

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 13531463

Frame	: 143/5TC	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>	: 28.1 kg
Protection degree	: IP56	Moment of inertia (J)	: 0.0067 kgm <sup>2</sup>
Design	: B		

Output [HP]	1	0.75	0.75	0.75	1	1	1
Poles	6	6	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	460	380	400	415	380	400	415
Rated current [A]	1.73	1.60	1.62	1.66	1.96	1.94	1.95
L. R. Amperes [A]	10.7	9.28	9.88	10.5	9.41	10.1	10.7
LRC [A]	6.2x(Code K)	5.8x(Code K)	6.1x(Code L)	6.3x(Code M)	4.8x(Code G)	5.2x(Code H)	5.5x(Code J)
No load current [A]	1.10	1.05	1.15	1.25	1.05	1.15	1.25
Rated speed [RPM]	1160	960	970	970	940	950	950
Slip [%]	3.33	4.00	3.00	3.00	6.00	5.00	5.00
Rated torque [kgfm]	0.626	0.567	0.561	0.561	0.772	0.764	0.764
Locked rotor torque [%]	260	280	300	320	200	229	250
Breakdown torque [%]	300	310	330	340	220	260	280
Service factor	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	50s (cold) 28s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	50.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)
Efficiency (%)	25%						
	50%	77.0	74.8	73.2	70.7	77.0	74.0
	75%	82.0	78.4	77.5	75.8	80.0	78.5
	100%	82.5	79.3	78.9	77.9	78.5	78.5
Power Factor	25%						
	50%	0.45	0.44	0.41	0.38	0.53	0.46
	75%	0.57	0.57	0.53	0.50	0.66	0.59
	100%	0.66	0.66	0.62	0.59	0.74	0.68

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

Losses (%)	P1 (0,9;1,0)	20.0	20.0	20.0	20.0	20.0	20.0
	P2 (0,5;1,0)	16.7	16.7	16.7	16.7	16.7	16.7
	P3 (0,25;1,0)	16.9	16.9	16.9	16.9	16.9	16.9
	P4 (0,9;0,5)	12.6	12.6	12.6	12.6	12.6	12.6
	P5 (0,5;0,5)	9.2	9.2	9.2	9.2	9.2	9.2
	P6 (0,5;0,25)	7.6	7.6	7.6	7.6	7.6	7.6
	P7 (0,25;0,25)	5.8	5.8	5.8	5.8	5.8	5.8

Bearing type	: 6205 C3	Non drive end	6204 C3	Foundation loads	
Sealing	: Inpro/Seal	Inpro/Seal		Max. traction	: 47 kgf
Lubrication interval	: 20000 h	20000 h		Max. compression	: 75 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.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	21/10/2024		Page 1 / 9	Revision

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Notes

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page		Revision
Checked by					
Date	21/10/2024				

# LOAD PERFORMANCE CURVE

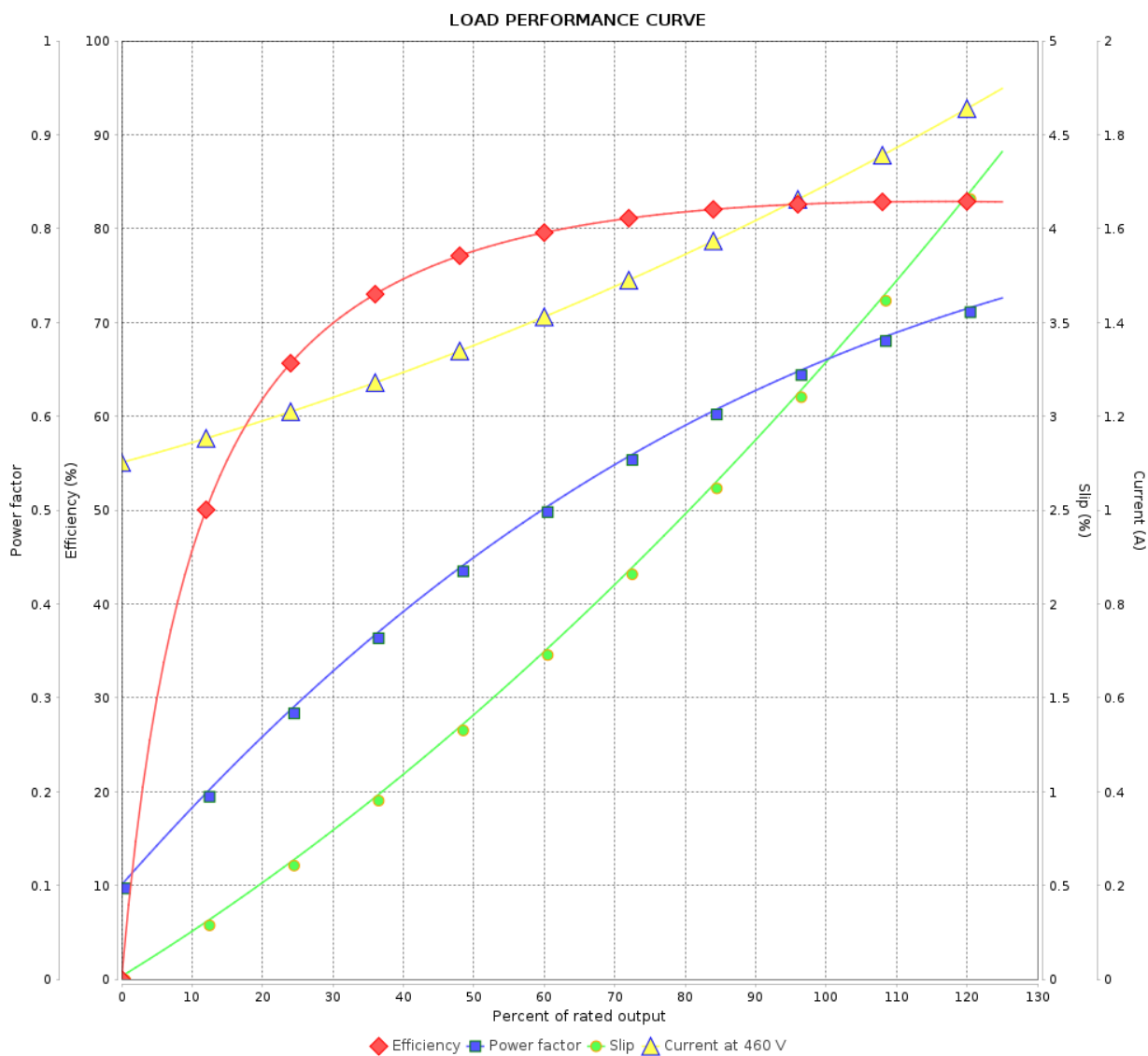
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 460 V 60 Hz 6P

Rated current : 1.73 A  
LRC : 6.2  
Rated torque : 0.626 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 300 %  
Rated speed : 1160 rpm

Moment of inertia (J) : 0.0067 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	21/10/2024				

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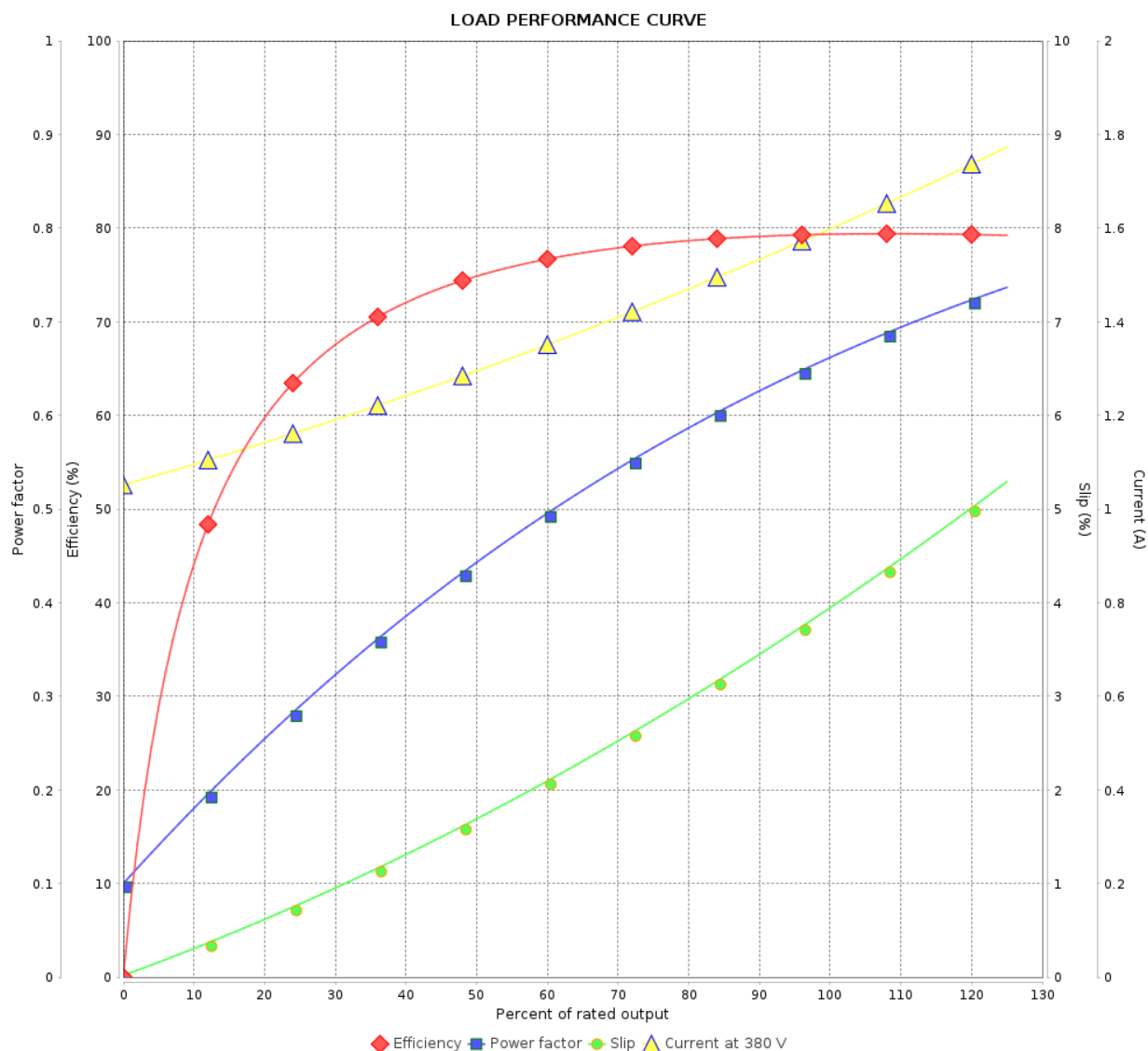
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 380 V 50 Hz 6P IE3

Rated current : 1.60 A  
LRC : 5.8  
Rated torque : 0.567 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 310 %  
Rated speed : 960 rpm

Moment of inertia (J) : 0.0067 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
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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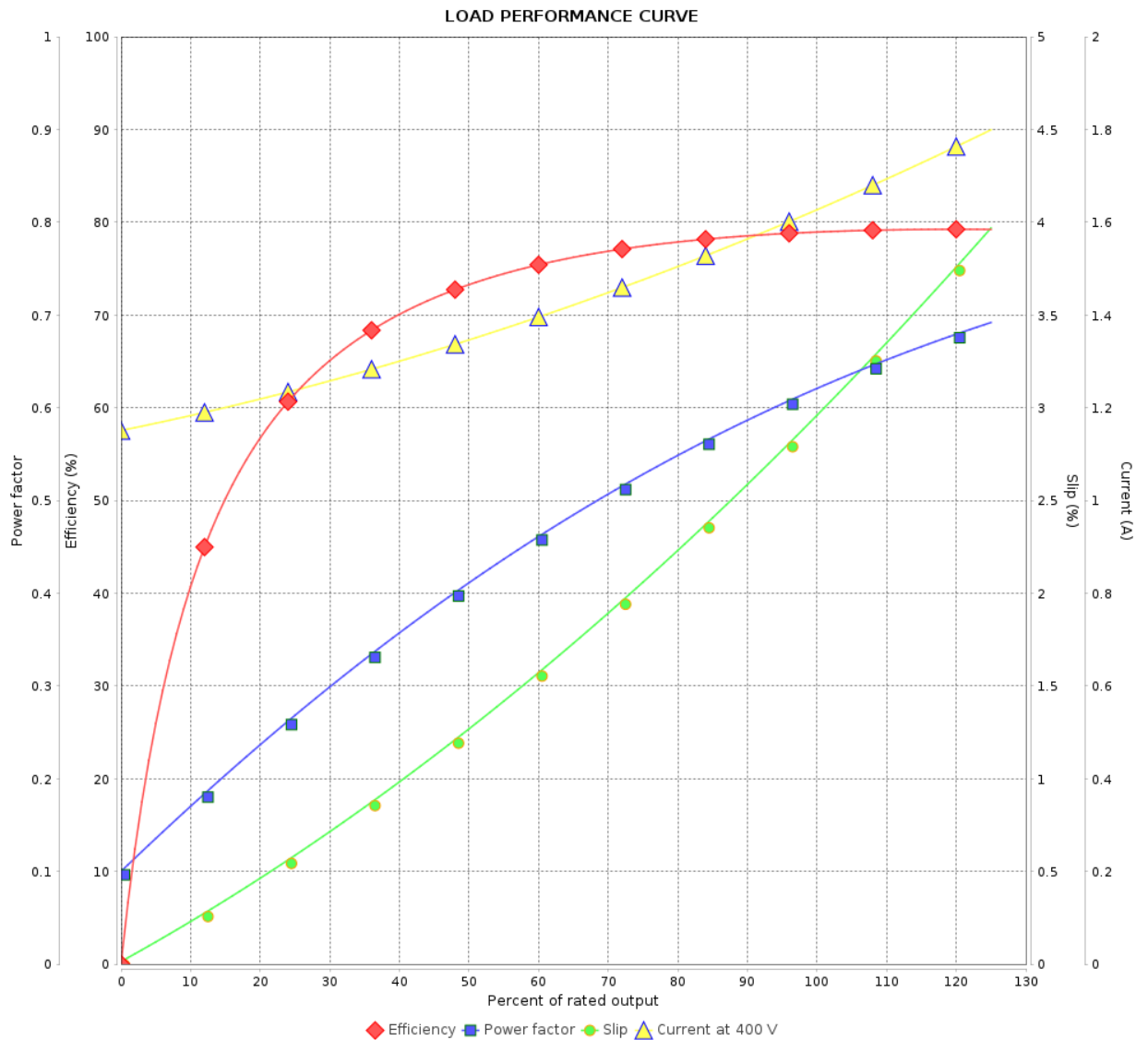
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 400 V 50 Hz 6P IE3

Rated current	: 1.62 A	Moment of inertia (J)	: 0.0067 kgm <sup>2</sup>
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 0.561 kgfm	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 9Revision		
Checked by				
Date	21/10/2024			

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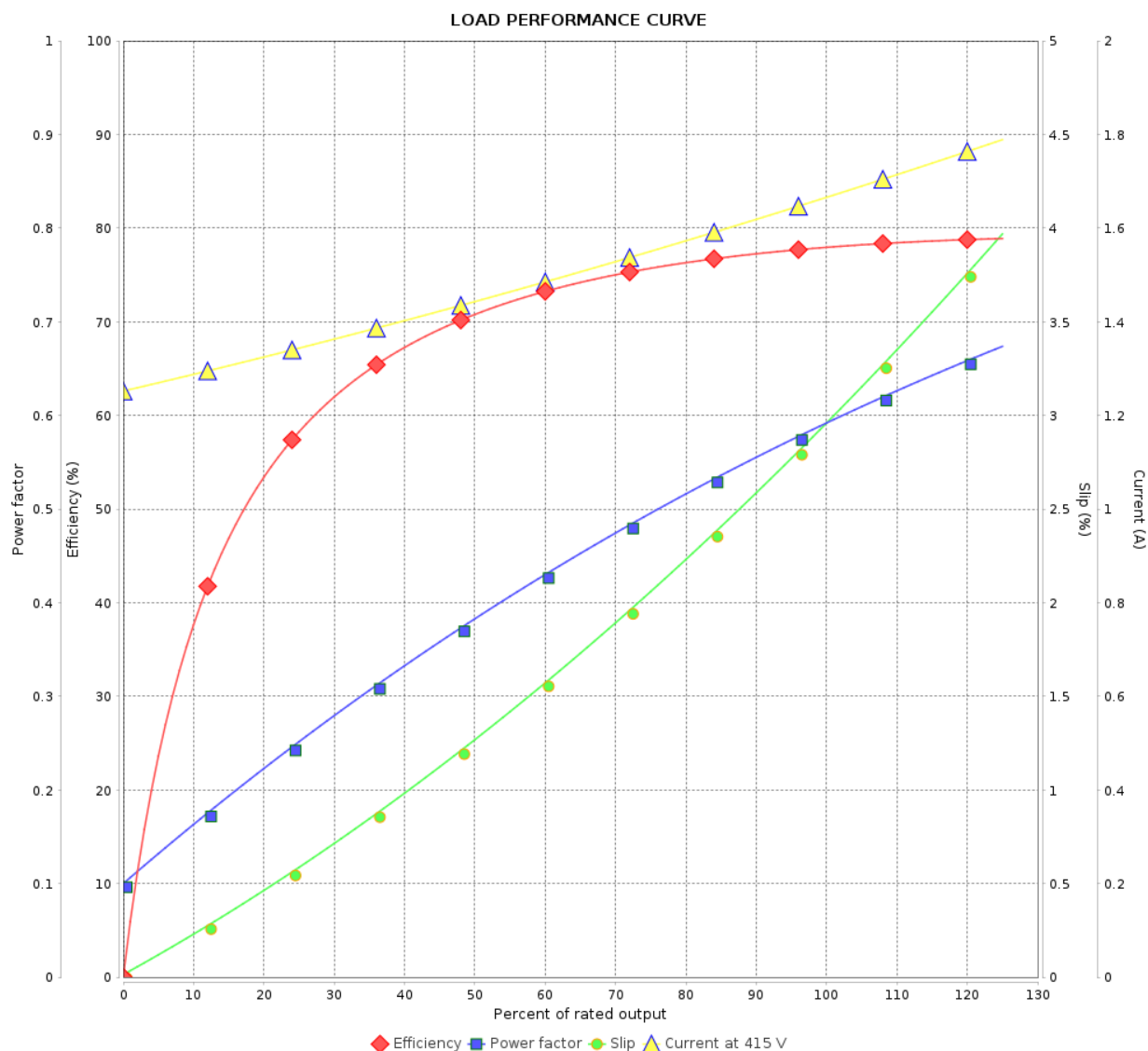
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 415 V 50 Hz 6P IE3

Rated current : 1.66 A  
LRC : 6.3  
Rated torque : 0.561 kgfm  
Locked rotor torque : 320 %  
Breakdown torque : 340 %  
Rated speed : 970 rpm

Moment of inertia (J) : 0.0067 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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

# LOAD PERFORMANCE CURVE

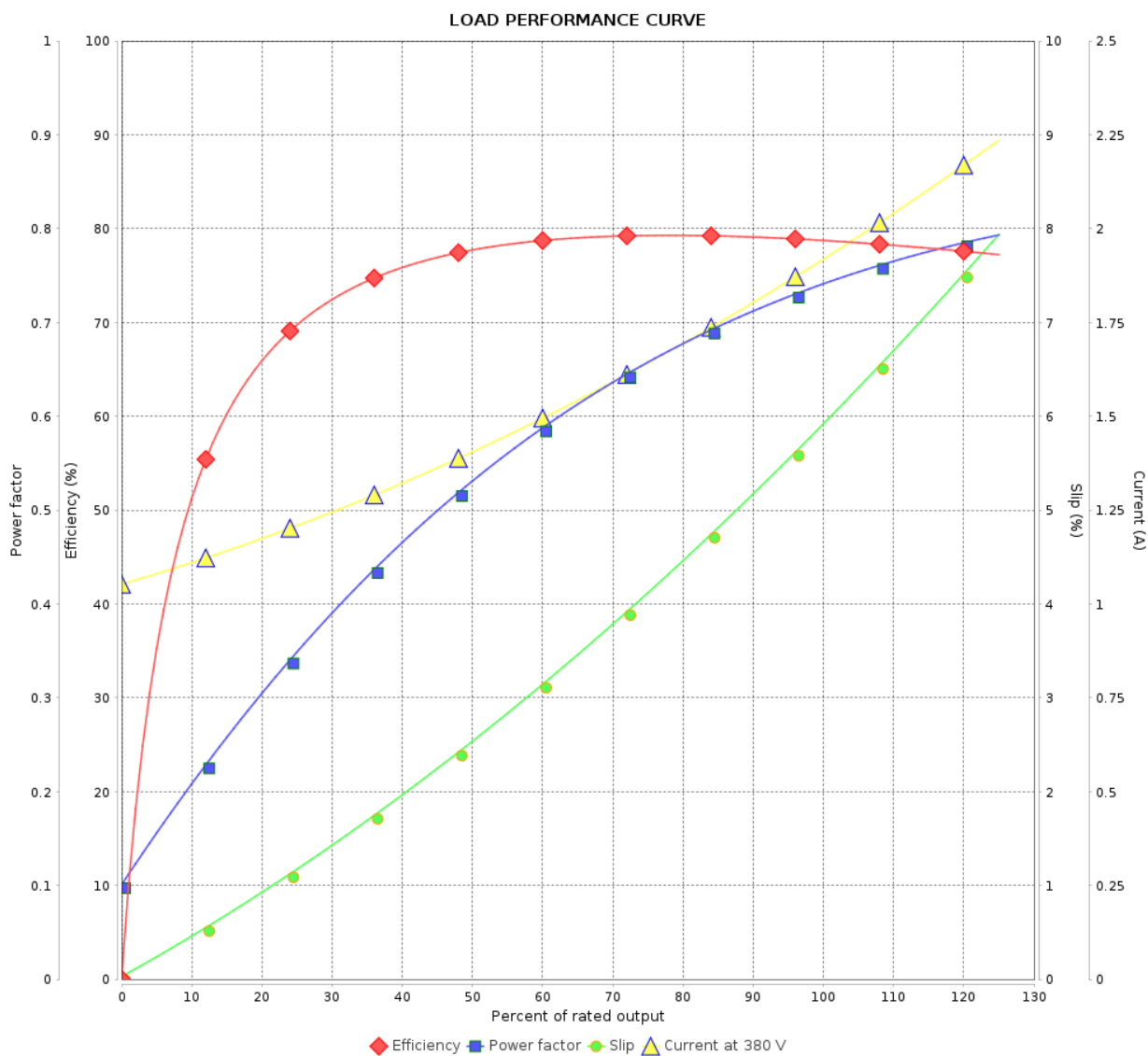
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 380 V 50 Hz 6P IE2

Rated current : 1.96 A  
LRC : 4.8  
Rated torque : 0.772 kgfm  
Locked rotor torque : 200 %  
Breakdown torque : 220 %  
Rated speed : 940 rpm

Moment of inertia (J) : 0.0067 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 9Revision		
Checked by				
Date	21/10/2024			

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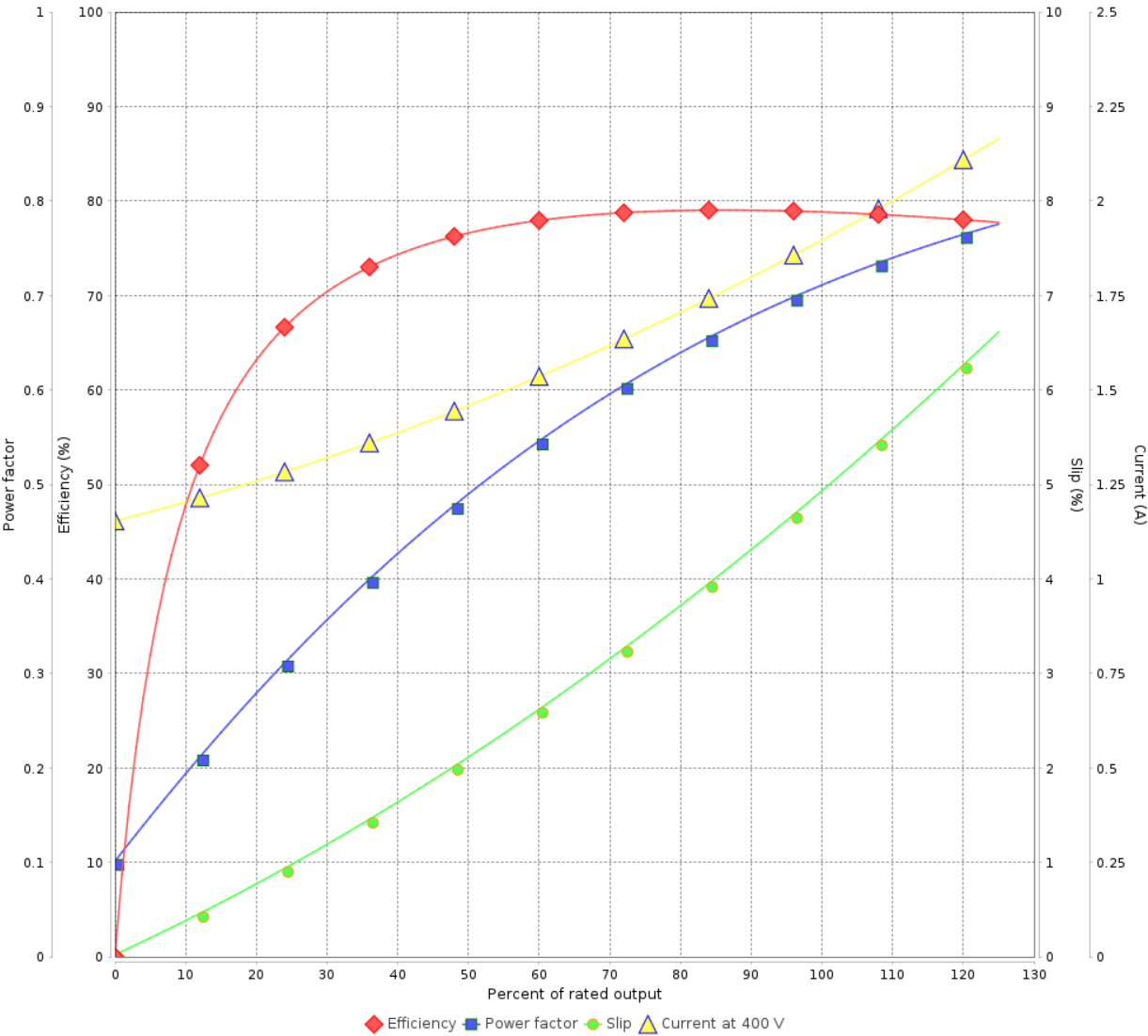
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase      Product code : 13531463

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Performance : 400 V 50 Hz 6P IE2

Rated current	: 1.94 A	Moment of inertia (J)	: 0.0067 kgm <sup>2</sup>
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.764 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 950 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by		Page 8 / 9      Revision			
Checked by					
Date	21/10/2024				



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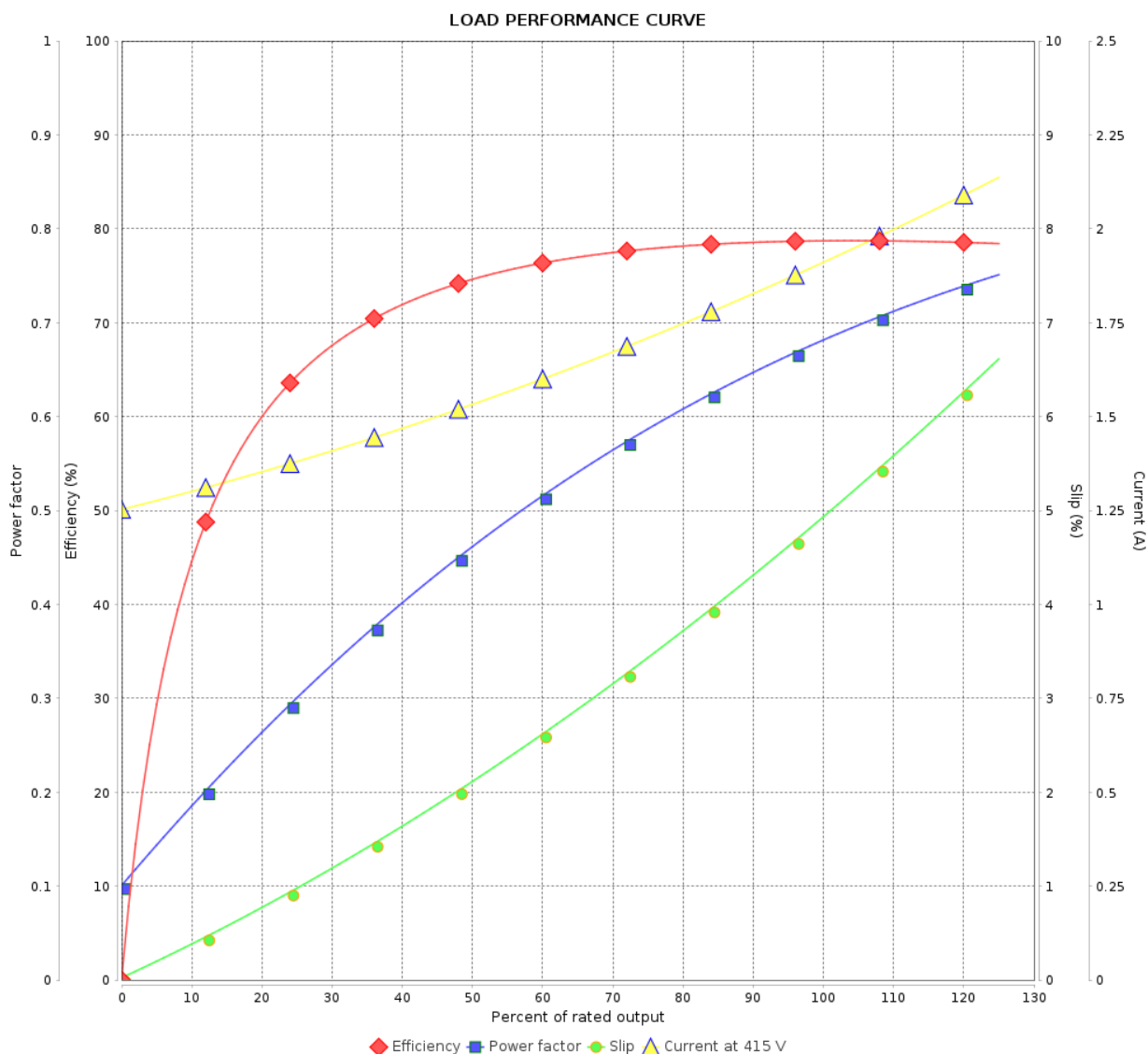
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 13531463



Performance : 415 V 50 Hz 6P IE2

Rated current : 1.95 A  
LRC : 5.5  
Rated torque : 0.764 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 280 %  
Rated speed : 950 rpm

Moment of inertia (J) : 0.0067 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 9 / 9Revision		
Checked by				
Date	21/10/2024			