

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer								
Product line	: NEMA Premium Efficiency Three-Phase			Product code :	13472771			
				Catalog # :	25018ET3G447TS-W22			
Frame	: 445/7TS			Cooling method	: IC411 - TEFC			
Insulation class	: F			Mounting	: F-1			
Duty cycle	: Cont.(S1)			Rotation ¹	: Both (CW and CCW)			
Ambient temperature	: -20°C to +40°C			Starting method	: Direct On Line			
Altitude	: 1000 m.a.s.l.			Approx. weight ²	: 2520 lb			
Protection degree	: IP55			Moment of inertia (J)	: 89.6 sq.ft.lb			
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 [ft.lb]	738	710	707	707	890	887	887	
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 ²	73.0 dB(A)							
Efficiency (%)	25%	95.7	94.8	95.0	95.0	95.6	95.3	95.6
	50%	95.8	95.0	95.1	95.1	95.4	95.4	95.4
	75%	96.2	95.8	95.8	95.8	95.4	95.4	95.8
	100%	96.2	95.8	95.8	95.8	95.0	95.4	95.4
Power Factor	25%	0.50	0.52	0.49	0.46	0.57	0.54	0.51
	50%	0.75	0.77	0.74	0.72	0.80	0.77	0.75
	75%	0.83	0.84	0.83	0.81	0.86	0.84	0.83
	100%	0.86	0.87	0.86	0.85	0.87	0.87	0.86
Bearing type	: Drive end 6314 C3 Non drive end 6314 C3		Foundation loads					
Sealing	: WSeal WSeal		Max. traction : 4179 lb					
Lubrication interval	: 12000 h 12000 h		Max. compression : 6699 lb					
Lubricant amount	: 27 g 27 g							
Lubricant type	: Mobil Polyrex EM							
Notes								
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.				These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.				
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



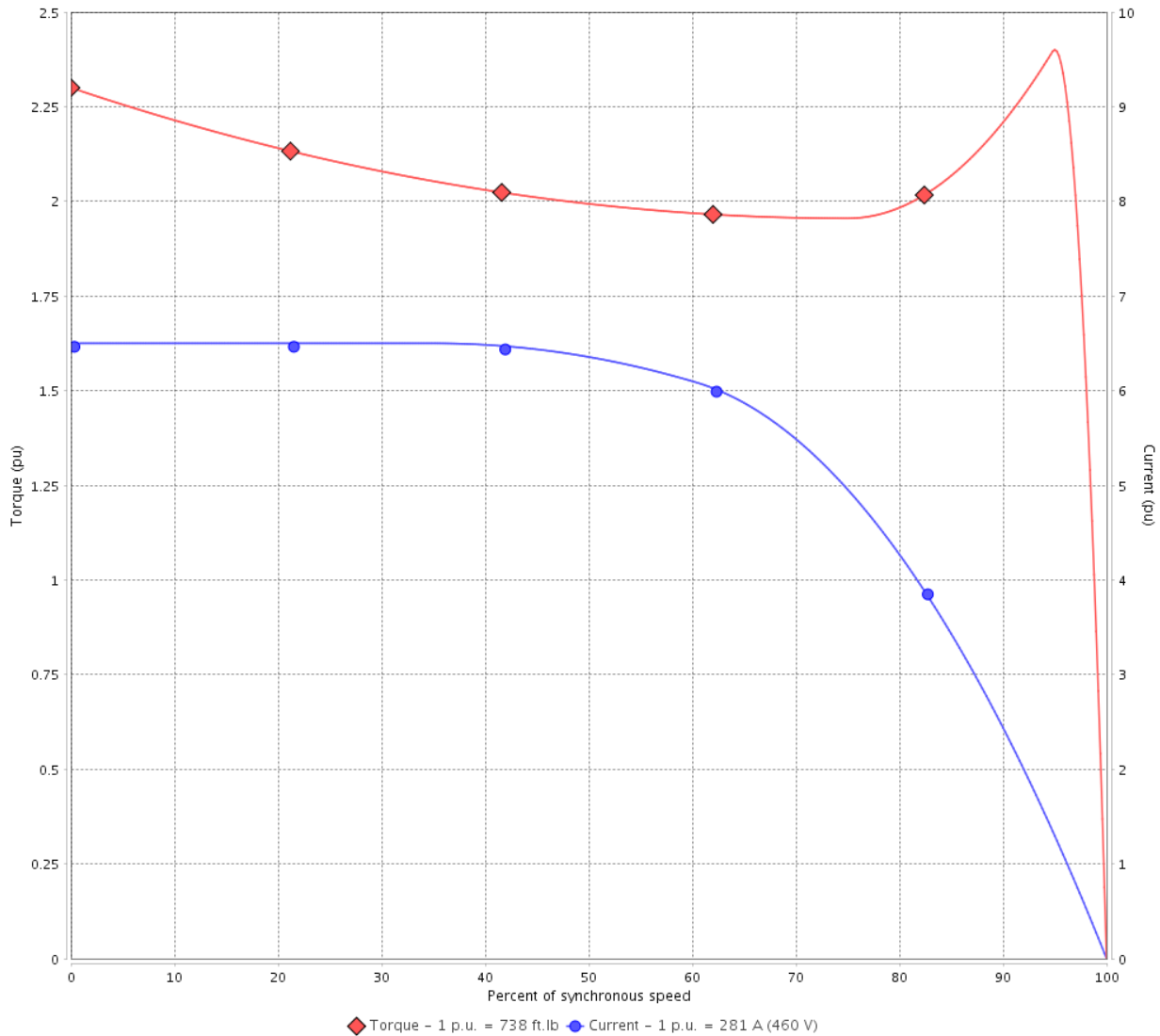
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 281 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 738 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



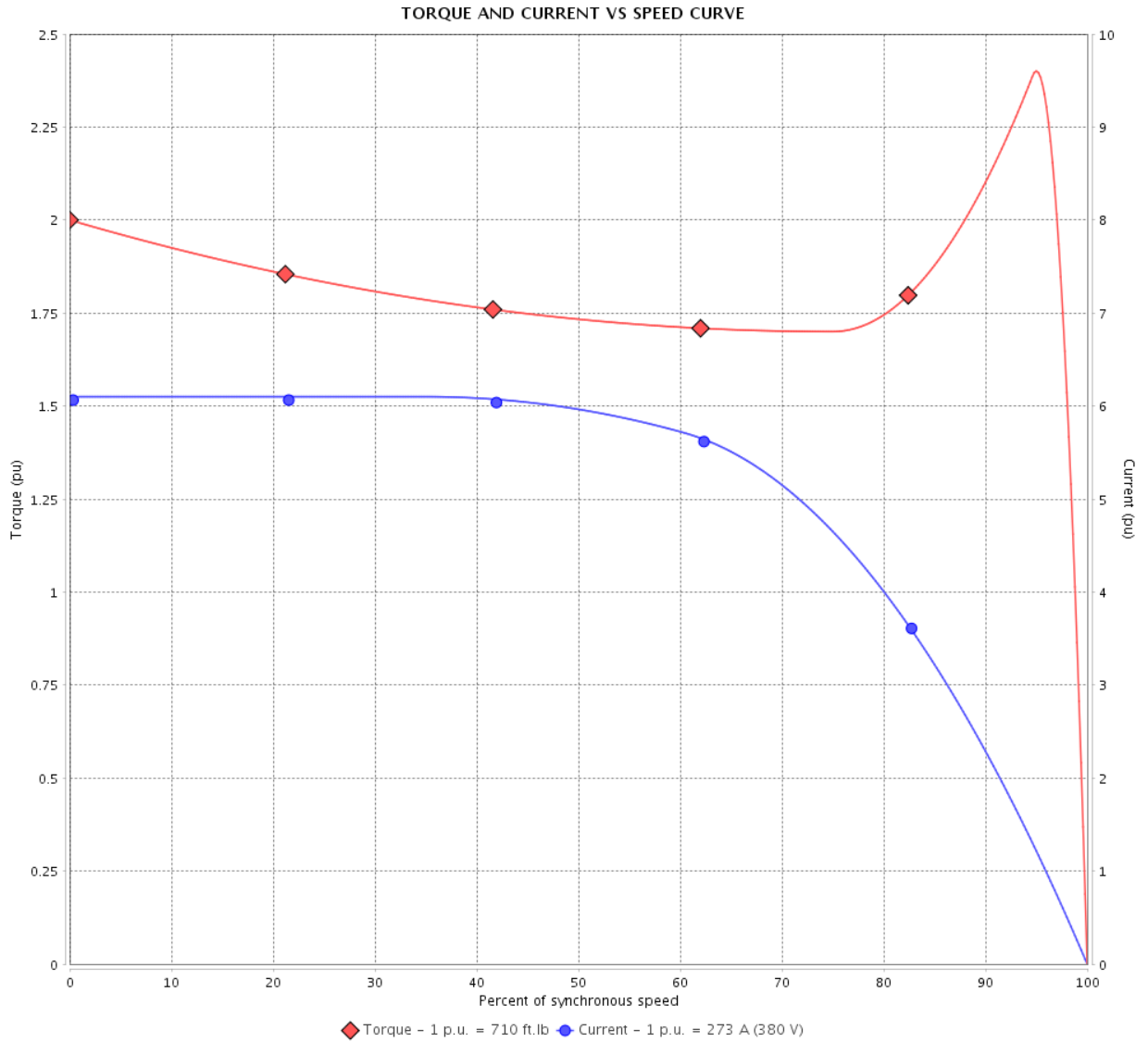
Three Phase Induction Motor - Squirrel Cage

Customer :

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Product code : 13472771

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 273 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 710 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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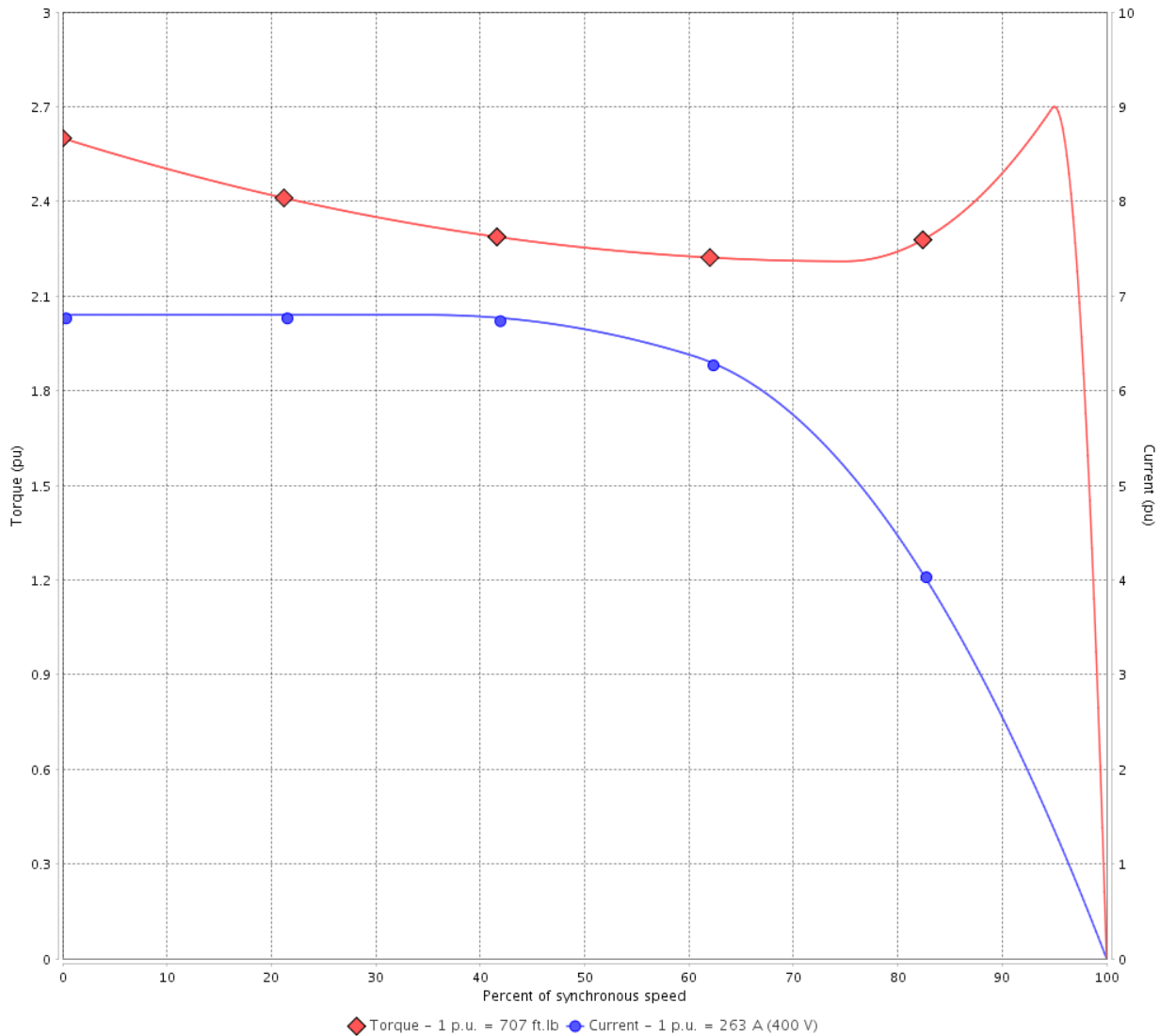
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 263 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 707 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



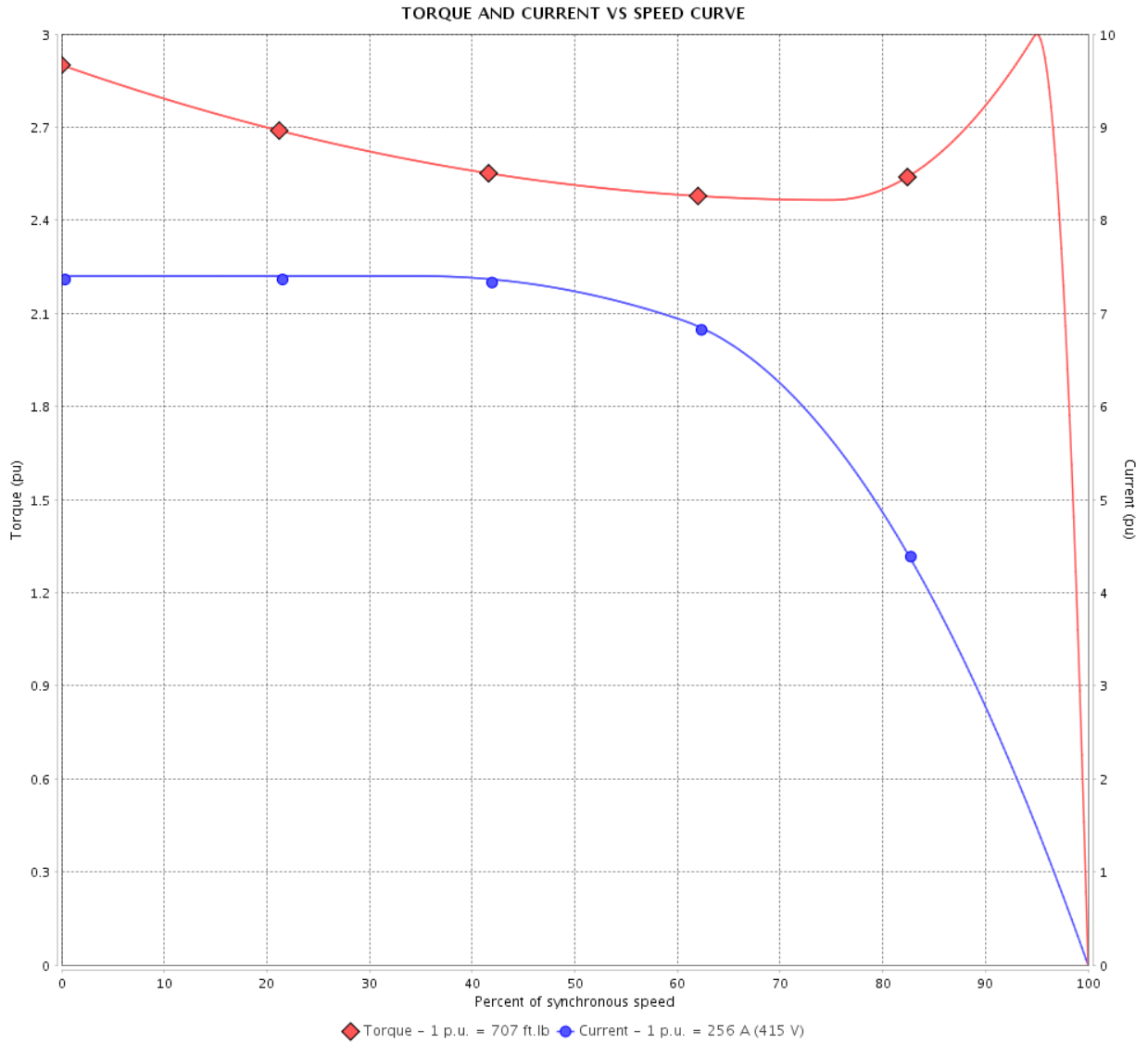
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Product code : 13472771

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Performance : 415 V 50 Hz 4P IE3

Rated current	: 256 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 707 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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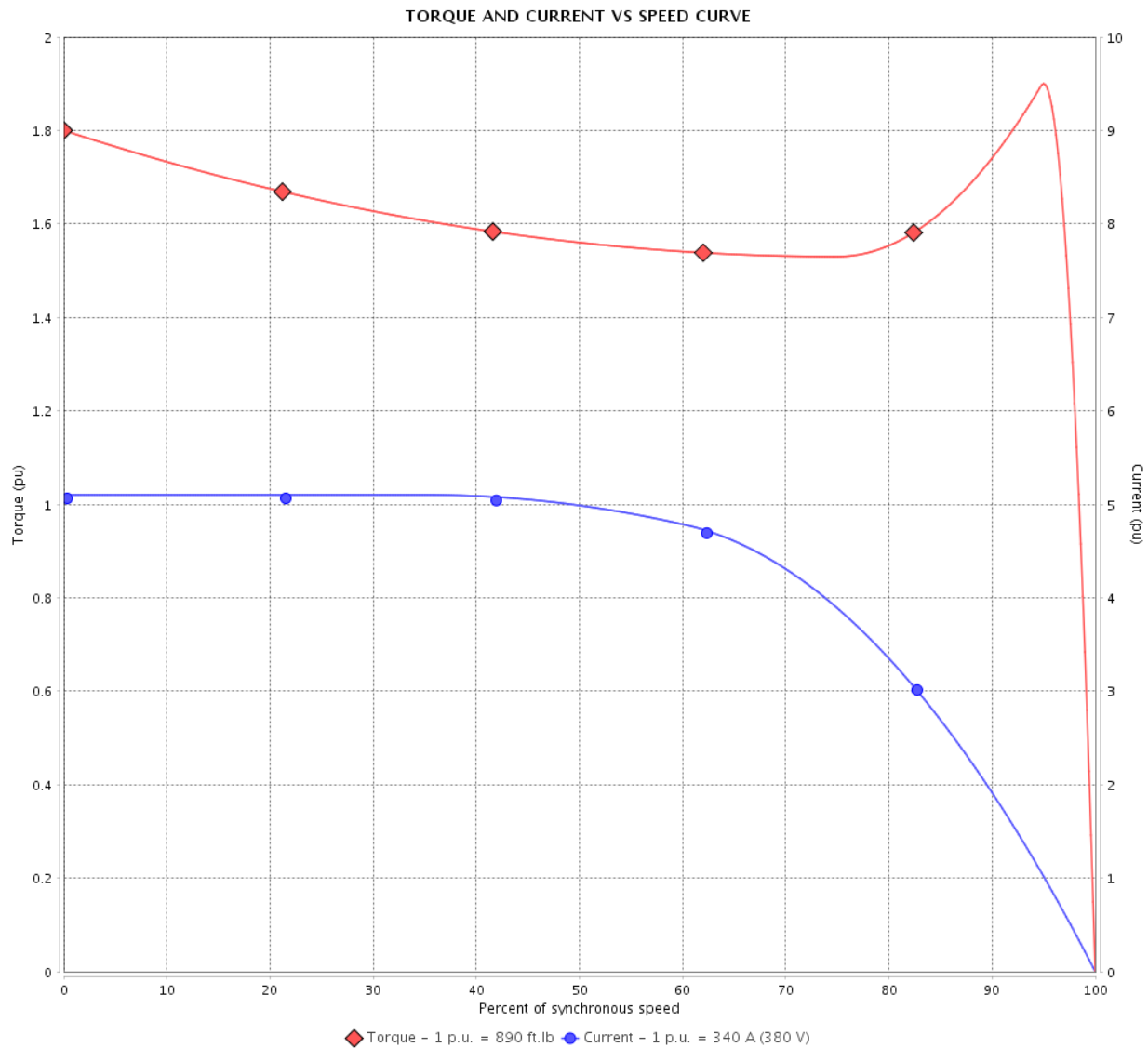


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 380 V 50 Hz 4P IE1

Rated current	: 340 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 890 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



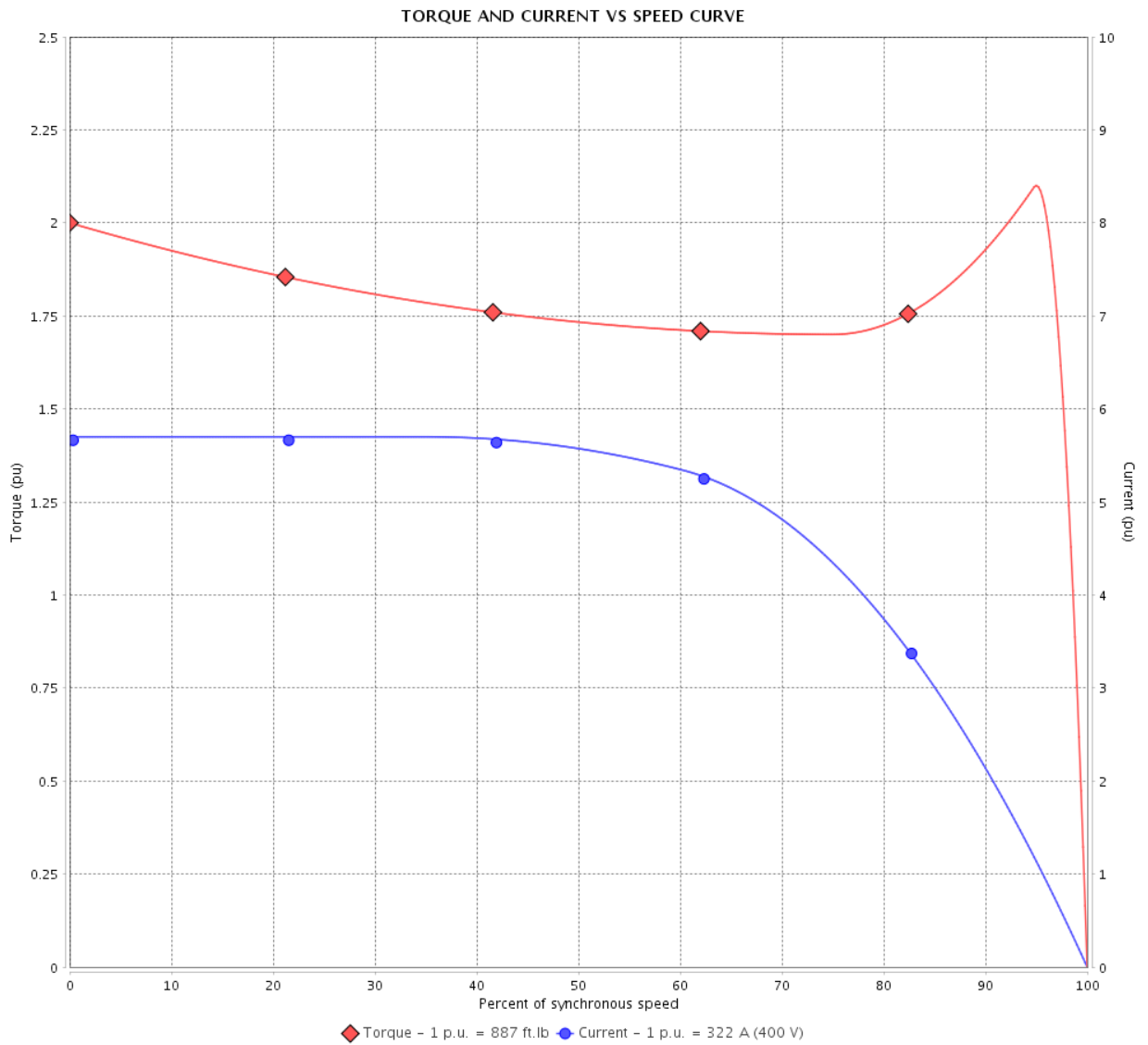
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Customer :

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Catalog # : 25018ET3G447TS-W22



Performance : 400 V 50 Hz 4P IE2

Rated current	: 322 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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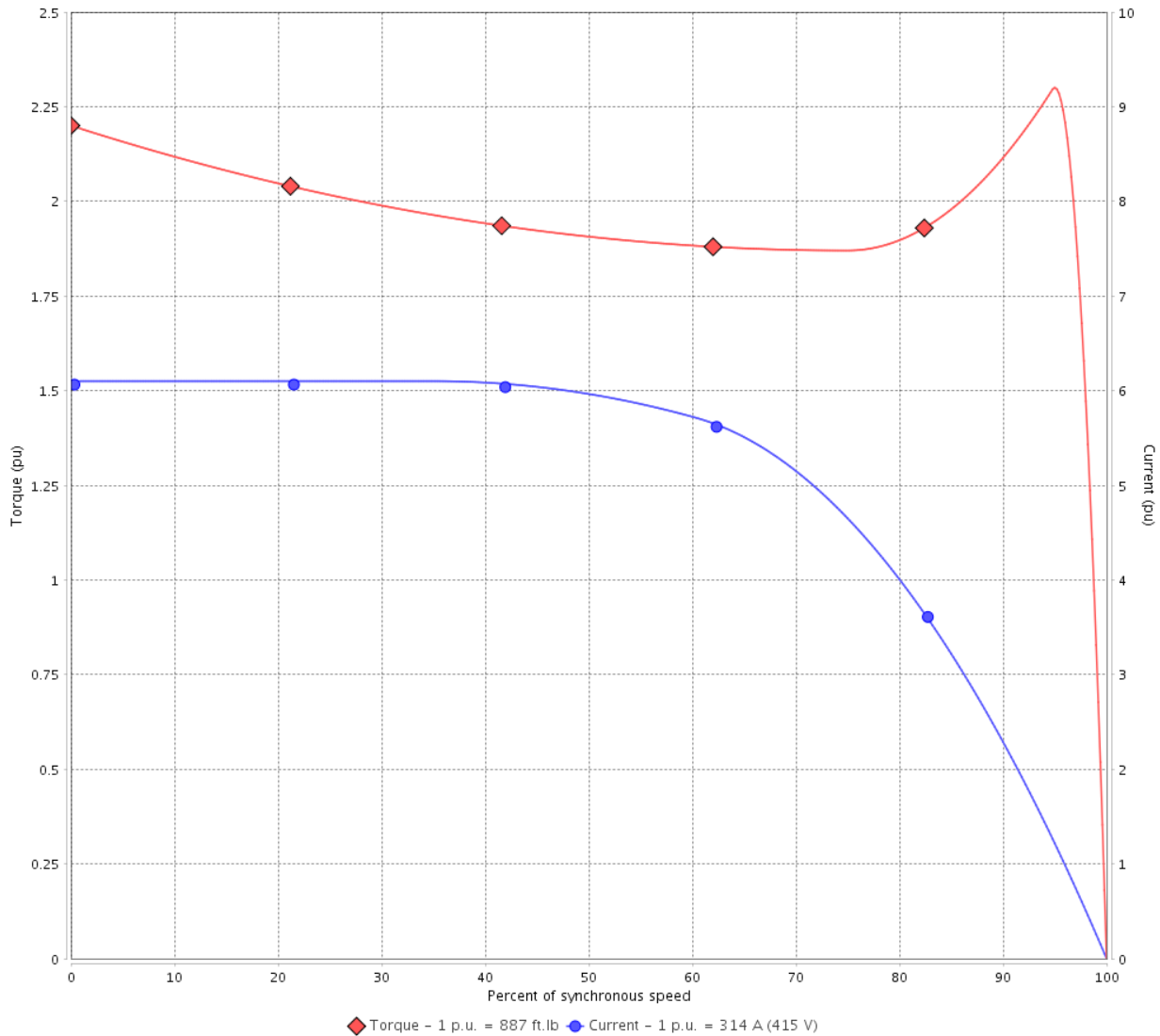
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 314 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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Three Phase Induction Motor - Squirrel Cage

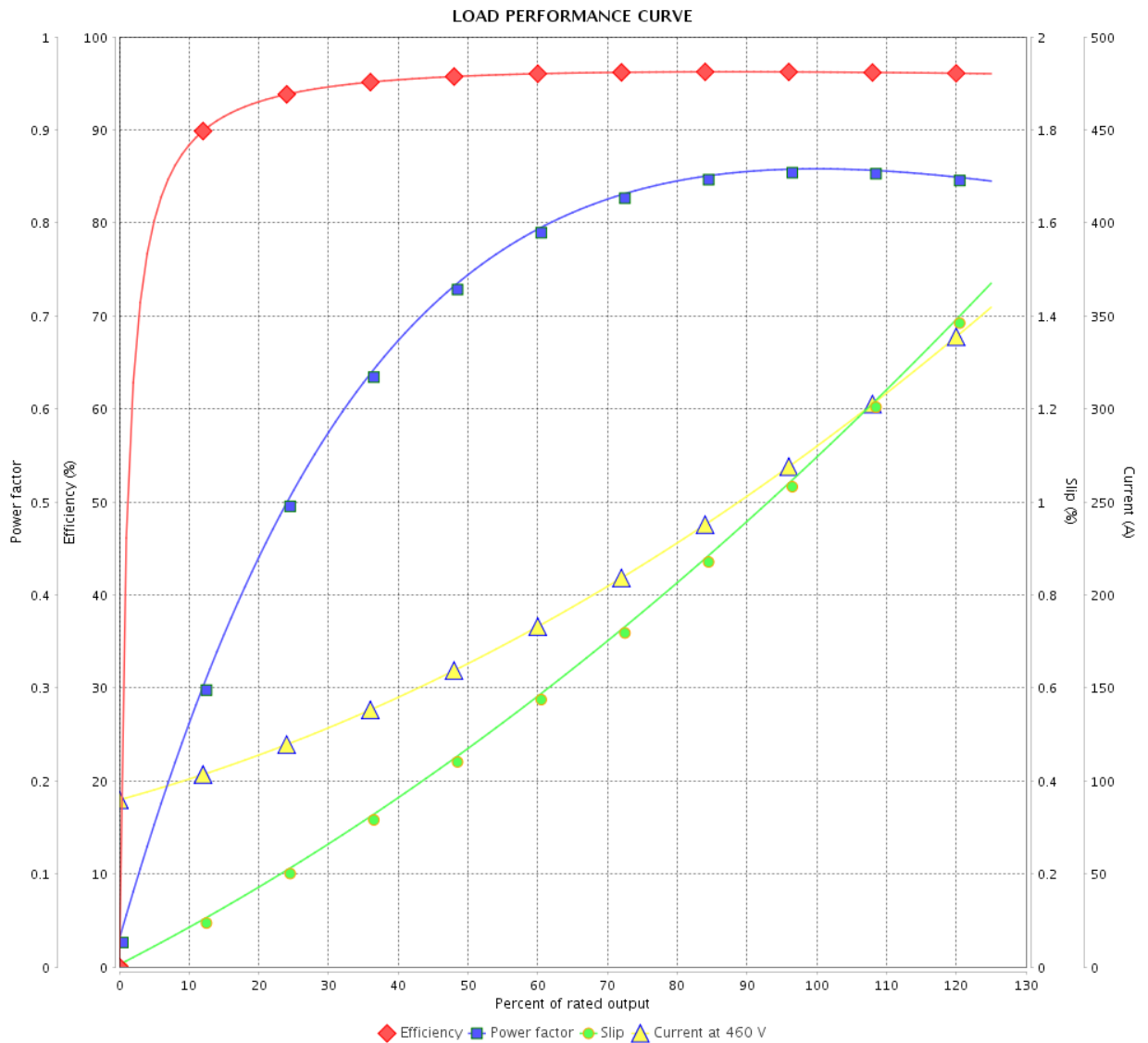


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Performance : 460 V 60 Hz 4P

Rated current : 281 A
 LRC : 6.5
 Rated torque : 738 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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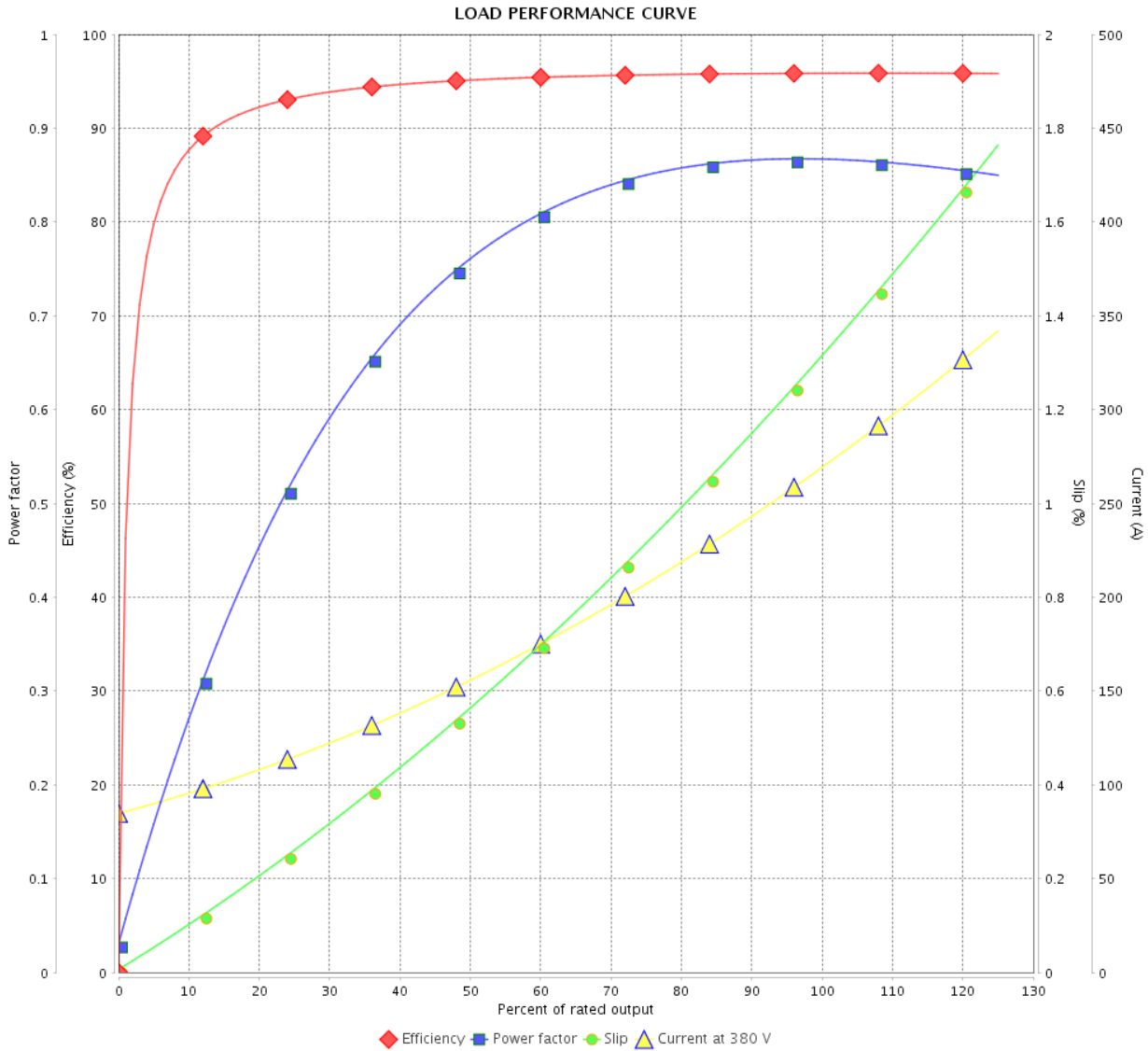


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Performance : 380 V 50 Hz 4P IE3

Rated current : 273 A
 LRC : 6.1
 Rated torque : 710 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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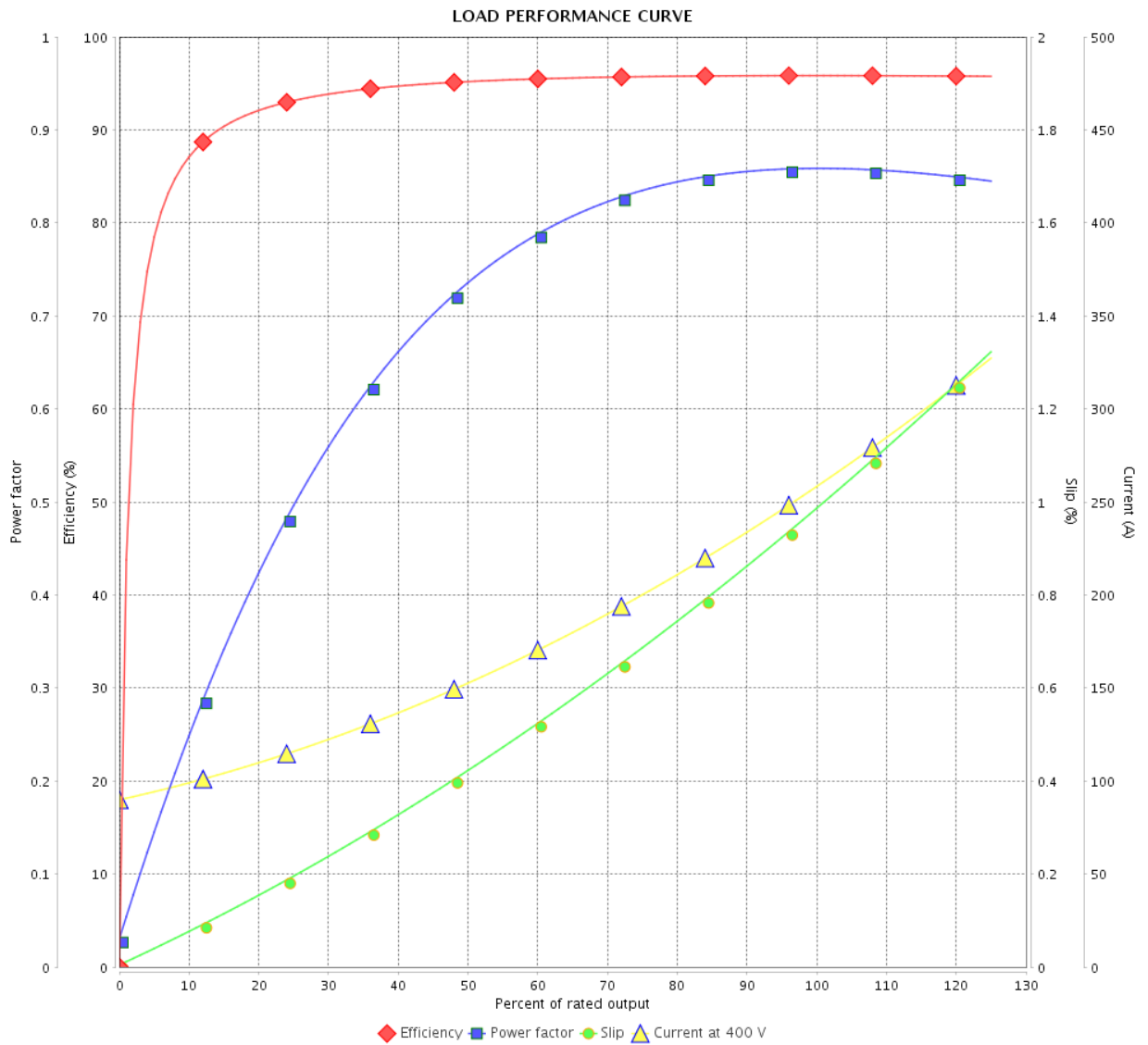


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Performance : 400 V 50 Hz 4P IE3

Rated current : 263 A
 LRC : 6.8
 Rated torque : 707 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 270 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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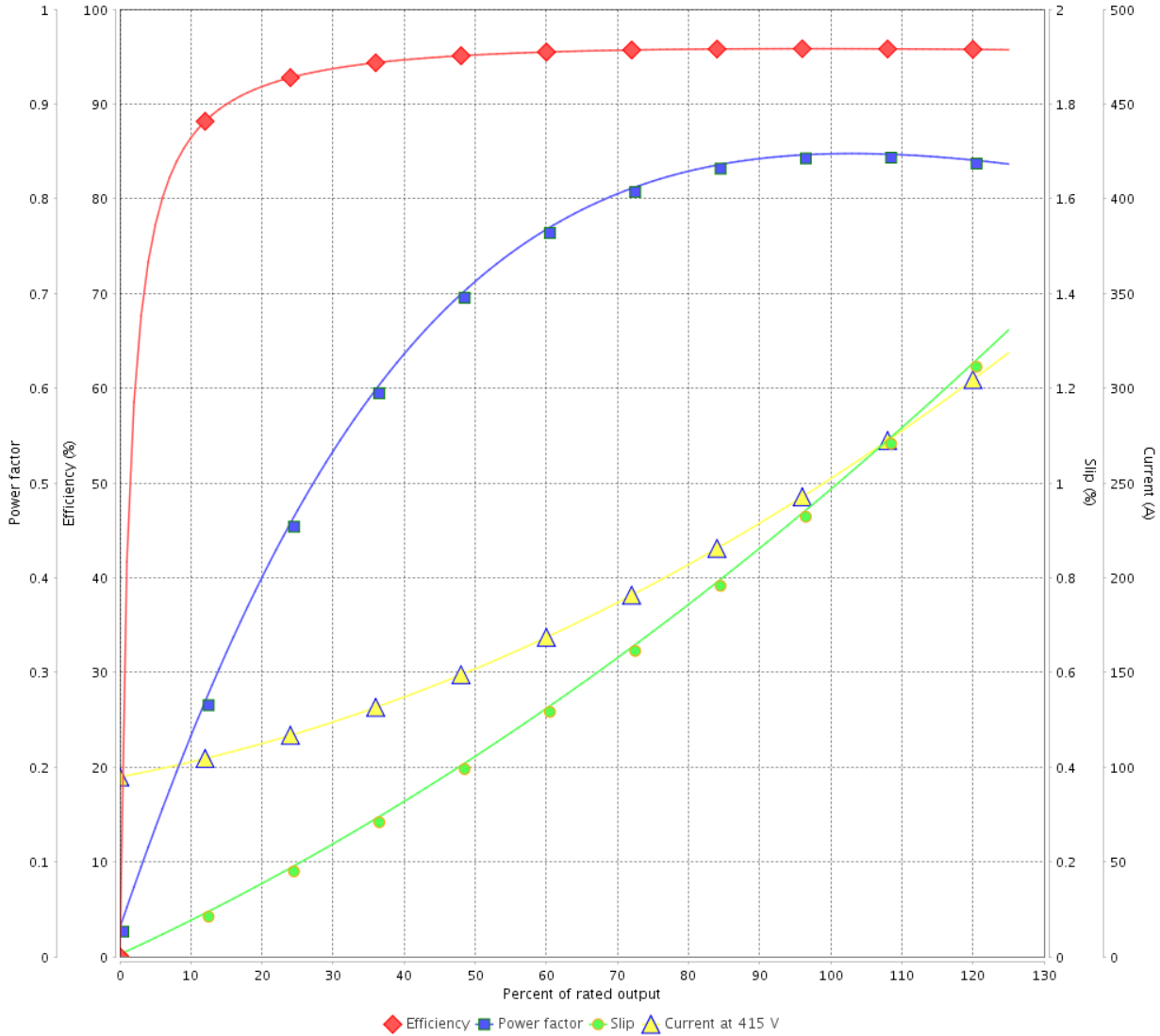
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Performance : 415 V 50 Hz 4P IE3

Rated current : 256 A
 LRC : 7.4
 Rated torque : 707 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 300 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

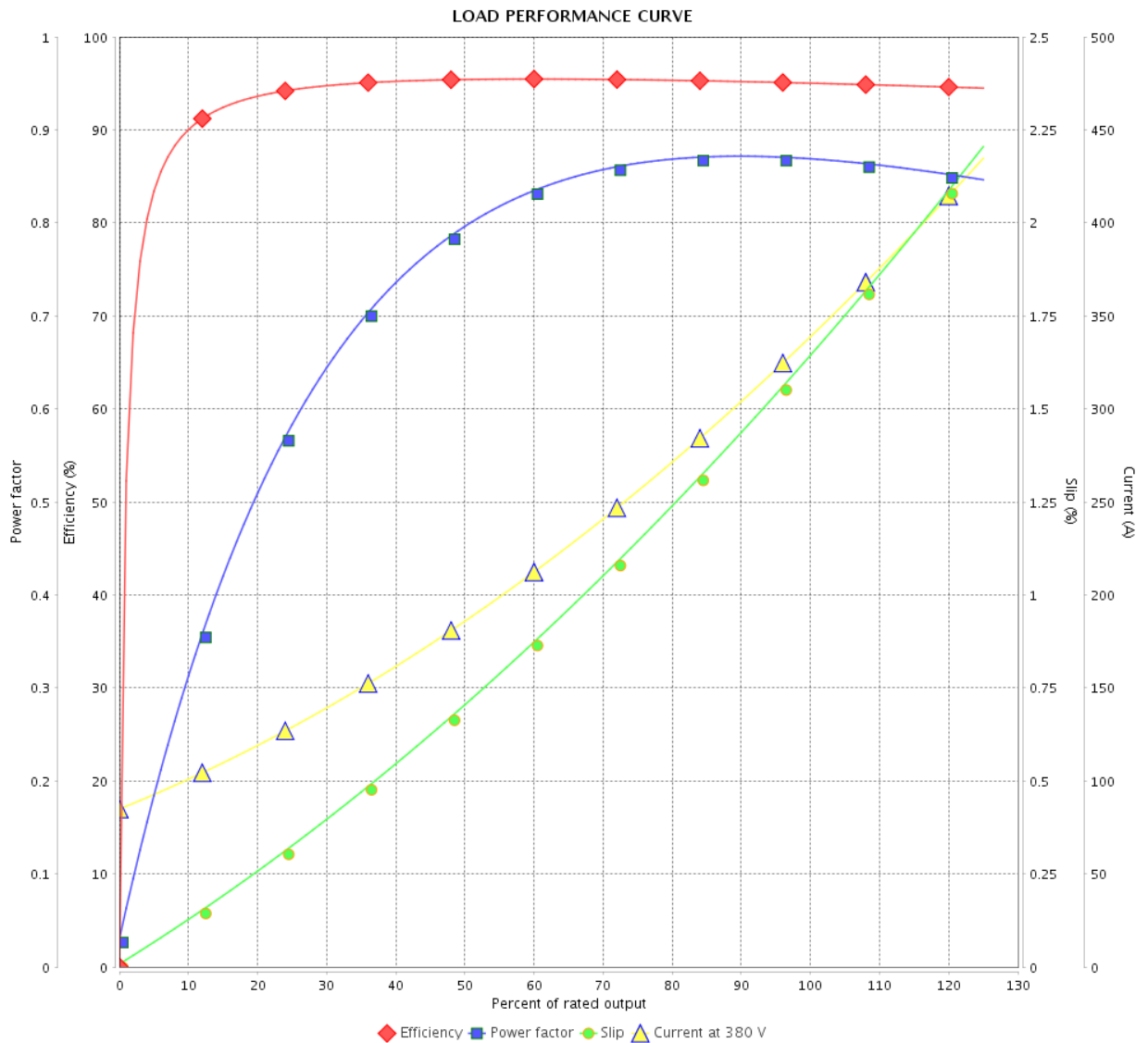


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Product code : 13472771

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Performance : 380 V 50 Hz 4P IE1

Rated current : 340 A
 LRC : 5.1
 Rated torque : 890 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 190 %
 Rated speed : 1475 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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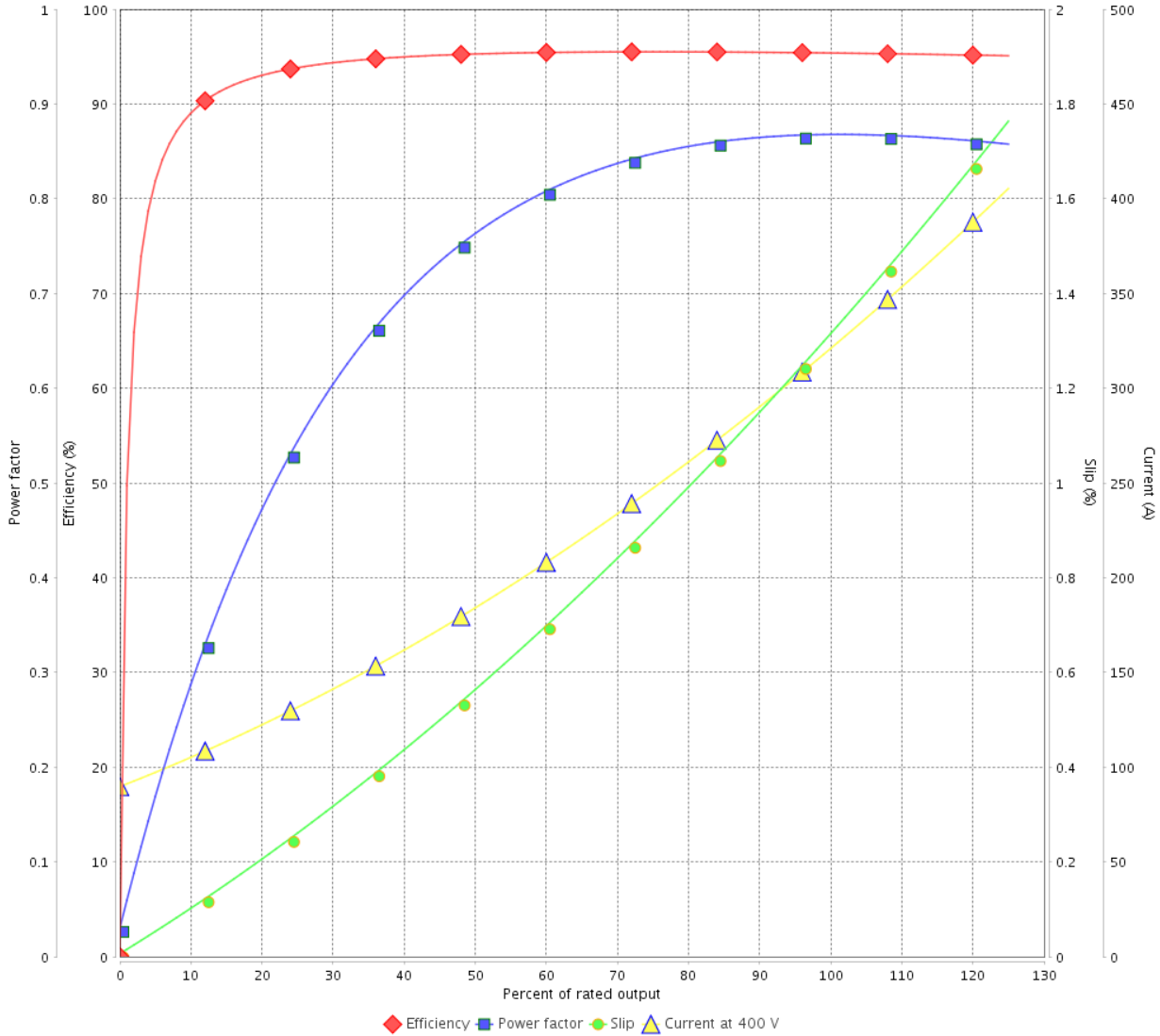
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current : 322 A
 LRC : 5.7
 Rated torque : 887 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

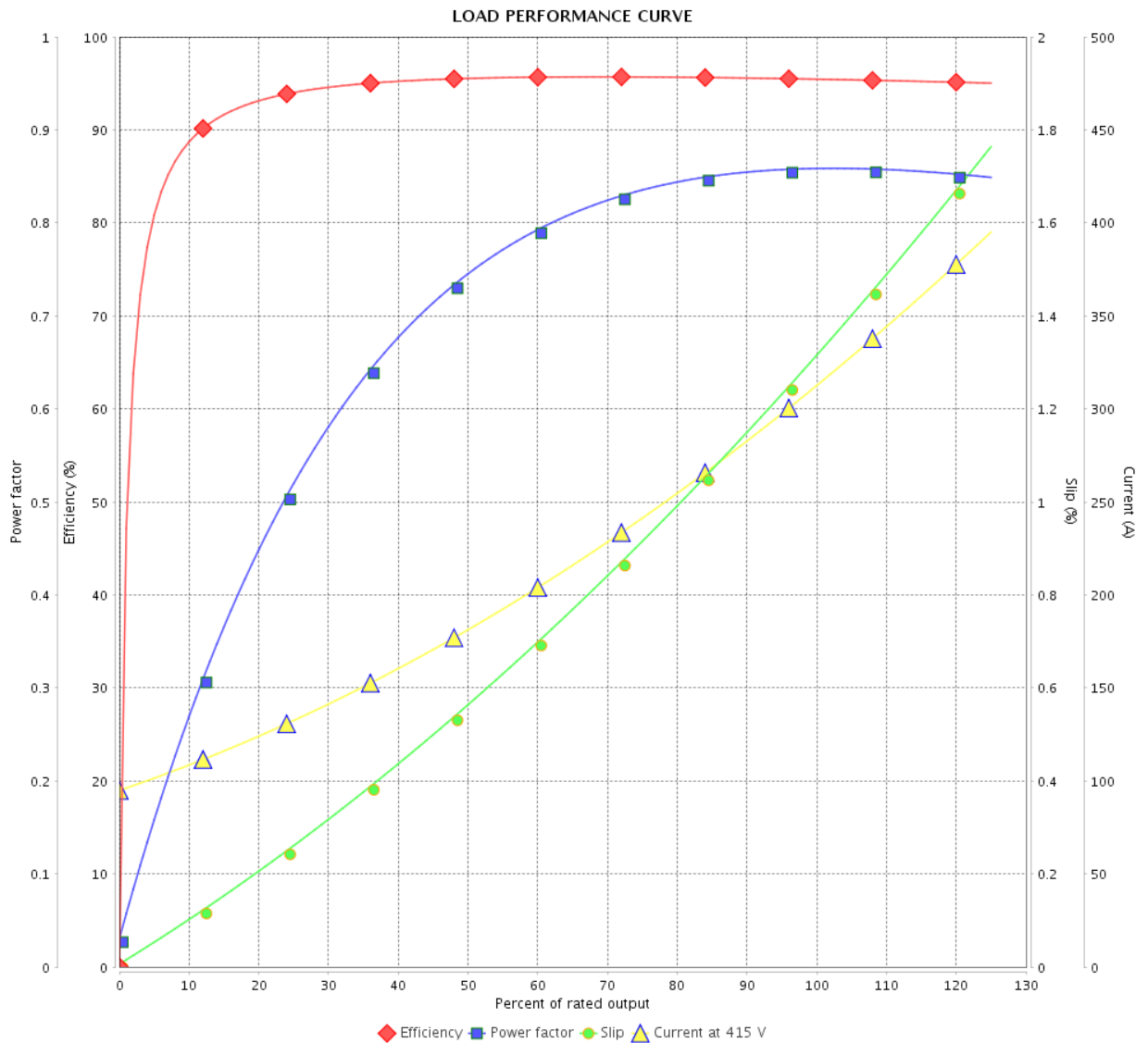


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 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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THERMAL LIMIT CURVE

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Performance : 460 V 60 Hz 4P

Rated current	: 281 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 738 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

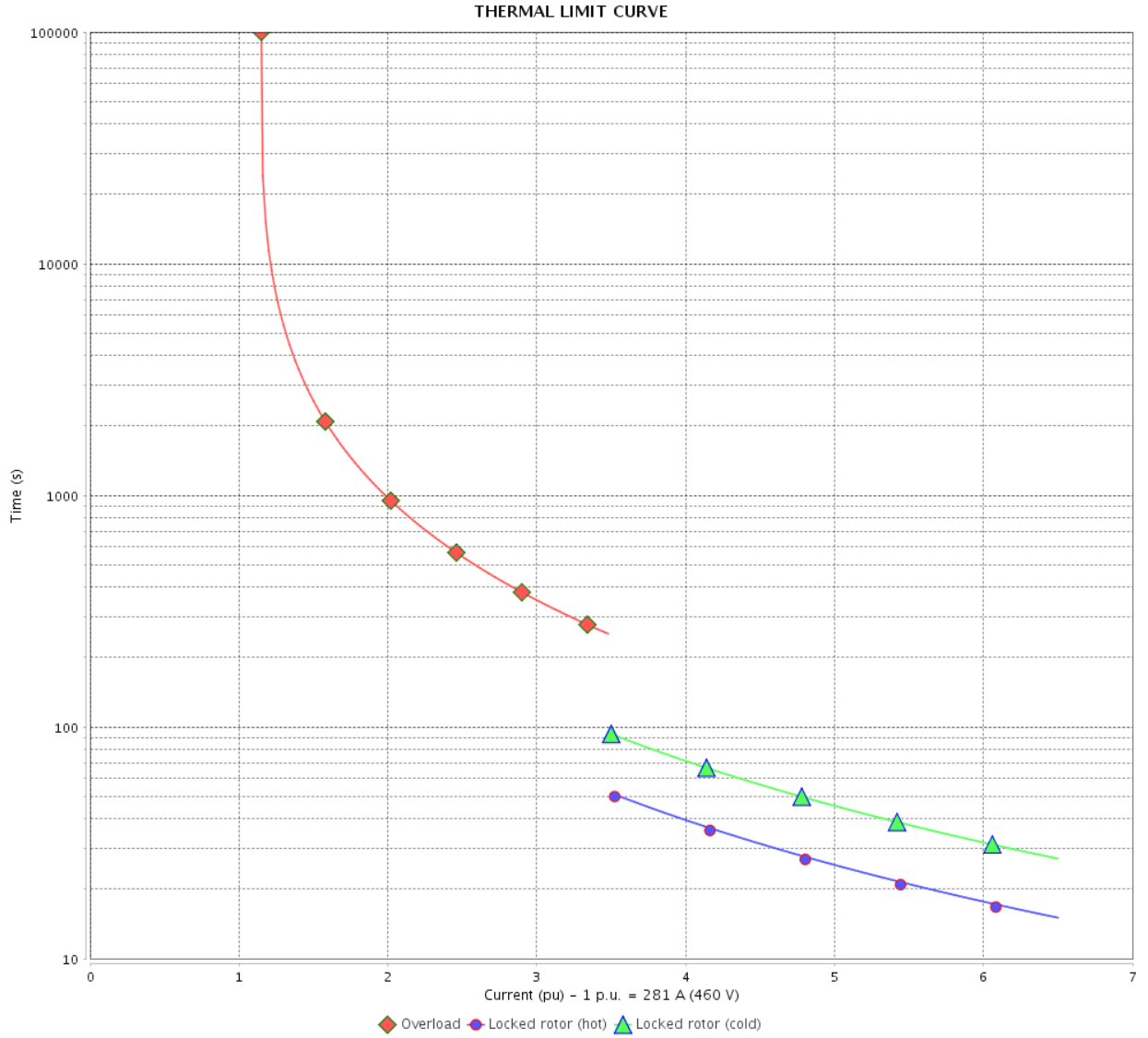
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 273 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 710 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

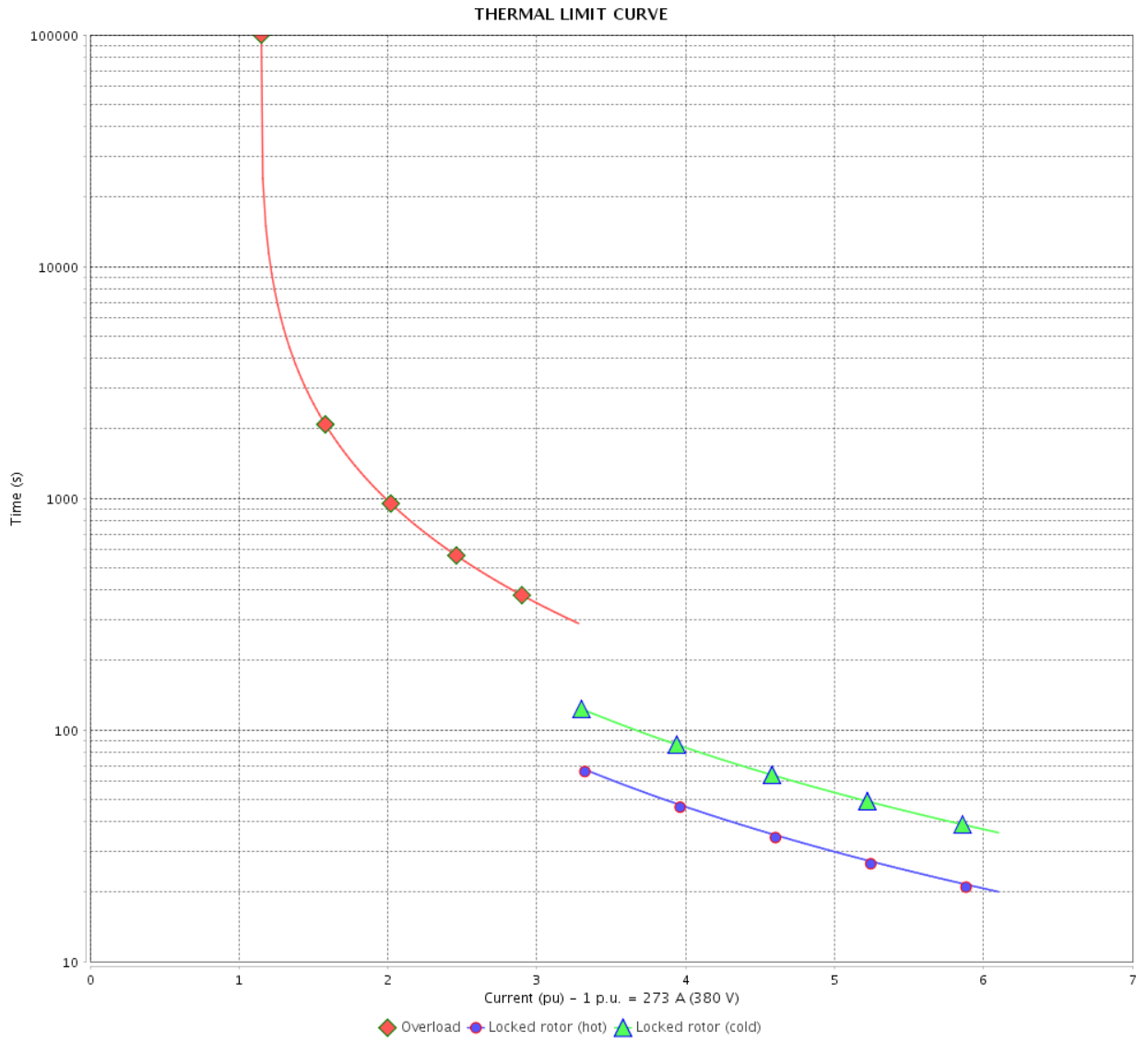
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Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 4P IE3

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LRC	: 6.8	Duty cycle	: Cont.(S1)
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Breakdown torque	: 270 %	Temperature rise	: 80 K
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Heating constant

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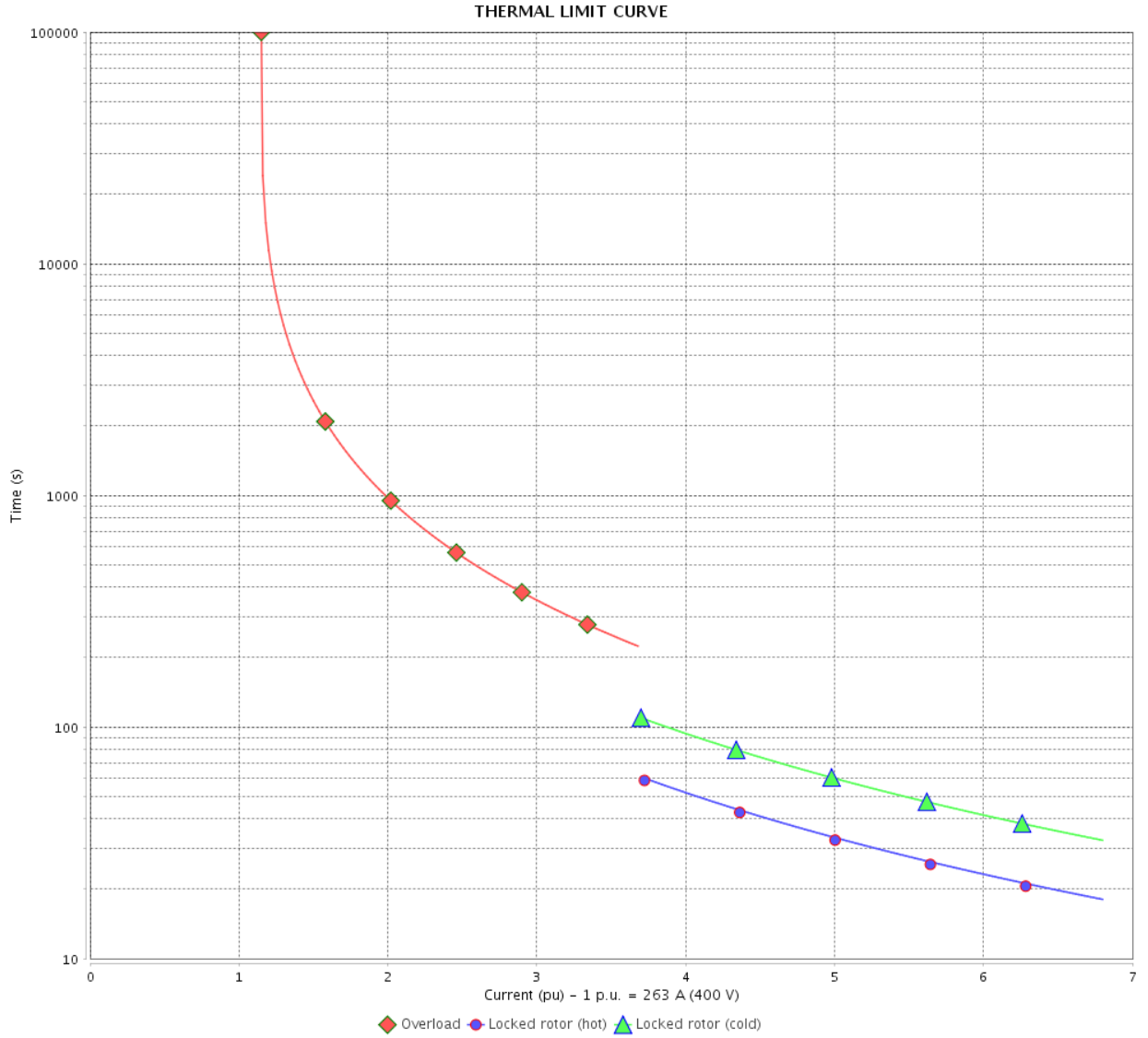
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LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 707 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

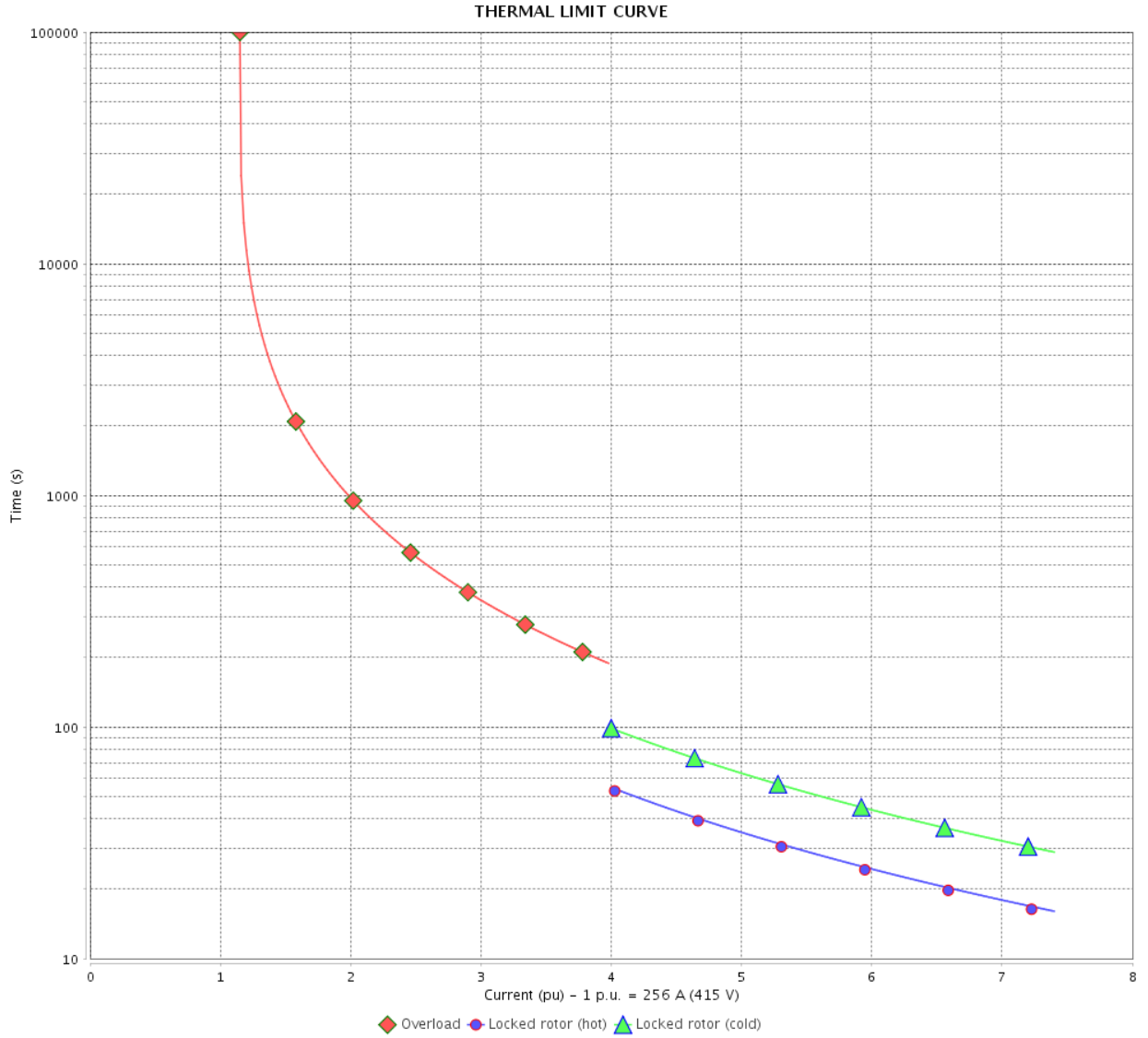
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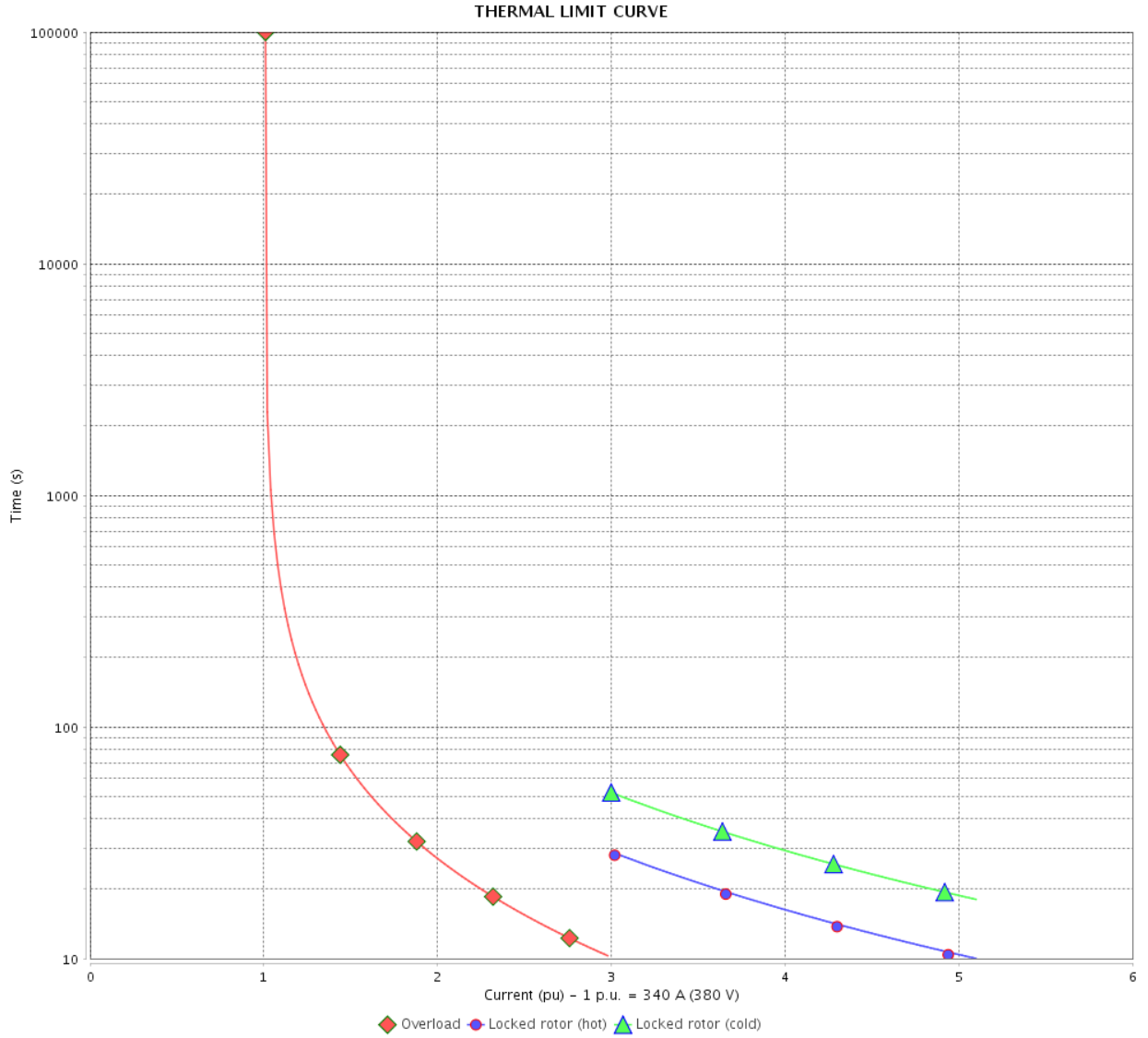
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Cooling constant

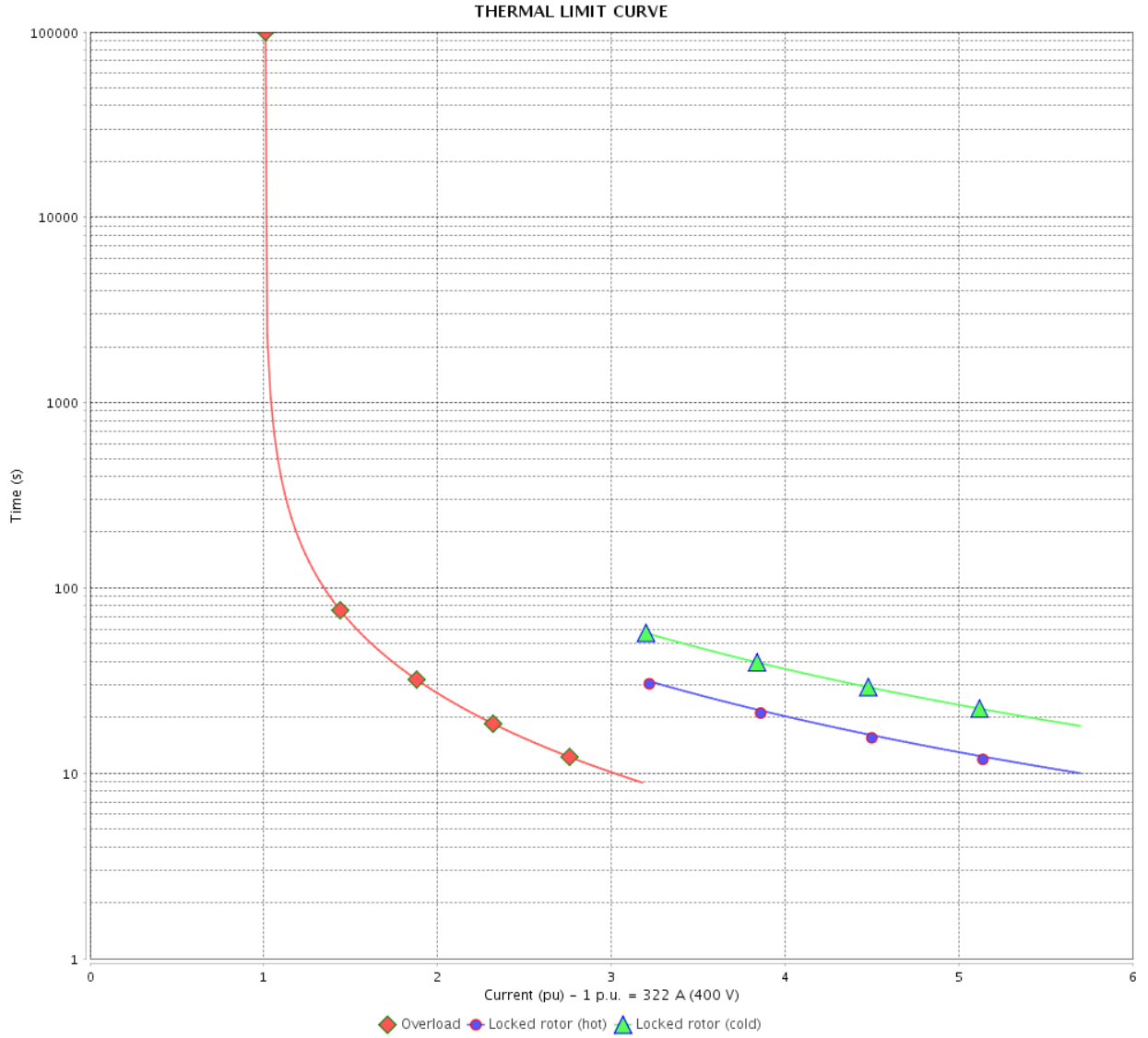
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		26 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Checked by				
Date				
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22

Performance : 415 V 50 Hz 4P IE2

Rated current	: 314 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

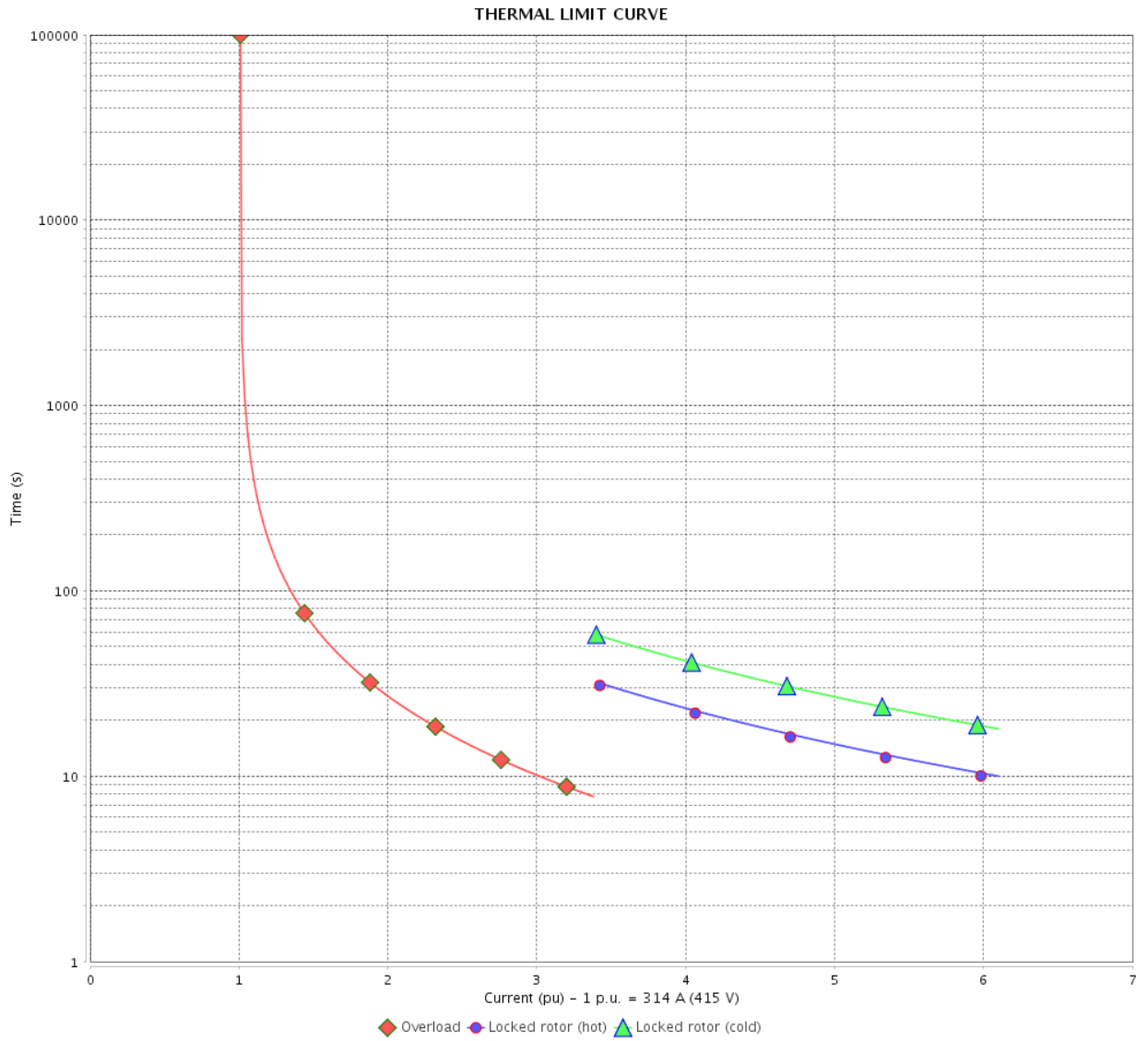
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Checked by			Page	Revision
Date	13/04/2022		28 / 36	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

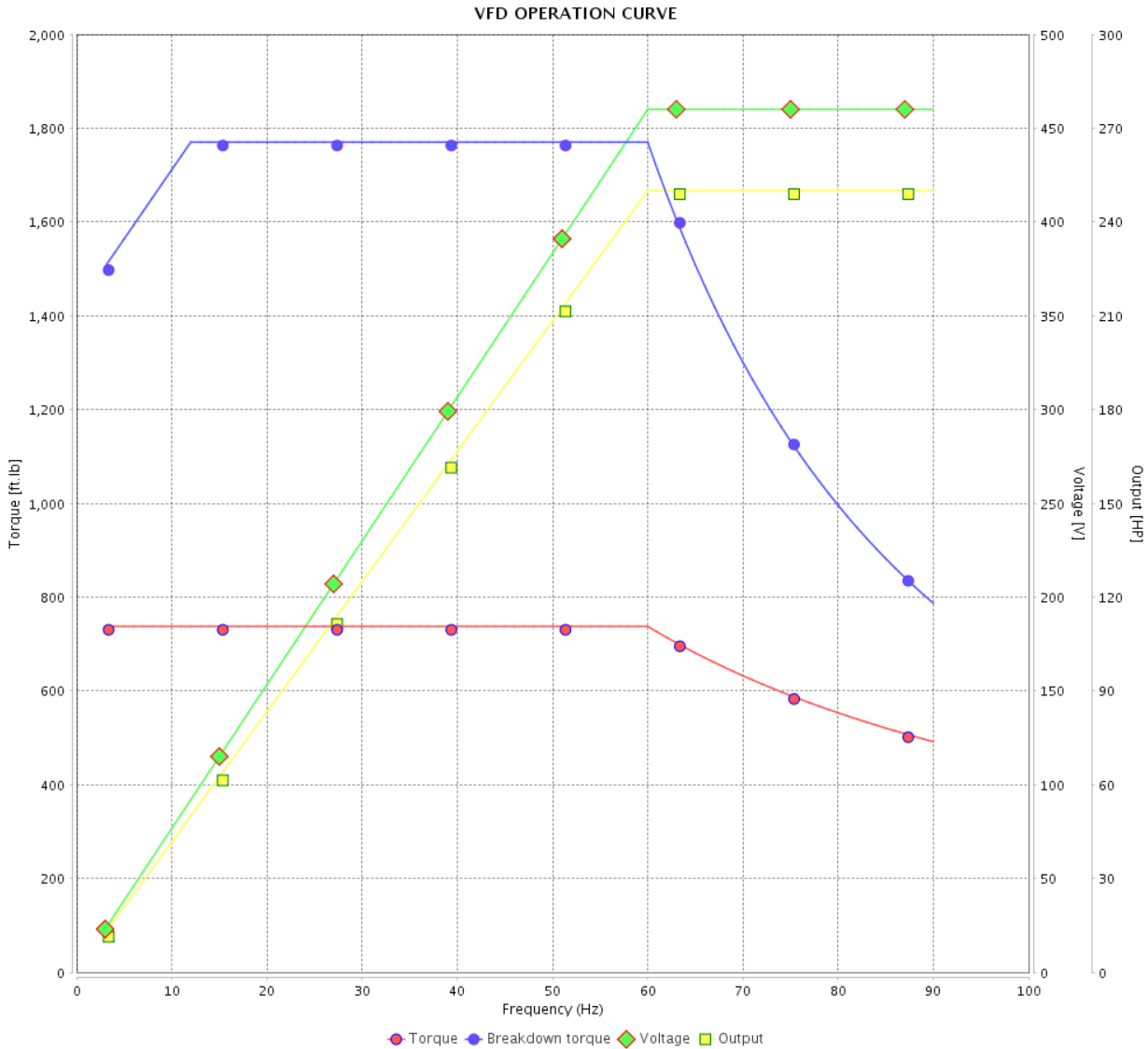


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 460 V 60 Hz 4P

Rated current : 281 A
 LRC : 6.5
 Rated torque : 738 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 240 %
 Rated speed : 1780 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 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				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

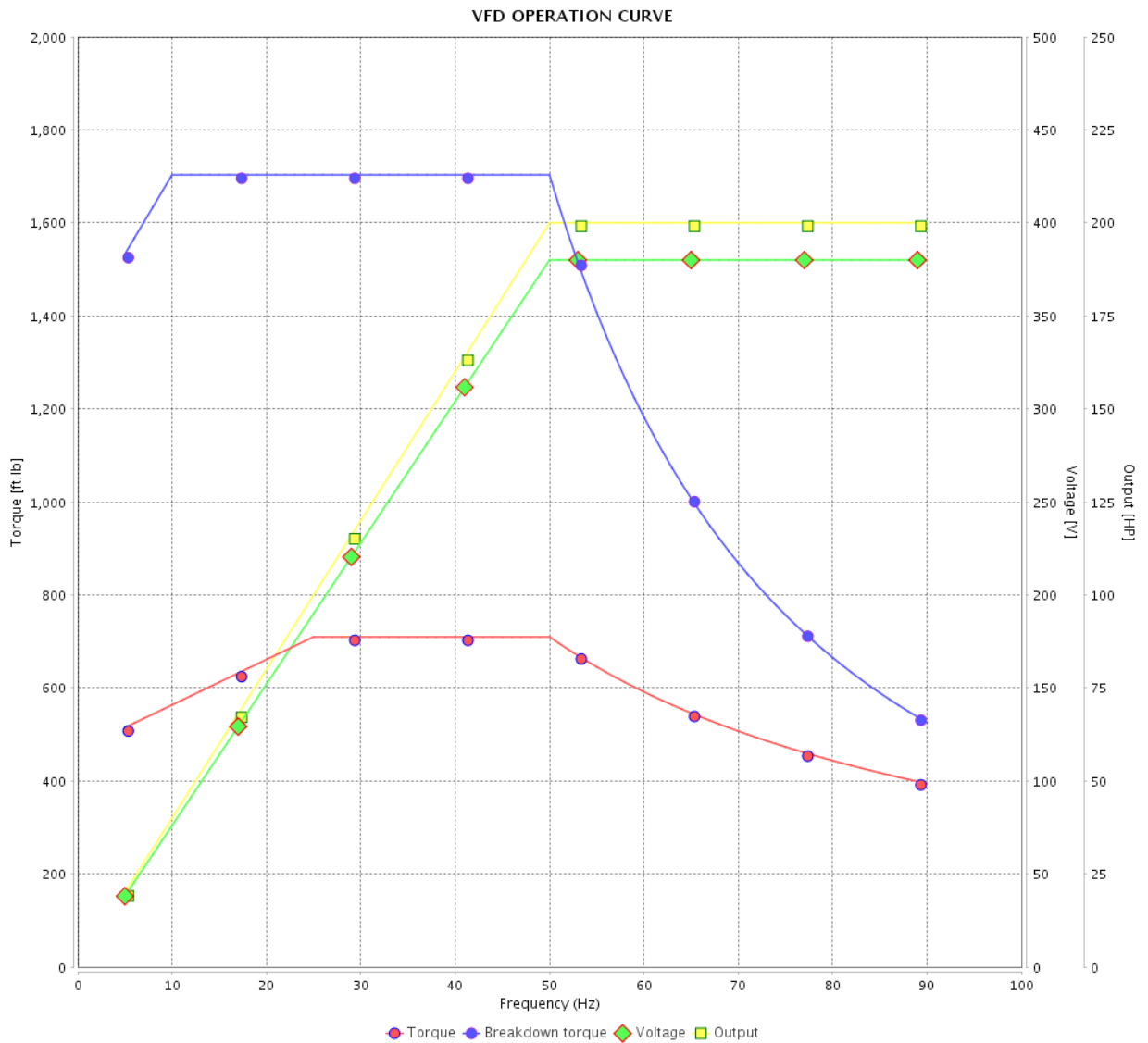


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 273 A
 LRC : 6.1
 Rated torque : 710 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

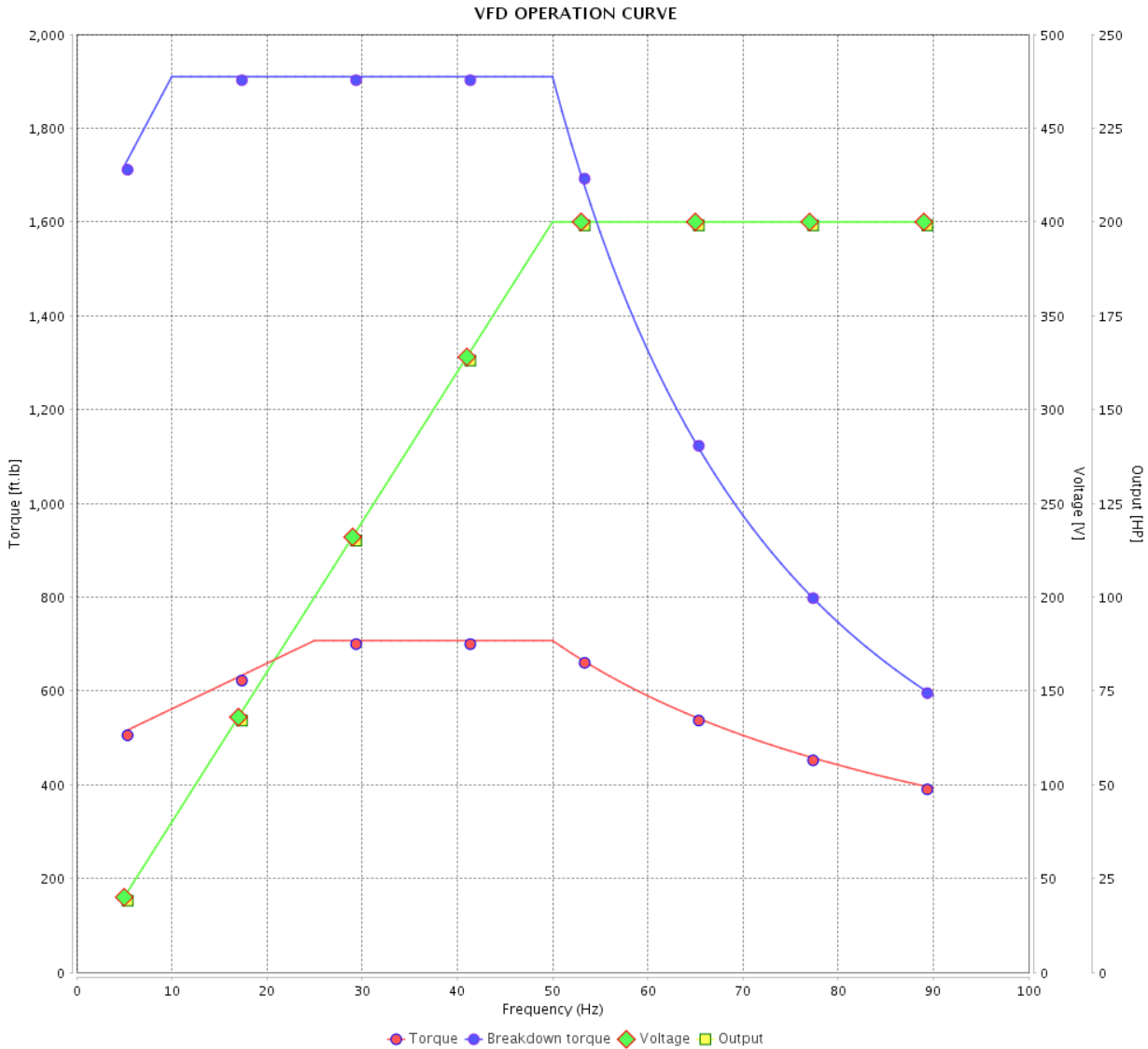


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 263 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 707 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

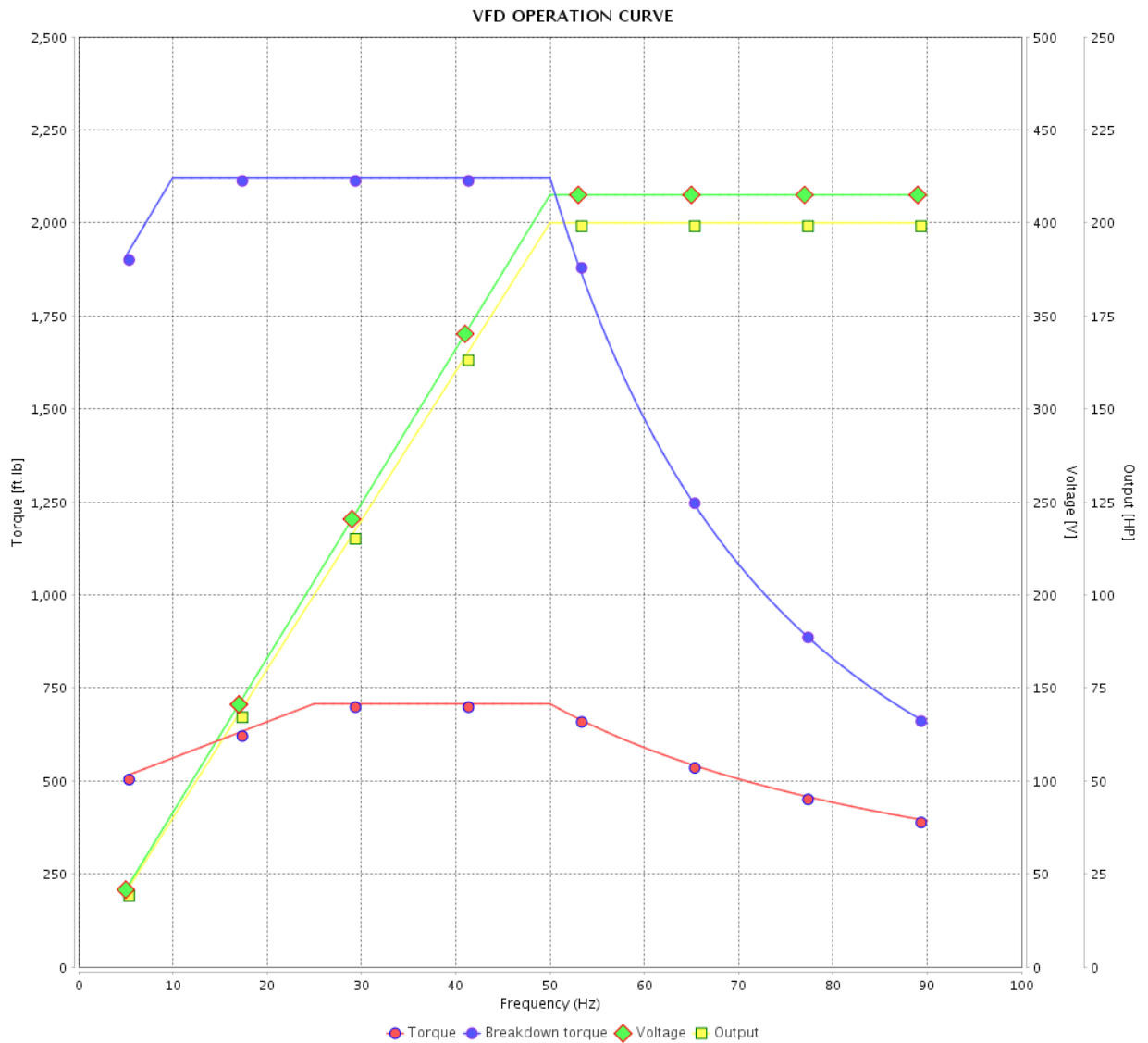


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 256 A
 LRC : 7.4
 Rated torque : 707 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 300 %
 Rated speed : 1485 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



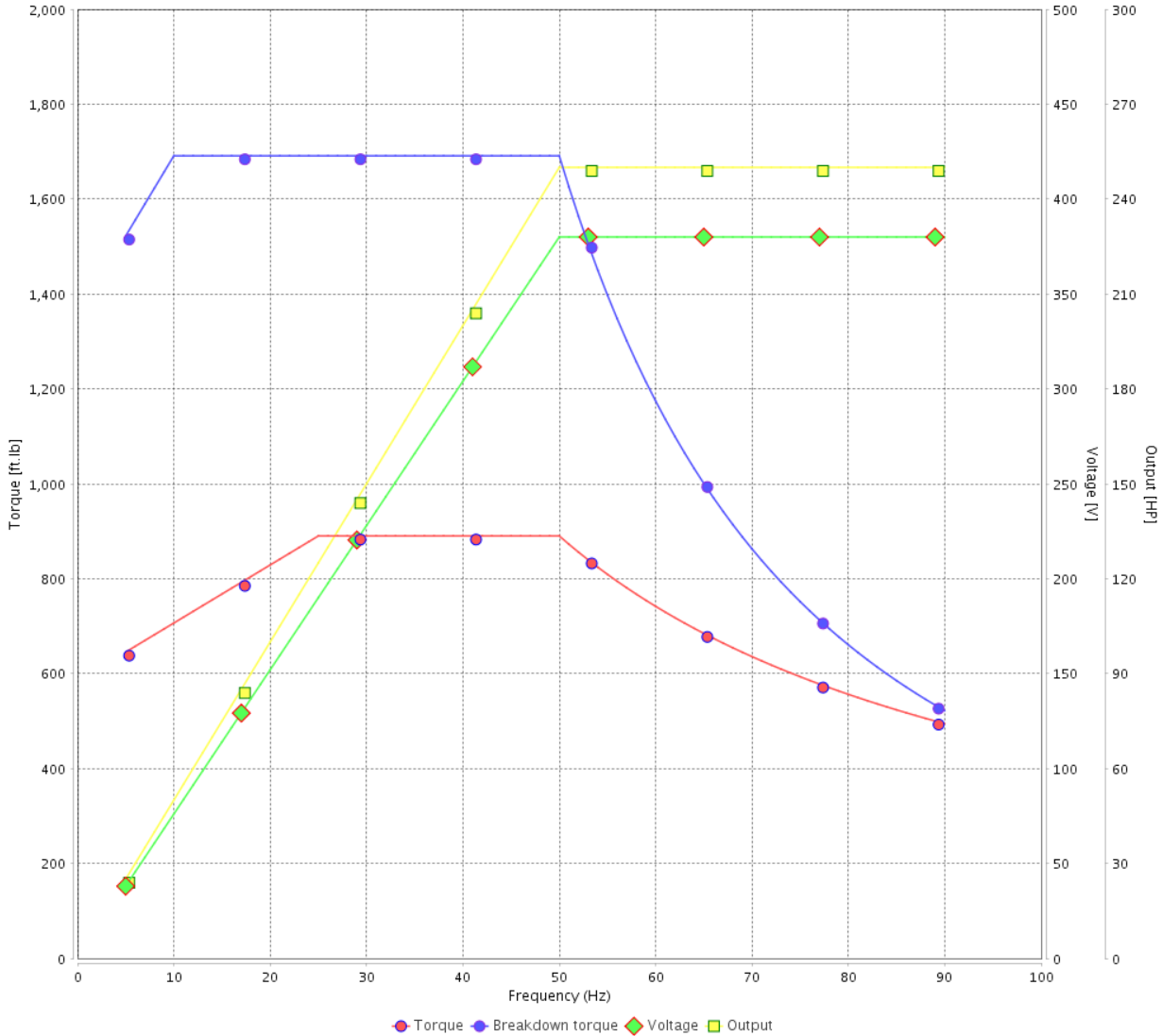
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 340 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 890 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 1475 rpm	Design	: B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

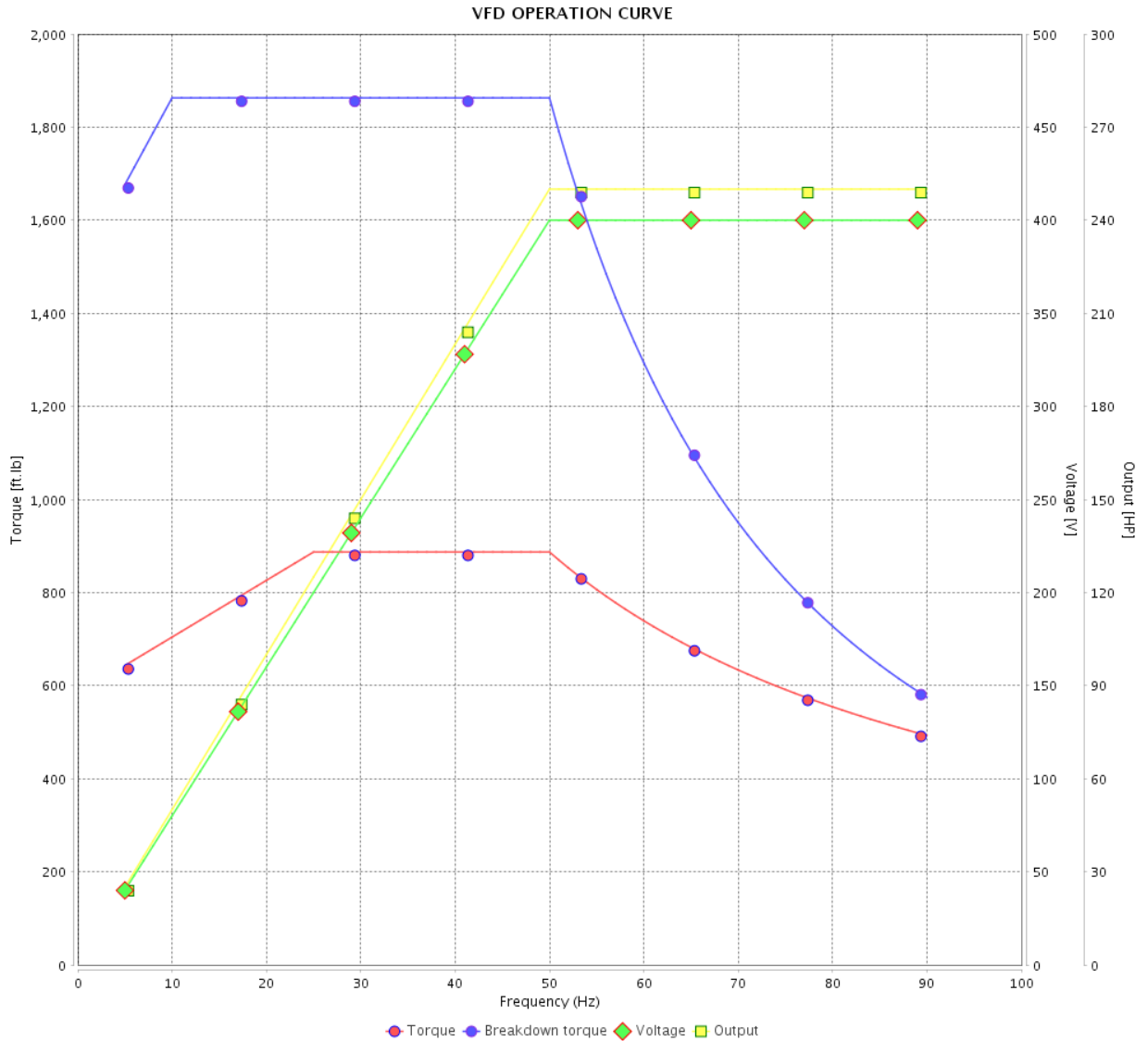


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

Catalog # : 25018ET3G447TS-W22



Performance : 400 V 50 Hz 4P IE2

Rated current : 322 A
 LRC : 5.7
 Rated torque : 887 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 1480 rpm

Moment of inertia (J) : 89.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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				Revision

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

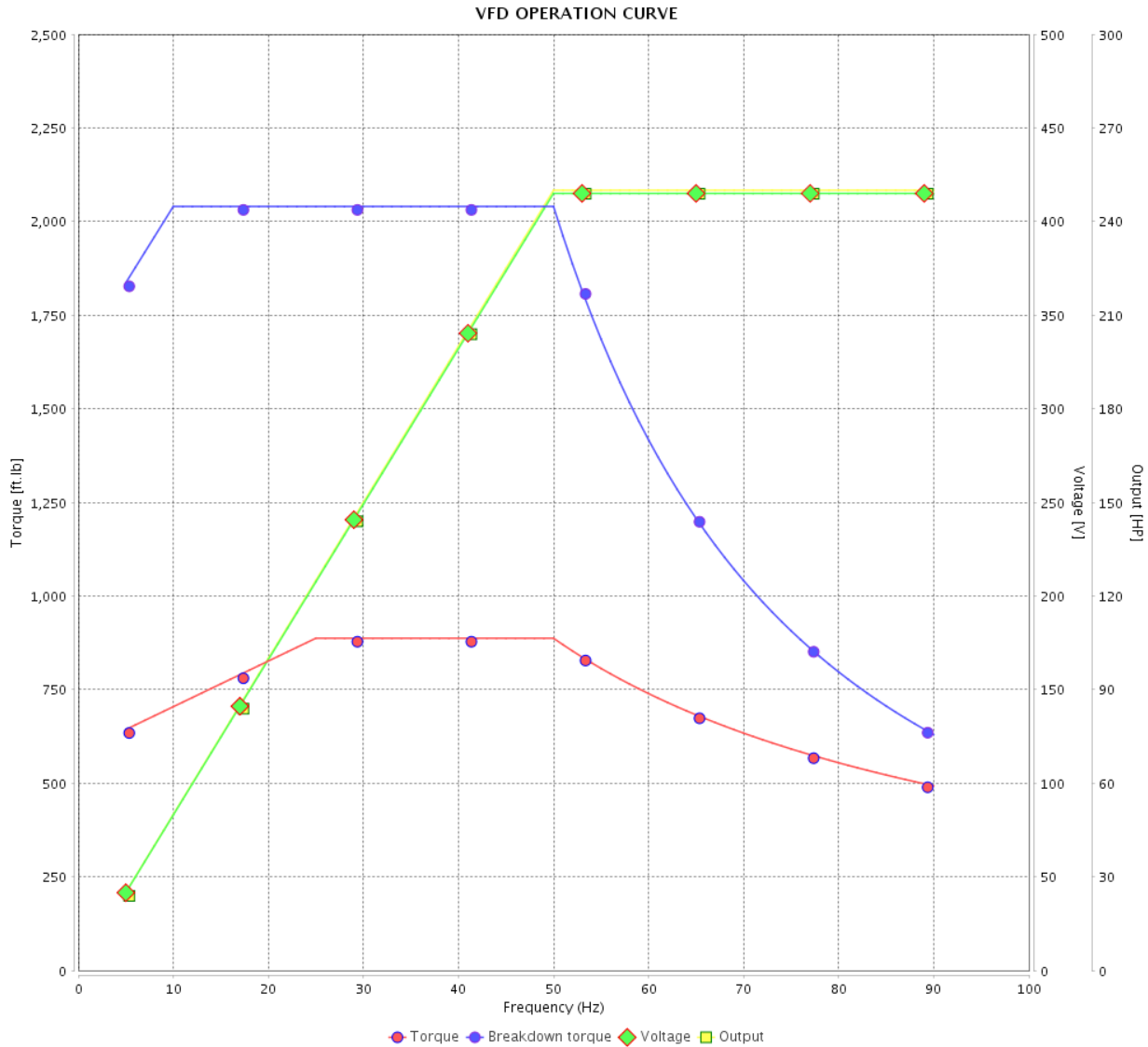


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13472771

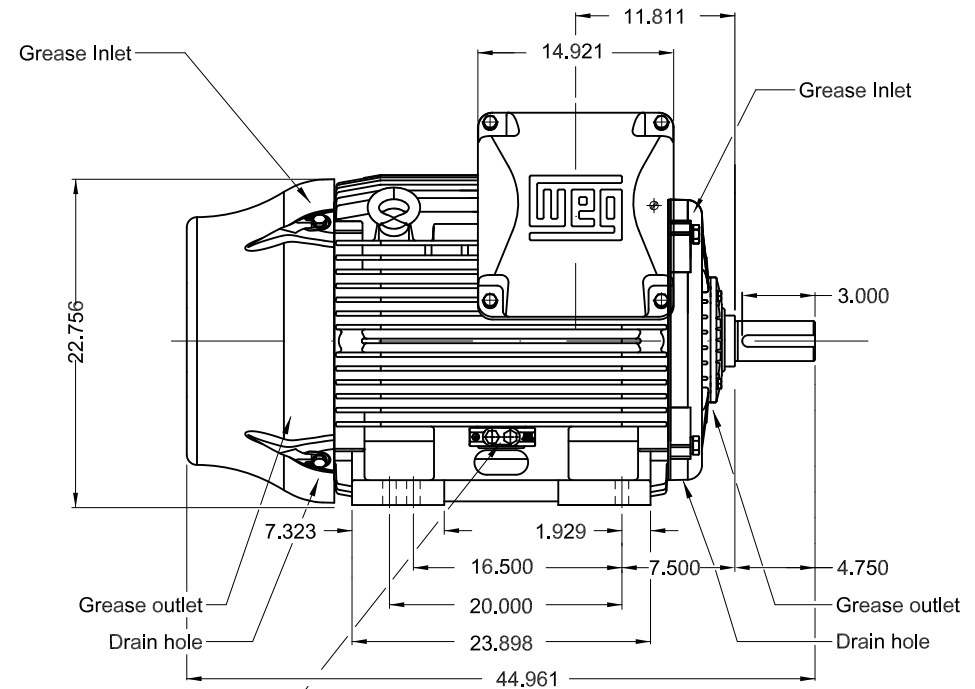
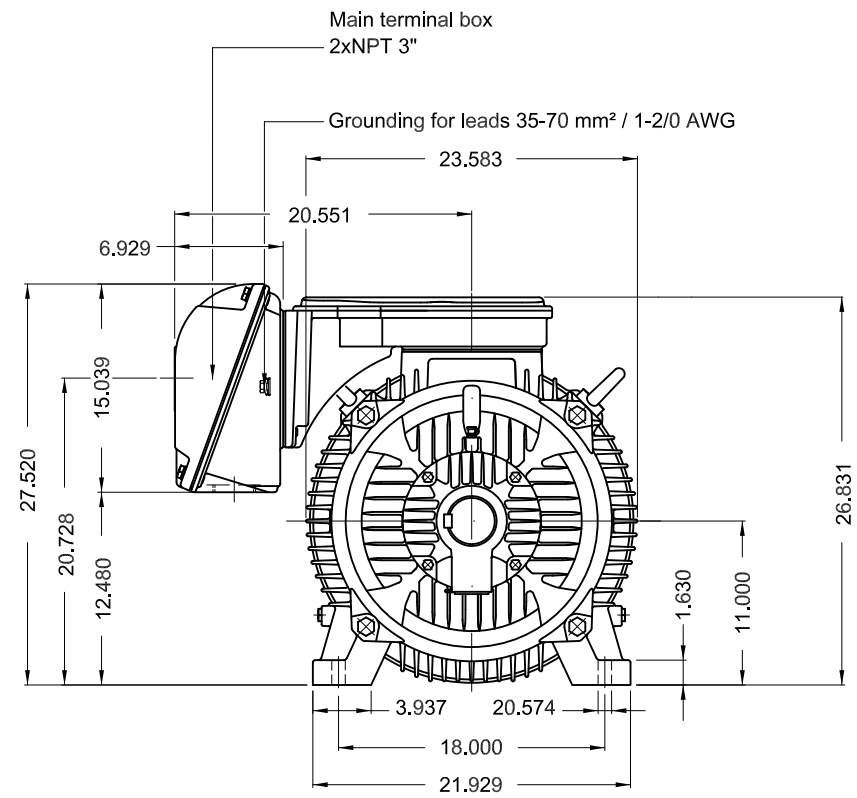
Catalog # : 25018ET3G447TS-W22



Performance : 415 V 50 Hz 4P IE2

Rated current	: 314 A	Moment of inertia (J)	: 89.6 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 887 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1480 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 36 / 36	Revision
Checked by				
Date	13/04/2022			

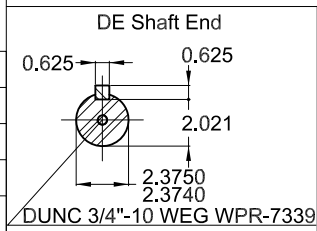


Grounding for leads 25-185 mm² / 3AWG-350MCM

250 HP 04 Poles 60 Hz

A

TS shaft end
Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 445/7TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD



SHEET 1 / 1

Dimensions in inches

XME A3

MADE IN MEXICO
13472771



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

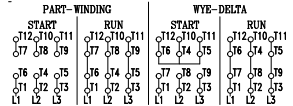


Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T3C
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3

MODEL 25018ET3G447TS-W22

Inverter Duty Motor
Severe Duty

PH3	60Hz	Fr. 445/7TS	1000m.a.s.l.	IP55	TEFC	2524lb	
V 460				A 281			
HP 250				kW 185			
SF 1.15				SFA 323			
RPM 1780				PF 0.86			
AMB 40°C				INS cl. F DT80K	NEMA NOM EFF	96.2%	
DUTY CONT.				DES B	Code	G	



→ 6314-C3 (27g)
 → 6314-C3 (27g)

MOBIL POLYREX EM (12000h)