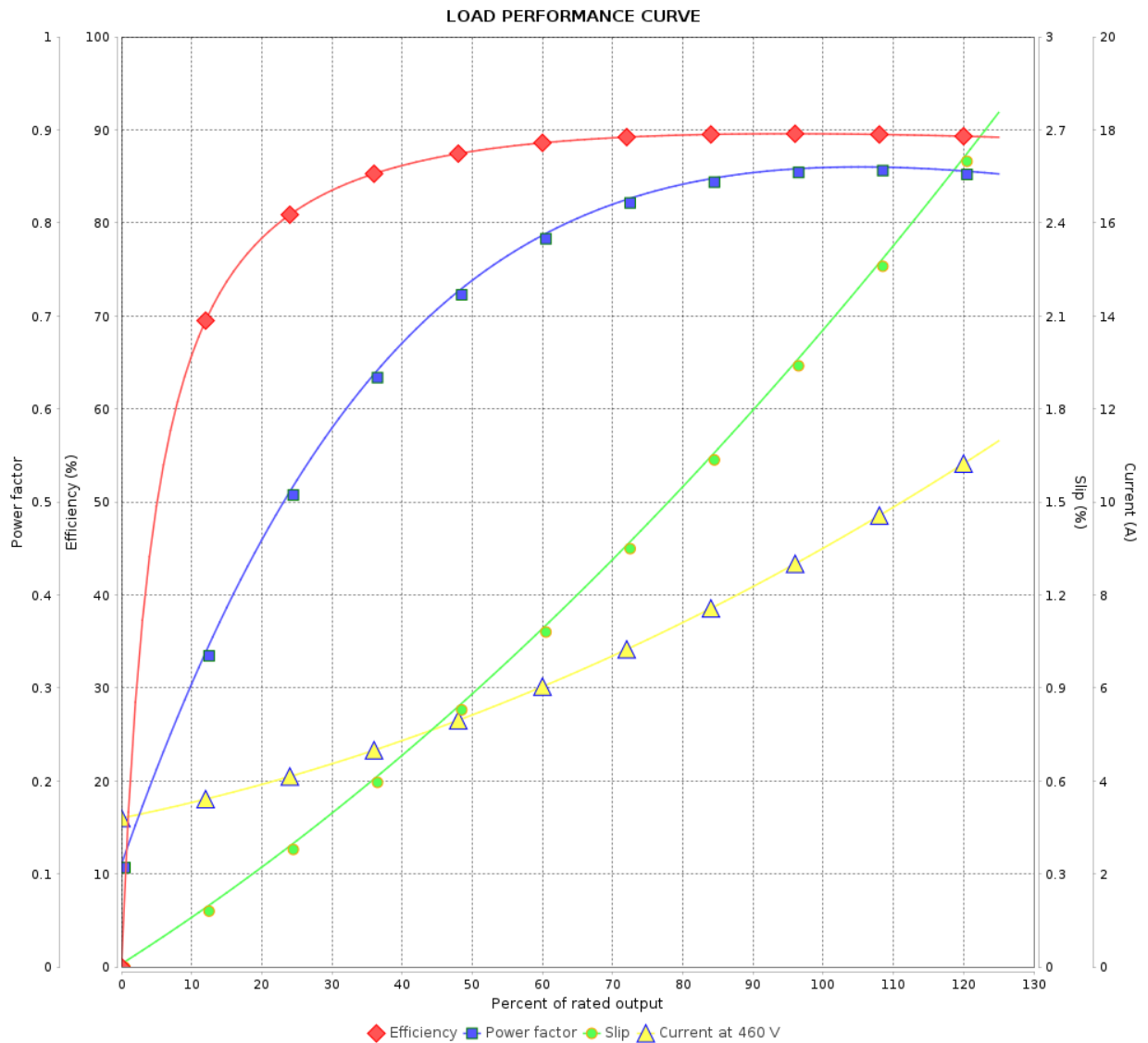
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 460 V 60 Hz 2P

Rated current : 8.97 A  
LRC : 7.2  
Rated torque : 1.54 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 290 %  
Rated speed : 3525 rpm

Moment of inertia (J) : 0.0197 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 3 / 9	Revision
Checked by					
Date	22/10/2024				

# LOAD PERFORMANCE CURVE

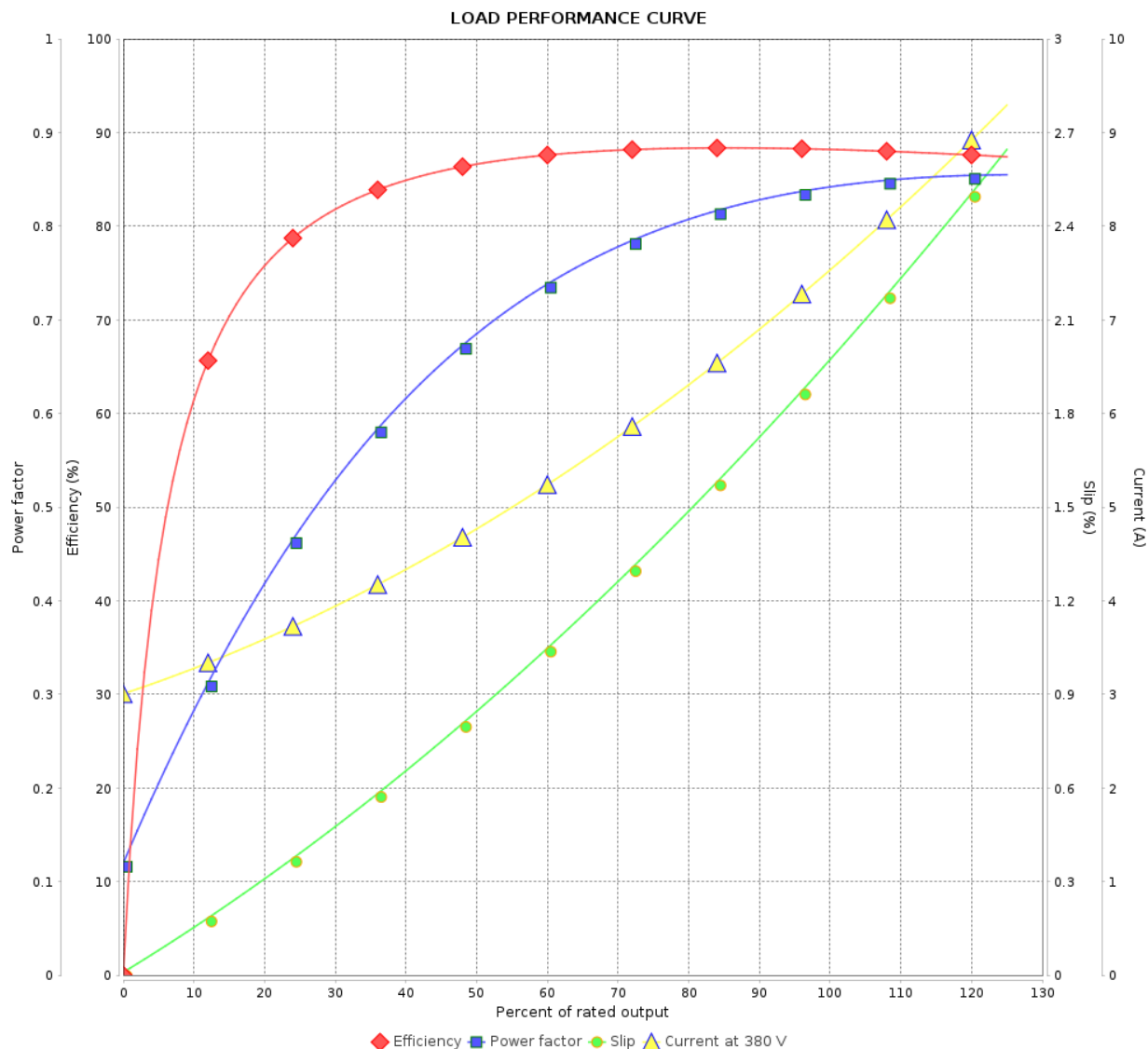
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 380 V 50 Hz 2P IE3

Rated current : 7.59 A  
LRC : 8.2  
Rated torque : 1.23 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 360 %  
Rated speed : 2940 rpm

Moment of inertia (J) : 0.0197 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 4 / 9	Revision
Checked by					
Date	22/10/2024				

# LOAD PERFORMANCE CURVE

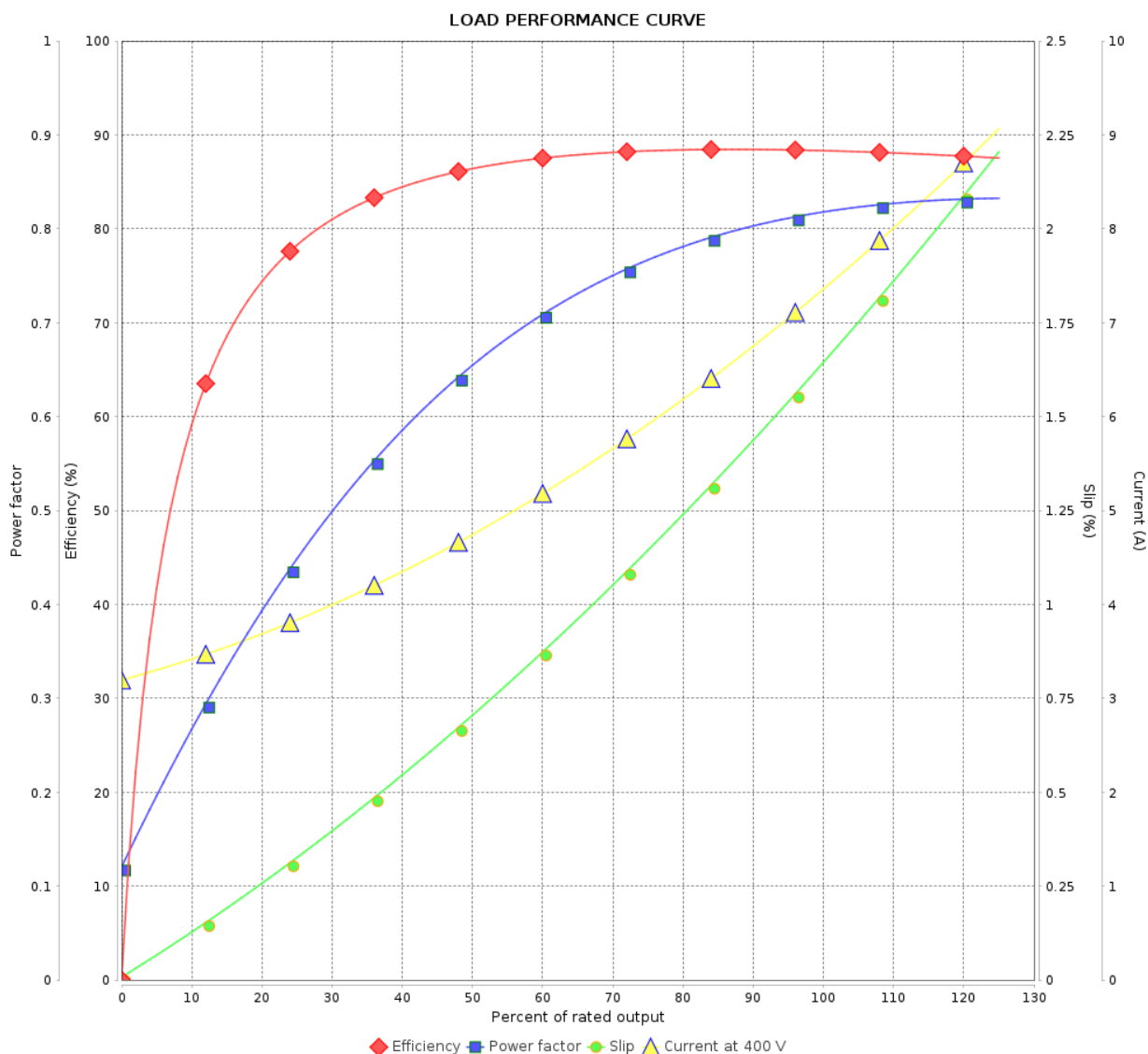
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 400 V 50 Hz 2P IE3

Rated current : 7.38 A  
LRC : 9.1  
Rated torque : 1.23 kgfm  
Locked rotor torque : 270 %  
Breakdown torque : 400 %  
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0197 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			

# LOAD PERFORMANCE CURVE

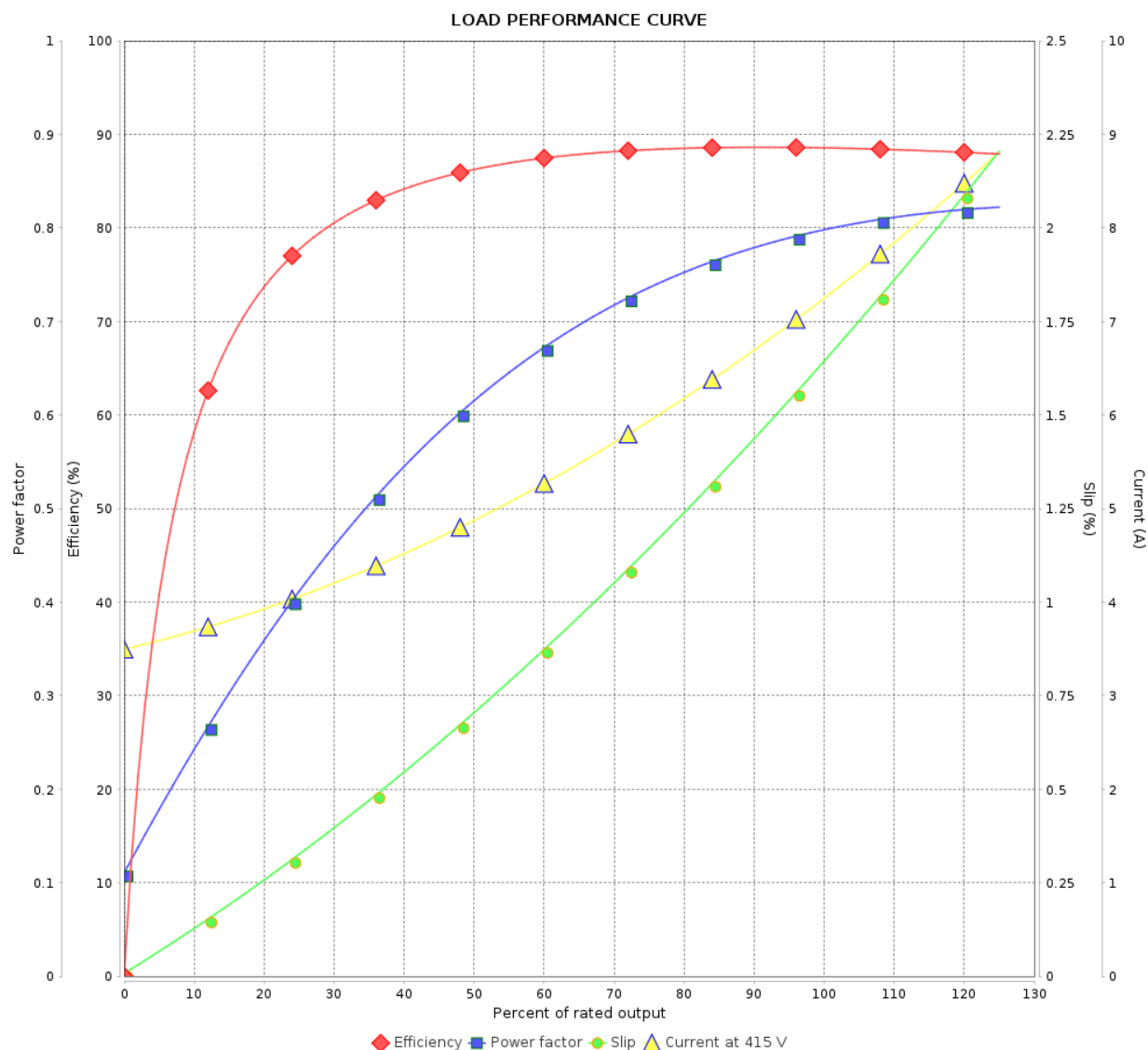
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 415 V 50 Hz 2P IE3

Rated current : 7.27 A  
LRC : 9.7  
Rated torque : 1.23 kgfm  
Locked rotor torque : 300 %  
Breakdown torque : 430 %  
Rated speed : 2950 rpm

Moment of inertia (J) : 0.0197 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				6 / 9	
Date					

# LOAD PERFORMANCE CURVE

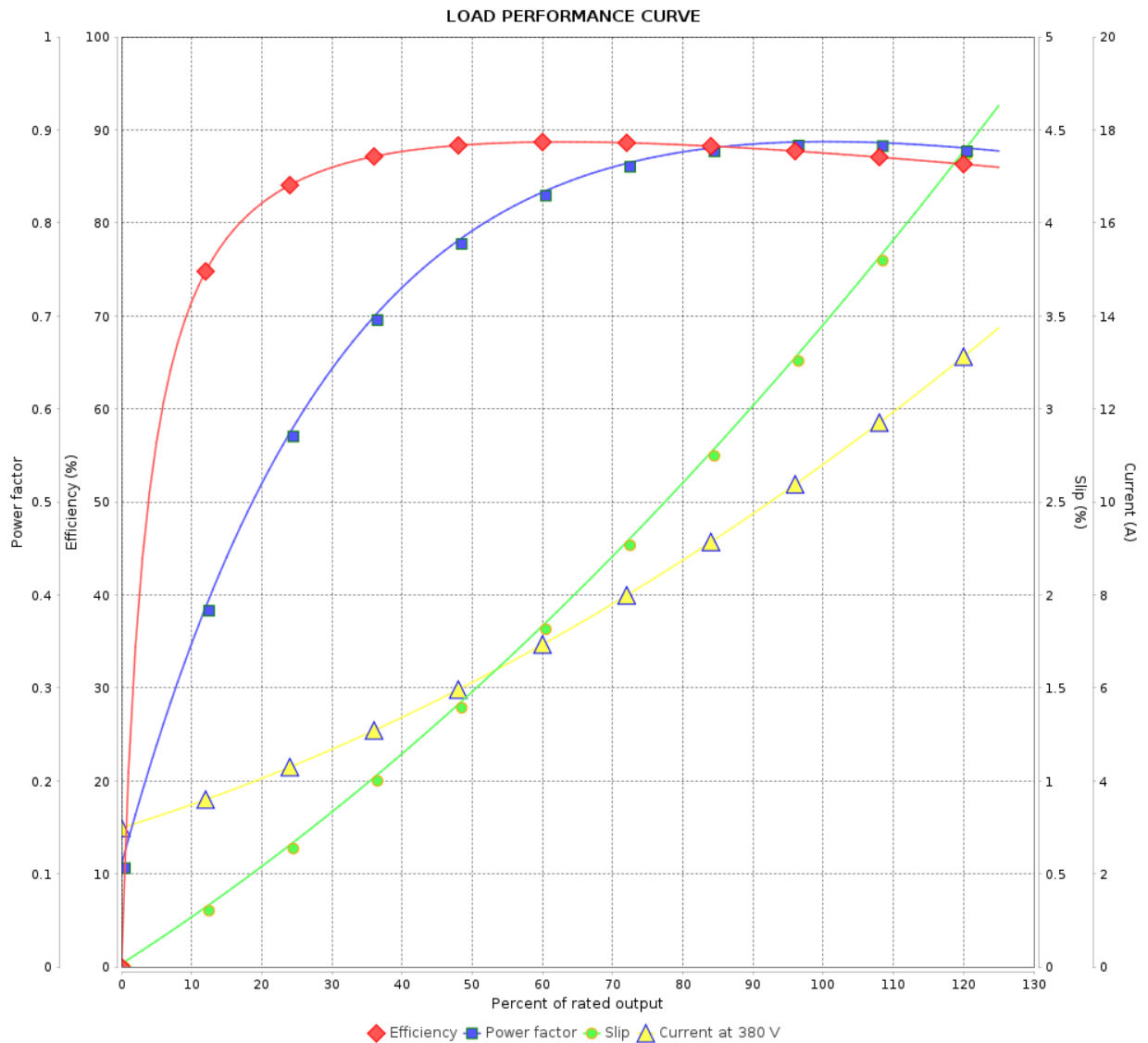
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 380 V 50 Hz 2P IE2

Rated current	: 10.7 A	Moment of inertia (J)	: 0.0197 kgm <sup>2</sup>
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 1.88 kgfm	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.25
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 2895 rpm	Design	: B

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

# LOAD PERFORMANCE CURVE

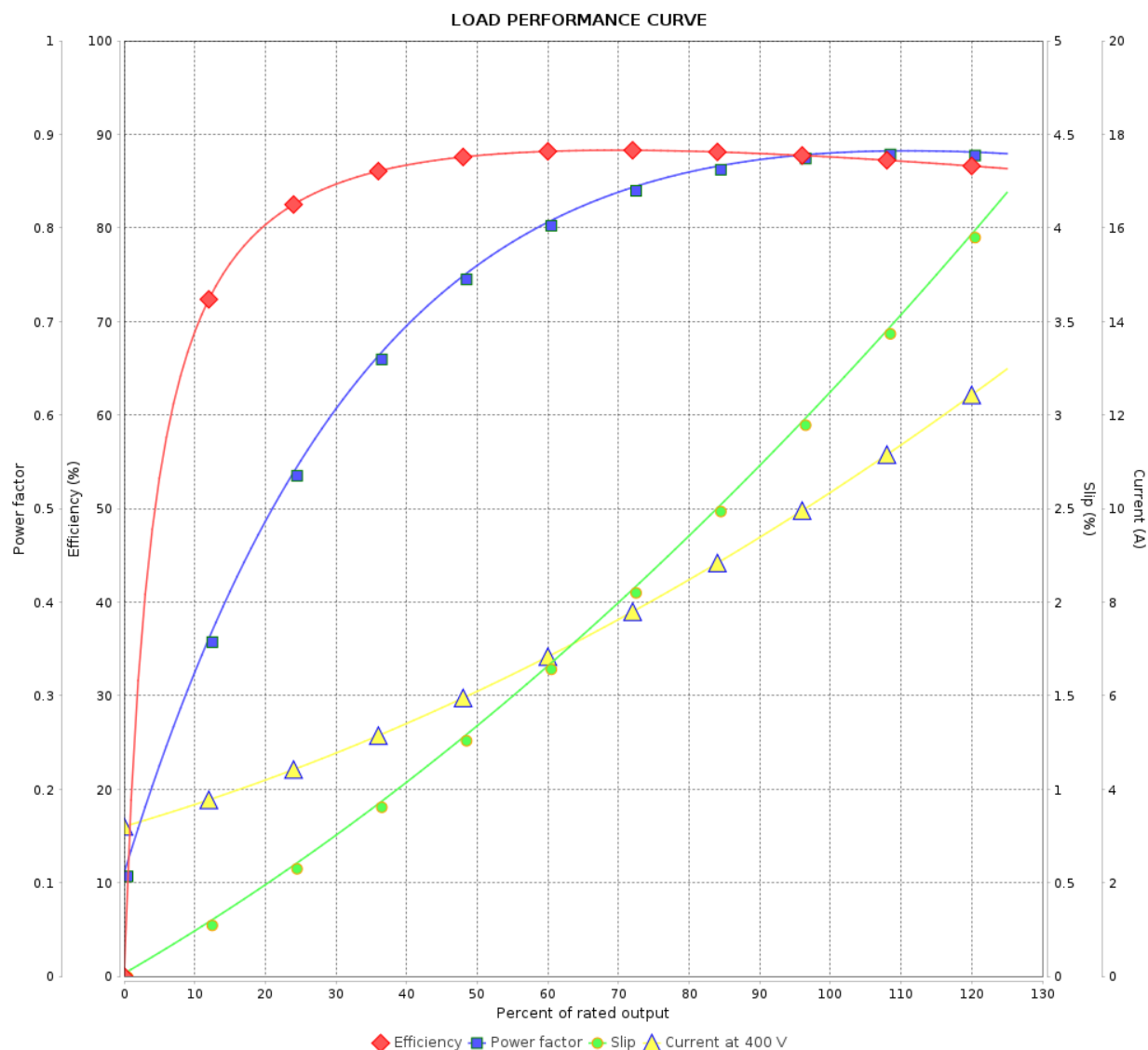
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984



Performance : 400 V 50 Hz 2P IE2

Rated current : 10.3 A  
LRC : 6.4  
Rated torque : 1.87 kgfm  
Locked rotor torque : 180 %  
Breakdown torque : 260 %  
Rated speed : 2905 rpm

Moment of inertia (J) : 0.0197 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 105 K  
Design : B

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



# LOAD PERFORMANCE CURVE

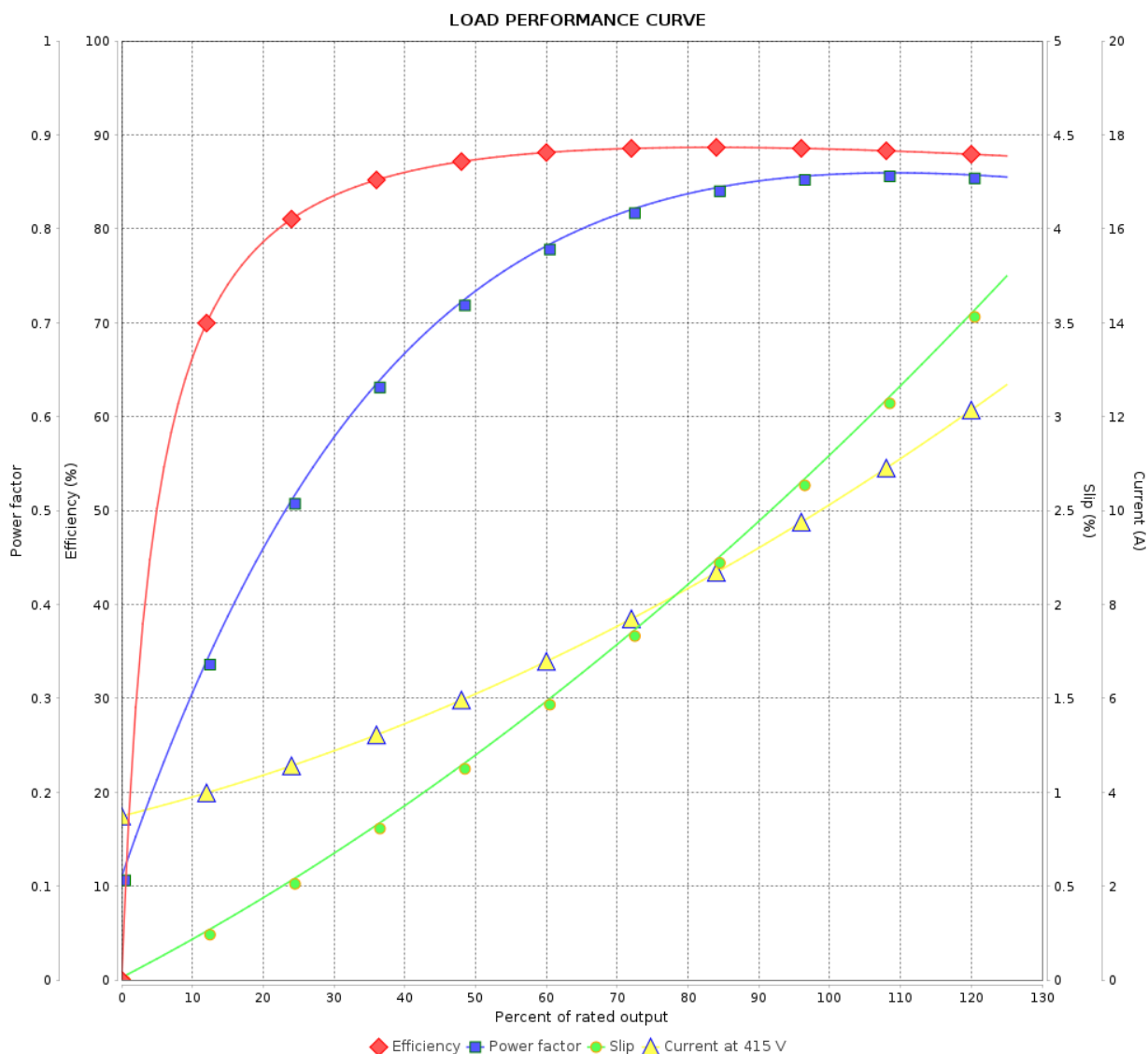
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 12378984

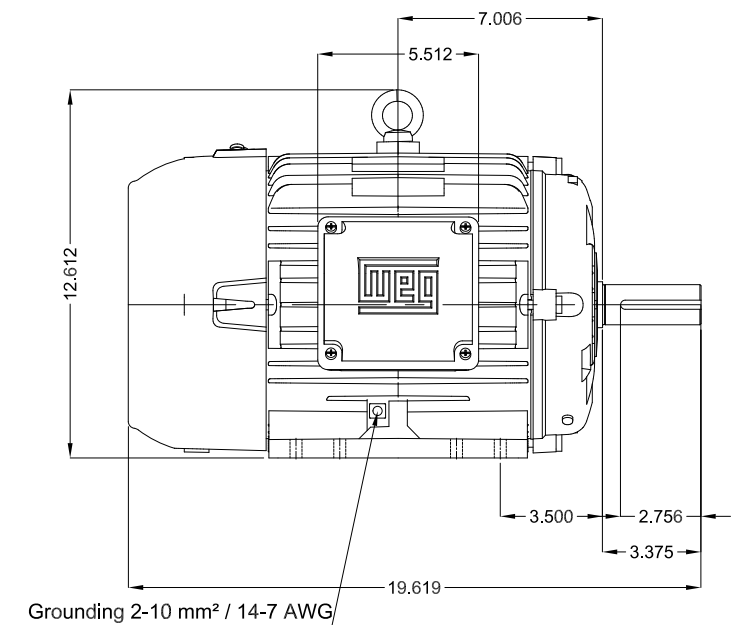
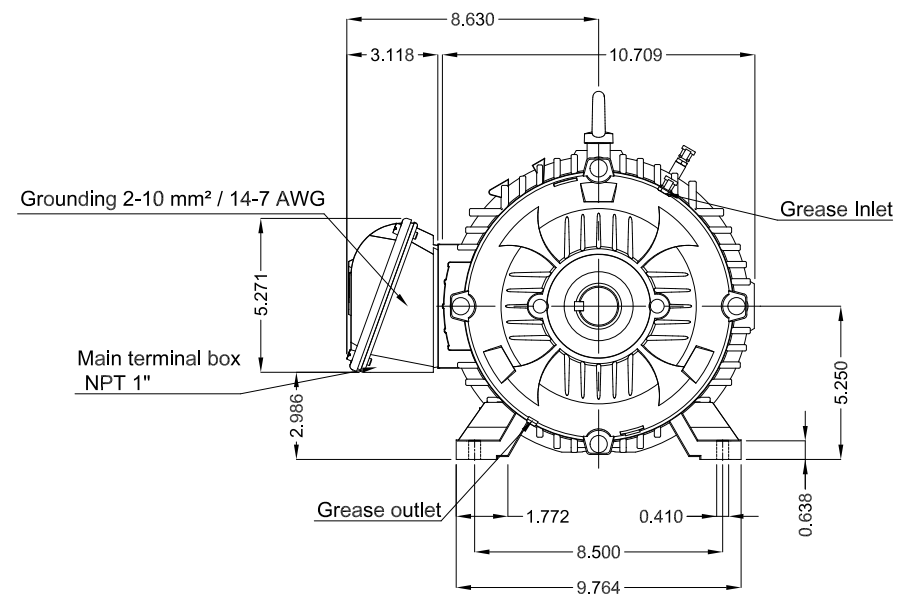
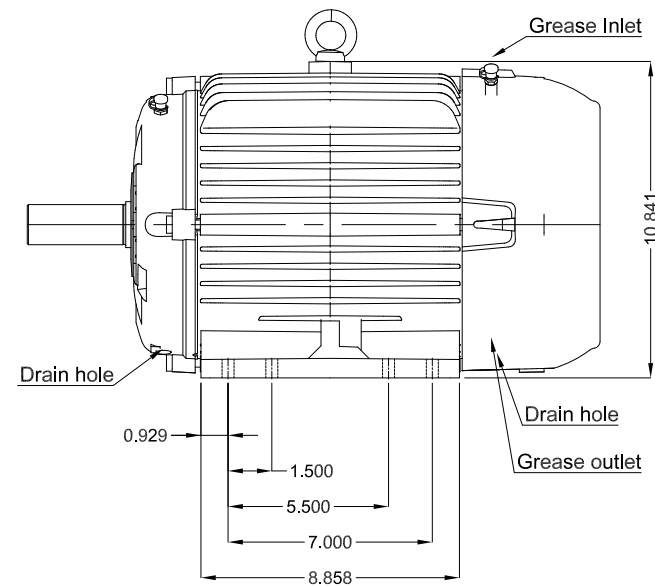


Performance : 415 V 50 Hz 2P IE2

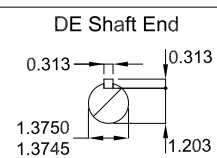
Rated current : 10.1 A  
LRC : 6.9  
Rated torque : 1.87 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 280 %  
Rated speed : 2915 rpm



Moment of inertia (J) : 0.0197 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 / 9 Revision		
Checked by				
Date	22/10/2024			



Grease outlet according to IEEE841
Color RAL 5009
Painting plan 202E
Mounting B3R(D)



7.5 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 213/5T IP56 TEFC			<div> <div>PREVIEW</div> <div>WDD   00</div> </div>			
CHECKED										
RELEASED										
REL. DATE										
						SHEET		/		