

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :			
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11970039
		Catalog # :	00212ST3QIE184TC-W22
Frame	: 182/4TC	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>	: 112 lb
Protection degree	: IP55	Moment of inertia (J)	: 0.6210 sq.ft.lb
Design	: B		
Output [HP]	2	2	2
Poles	6	6	6
Frequency [Hz]	60	50	50
Rated voltage [V]	460	380	400
Rated current [A]	3.22	3.66	3.61
L. R. Amperes [A]	24.2	22.0	24.2
LRC [A]	7.5x(Code L)	6.0x(Code J)	6.7x(Code K)
No load current [A]	1.90	1.90	2.05
Rated speed [RPM]	1170	960	965
Slip [%]	2.50	4.00	3.50
Rated torque [ft.lb]	8.98	10.9	10.9
Locked rotor torque [%]	300	229	280
Breakdown torque [%]	350	260	310
Service factor	1.25	1.00	1.00
Temperature rise	80 K	80 K	80 K
Locked rotor time	55s (cold) 31s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)
Efficiency (%)	25%	85.4	84.8
	50%	86.5	85.5
	75%	87.5	86.5
	100%	88.5	86.5
Power Factor	25%	0.26	0.31
	50%	0.46	0.53
	75%	0.58	0.65
	100%	0.66	0.72
Bearing type	: <u>Drive end</u> 6207 C3 <u>Non drive end</u> 6206 C3	Foundation loads	
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 180 lb
Lubrication interval	: 20000 h 20000 h	Max. compression	: 292 lb
Lubricant amount	: 7 g 5 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
Date	14/04/2022		1 / 21
			Revision

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



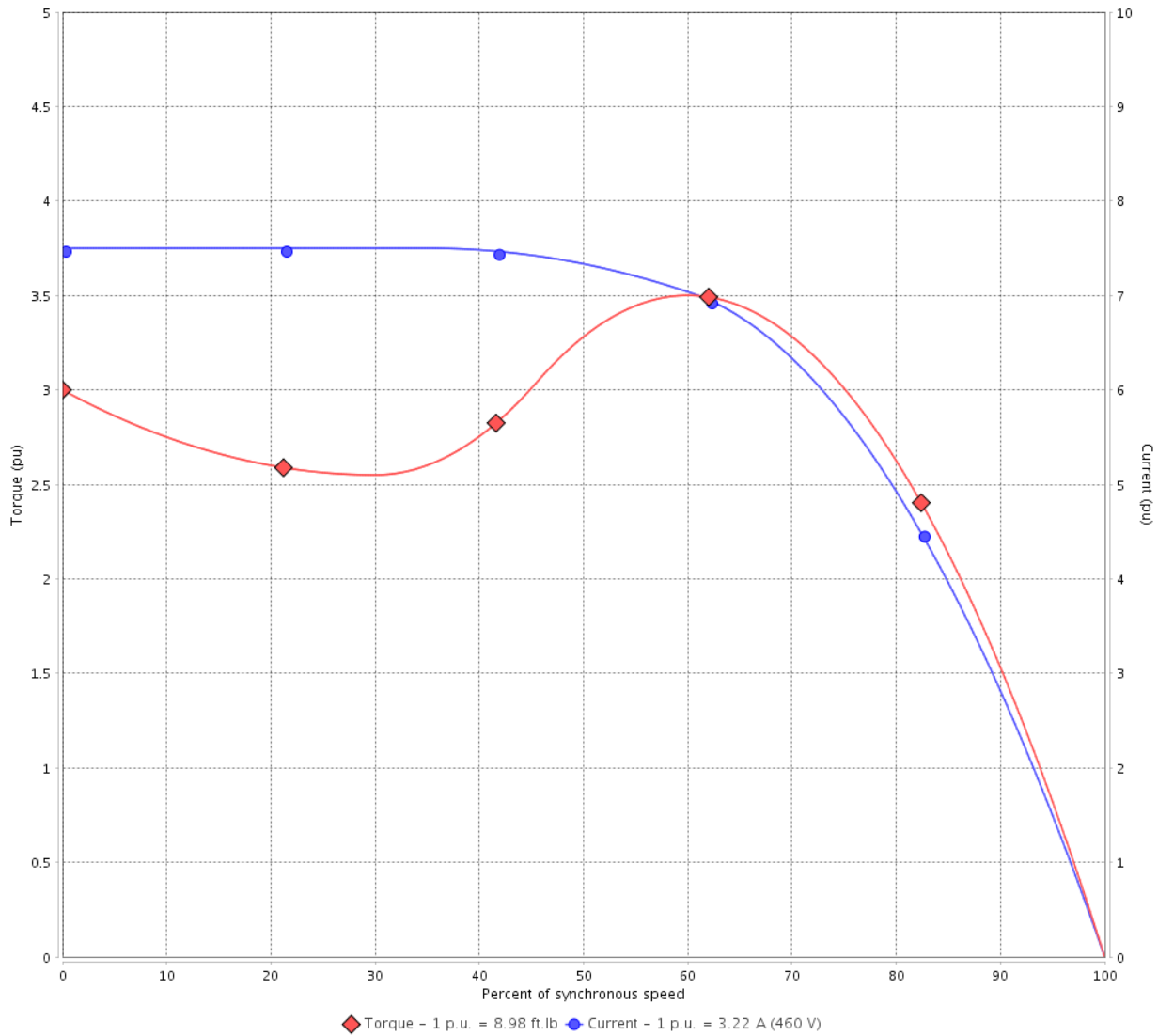
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 6P

Rated current	: 3.22 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 8.98 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Locked rotor time : 55s (cold) 31s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	14/04/2022			
			2 / 21	

# TORQUE AND CURRENT VS SPEED CURVE



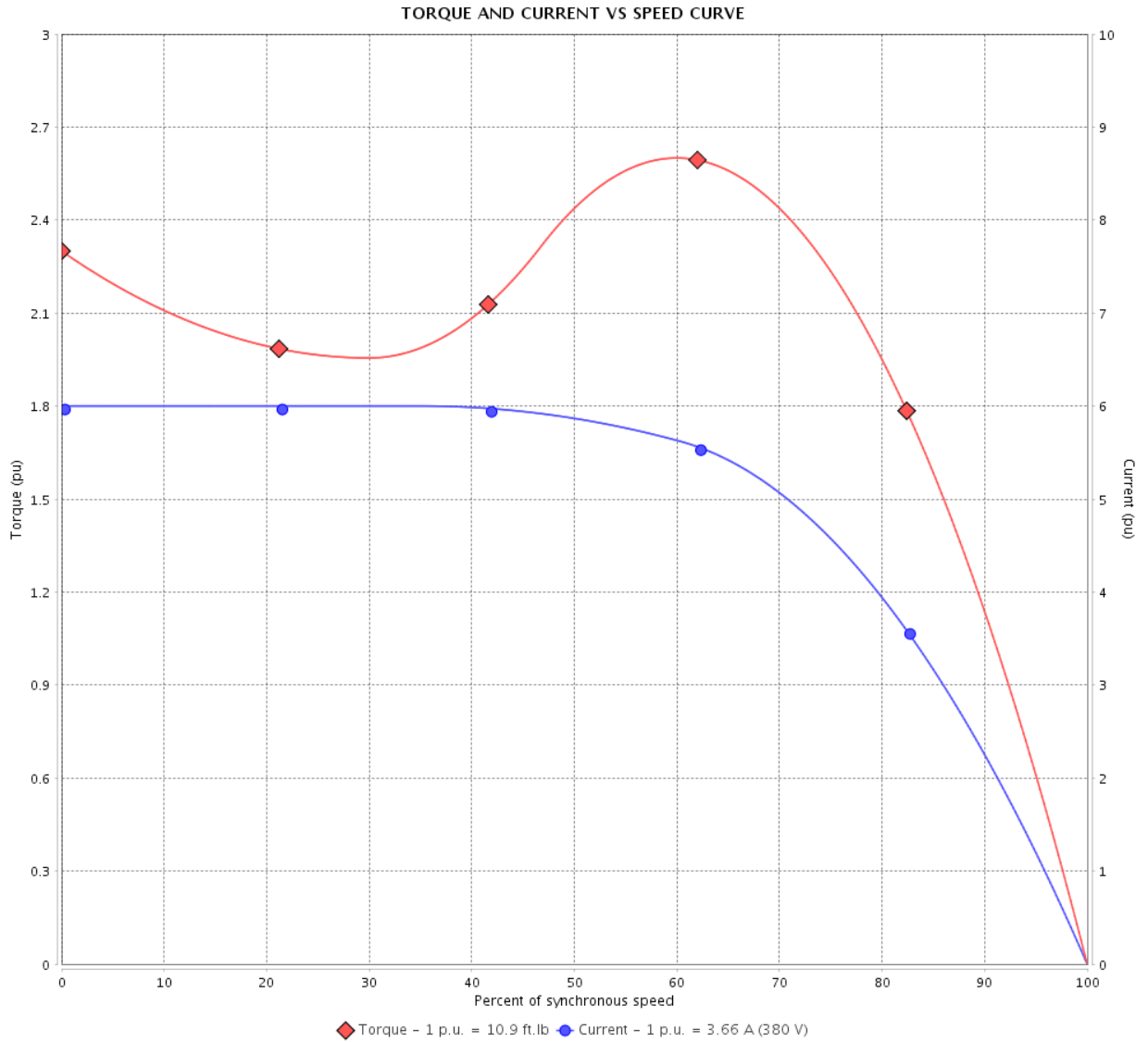
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22



Performance : 380 V 50 Hz 6P IE4

Rated current	: 3.66 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 21	
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



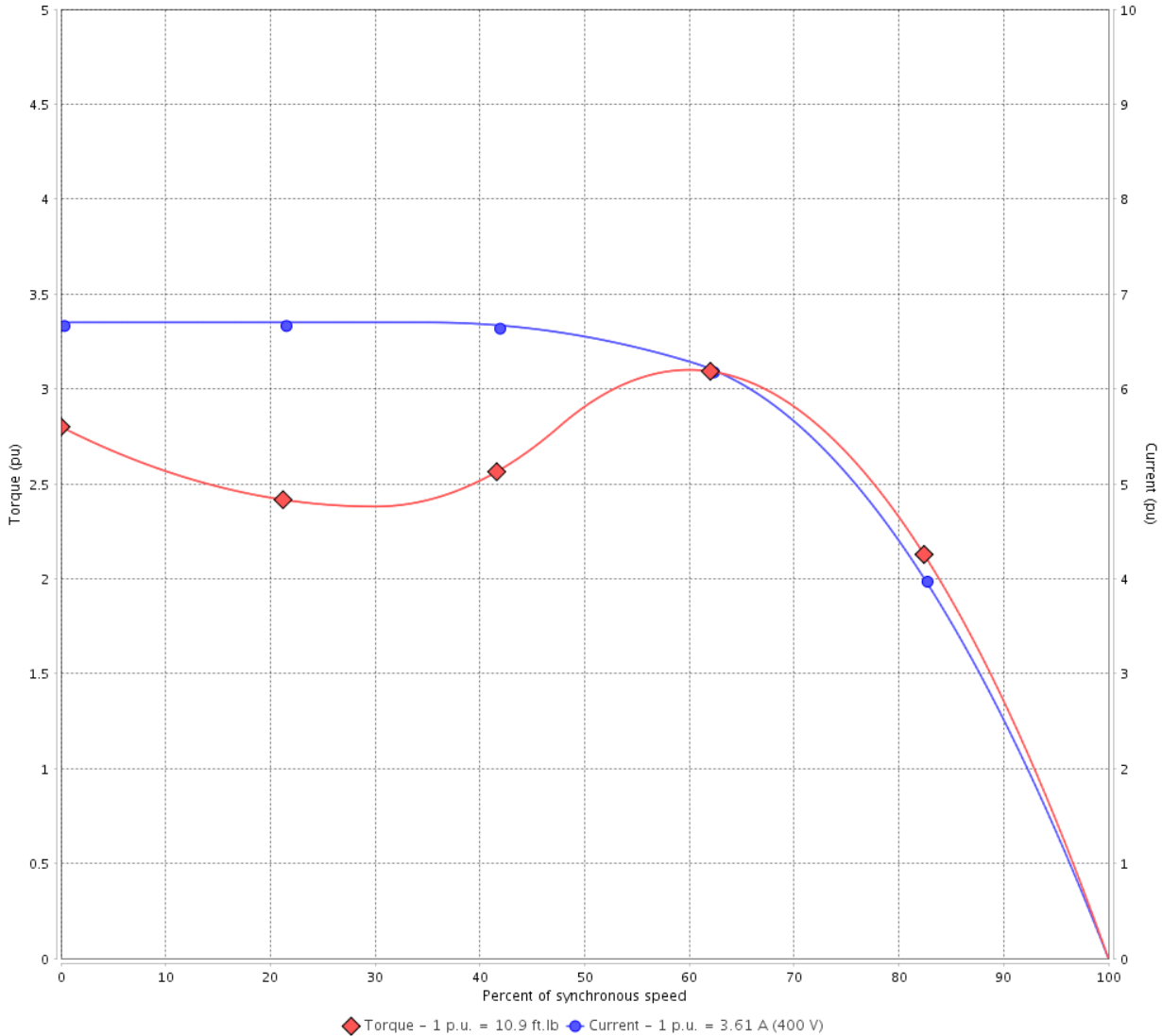
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current	: 3.61 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



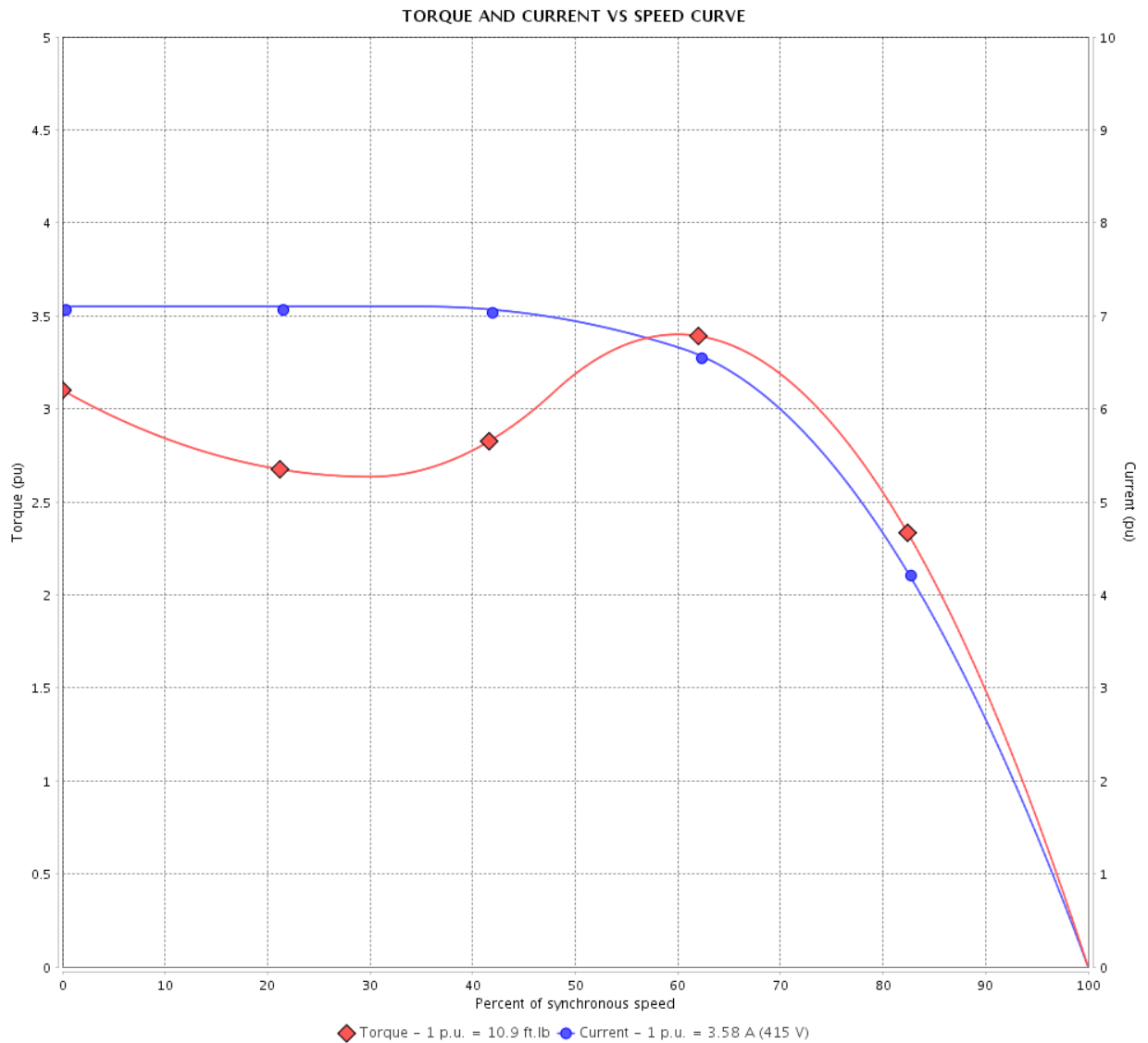
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22



Performance : 415 V 50 Hz 6P IE4

Rated current	: 3.58 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 21	
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



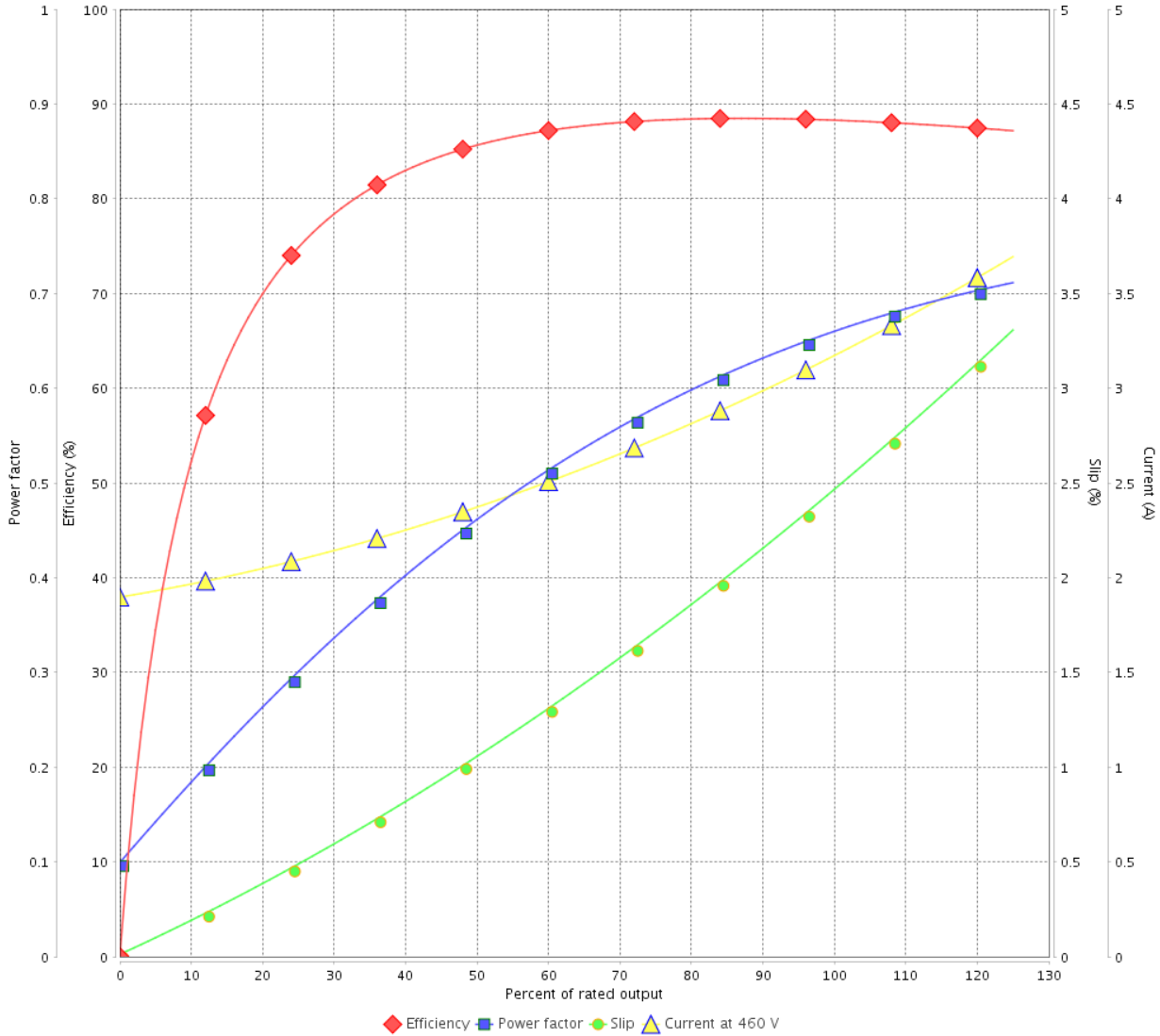
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 6P

Rated current : 3.22 A  
 LRC : 7.5  
 Rated torque : 8.98 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 0.6210 sq.ft.lb  
 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 6 / 21	Revision
Checked by				
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

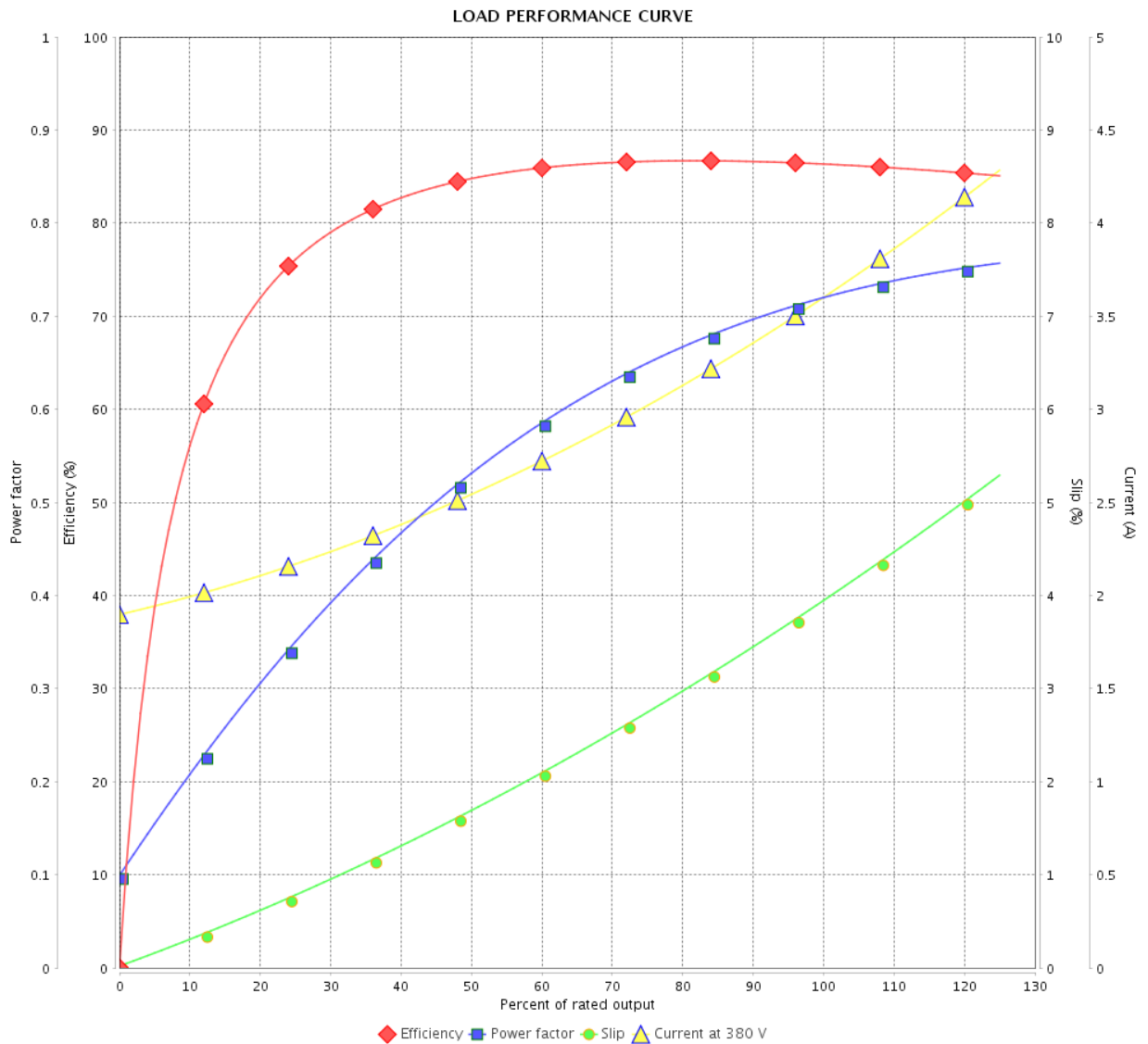


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22



Performance : 380 V 50 Hz 6P IE4

Rated current : 3.66 A  
 LRC : 6.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 0.6210 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		7 / 21		
Date		14/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



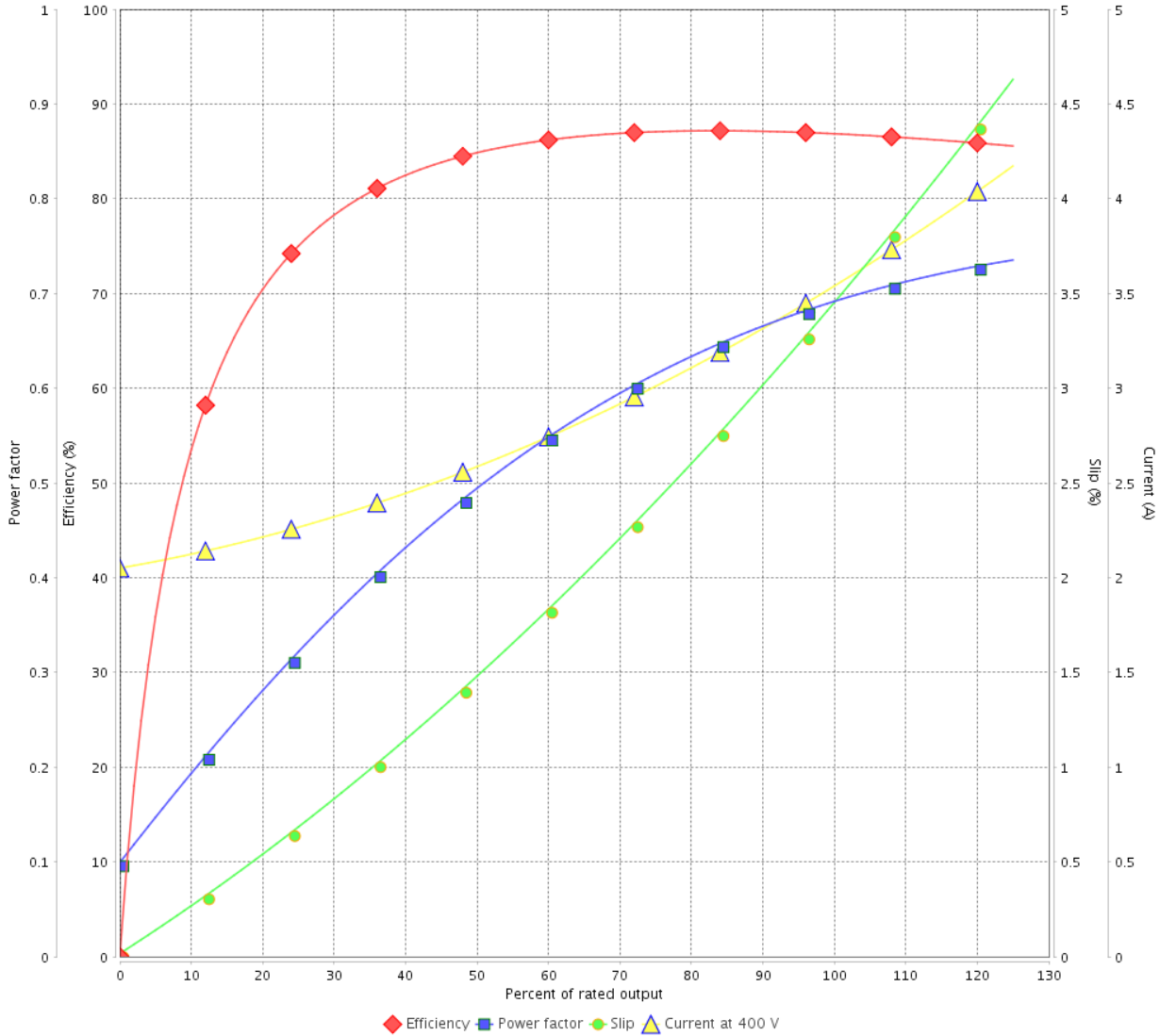
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current : 3.61 A  
 LRC : 6.7  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 310 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.6210 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	14/04/2022			



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

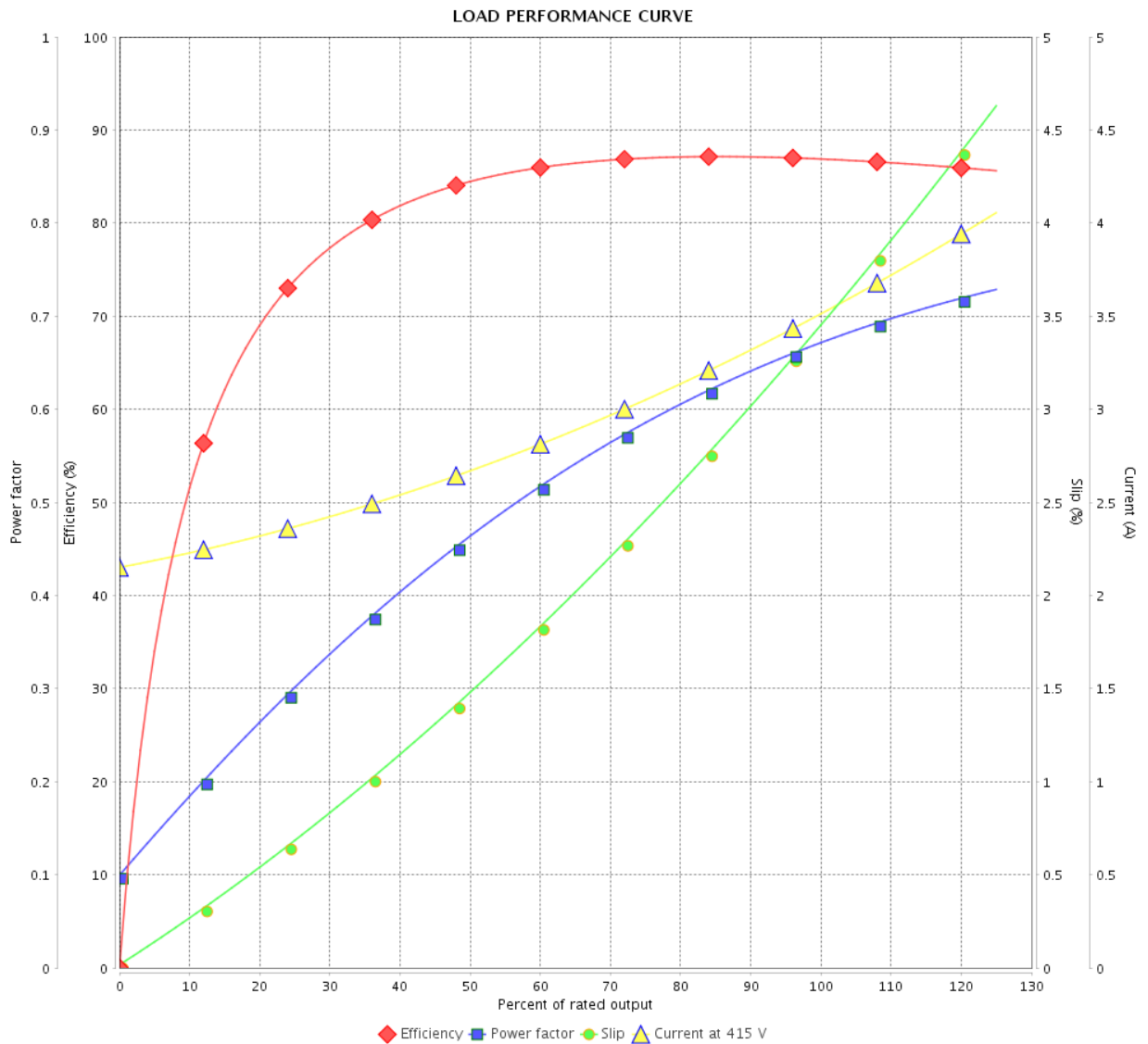


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22



Performance : 415 V 50 Hz 6P IE4

Rated current : 3.58 A  
 LRC : 7.1  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 310 %  
 Breakdown torque : 340 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.6210 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				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11970039  
Catalog # : 00212ST3QIE184TC-W22

Performance : 460 V 60 Hz 6P

Rated current	: 3.22 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 8.98 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Heating constant

Cooling constant

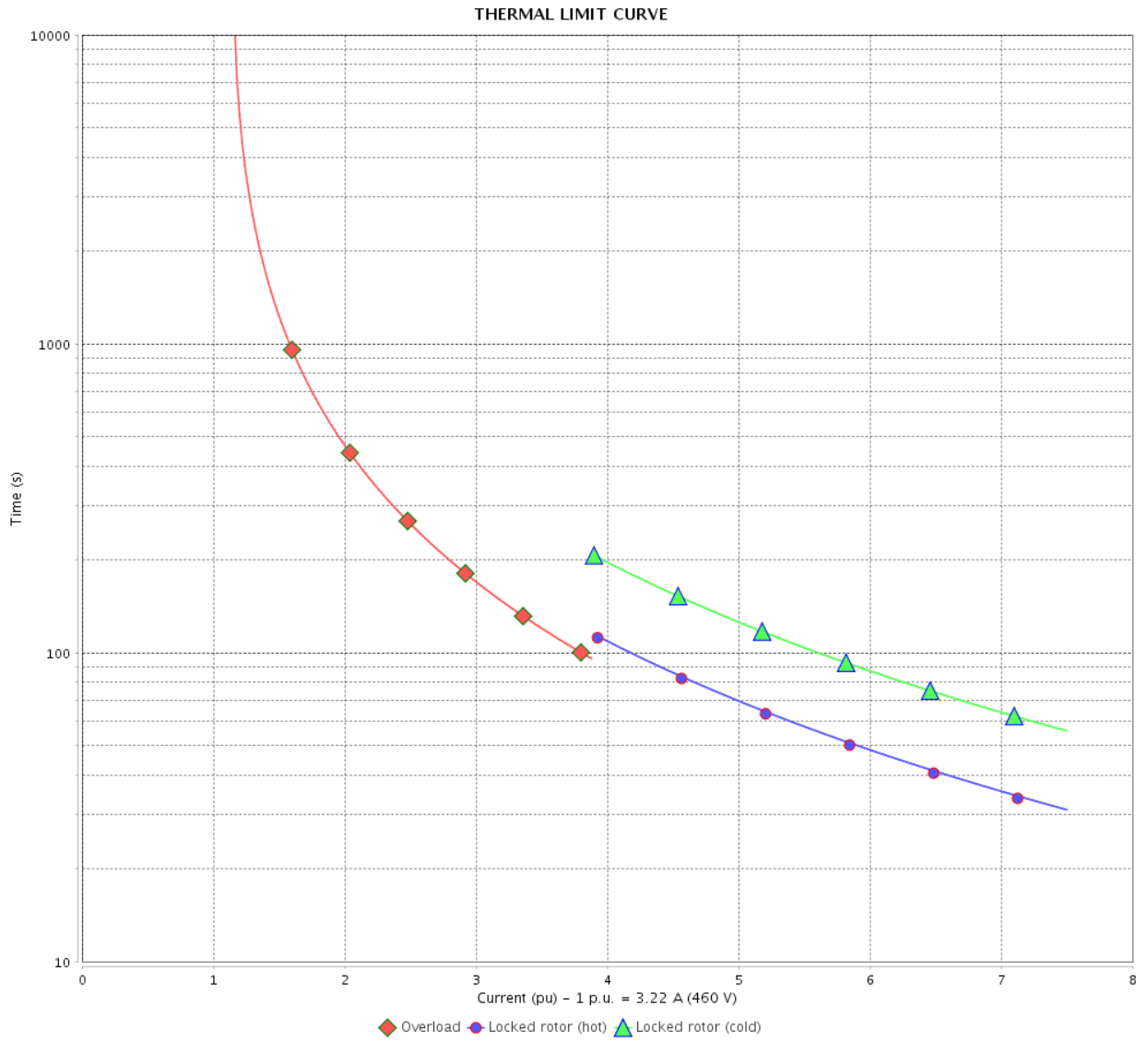
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		10 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			11 / 21	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11970039  
Catalog # : 00212ST3QIE184TC-W22

Performance : 380 V 50 Hz 6P IE4

Rated current	: 3.66 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Heating constant

Cooling constant

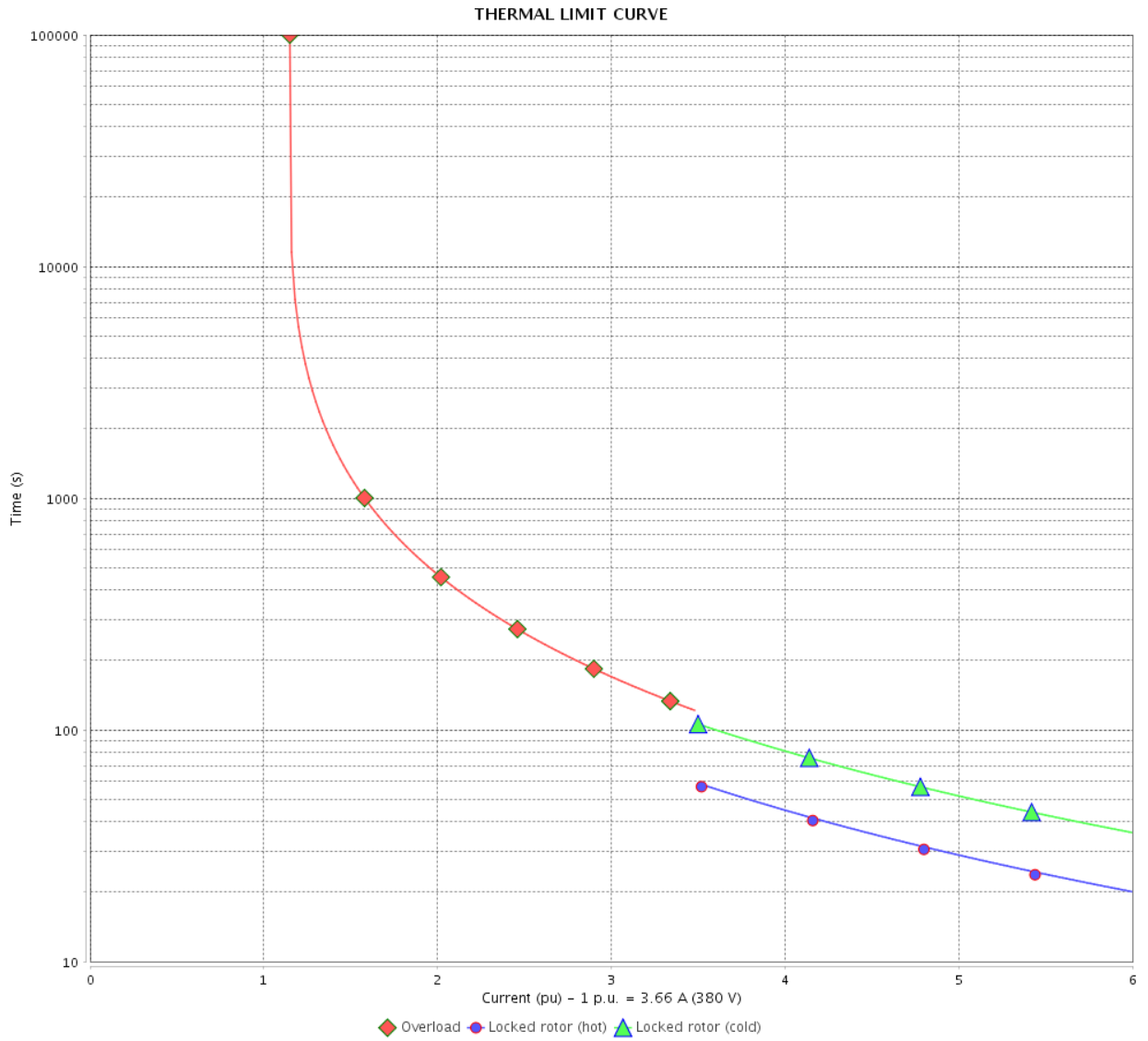
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Date	14/04/2022		12 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
Date		14/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11970039  
Catalog # : 00212ST3QIE184TC-W22

Performance : 400 V 50 Hz 6P IE4

Rated current	: 3.61 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 280 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

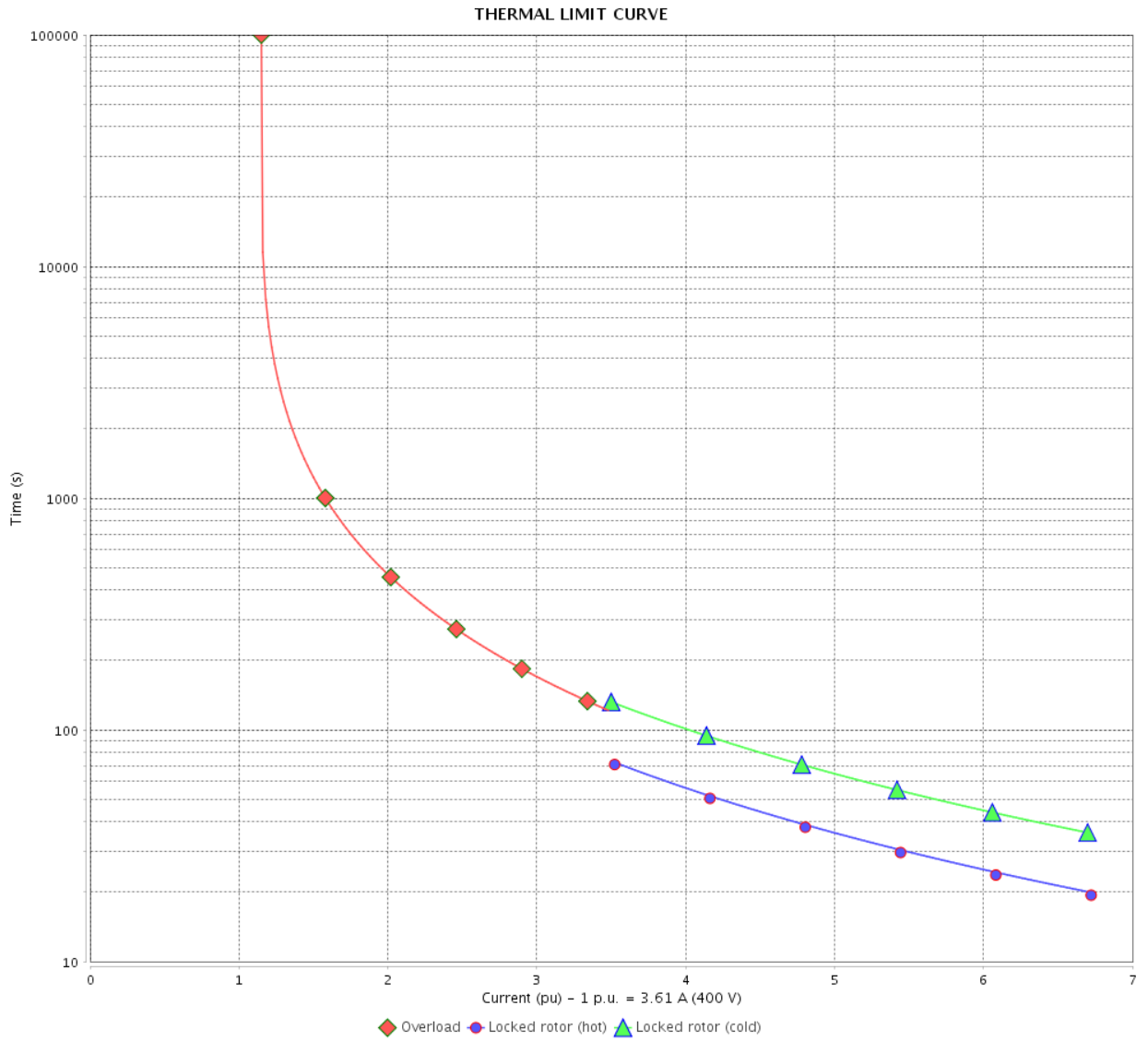
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		14 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 21		
Date		14/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11970039  
Catalog # : 00212ST3QIE184TC-W22

Performance : 415 V 50 Hz 6P IE4

Rated current	: 3.58 A	Moment of inertia (J)	: 0.6210 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		16 / 21	

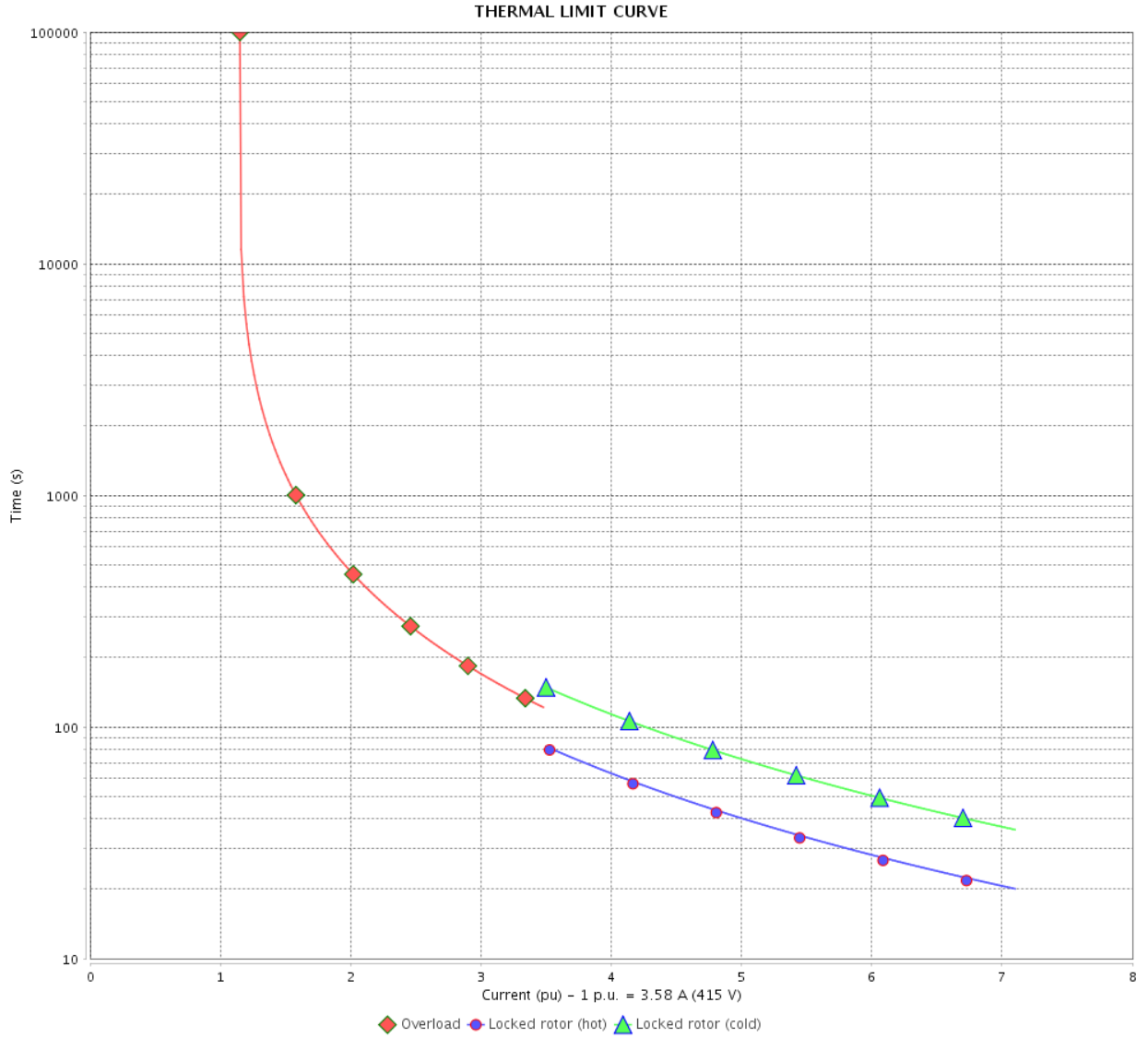


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 17 / 21		Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



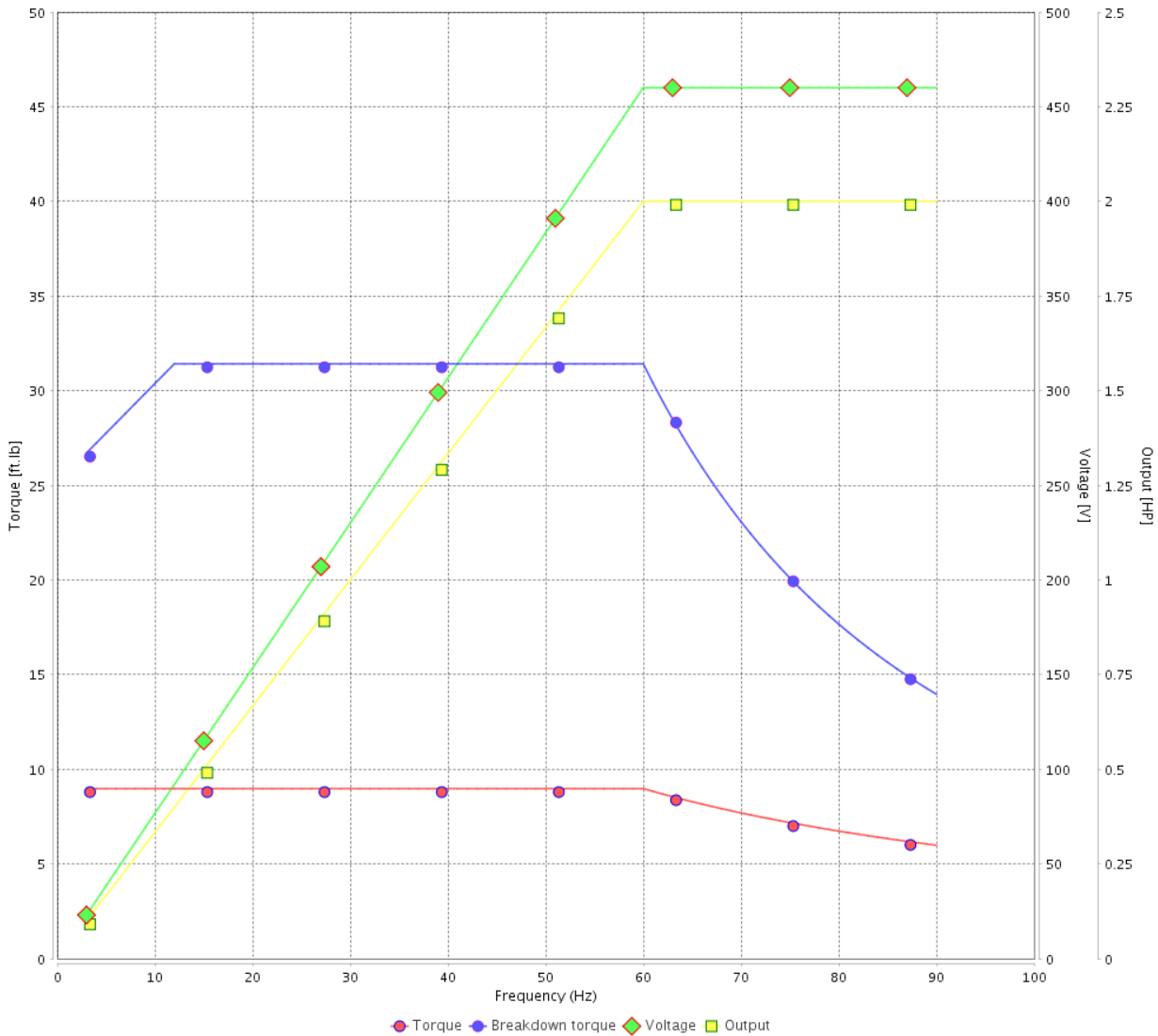
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

VFD OPERATION CURVE



Performance : 460 V 60 Hz 6P

Rated current : 3.22 A  
 LRC : 7.5  
 Rated torque : 8.98 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 0.6210 sq.ft.lb  
 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 18 / 21	Revision
Checked by				
Date	14/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

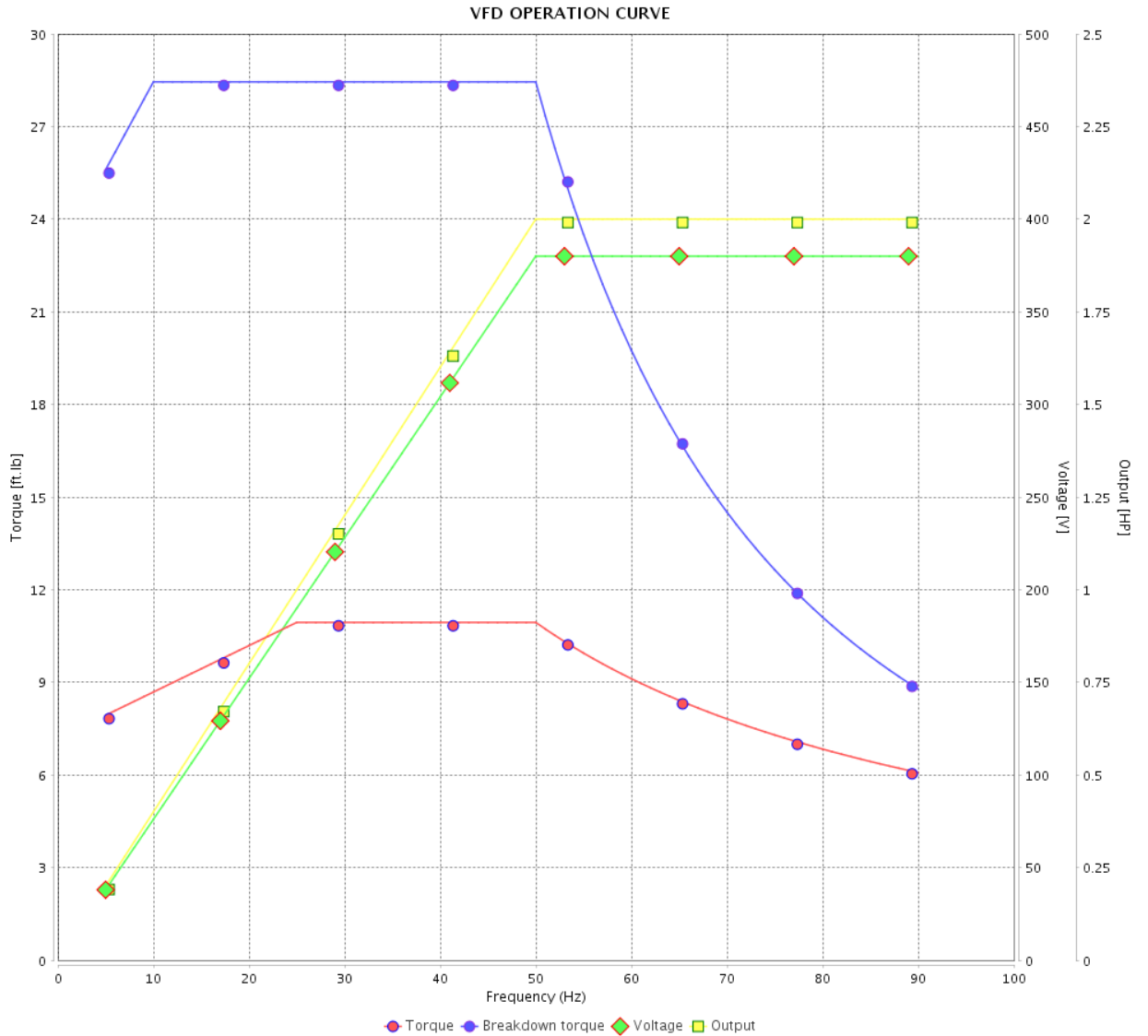


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22



Performance : 380 V 50 Hz 6P IE4

Rated current : 3.66 A  
 LRC : 6.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 0.6210 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		19 / 21		
Date	14/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



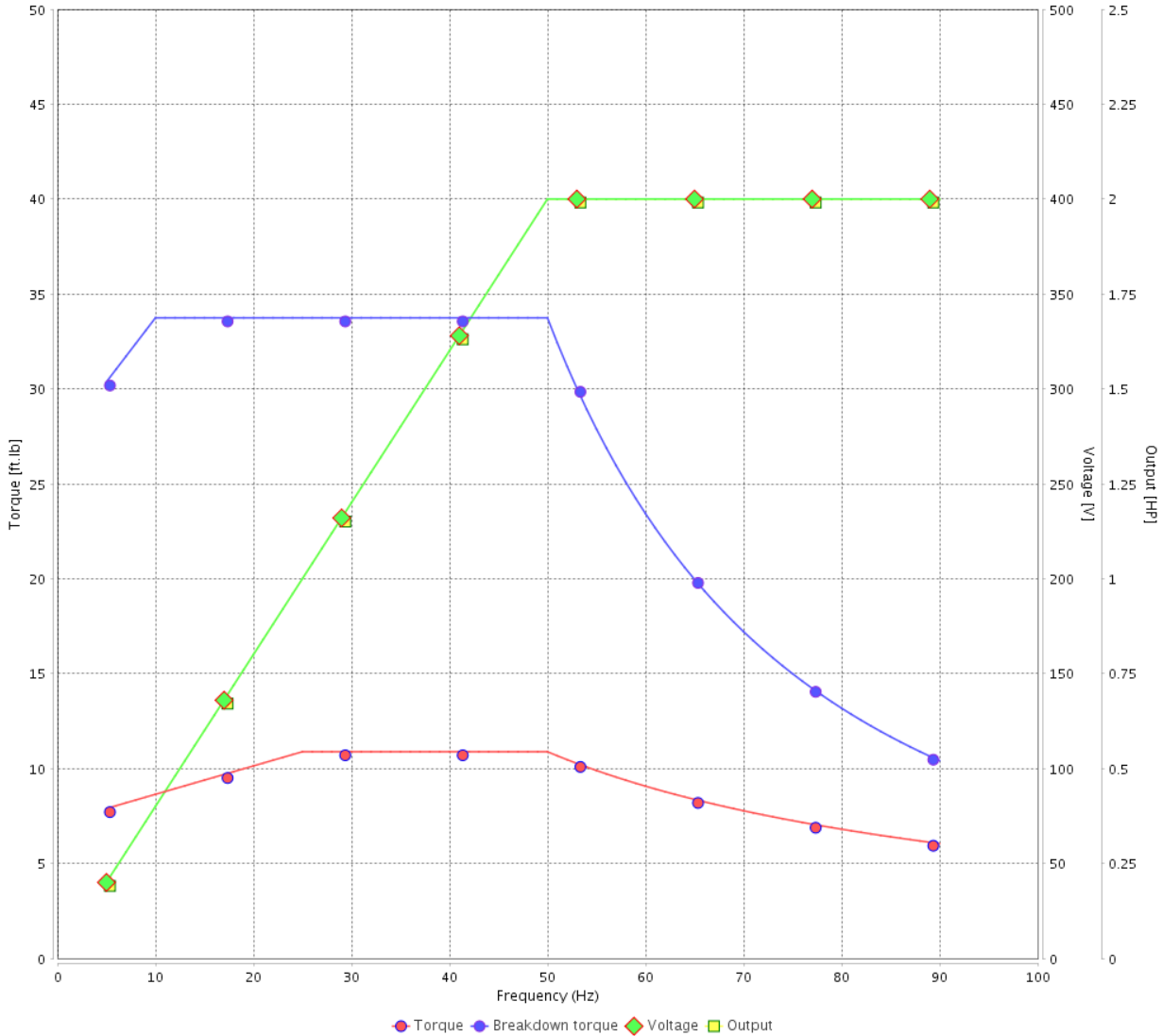
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current : 3.61 A  
 LRC : 6.7  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 280 %  
 Breakdown torque : 310 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.6210 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 20 / 21	Revision
Checked by				
Date	14/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

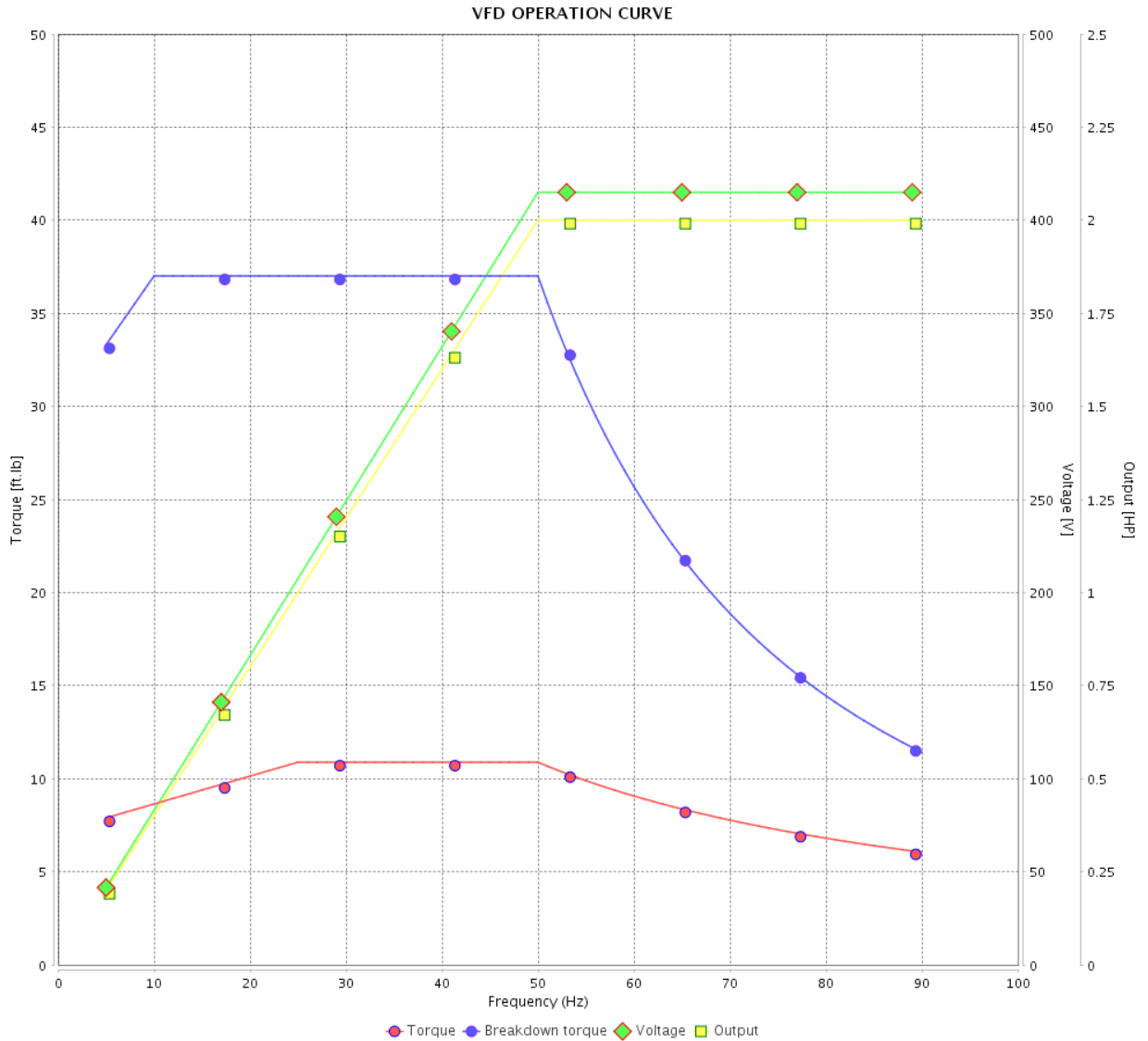


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 11970039

Catalog # : 00212ST3QIE184TC-W22

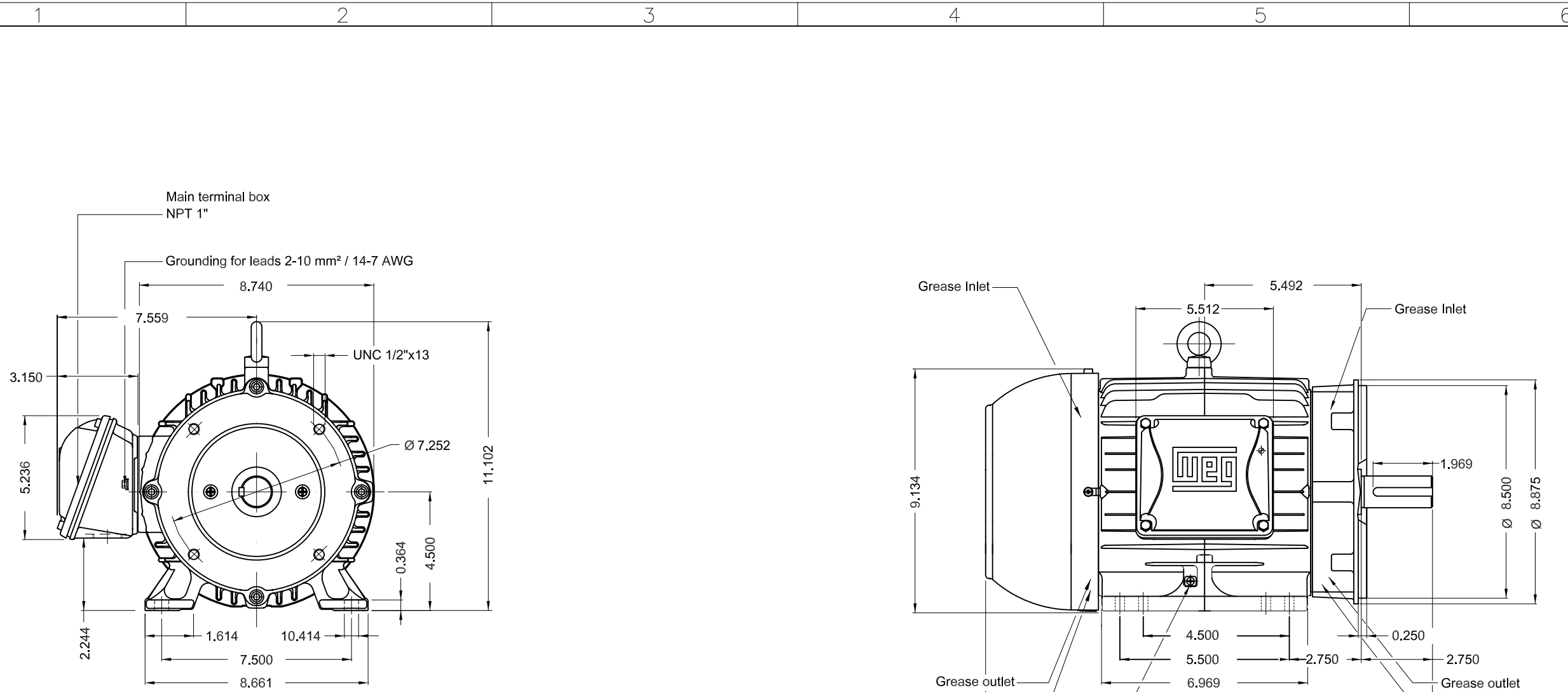


Performance : 415 V 50 Hz 6P IE4

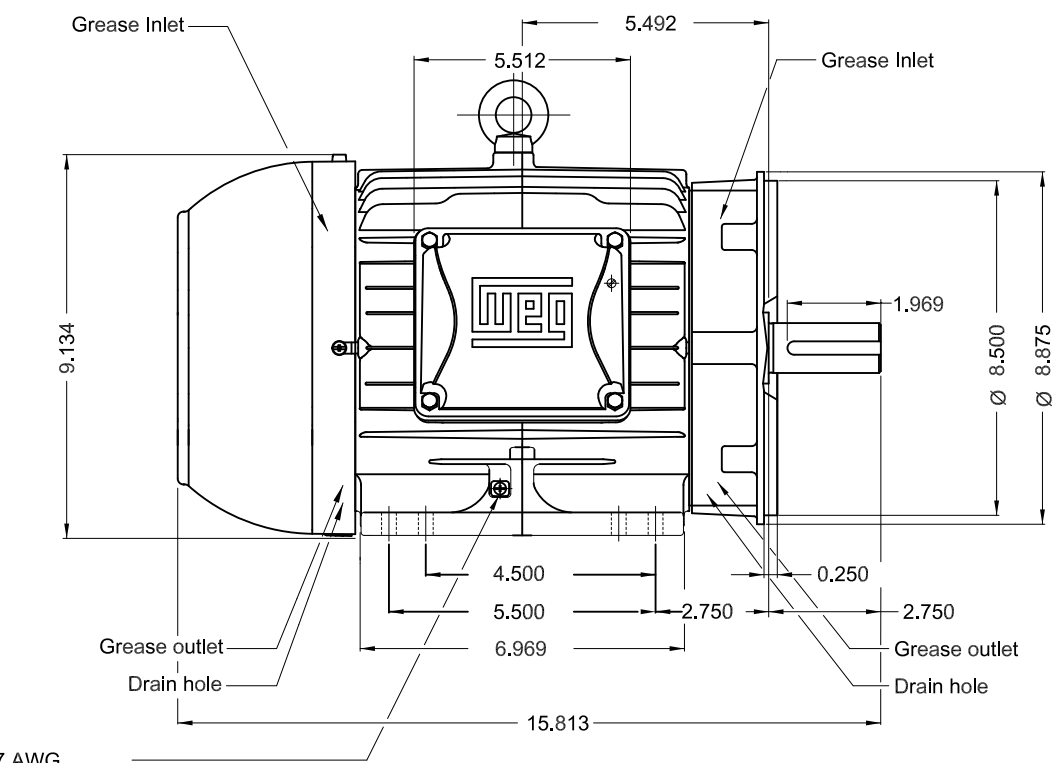
Rated current : 3.58 A  
 LRC : 7.1  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 310 %  
 Breakdown torque : 340 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.6210 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		21 / 21		
Date	14/04/2022			

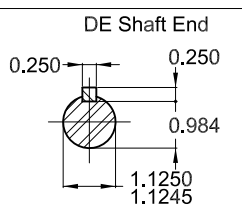


Grounding for leads 2-10 mm<sup>2</sup> / 14-7 AWG



A  
B  
C  
D  
E

Color RAL 5009  
Painting plan 202E  
Mounting B34R(D)



2 HP 06 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 182/4TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
WDD



MADE IN BRAZIL  
11970039



**NEMA**  
Premium



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 - T5  
For use on PWM: Gr. A, B, C, D, F and G,  
VT 1000:1, CT 20:1, 1.00SF - T4A

MODEL 00212ST3QIE184TC-W22

Inverter Duty Motor  
Severe Duty

**IEEE**  
841-2009



FOR SAFE AREA  
Mod. TE1BFOXON  
CC029A

PH3 60Hz Fr. 182/4TC 1000m.a.s.l. IP55 TEFC 116lb

V 460

A 3.22

HP 2.0

kW 1.5

SF 1.25

SFA 4.03

RPM 1170

PF 0.66

AMB 40°C

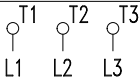
INS cl. F DT80K

NEMA NOM EFF 88.5%

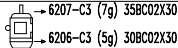
DUTY CONT.

DES B Code L

GUARANT. EFF 86.5%



460V



MOBIL POLYREX EM (20000h)

