

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :							
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11431380				
		Catalog # :	12536ST3QIE444TS-W22				
Frame	: 444/5TS	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	: 1632 lb				
Protection degree	: IP55	Moment of inertia (J)	: 33.5 sq.ft.lb				
Design	: B						
Output [HP]	125	100	100	100	125	125	125
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]	134	135	128	124	163	154	148
L. R. Amperes [A]	884	878	909	955	848	878	918
LRC [A]	6.6x(Code G)	6.5x(Code G)	7.1x(Code G)	7.7x(Code H)	5.2x(Code D)	5.7x(Code E)	6.2x(Code F)
No load current [A]	34.0	33.6	36.0	37.9	33.6	36.0	37.9
Rated speed [RPM]	3570	2970	2970	2975	2960	2965	2970
Slip [%]	0.83	1.00	1.00	0.83	1.33	1.17	1.00
Rated torque [ft.lb]	184	177	177	177	222	221	221
Locked rotor torque [%]	200	200	210	240	160	170	190
Breakdown torque [%]	250	250	280	300	200	220	240
Service factor	1.15	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	52s (cold) 29s (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 ²	81.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)	77.0 dB(A)
Efficiency (%)	25%						
	50%	93.6	93.2	93.2	92.8	94.0	94.0
	75%	94.5	94.3	94.3	94.3	94.5	94.5
	100%	95.0	94.7	94.7	94.8	94.5	94.5
Power Factor	25%						
	50%	0.82	0.79	0.77	0.75	0.85	0.84
	75%	0.87	0.87	0.87	0.85	0.88	0.88
	100%	0.89	0.89	0.89	0.89	0.89	0.89
Bearing type	: Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads				
Sealing	: Inpro/Seal	Inpro/Seal	Max. traction	: 597 lb			
Lubrication interval	: 4000 h	4000 h	Max. compression	: 2230 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.			
Rev.	Changes Summary			Performed	Checked	Date	
Performed by							
Checked by					Page	Revision	
Date	01/06/2022				1 / 36		

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



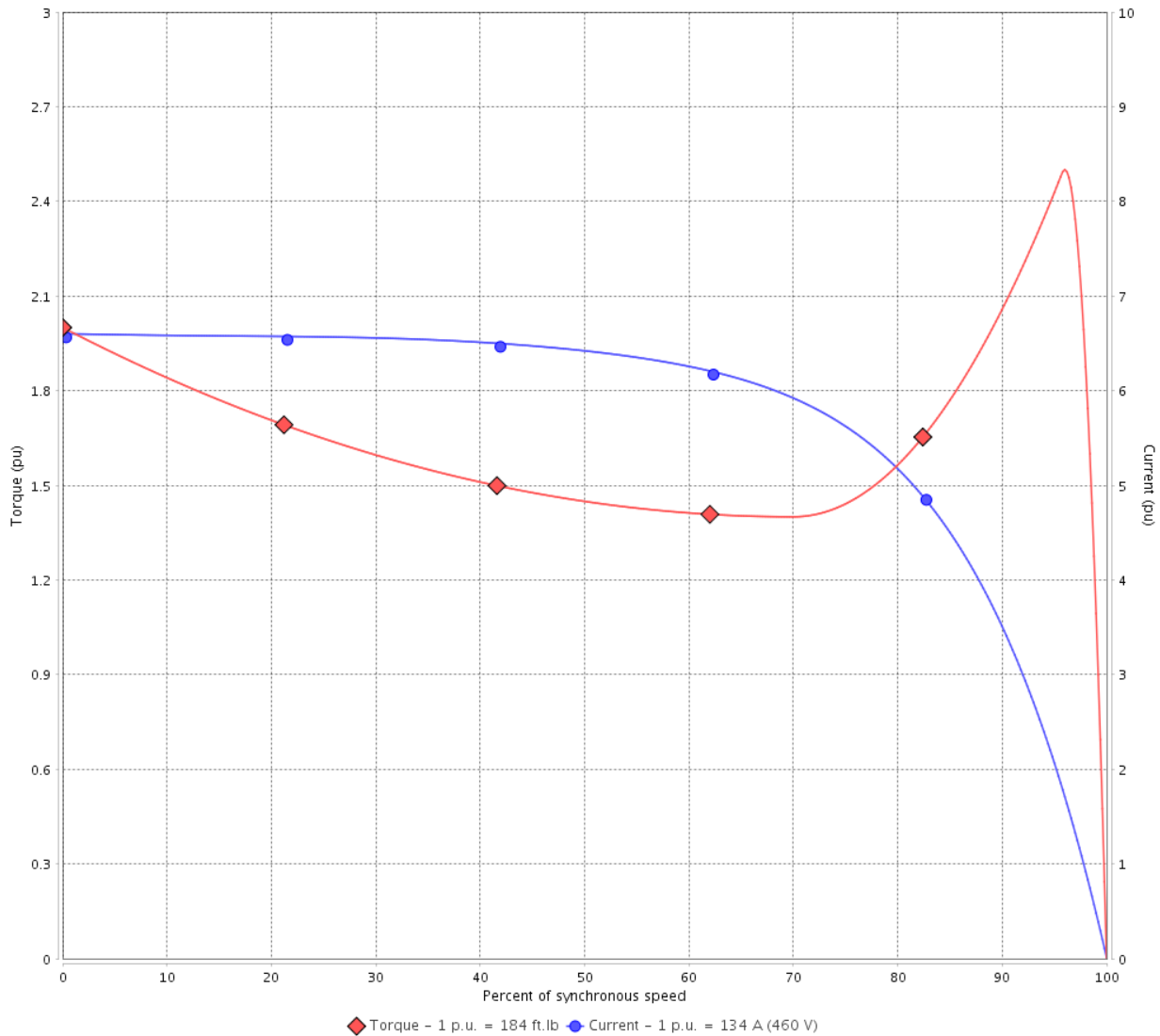
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 2P

Rated current	: 134 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 184 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 3570 rpm	Design	: B

Locked rotor time : 52s (cold) 29s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 36	Revision
Checked by				
Date	01/06/2022			

TORQUE AND CURRENT VS SPEED CURVE



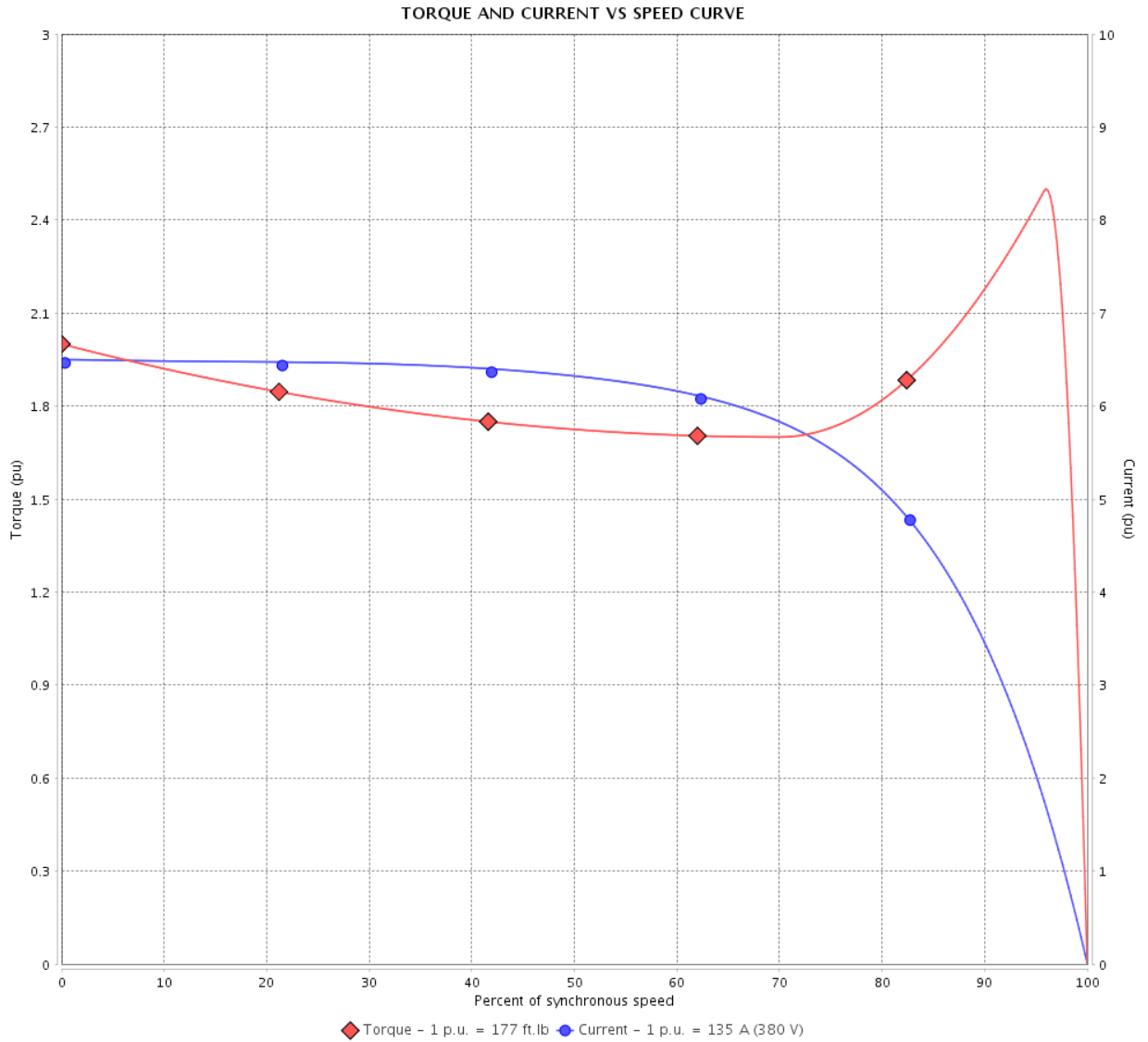
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Customer :

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Performance : 380 V 50 Hz 2P IE3

Rated current	: 135 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 36	Revision
Checked by				
Date	01/06/2022			

TORQUE AND CURRENT VS SPEED CURVE

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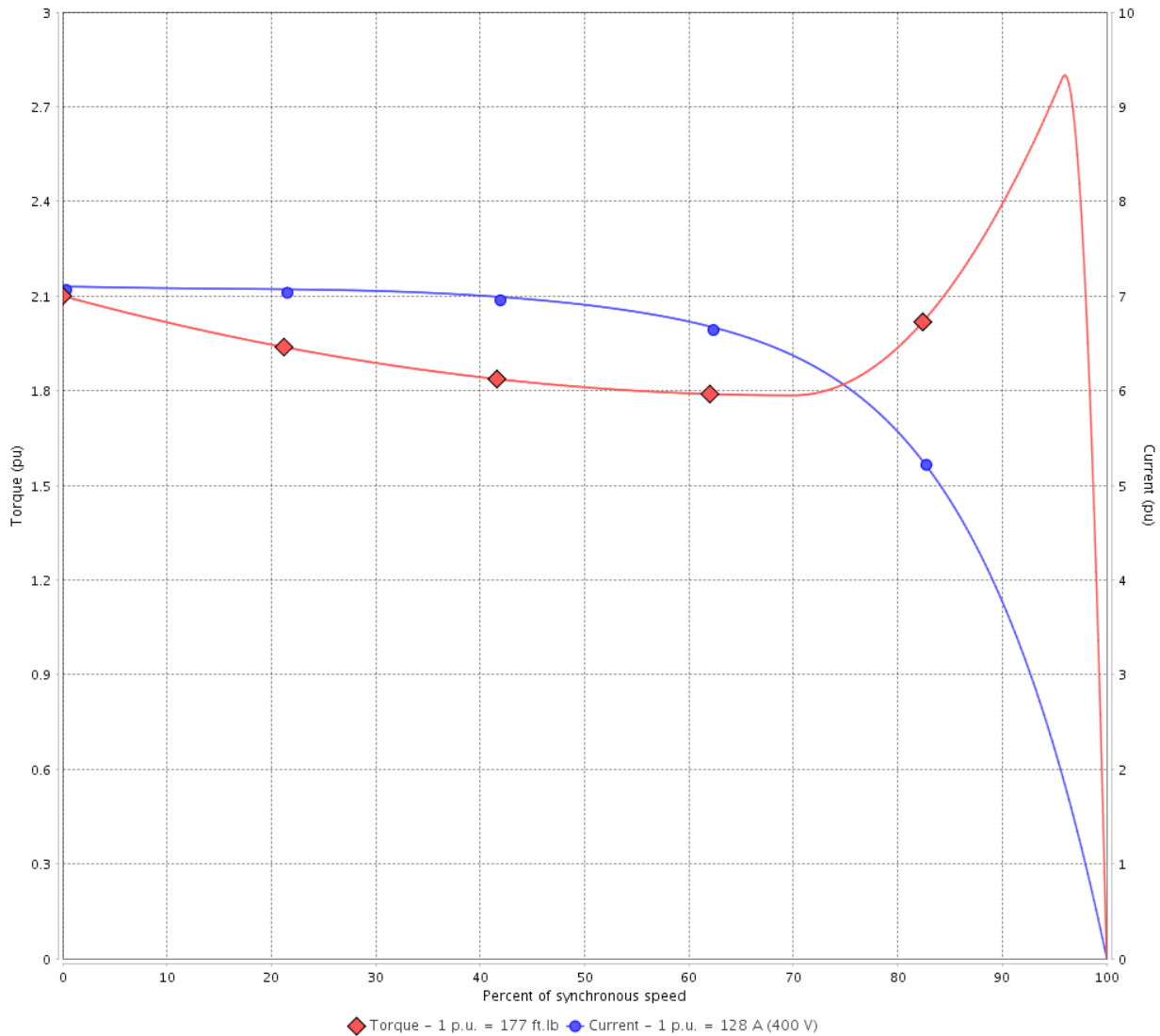
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 2P IE3

Rated current	: 128 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 36	Revision
Checked by				
Date	01/06/2022			

TORQUE AND CURRENT VS SPEED CURVE



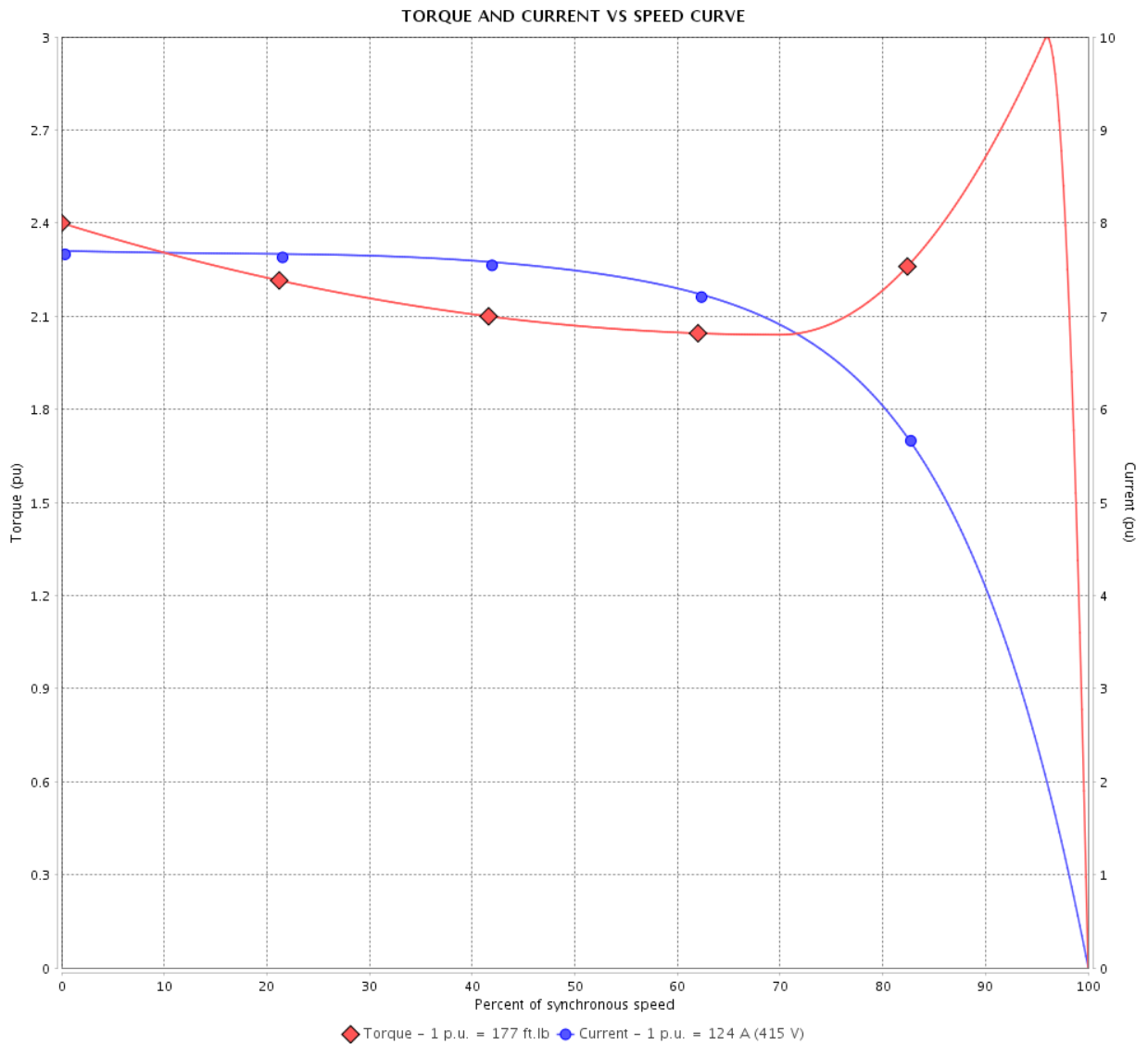
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Performance : 415 V 50 Hz 2P IE3

Rated current	: 124 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 36	Revision
Checked by				
Date	01/06/2022			

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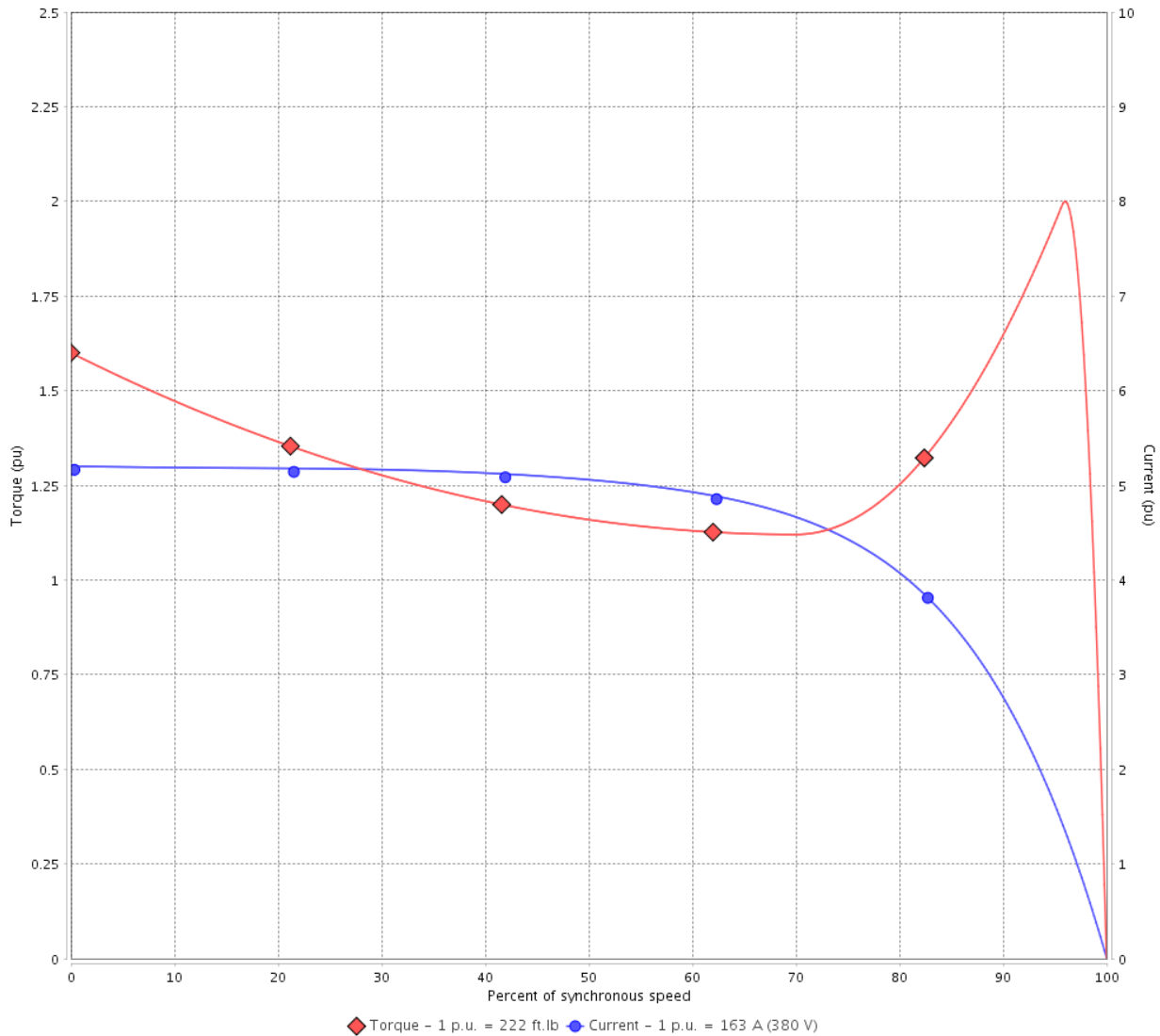
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 163 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 222 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 36	Revision
Checked by				
Date	01/06/2022			

TORQUE AND CURRENT VS SPEED CURVE



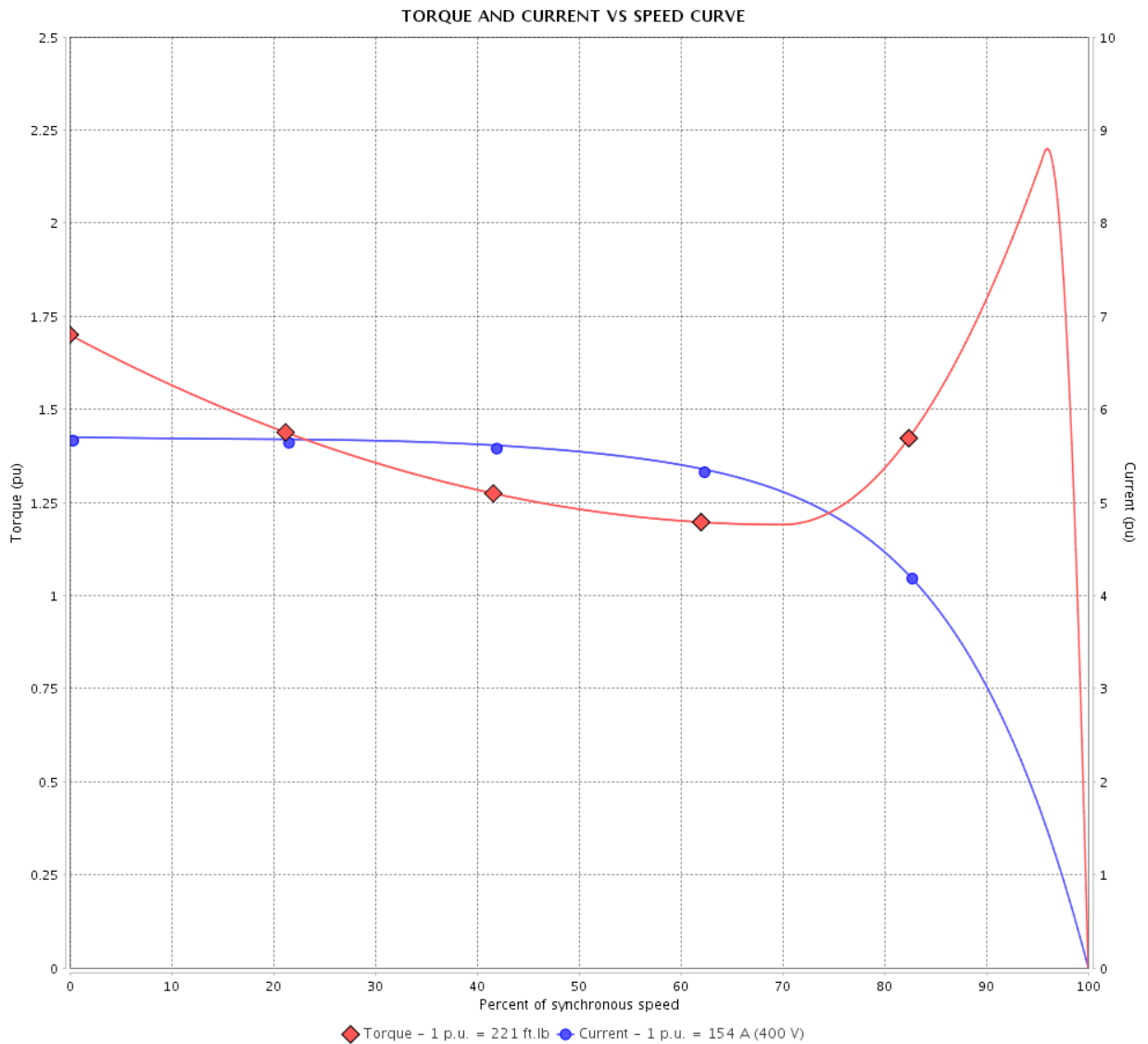
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Performance : 400 V 50 Hz 2P IE2

Rated current	: 154 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 2965 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 7 / 36	Revision
Checked by				
Date	01/06/2022			

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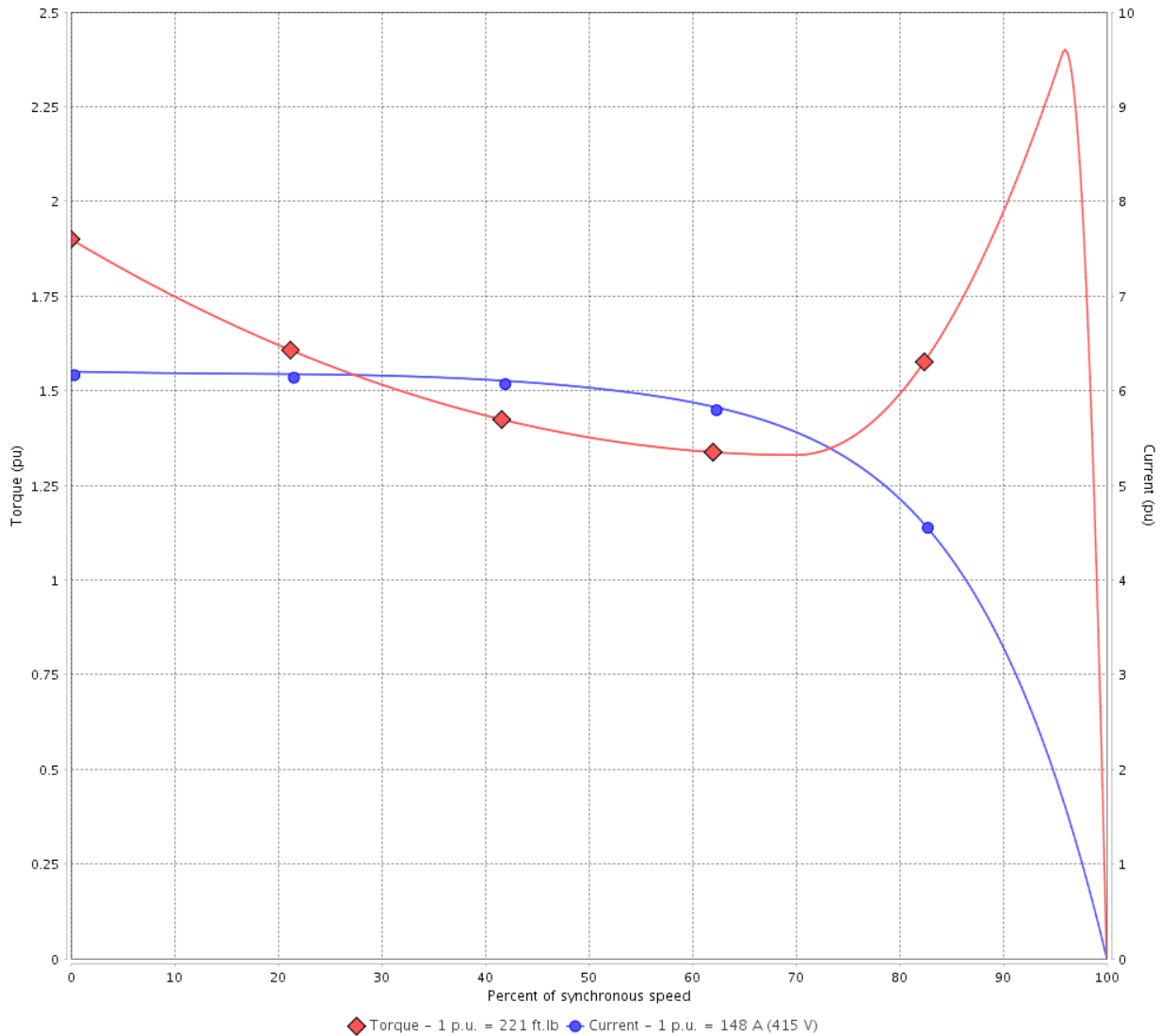
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 148 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 36	Revision
Checked by				
Date	01/06/2022			

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Three Phase Induction Motor - Squirrel Cage

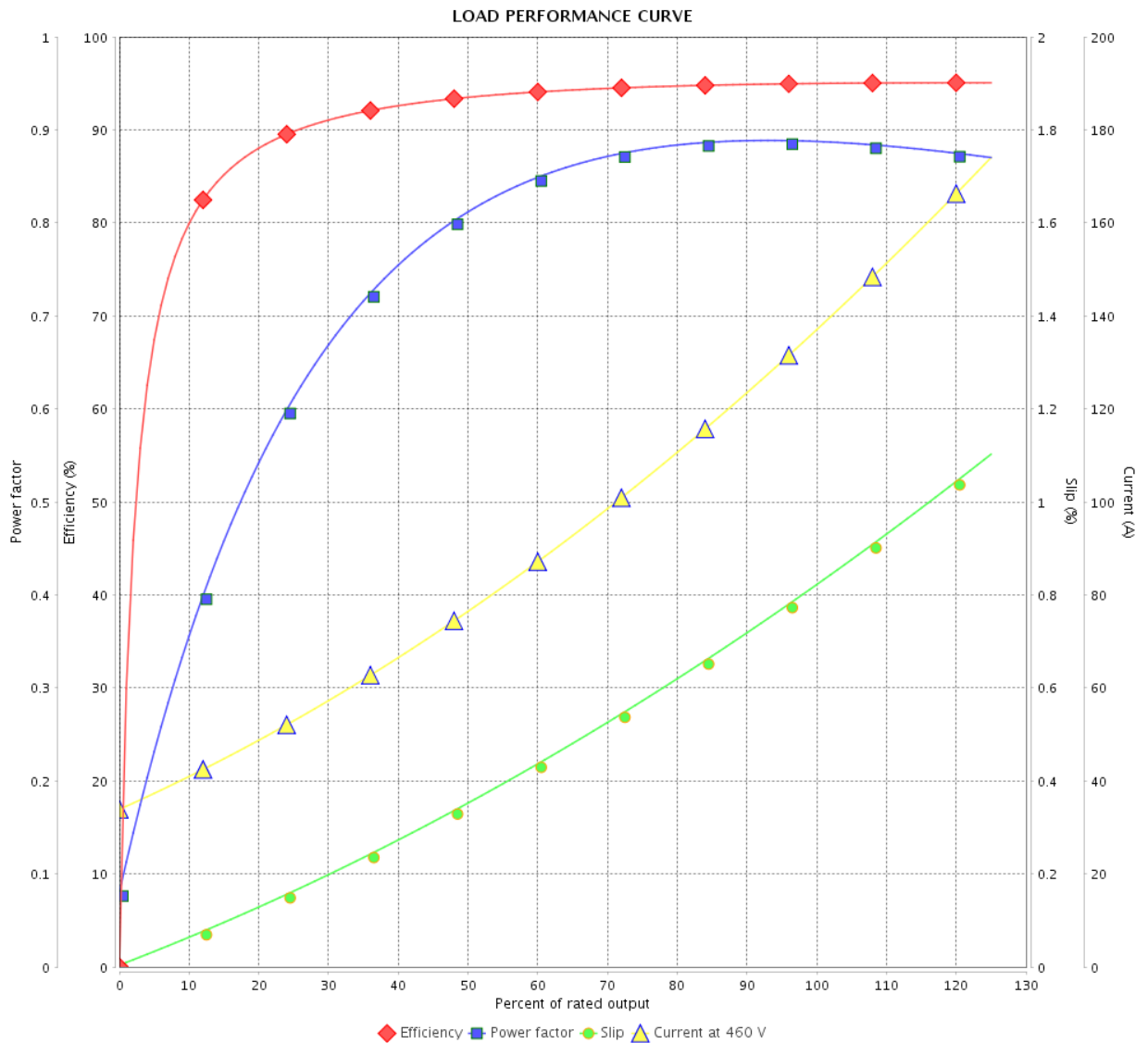


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Performance : 460 V 60 Hz 2P

Rated current : 134 A
 LRC : 6.6
 Rated torque : 184 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 3570 rpm

Moment of inertia (J) : 33.5 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				
			9 / 36	

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

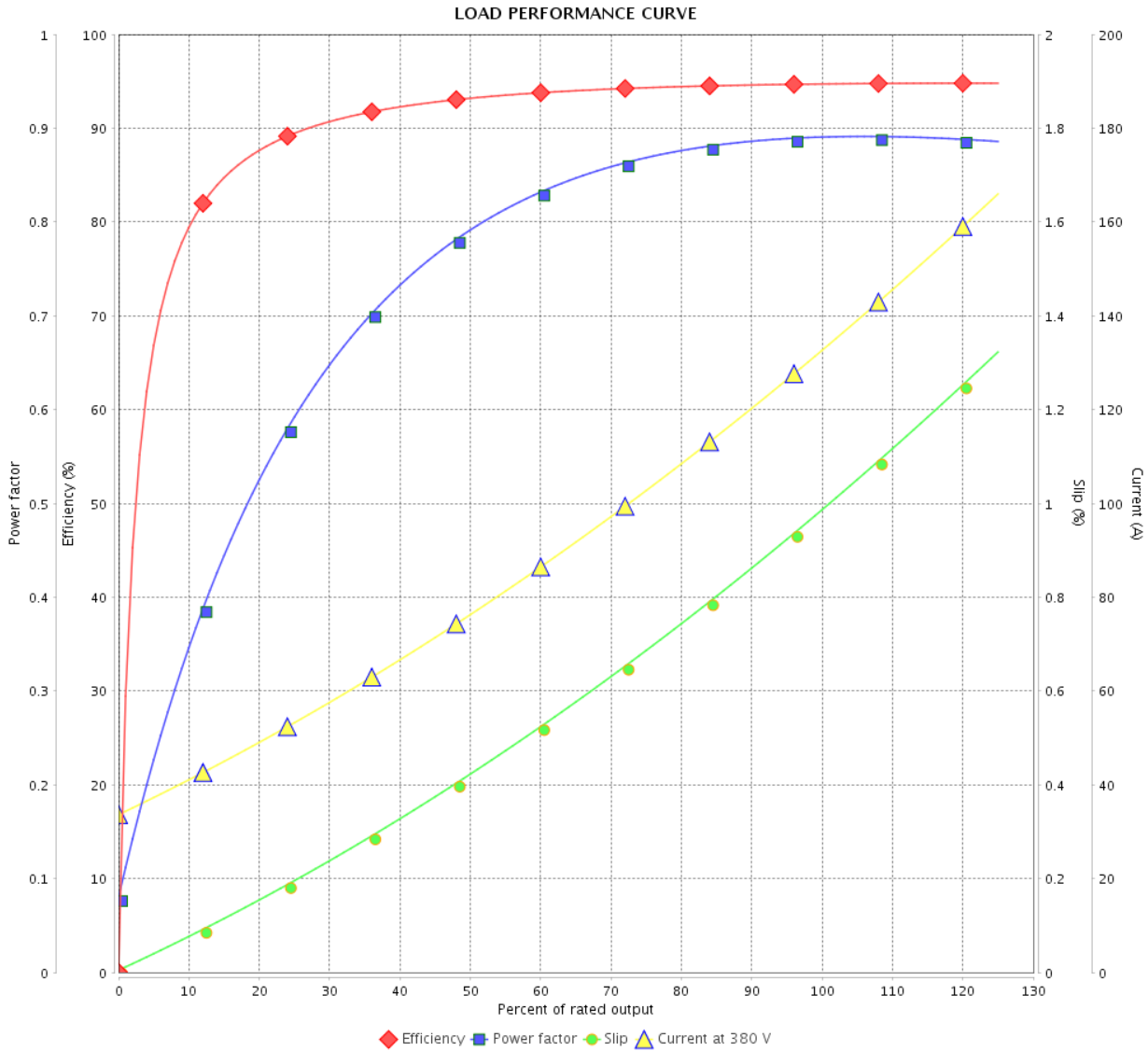


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Performance : 380 V 50 Hz 2P IE3

Rated current : 135 A
 LRC : 6.5
 Rated torque : 177 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 10 / 36	Revision
Checked by				
Date	01/06/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

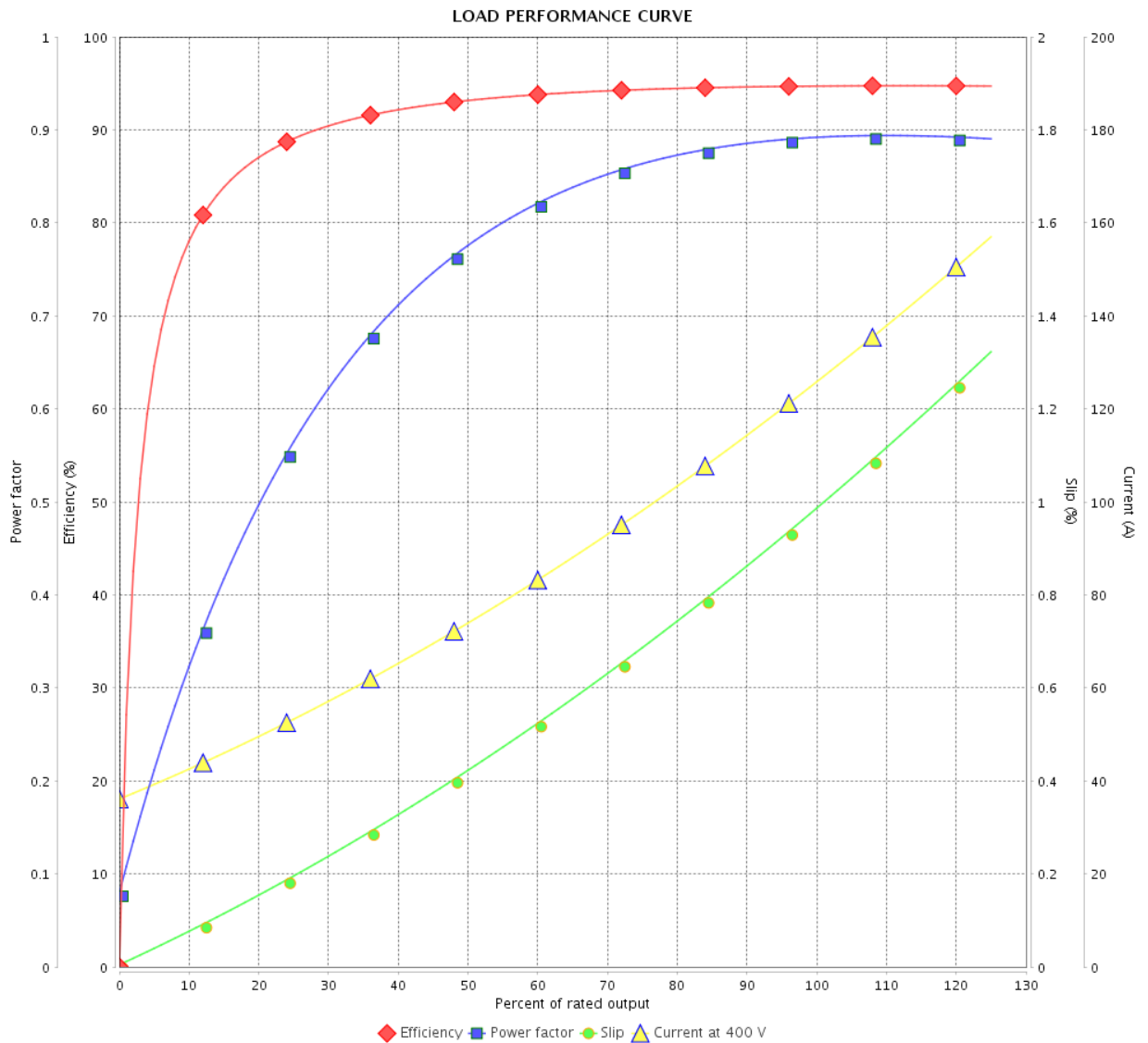


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Performance : 400 V 50 Hz 2P IE3

Rated current : 128 A
 LRC : 7.1
 Rated torque : 177 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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		11 / 36		
Date		01/06/2022		

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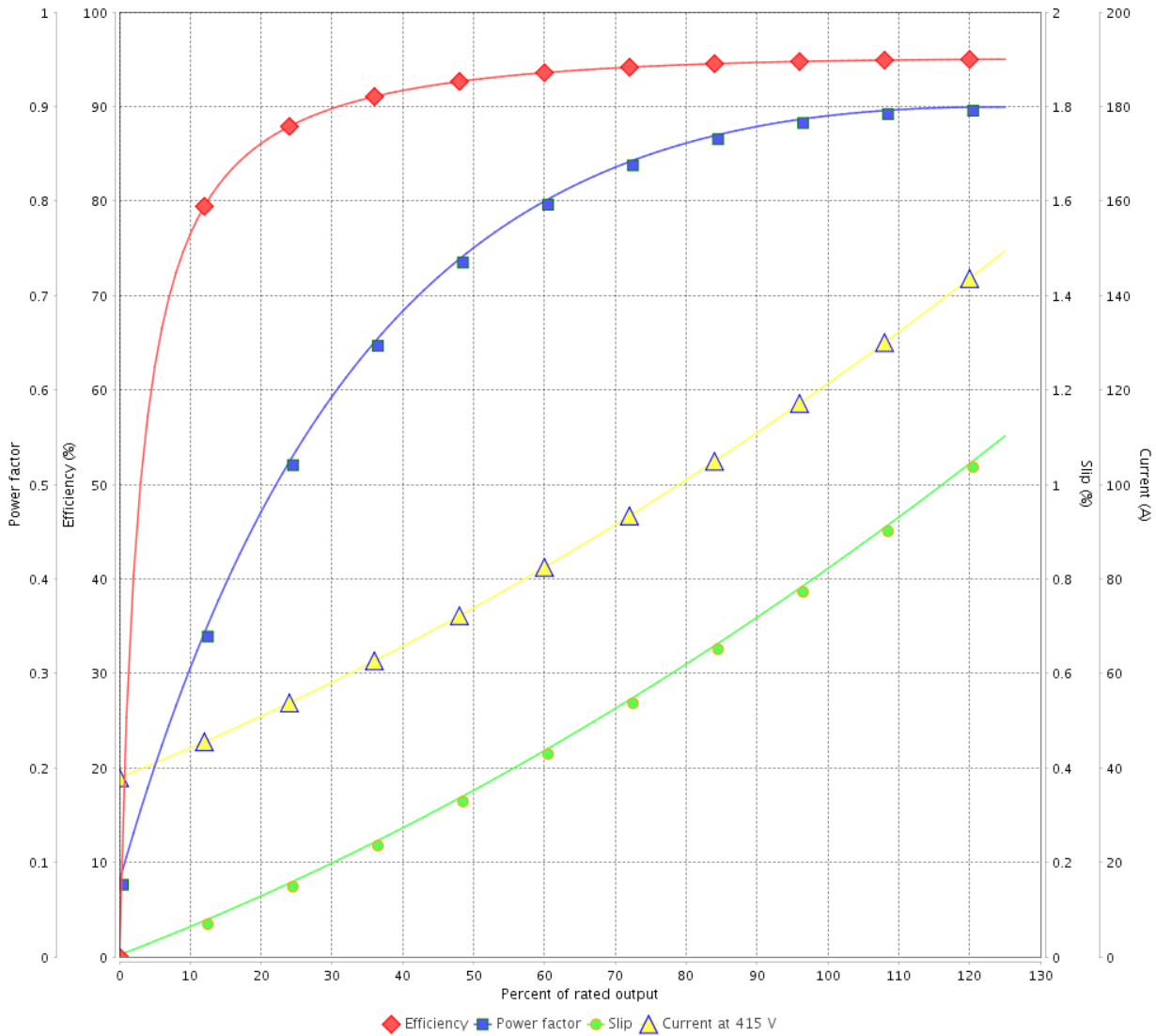
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Performance : 415 V 50 Hz 2P IE3

Rated current : 124 A	Moment of inertia (J) : 33.5 sq.ft.lb
LRC : 7.7	Duty cycle : Cont.(S1)
Rated torque : 177 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 300 %	Temperature rise : 80 K
Rated speed : 2975 rpm	Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 36	Revision
Checked by				
Date	01/06/2022			

LOAD PERFORMANCE CURVE

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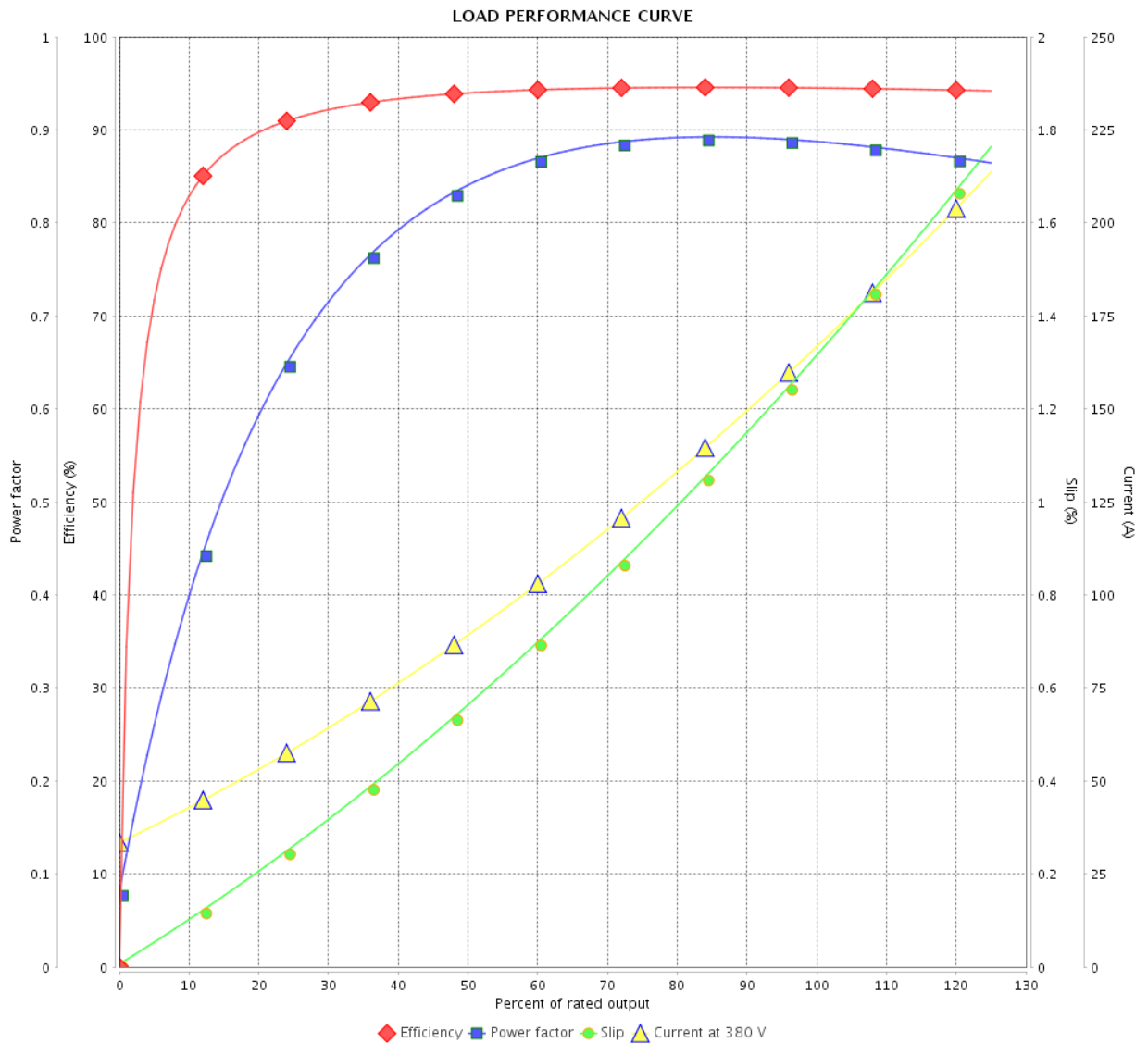


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Product code : 11431380

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Performance : 380 V 50 Hz 2P IE2

Rated current : 163 A
 LRC : 5.2
 Rated torque : 222 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 200 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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		13 / 36		
Date		01/06/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



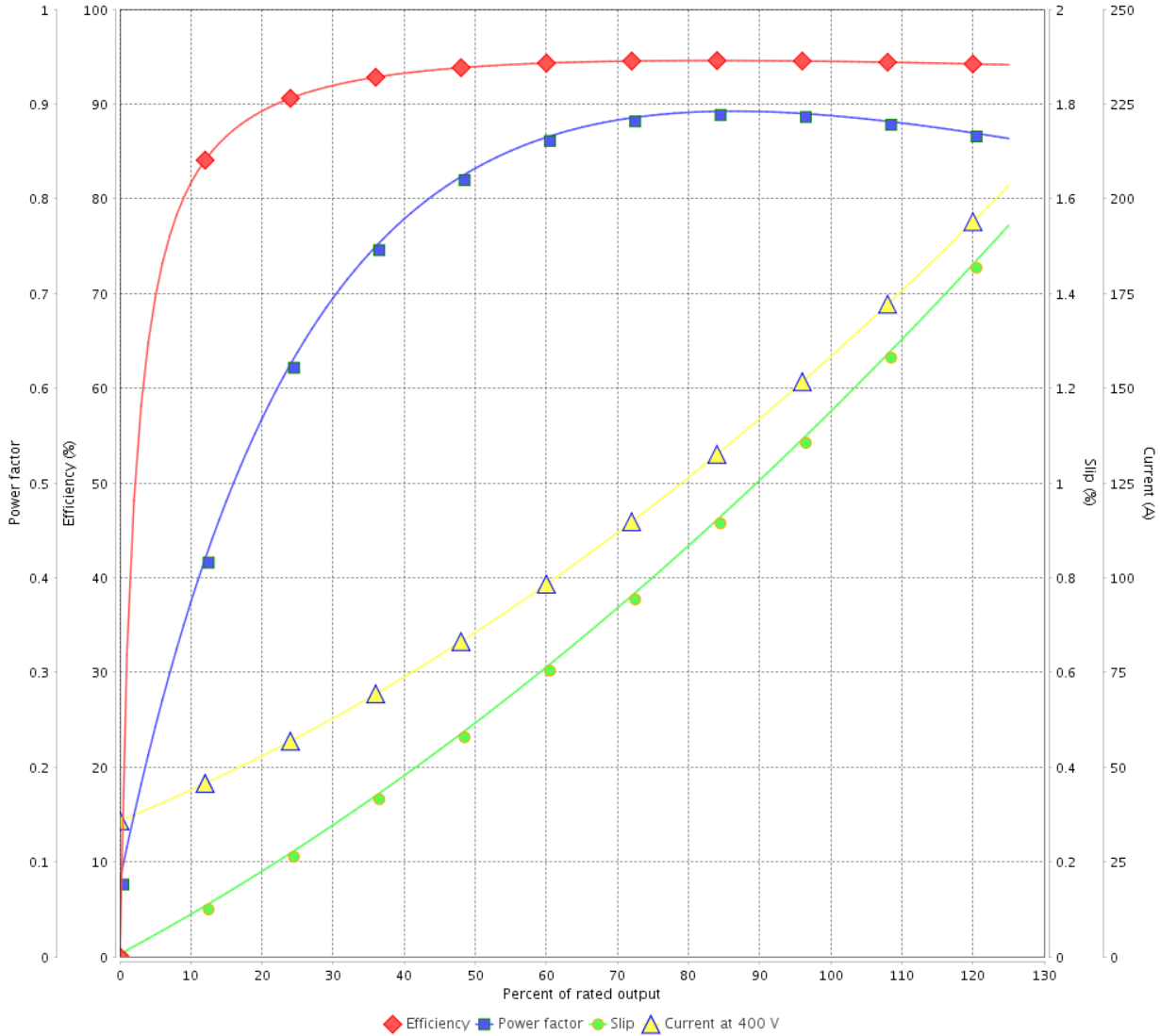
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Performance : 400 V 50 Hz 2P IE2

Rated current : 154 A
 LRC : 5.7
 Rated torque : 221 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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		14 / 36		
Date	01/06/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

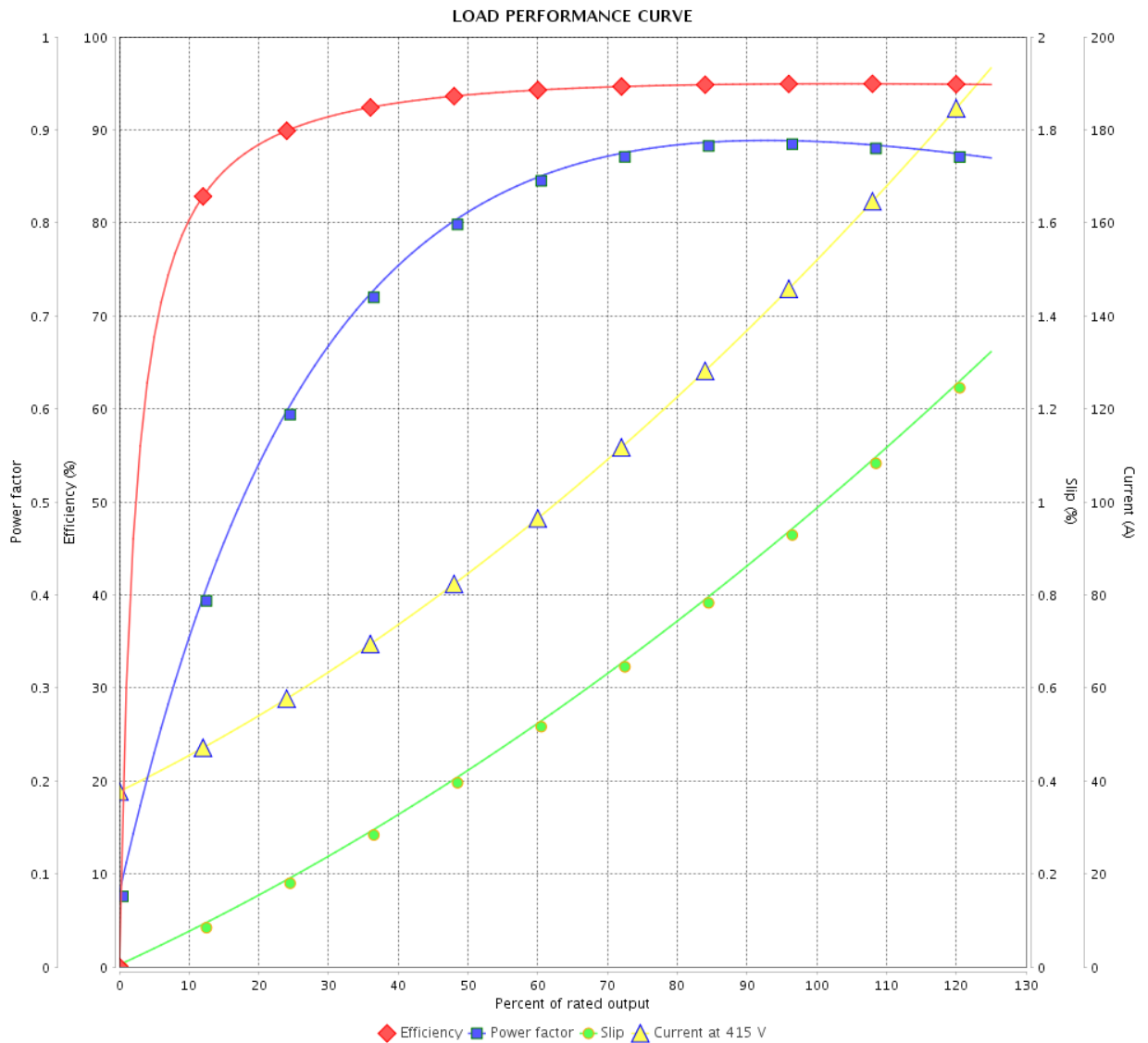


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Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A
 LRC : 6.2
 Rated torque : 221 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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			15 / 36	
Date	01/06/2022			

THERMAL LIMIT CURVE



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Performance : 460 V 60 Hz 2P

Rated current : 134 A	Moment of inertia (J) : 33.5 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 184 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.15
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 3570 rpm	Design : B

Heating constant

Cooling constant

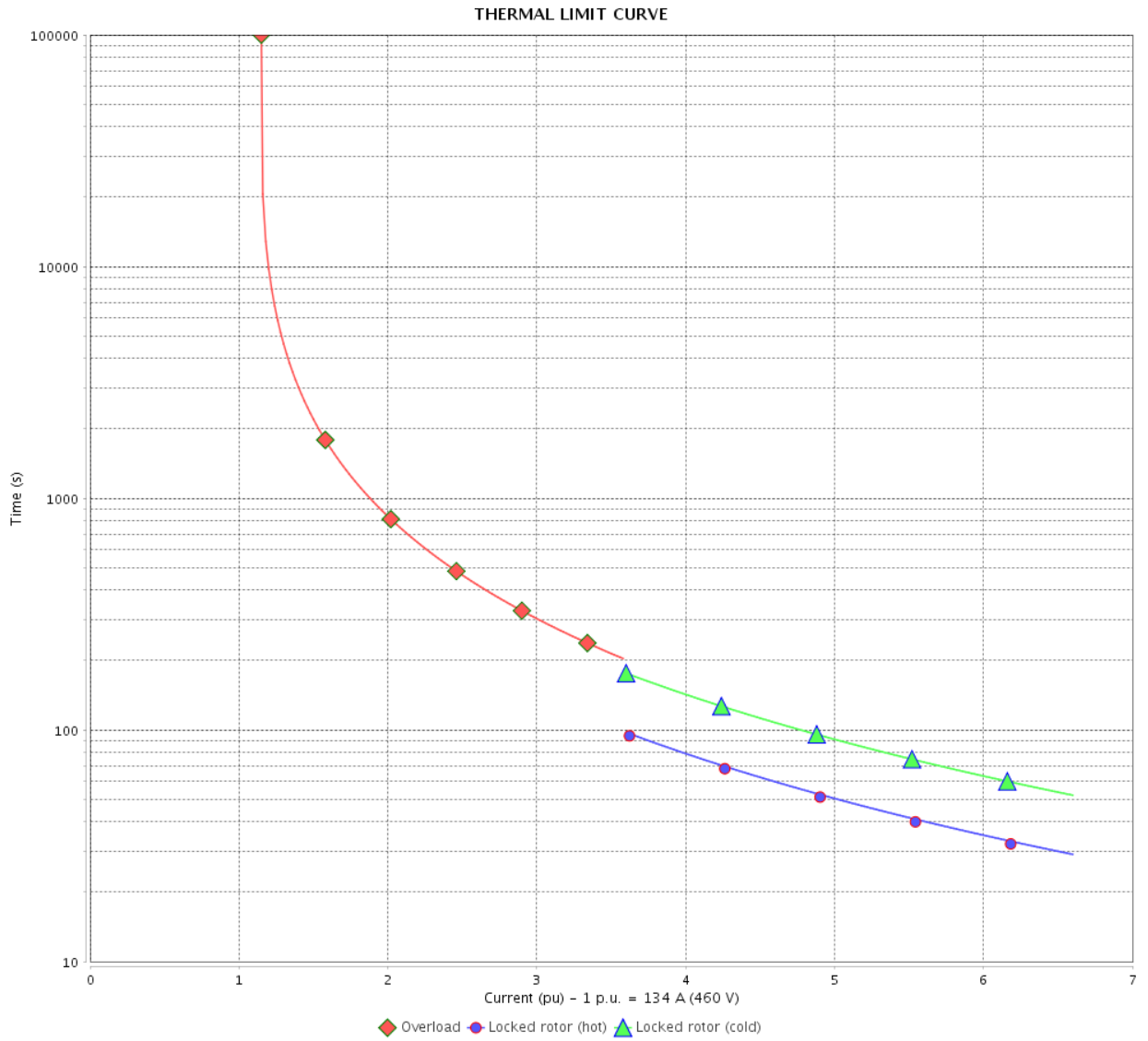
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 36	Revision
Checked by				
Date	01/06/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 17 / 36		Revision
Checked by				
Date				

THERMAL LIMIT CURVE



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Performance : 380 V 50 Hz 2P IE3

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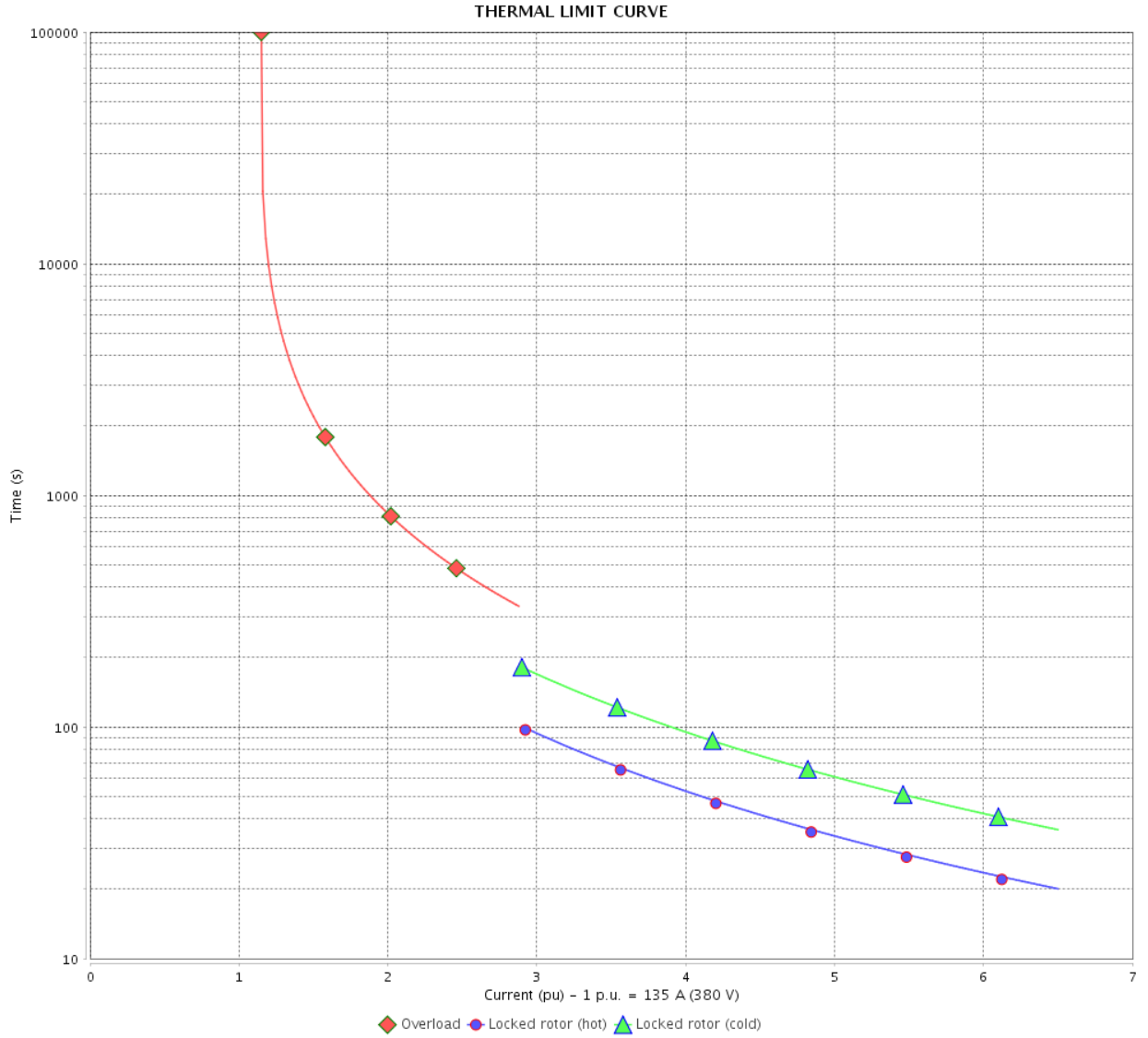
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 18 / 36	Revision
Checked by				
Date	01/06/2022			

THERMAL LIMIT CURVE

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		19 / 36		
Date		01/06/2022		

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LRC : 7.1	Duty cycle : Cont.(S1)
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Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
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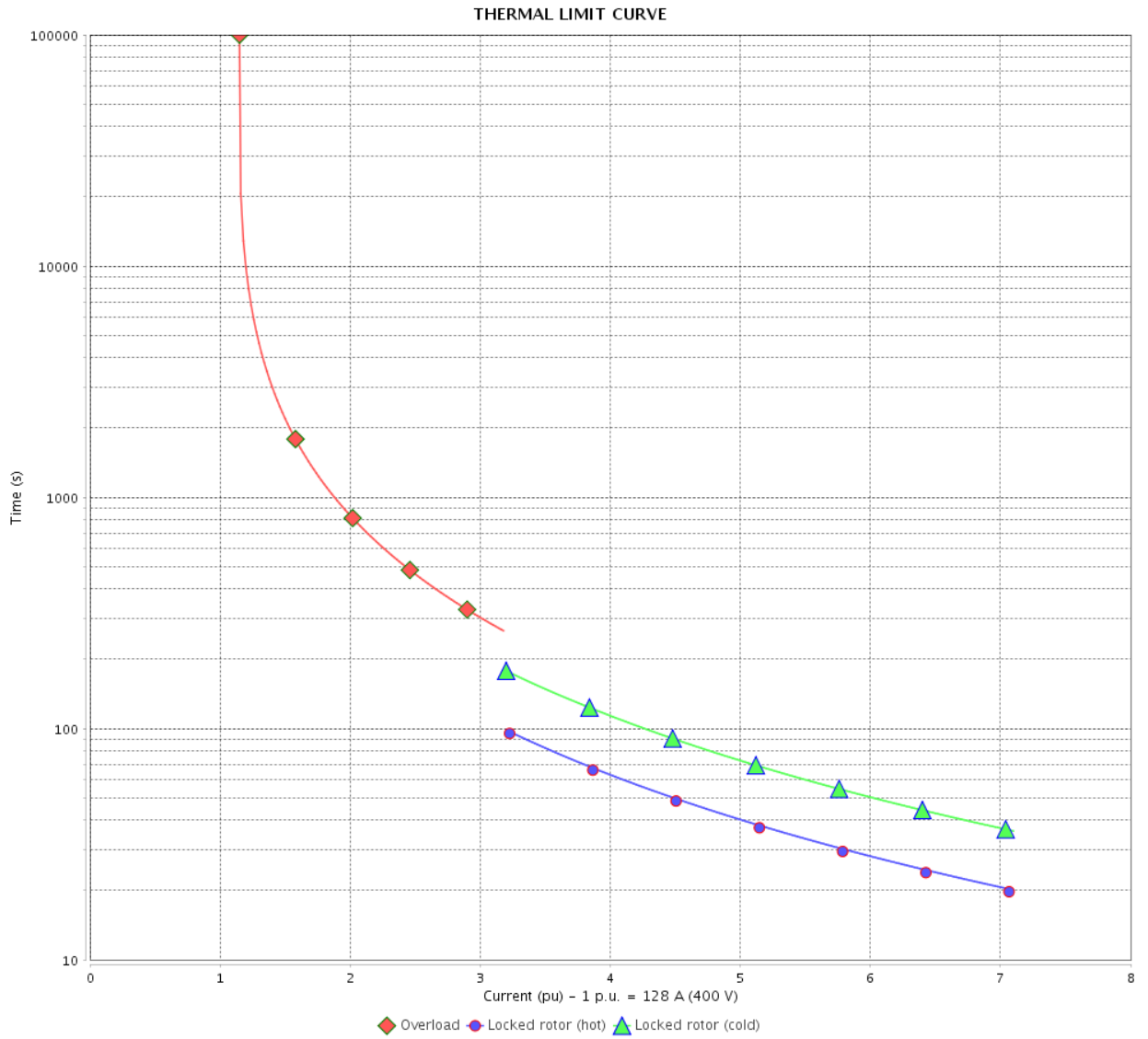
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	01/06/2022		20 / 36	

THERMAL LIMIT CURVE

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 21 / 36		Revision
Checked by				
Date				

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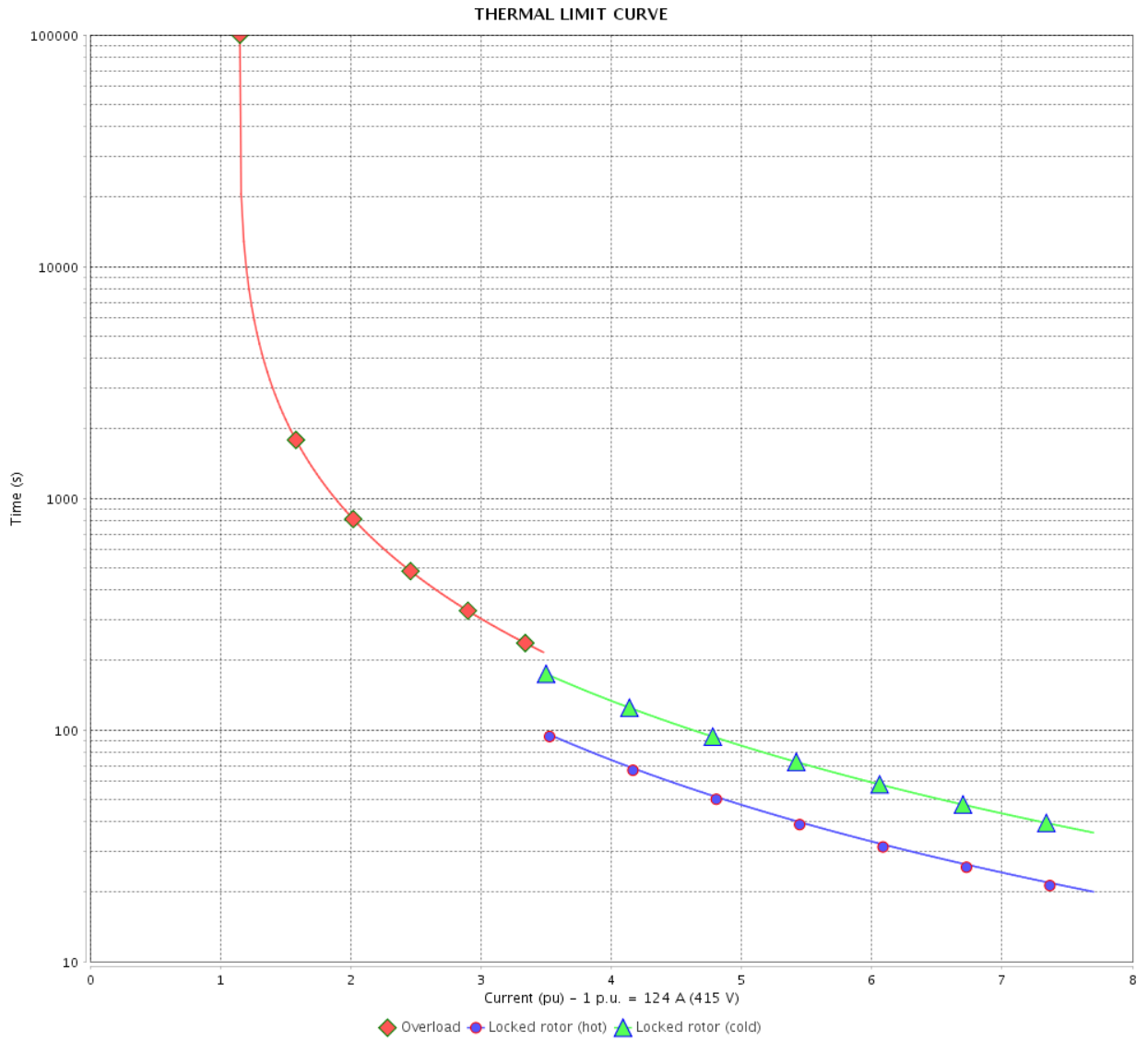
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 22 / 36	Revision
Checked by				
Date	01/06/2022			

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 23 / 36		Revision
Checked by				
Date				

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Rated current	: 163 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 222 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 2960 rpm	Design	: B

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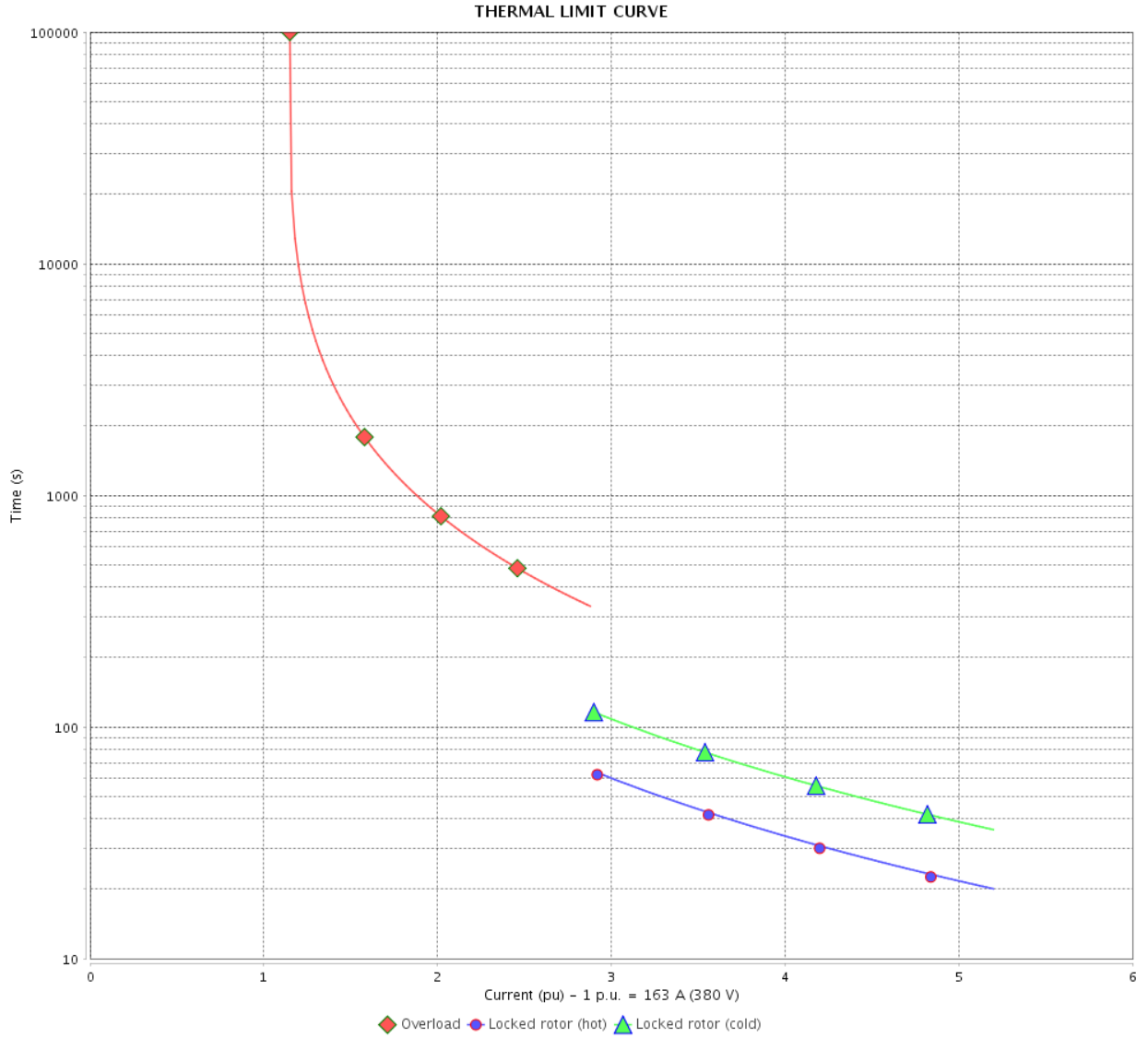
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	01/06/2022		24 / 36	

THERMAL LIMIT CURVE

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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			25 / 36	

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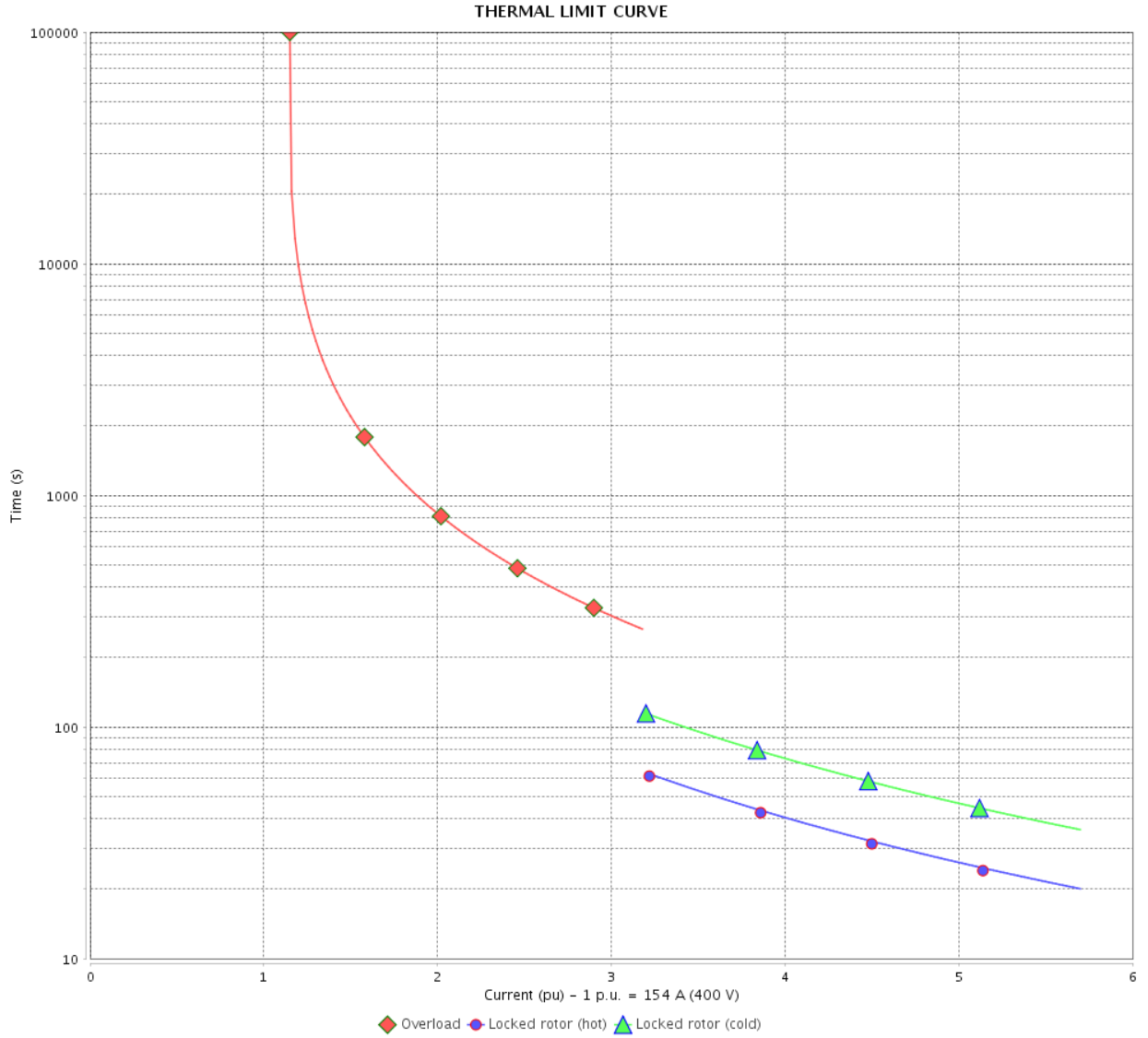
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Performed by			Page	Revision
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		27 / 36		
Date		01/06/2022		

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Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11431380
 Catalog # : 12536ST3QIE444TS-W22

Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A	Moment of inertia (J) : 33.5 sq.ft.lb
LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 221 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 2970 rpm	Design : B

Heating constant

Cooling constant

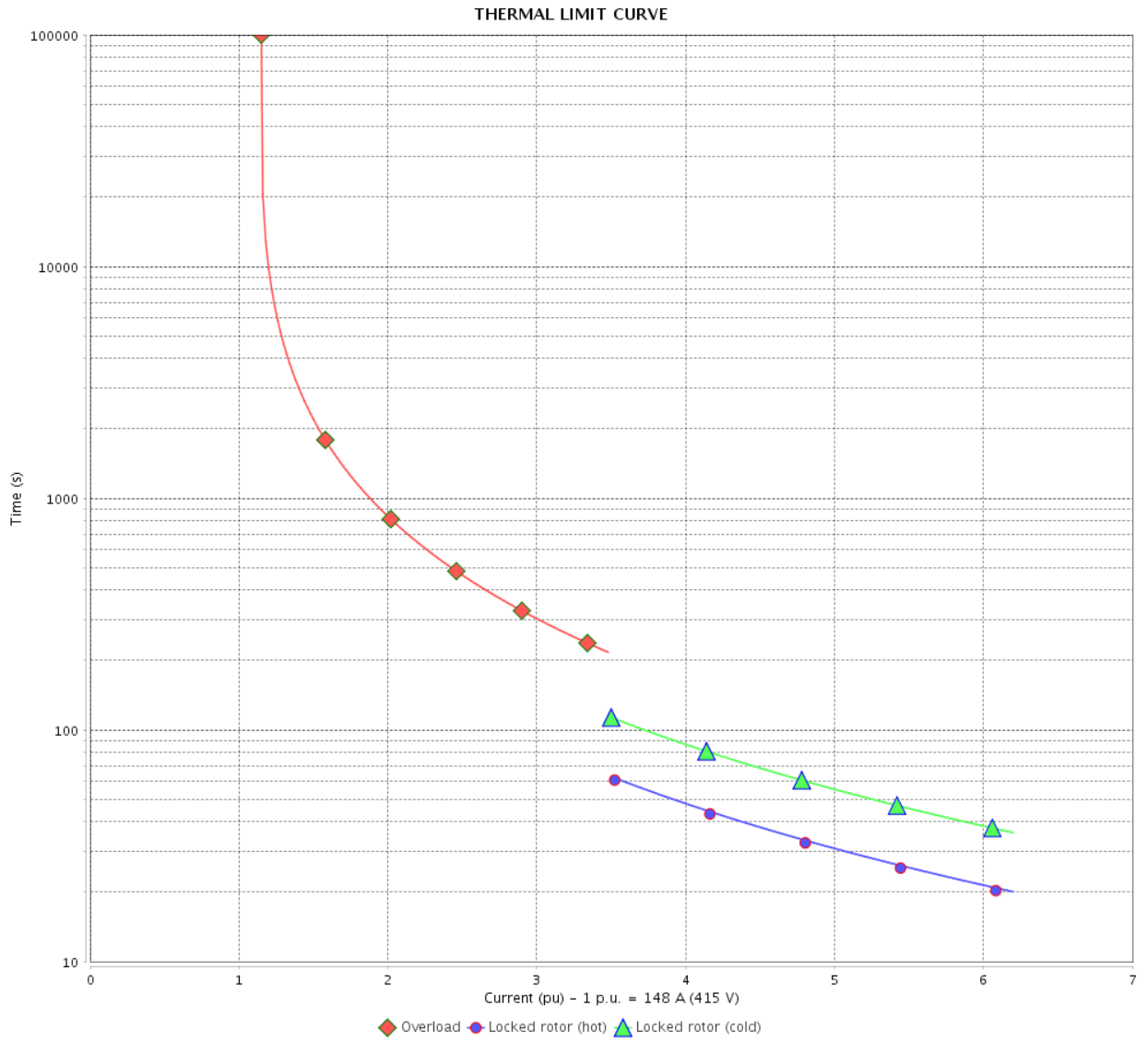
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 28 / 36	Revision
Checked by				
Date	01/06/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 29 / 36		Revision
Checked by				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

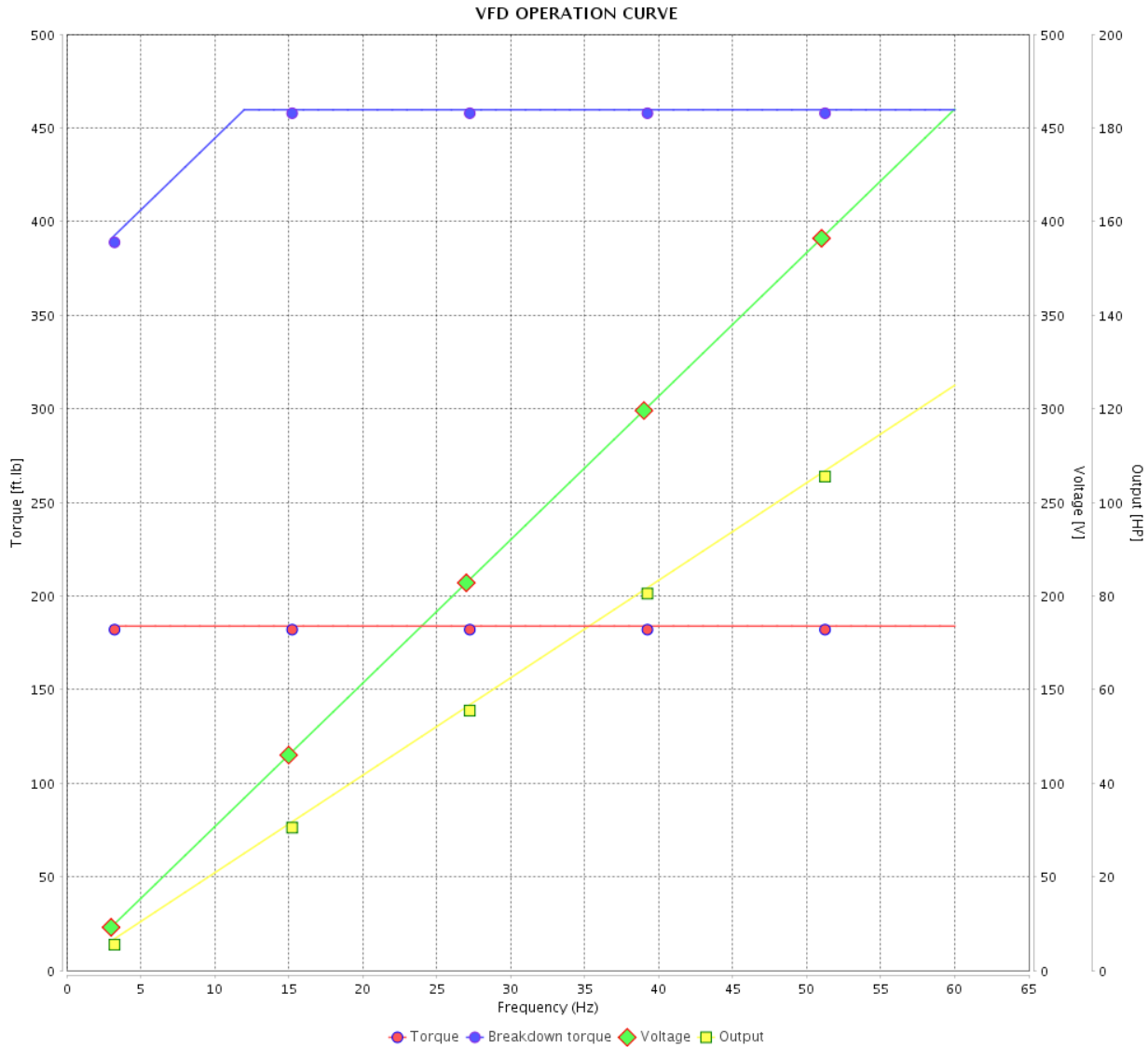


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22



Performance : 460 V 60 Hz 2P

Rated current	: 134 A	Moment of inertia (J)	: 33.5 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 184 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 3570 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 30 / 36	Revision
Checked by				
Date	01/06/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

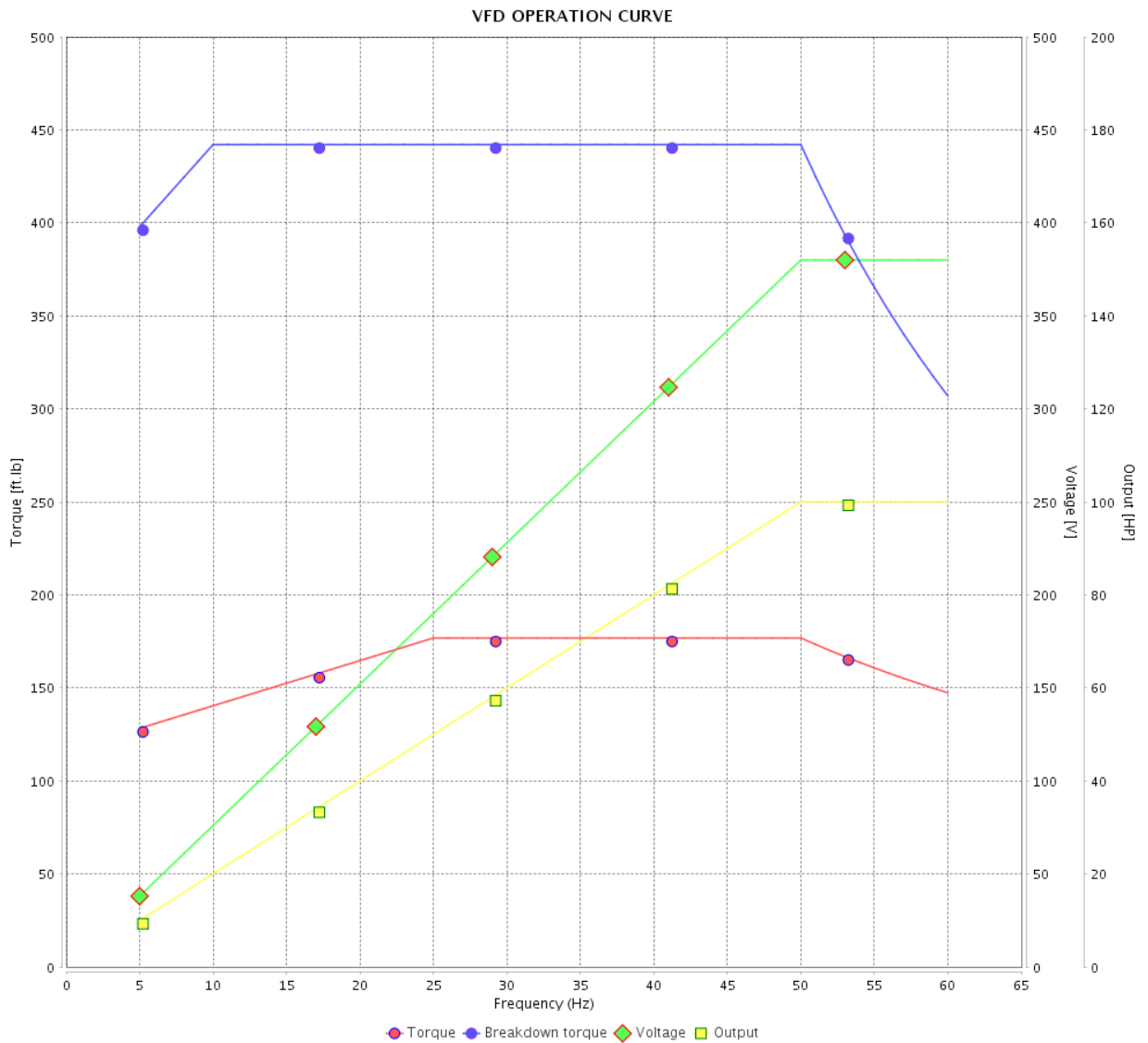


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22



Performance : 380 V 50 Hz 2P IE3

Rated current : 135 A
 LRC : 6.5
 Rated torque : 177 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 31 / 36	Revision
Checked by				
Date	01/06/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

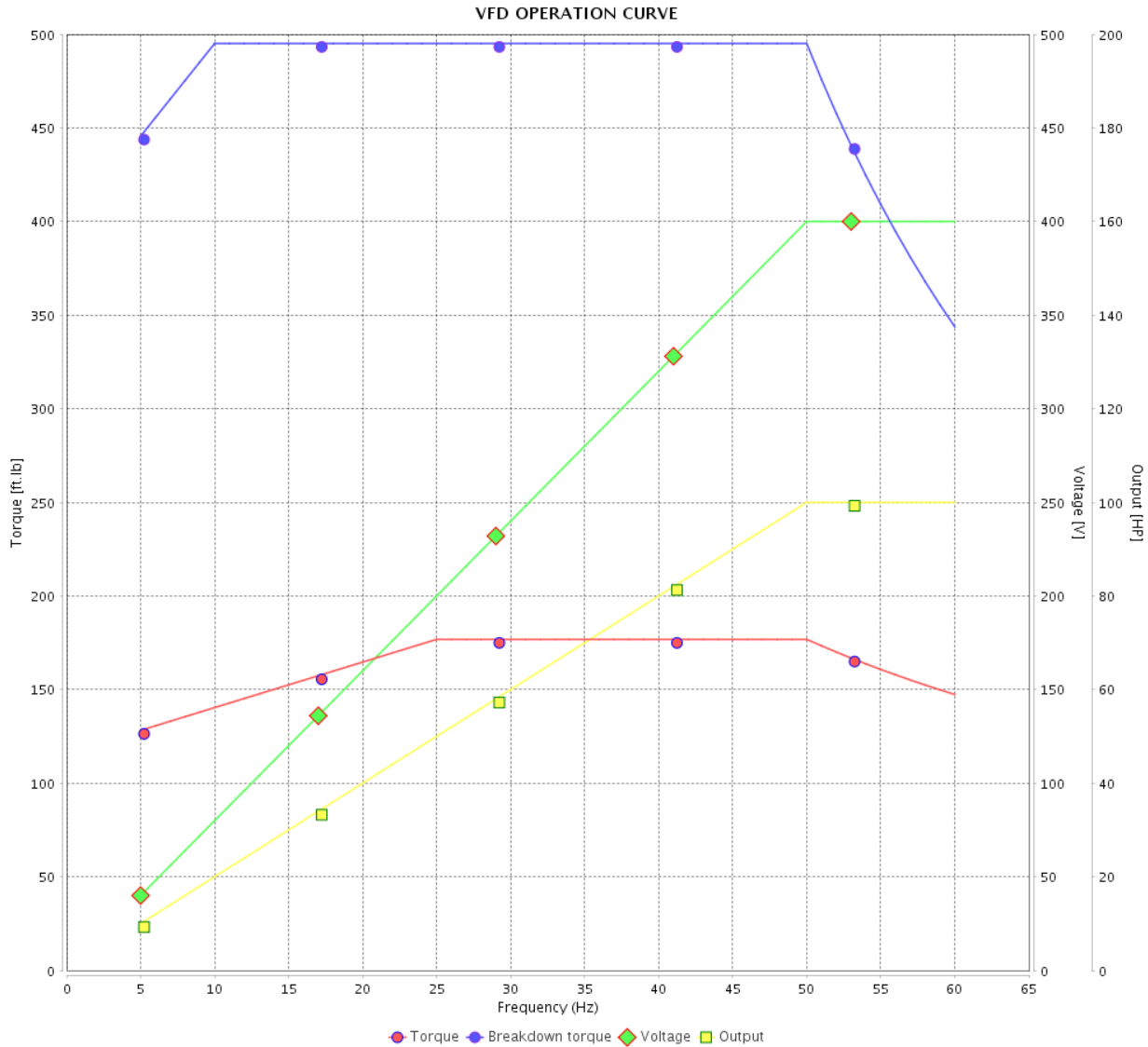


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22



Performance : 400 V 50 Hz 2P IE3

Rated current : 128 A
 LRC : 7.1
 Rated torque : 177 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 280 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 32 / 36	Revision
Checked by				
Date	01/06/2022			

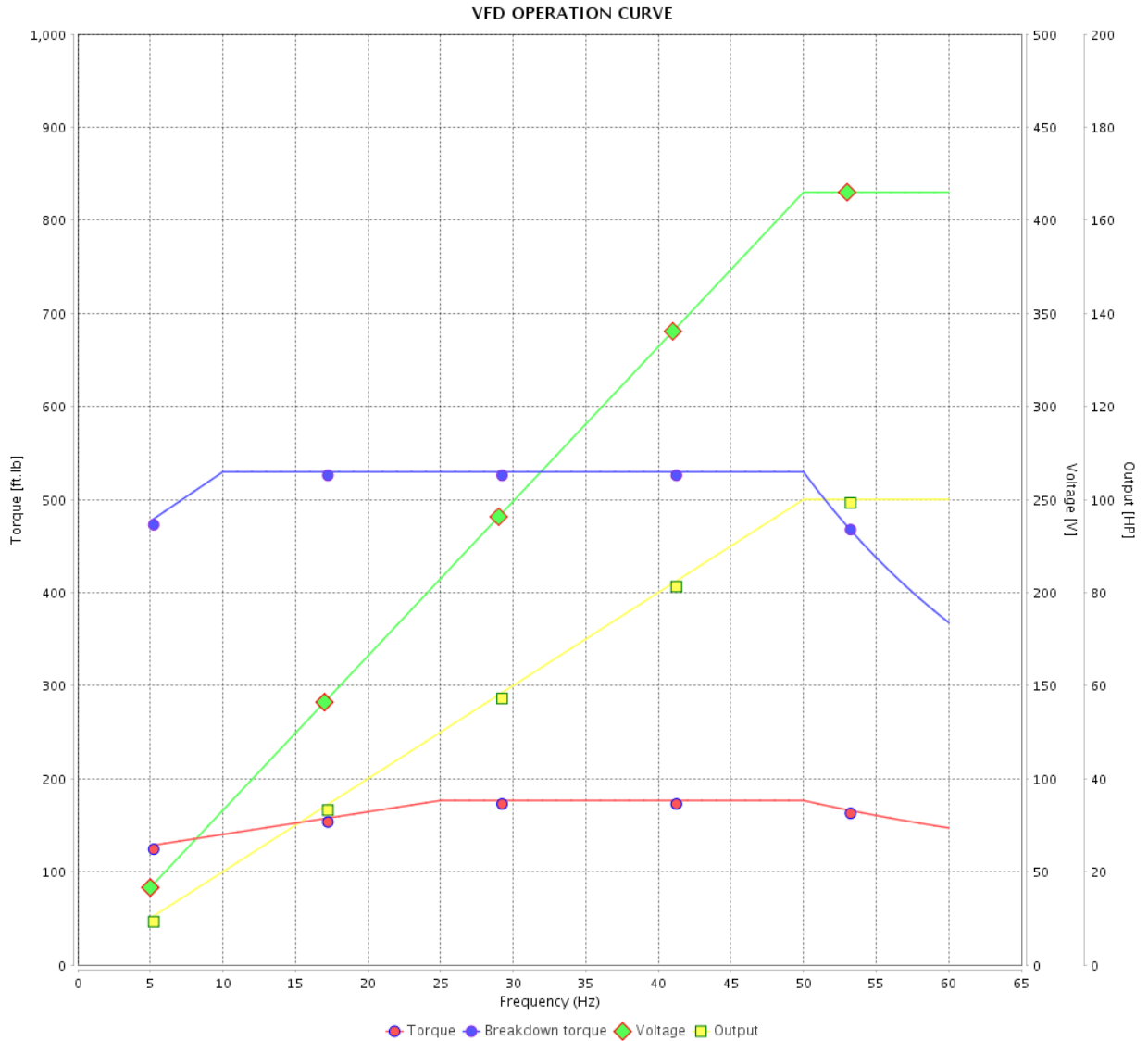
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11431380
 Catalog # : 12536ST3QIE444TS-W22



Performance : 415 V 50 Hz 2P IE3

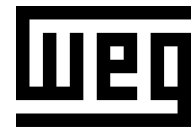
Rated current : 124 A
 LRC : 7.7
 Rated torque : 177 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 300 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 33 / 36	Revision
Checked by				
Date	01/06/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

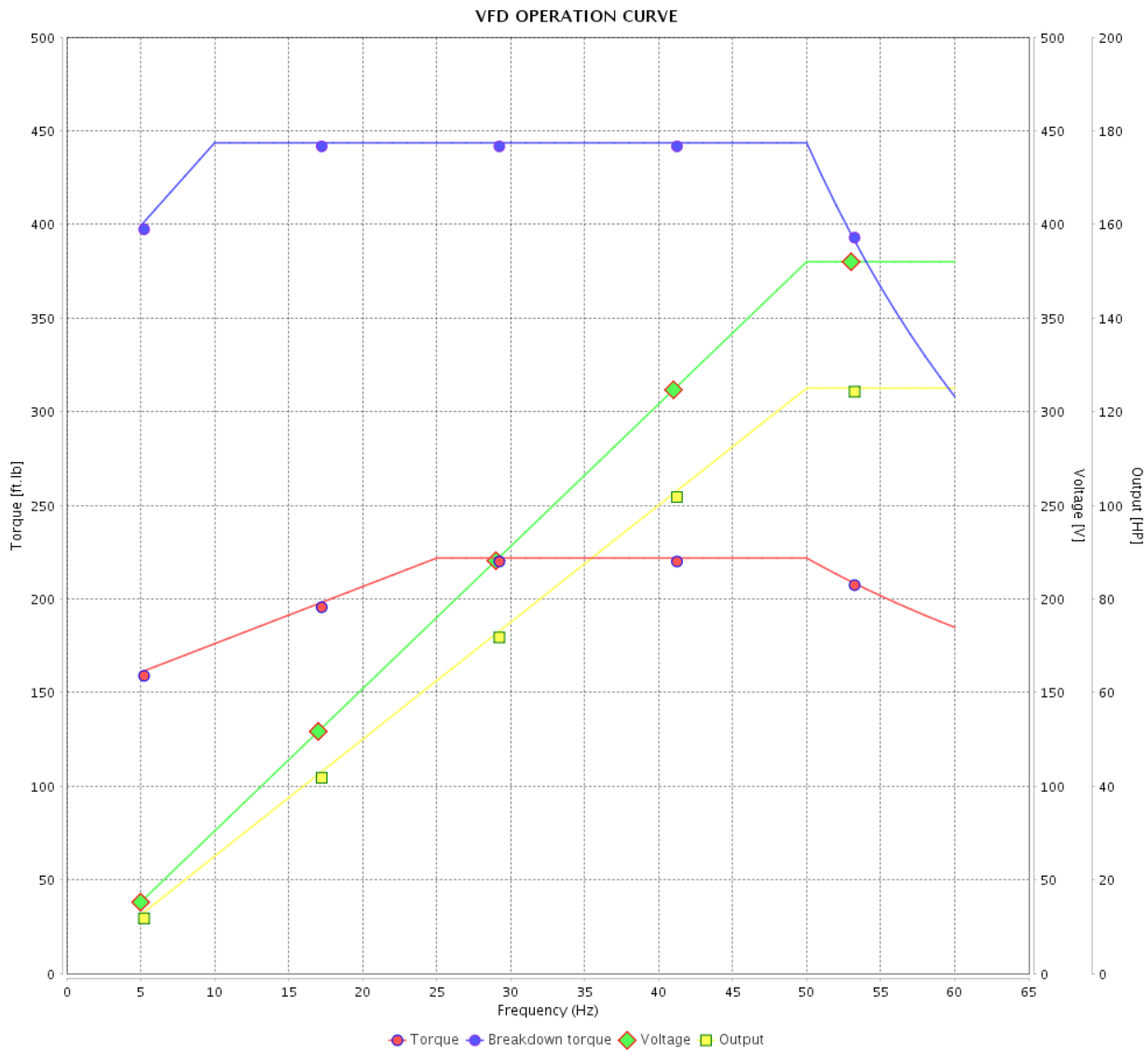


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22



Performance : 380 V 50 Hz 2P IE2

Rated current : 163 A
 LRC : 5.2
 Rated torque : 222 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 200 %
 Rated speed : 2960 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 34 / 36	Revision
Checked by				
Date	01/06/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

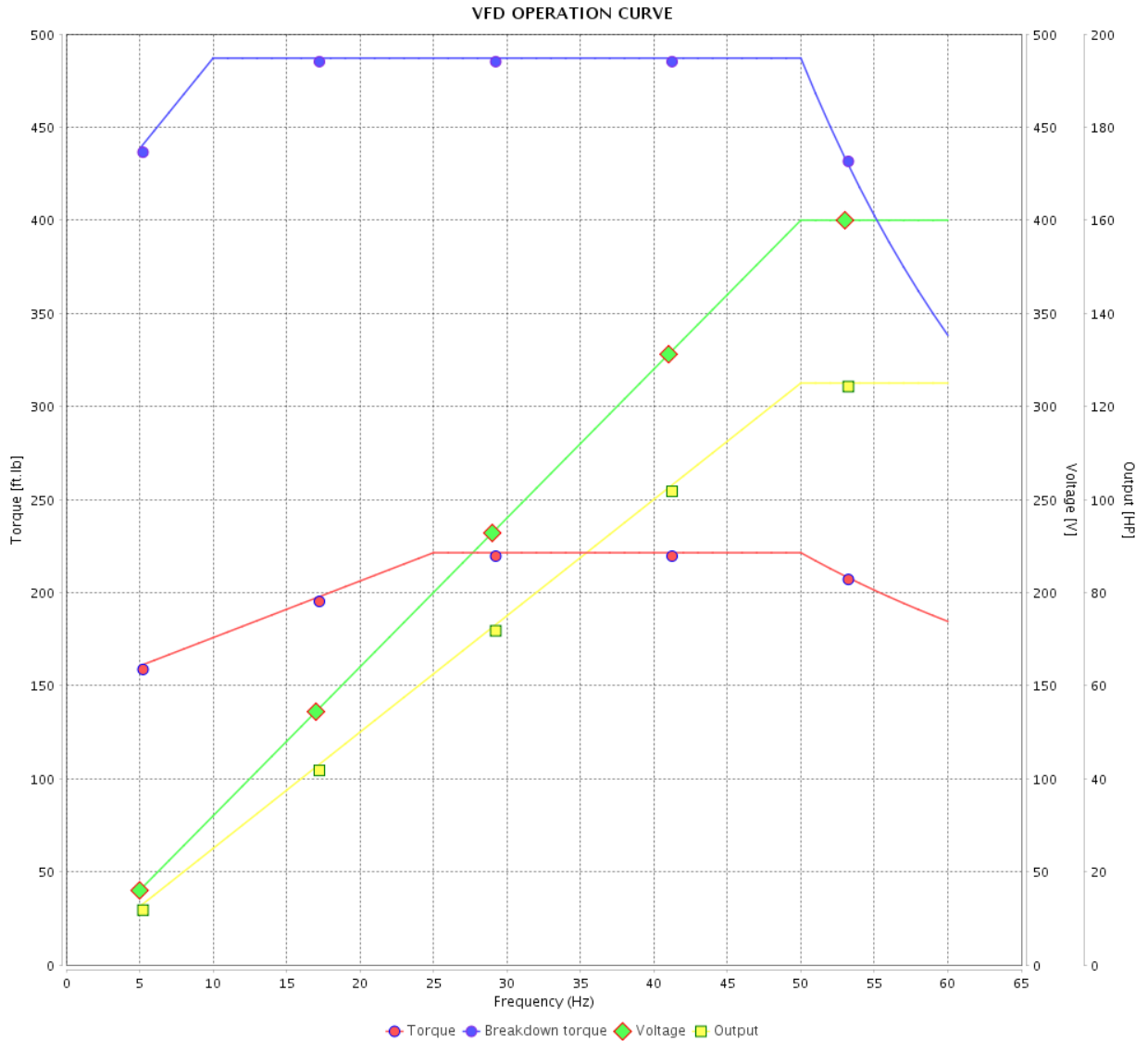


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22



Performance : 400 V 50 Hz 2P IE2

Rated current : 154 A
 LRC : 5.7
 Rated torque : 221 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 2965 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 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 35 / 36	Revision
Checked by				
Date	01/06/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



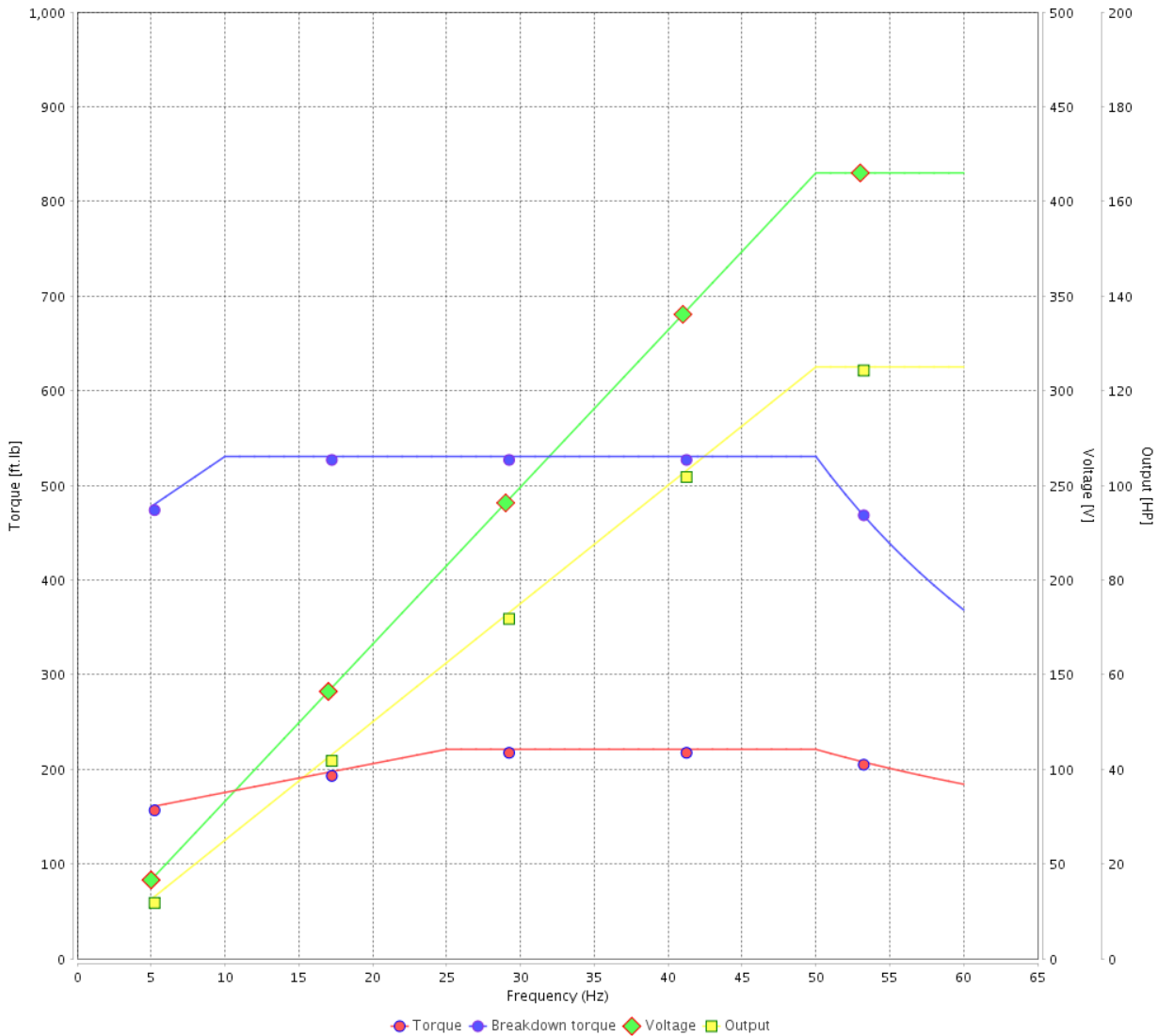
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431380

Catalog # : 12536ST3QIE444TS-W22

VFD OPERATION CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A
 LRC : 6.2
 Rated torque : 221 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 33.5 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

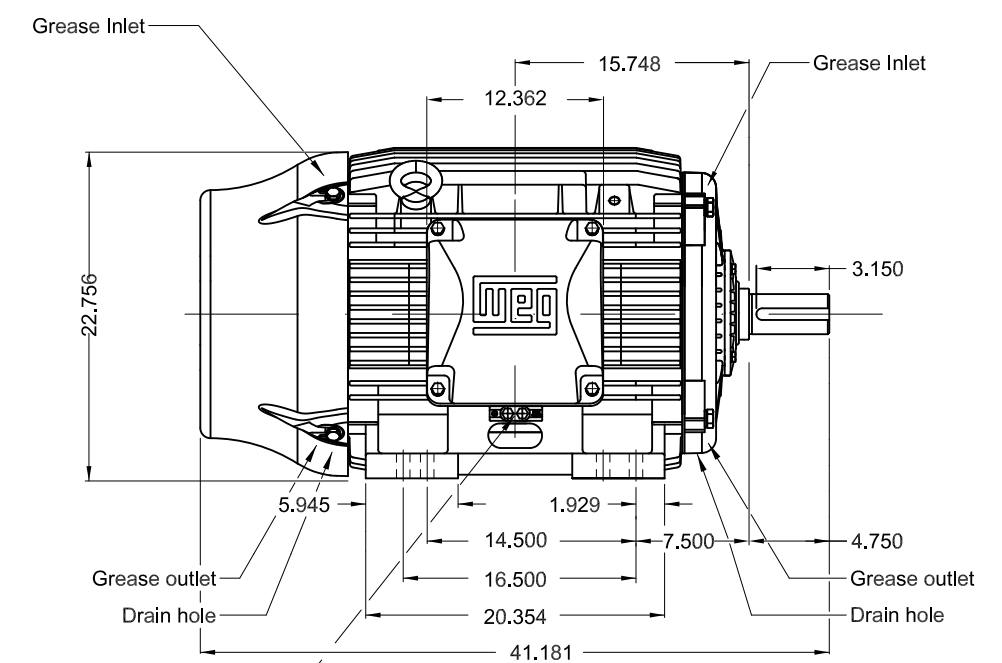
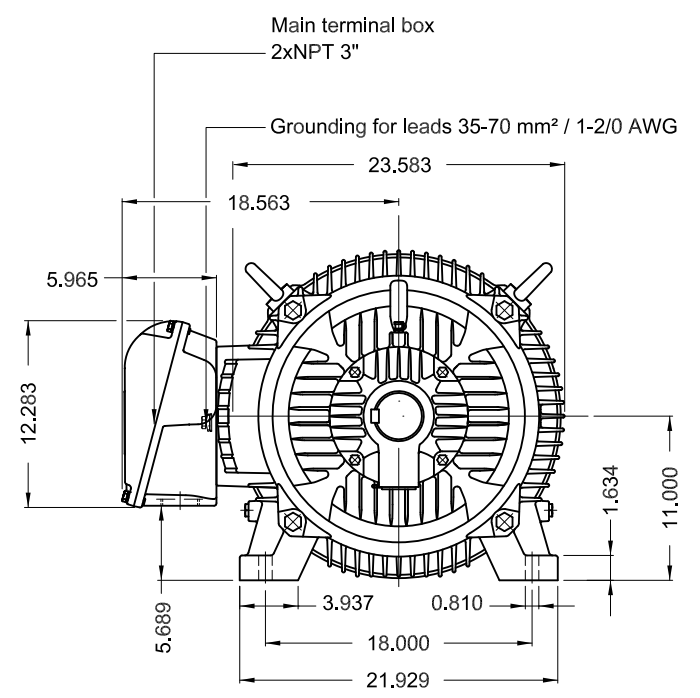
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

1 2 3 4 5 6

A

B

C

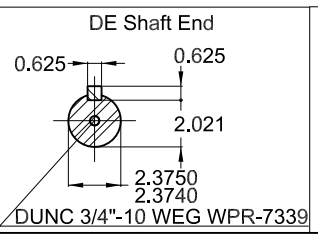


Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

Without vertical jackscrews
 Color RAL 5009
 Painting plan 202E
 Mounting B3R(D)



125 HP 02 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 444/5TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches

XME A3



NEMA
Premium
W22



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 - T3A

MODEL 12536ST3QIE444TS-W22



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
11431380

PH3 60Hz Fr. 444/5TS 1000m.a.s.l. IP55 TEFC 1632lb

V 460

A 134

HP 125

kW 90

SF 1.15

SFA 154

RPM 3570

PF 0.89

AMB 40°C

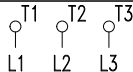
INS cl. F DT80K

NEMA NOM EFF 95.0%

DUTY CONT.

DES B Code G

GUARANT. EFF 94.1%



460V



→ 6314-C3 (27g) 70BC03X30

→ 6314-C3 (27g) 70BC03X30



MOBIL POLYREX EM (4000h)

