

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :							
Product line	: W22 NEMA Premium Efficiency Three-Phase	Product code :	12102821				
Frame	: 445/7TC	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>2</sup>	: 1133 kg				
Protection degree	: IP55	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>				
Design	: B						
Output [HP]	250	200	200	200	250	250	250
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]	281	273	263	256	340	322	314
L. R. Amperes [A]	1827	1665	1788	1894	1734	1835	1915
LRC [A]	6.5x(Code G)	6.1x(Code F)	6.8x(Code G)	7.4x(Code H)	5.1x(Code E)	5.7x(Code F)	6.1x(Code F)
No load current [A]	90.0	85.0	90.0	95.0	85.0	90.0	95.0
Rated speed [RPM]	1780	1480	1485	1485	1475	1480	1480
Slip [%]	1.11	1.33	1.00	1.00	1.67	1.33	1.33
Rated torque [kgfm]	102	98.1	97.7	97.7	123	123	123
Locked rotor torque [%]	229	200	260	290	180	200	220
Breakdown torque [%]	240	240	270	300	190	210	229
Service factor	1.15	1.15	1.15	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	105 K	105 K	105 K
Locked rotor time	27s (cold) 15s (hot)	36s (cold) 20s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)	18s (cold) 10s (hot)
Noise level <sup>2</sup>	73.0 dB(A)						
Efficiency (%)	25%						
	50%	95.8	95.0	95.1	95.1	95.4	95.4
	75%	96.2	95.8	95.8	95.8	95.4	95.8
	100%	96.2	95.8	95.8	95.8	95.0	95.4
Power Factor	25%						
	50%	0.75	0.77	0.74	0.72	0.80	0.77
	75%	0.83	0.84	0.83	0.81	0.86	0.84
	100%	0.86	0.87	0.86	0.85	0.87	0.87
Losses at normative operating points (speed;torque), in percentage of rated output power							
Losses (%)	P1 (0,9;1,0)	4.2	4.2	4.2	4.2	4.2	4.2
	P2 (0,5;1,0)	3.5	3.5	3.5	3.5	3.5	3.5
	P3 (0,25;1,0)	3.1	3.1	3.1	3.1	3.1	3.1
	P4 (0,9;0,5)	2.1	2.1	2.1	2.1	2.1	2.1
	P5 (0,5;0,5)	1.5	1.5	1.5	1.5	1.5	1.5
	P6 (0,5;0,25)	1.0	1.0	1.0	1.0	1.0	1.0
	P7 (0,25;0,25)	0.6	0.6	0.6	0.6	0.6	0.6
Bearing type	: Drive end 6319 C3	Non drive end 6316 C3	Foundation loads				
Sealing	: Viton	Viton	Max. traction	: 1900 kgf			
	: Oil Seal	Oil Seal	Max. compression	: 3033 kgf			
Lubrication interval	: 8000 h	10000 h					
Lubricant amount	: 45 g	34 g					
Lubricant type	: Mobil Polyrex EM						
Rev.	Changes Summary			Performed	Checked	Date	
Performed by							
Checked by					Page	Revision	
Date	19/03/2024				1 / 9		

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

Notes

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	19/03/2024		2 / 9	

# LOAD PERFORMANCE CURVE

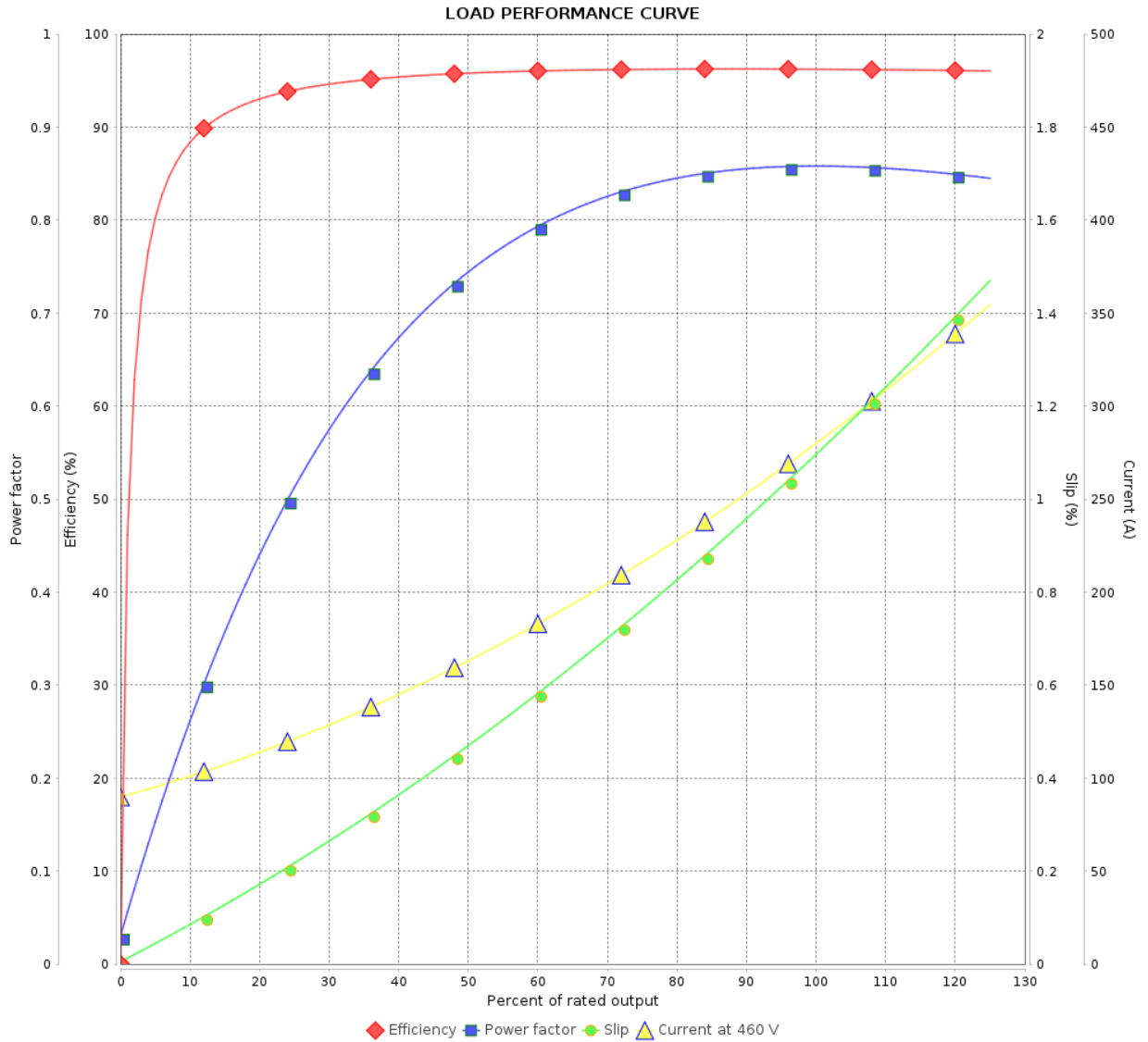
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 460 V 60 Hz 4P

Rated current : 281 A  
 LRC : 6.5  
 Rated torque : 102 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 240 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 3.77 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

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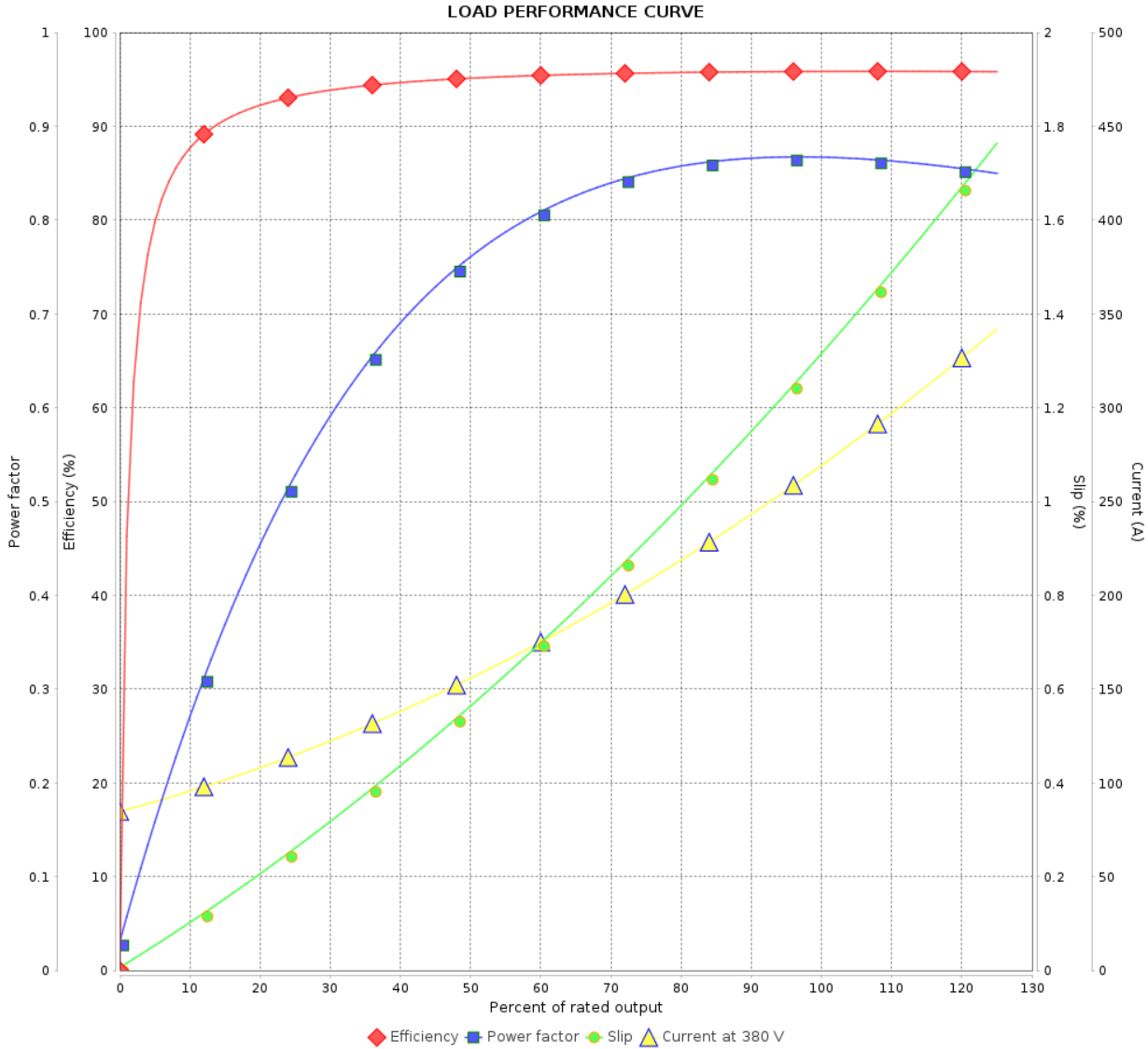
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 380 V 50 Hz 4P IE3

Rated current : 273 A  
 LRC : 6.1  
 Rated torque : 98.1 kgfm  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 3.77 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 9	Revision
Checked by				
Date	19/03/2024			

# LOAD PERFORMANCE CURVE

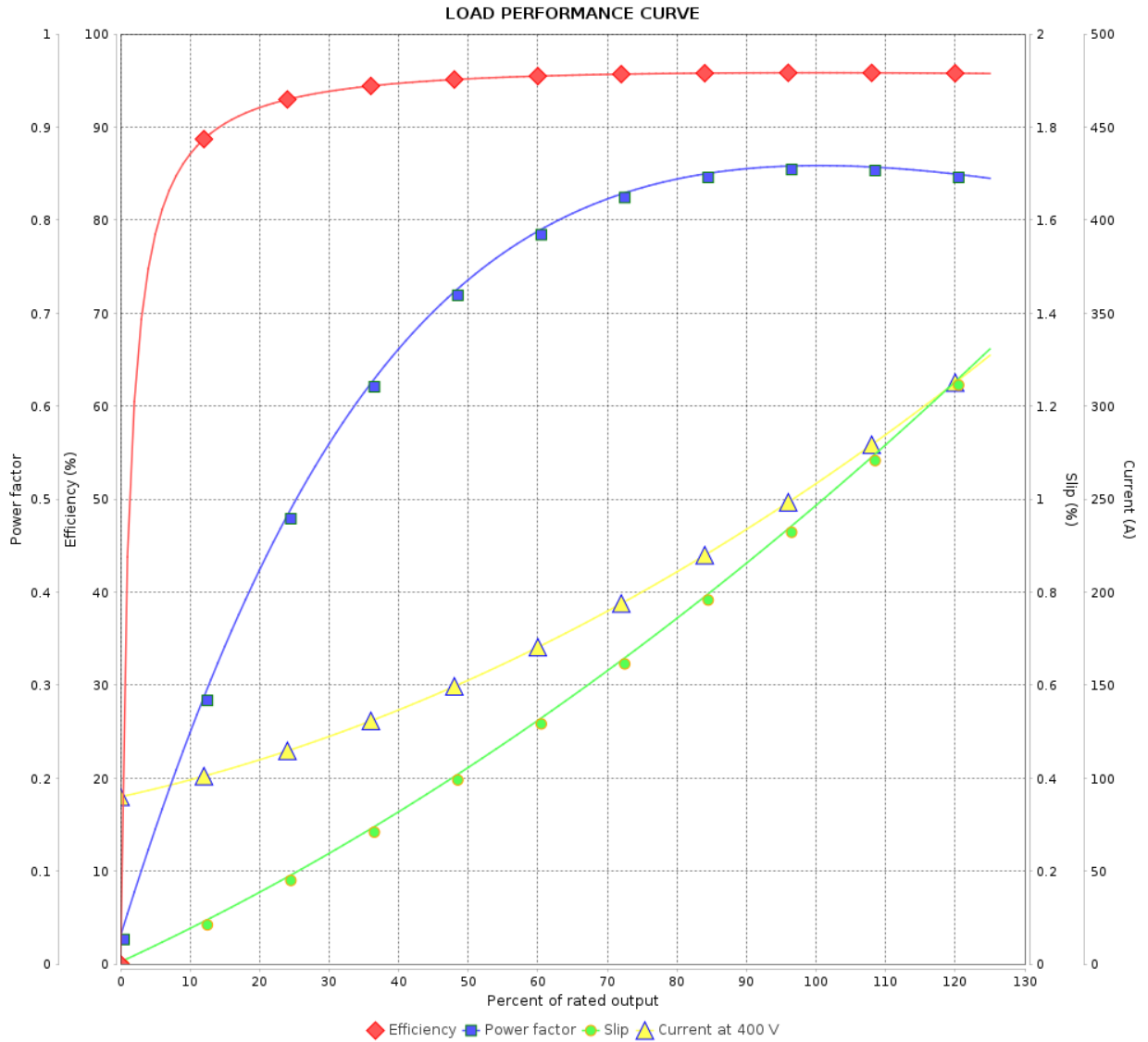
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 400 V 50 Hz 4P IE3

Rated current : 263 A  
 LRC : 6.8  
 Rated torque : 97.7 kgfm  
 Locked rotor torque : 260 %  
 Breakdown torque : 270 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 3.77 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 / 9		
Date		19/03/2024		

# LOAD PERFORMANCE CURVE

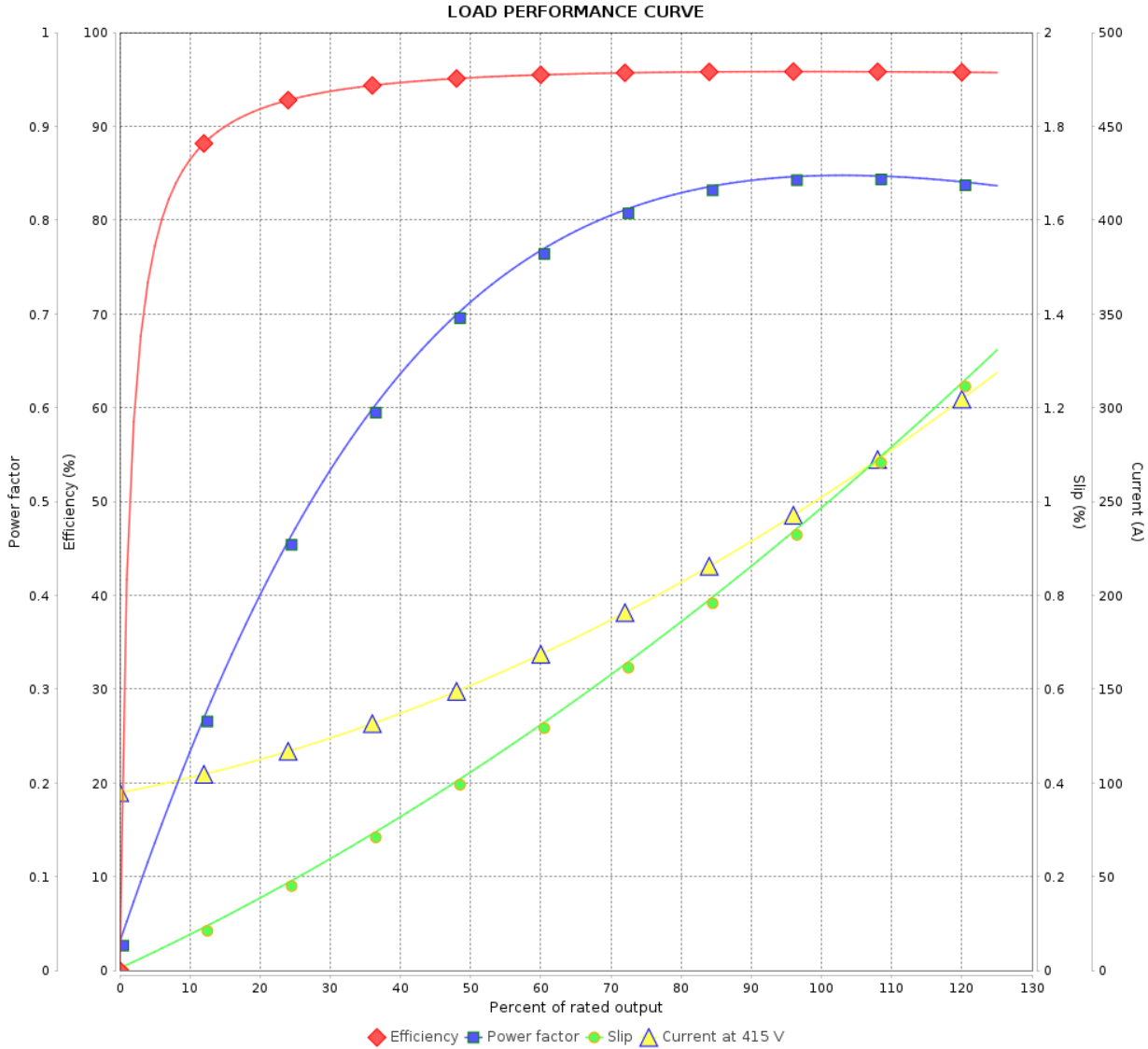
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 415 V 50 Hz 4P IE3

Rated current	: 256 A	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 97.7 kgfm	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 9	Revision
Checked by				
Date	19/03/2024			

# LOAD PERFORMANCE CURVE

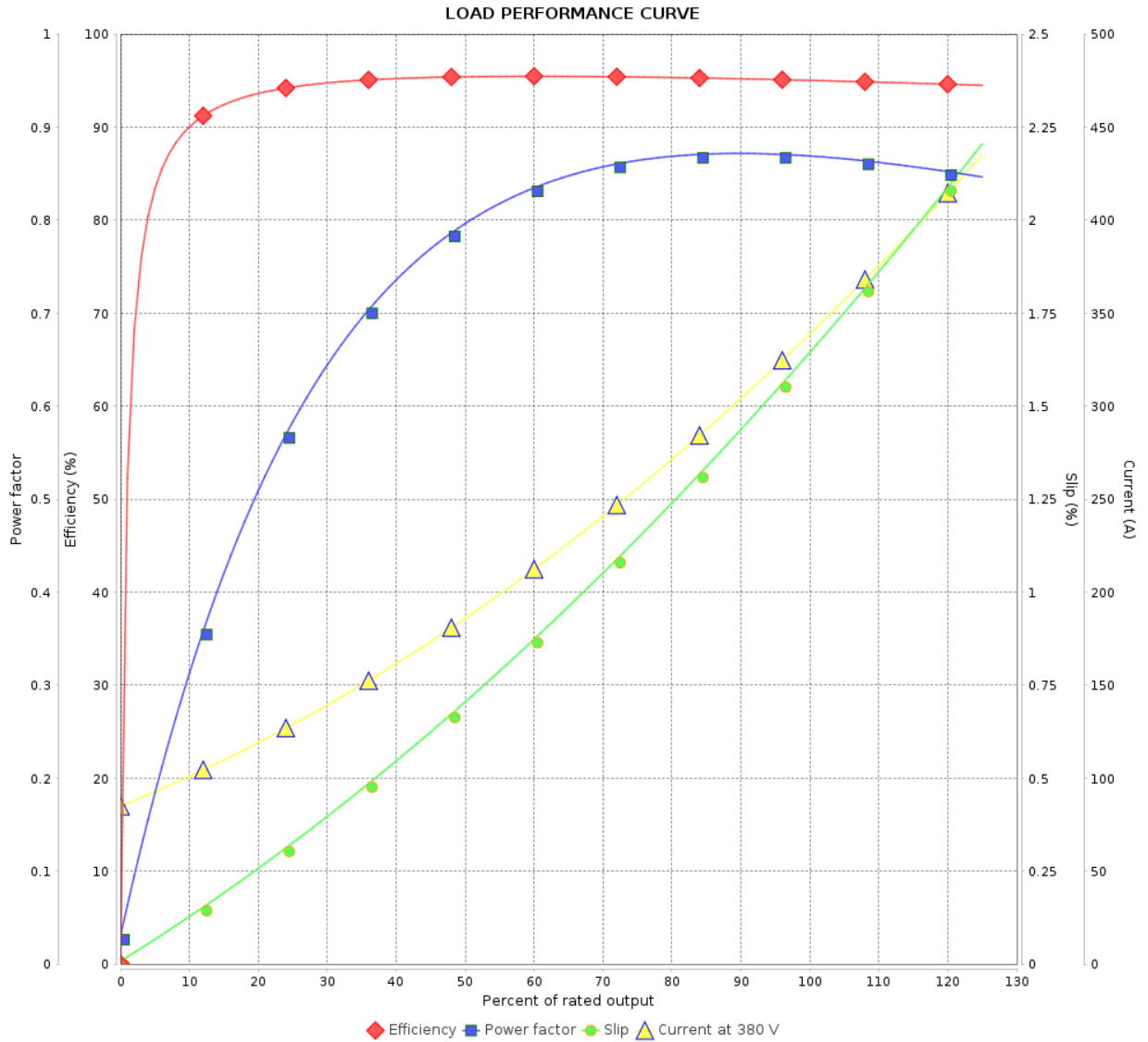
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 380 V 50 Hz 4P IE1

Rated current : 340 A  
 LRC : 5.1  
 Rated torque : 123 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 190 %  
 Rated speed : 1475 rpm

Moment of inertia (J) : 3.77 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# LOAD PERFORMANCE CURVE

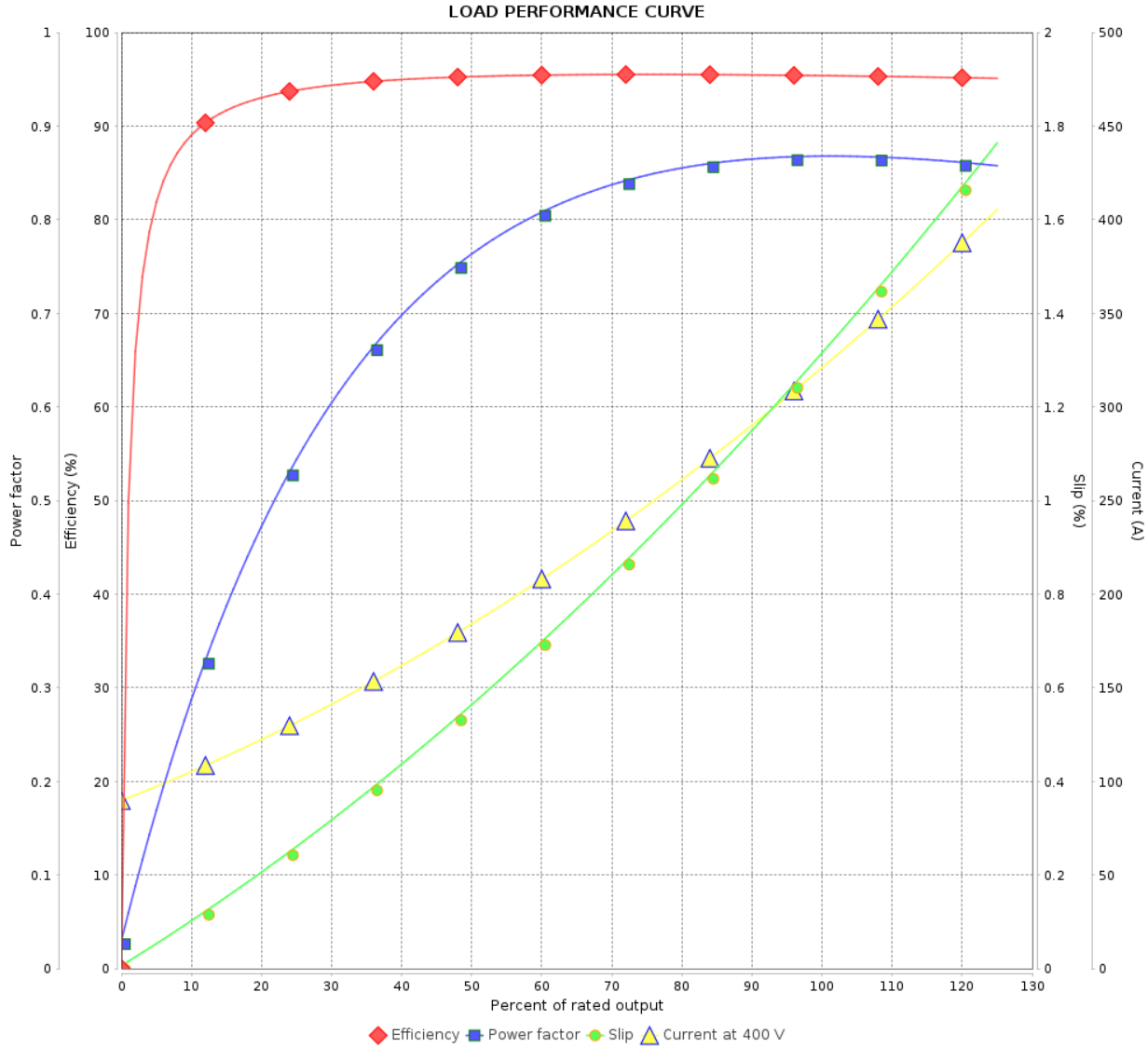
Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 400 V 50 Hz 4P IE2

Rated current	: 322 A	Moment of inertia (J)	: 3.77 kgm <sup>2</sup>
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 123 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 9	Revision
Checked by				
Date	19/03/2024			



# LOAD PERFORMANCE CURVE

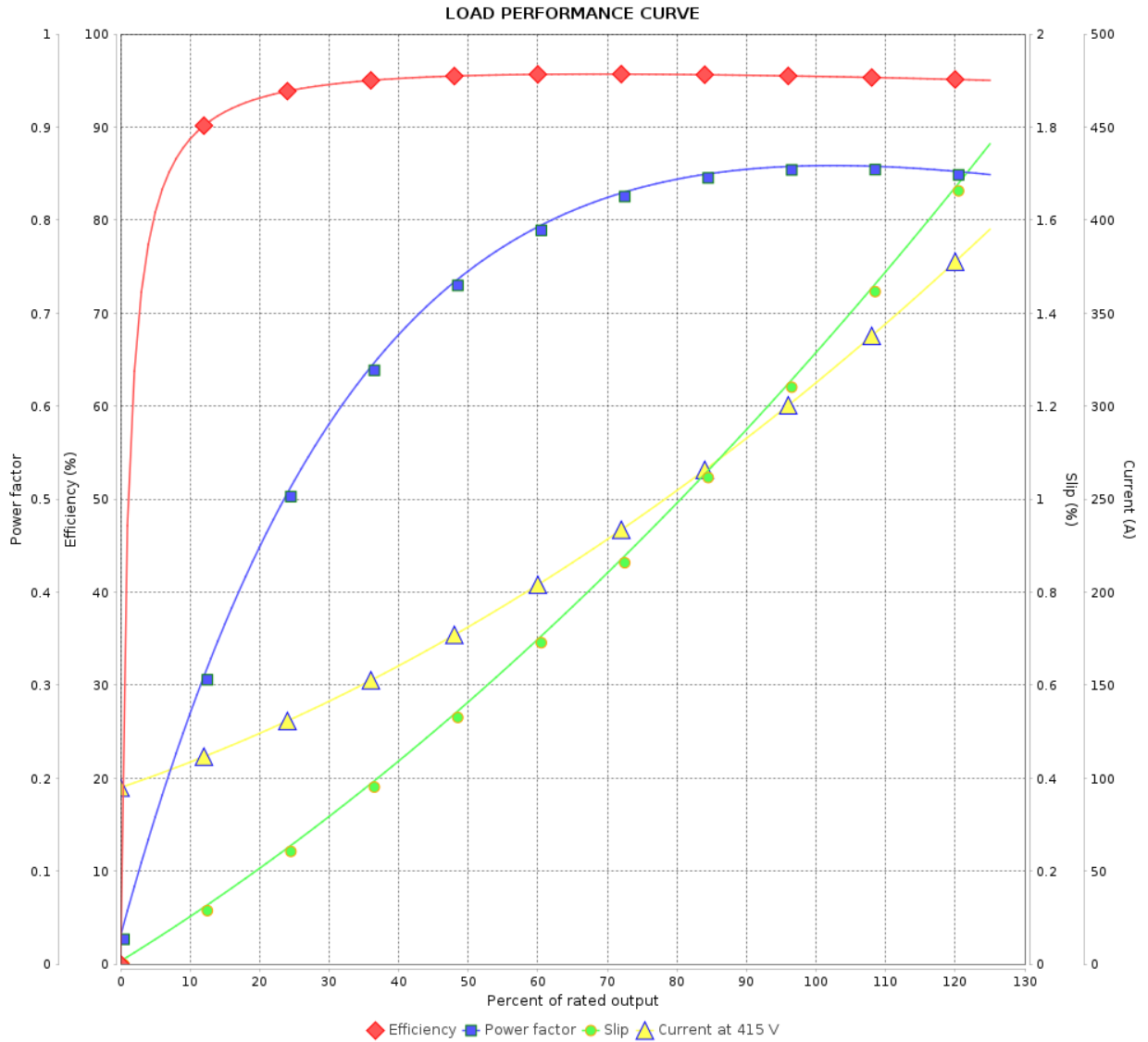
## Three Phase Induction Motor - Squirrel Cage



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

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12102821



Performance : 415 V 50 Hz 4P IE2

Rated current : 314 A  
 LRC : 6.1  
 Rated torque : 123 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 229 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 3.77 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				