

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer								
Product line		: NEMA Premium Efficiency Three-Phase		Product code :		12822412		
				Catalog # :		00218ST3QIER145TC-W2		
Frame		: 145TC		Cooling method		: IC411 - TEFC		
Insulation class		: F		Mounting		: W-6		
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>		: 59.6 lb		
Protection degree		: IP55		Moment of inertia (J)		: 0.1561 sq.ft.lb		
Design		: B						
Output [HP]	2	1.5	1.5	1.5	2	2	2	
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]	2.76	2.57	2.57	2.56	3.33	3.22	3.14	
L. R. Amperes [A]	22.9	21.1	22.4	21.5	20.0	21.3	22.9	
LRC [A]	8.3x(Code L)	8.2x(Code L)	8.7x(Code M)	8.4x(Code M)	6.0x(Code H)	6.6x(Code J)	7.3x(Code K)	
No load current [A]	1.63	1.61	1.80	1.97	1.61	1.80	1.97	
Rated speed [RPM]	1750	1460	1465	1465	1435	1440	1450	
Slip [%]	2.78	2.67	2.33	2.33	4.33	4.00	3.33	
Rated torque [ft.lb]	6.00	5.40	5.38	5.38	7.32	7.29	7.24	
Locked rotor torque [%]	270	290	320	350	220	229	250	
Breakdown torque [%]	320	330	380	409	240	260	290	
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K	
Locked rotor time	23s (cold)	32s (cold)	28s (cold)	27s (cold)	23s (cold)	21s (cold)	21s (cold)	
	13s (hot)	18s (hot)	16s (hot)	15s (hot)	13s (hot)	12s (hot)	12s (hot)	
Noise level <sup>2</sup>	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	85.2	83.5	80.9	80.3	86.7	83.7	83.8
	50%	85.5	84.0	82.0	81.4	85.5	84.0	84.0
	75%	86.5	84.2	83.5	83.1	84.0	84.0	84.0
	100%	86.5	84.5	84.5	84.1	82.5	84.0	84.0
Power Factor	25%	0.32	0.31	0.27	0.25	0.39	0.35	0.32
	50%	0.57	0.55	0.50	0.47	0.66	0.62	0.60
	75%	0.70	0.69	0.64	0.61	0.78	0.74	0.72
	100%	0.79	0.77	0.73	0.71	0.83	0.80	0.79
Bearing type	: Drive end		: Non drive end		Foundation loads			
	: 6205 C3		: 6204 C3		Max. traction : 153 lb			
	: Inpro/Seal		: Inpro/Seal		Max. compression : 213 lb			
	: 20000 h		: 20000 h					
	: 4 g		: 4 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	14/04/2022					1 / 36		

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



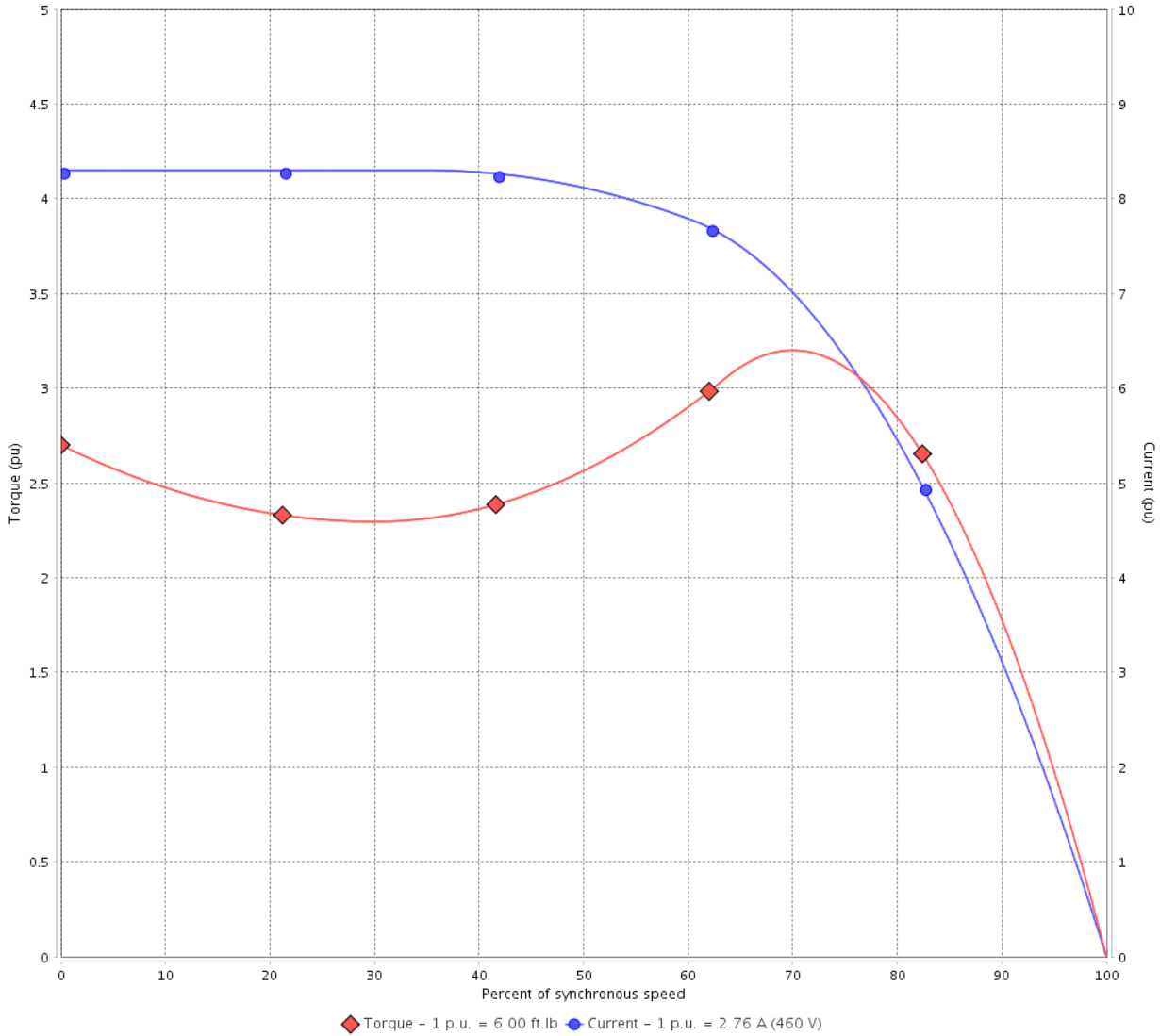
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 2.76 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.3	Duty cycle	: Cont.(S1)
Rated torque	: 6.00 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1750 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



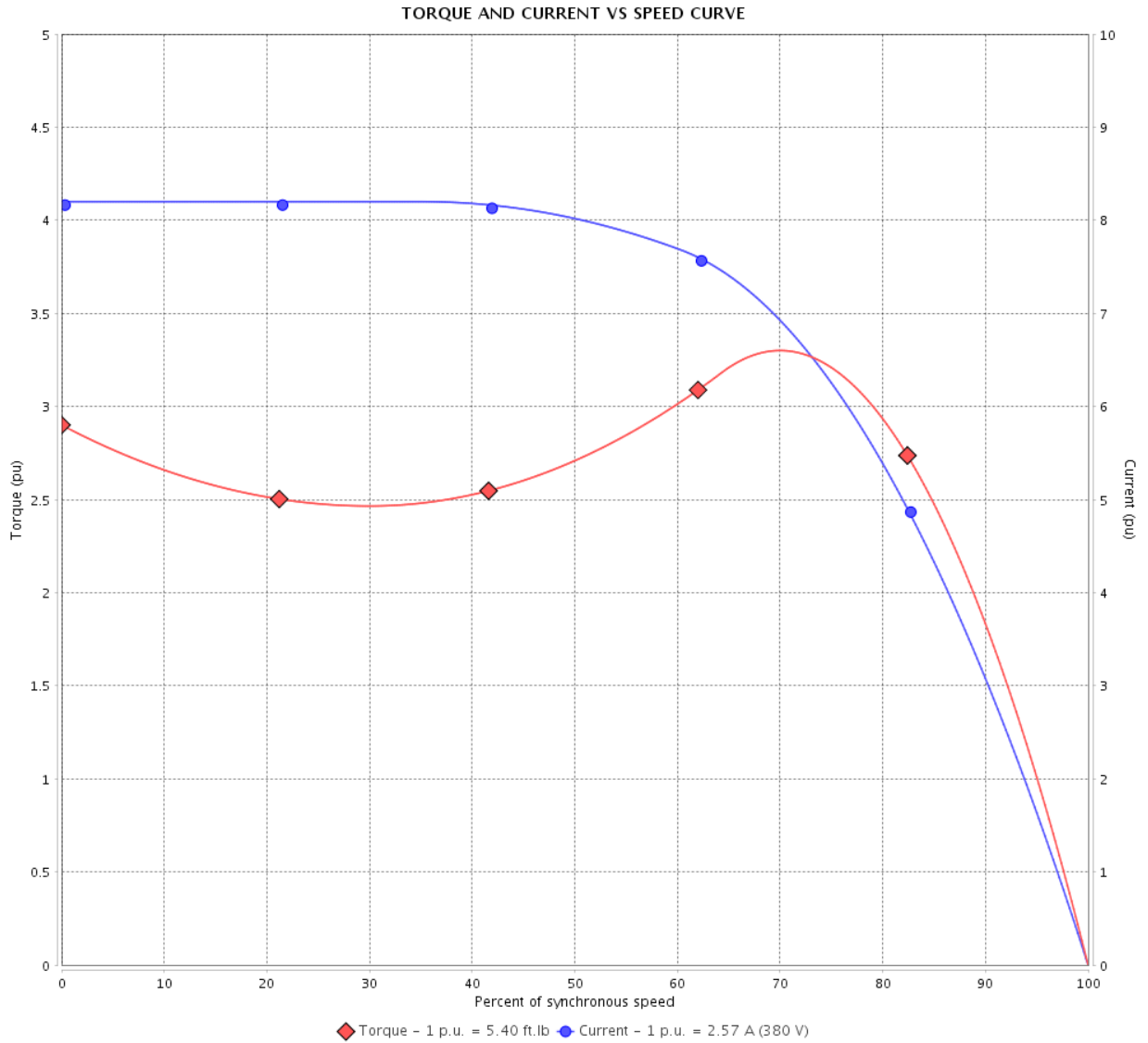
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 380 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 5.40 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



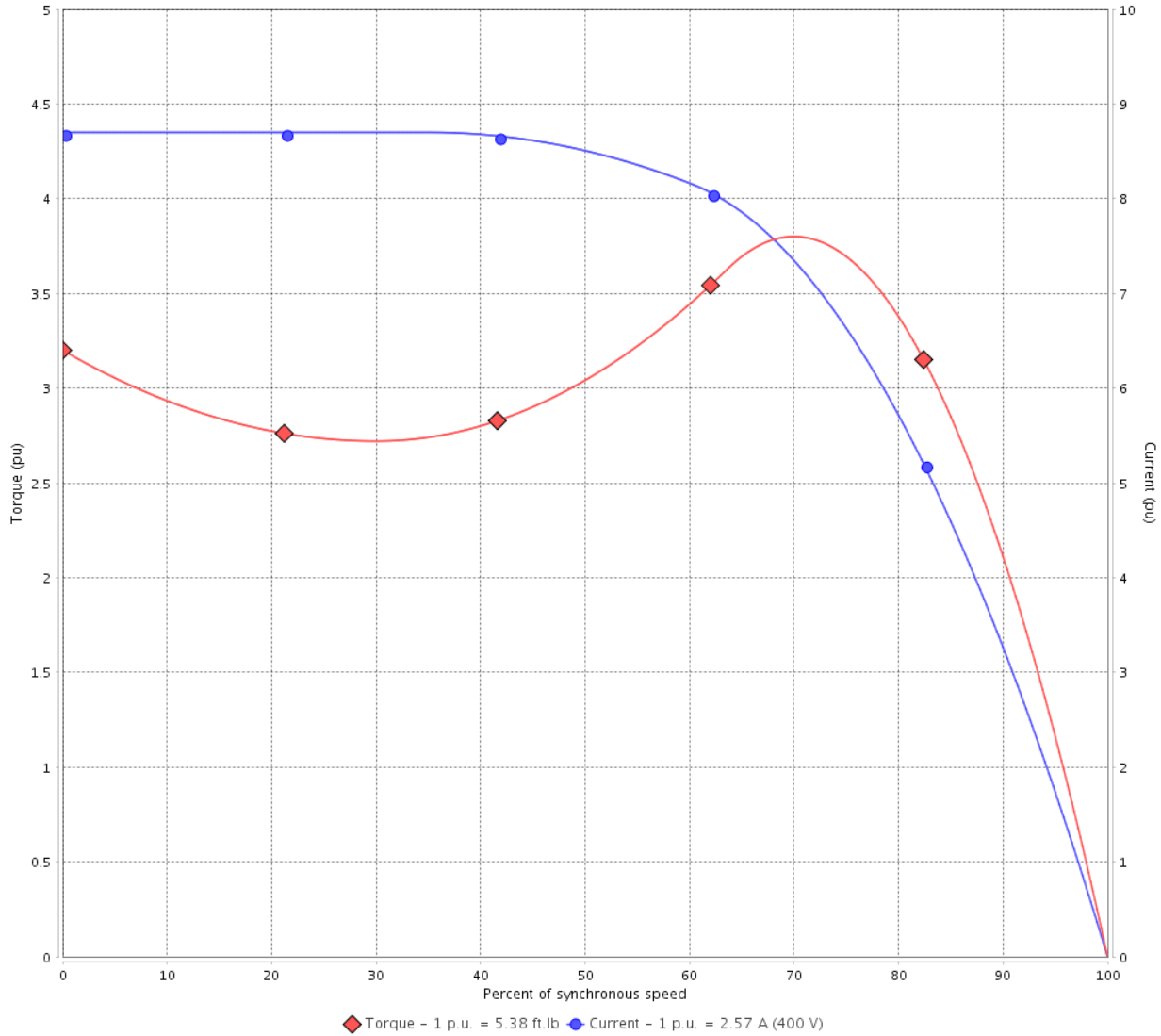
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 5.38 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.25
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



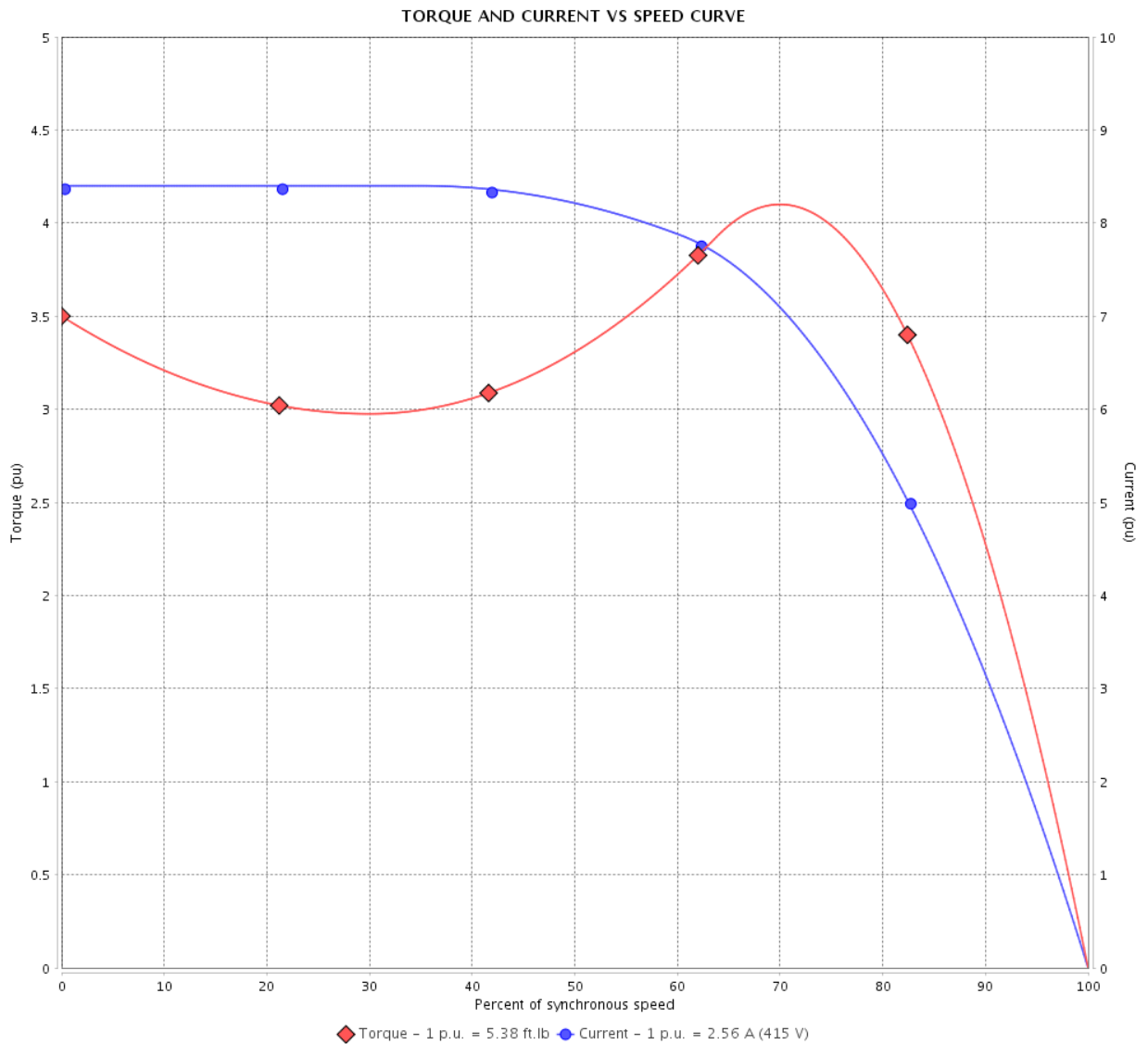
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 415 V 50 Hz 4P IE3

Rated current	: 2.56 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 5.38 ft.lb	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.25
Breakdown torque	: 409 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



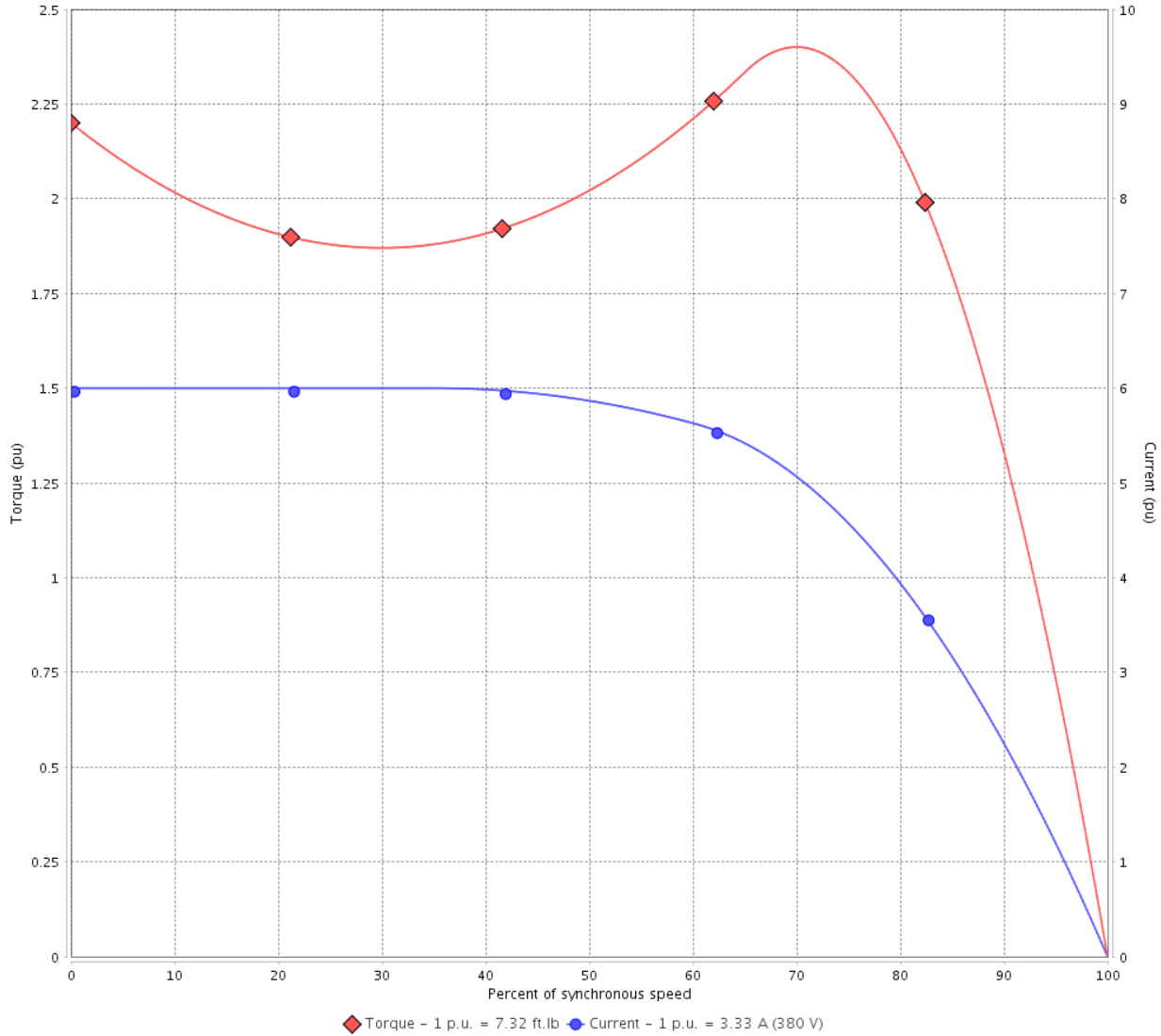
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current	: 3.33 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.32 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



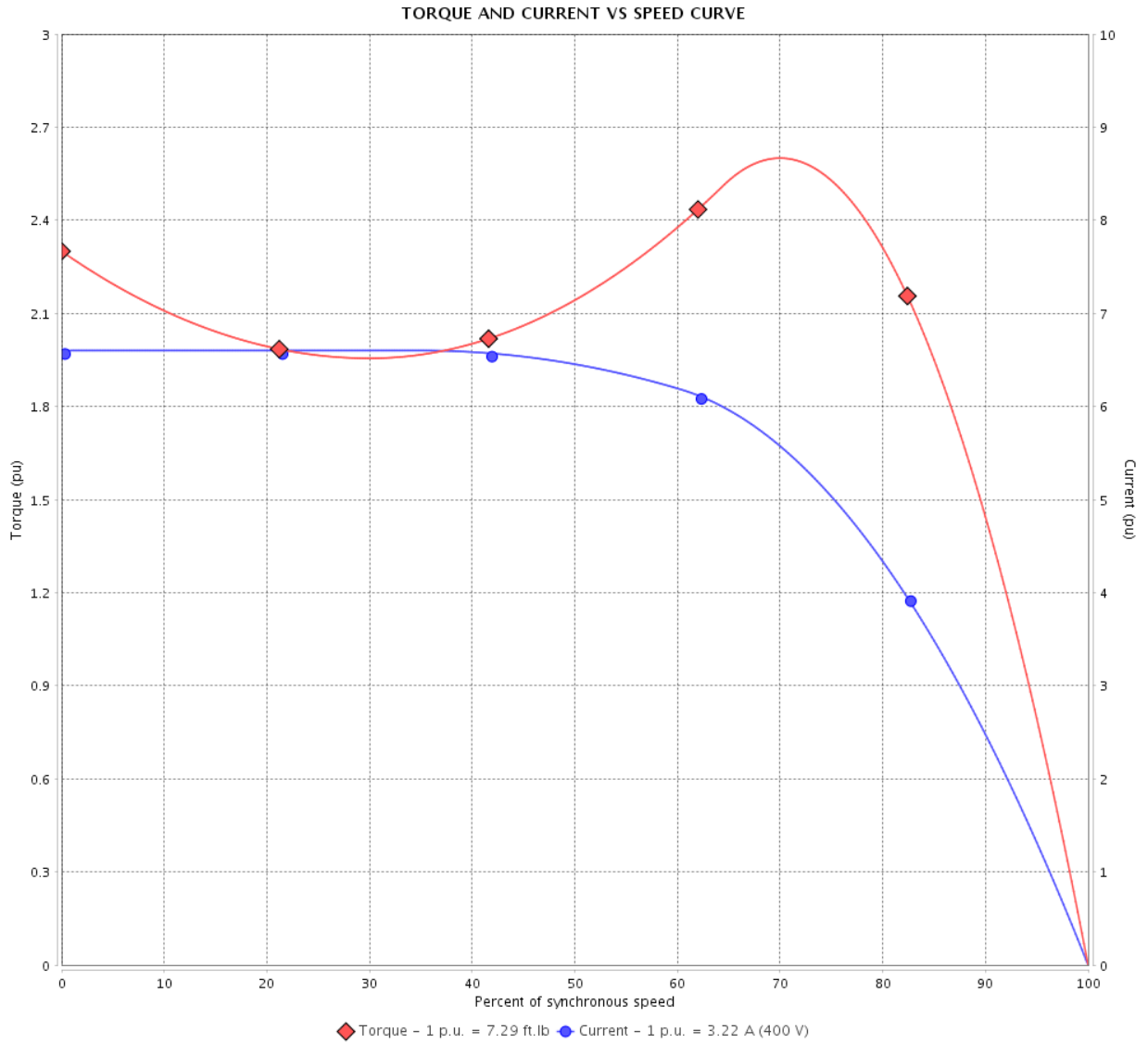
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 400 V 50 Hz 4P IE2

Rated current : 3.22 A  
 LRC : 6.6  
 Rated torque : 7.29 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.1561 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 7 / 36	Revision
Checked by				
Date	14/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



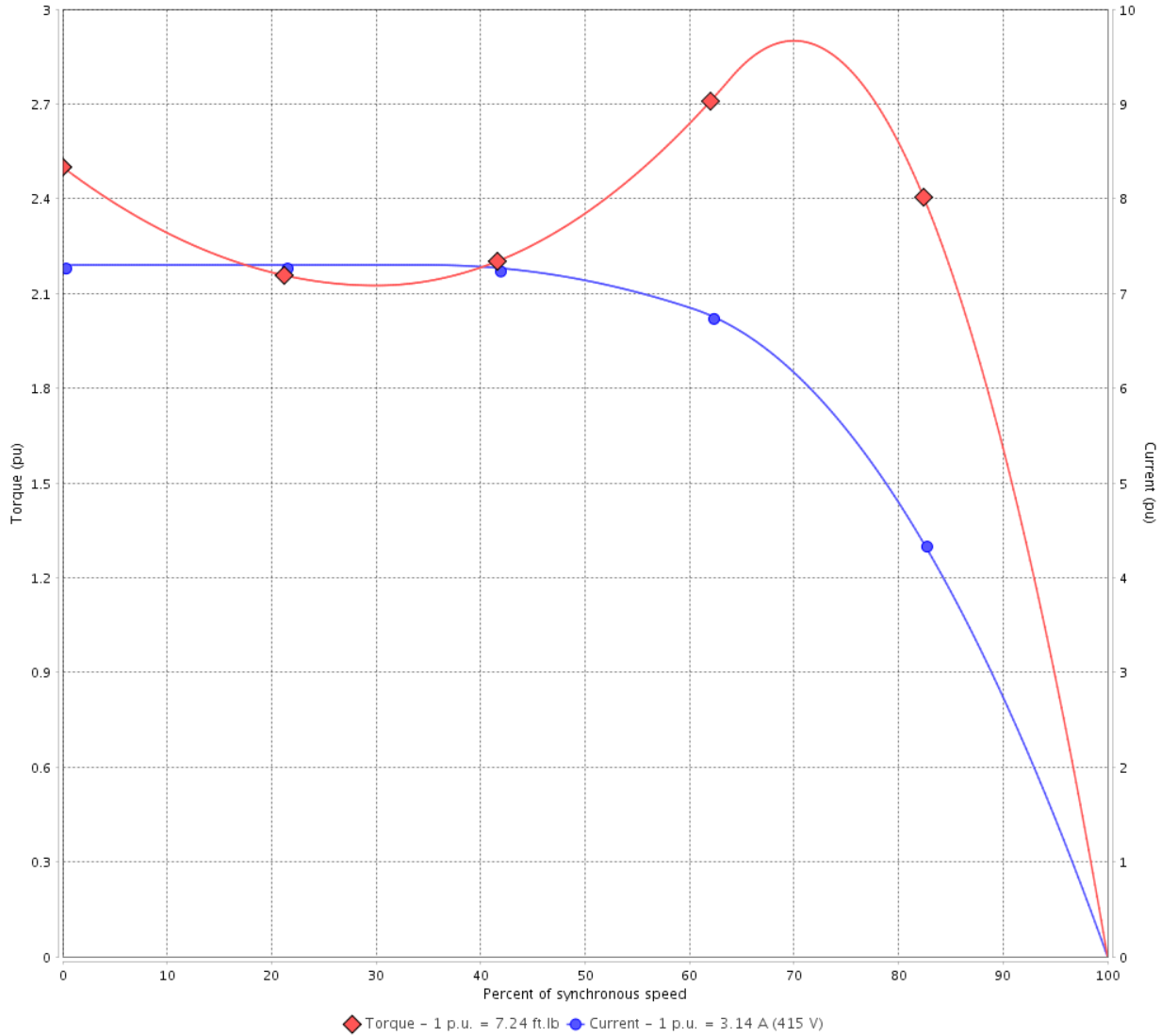
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 3.14 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 7.24 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

Locked rotor time : 21s (cold) 12s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 36	Revision
Checked by				
Date	14/04/2022			



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

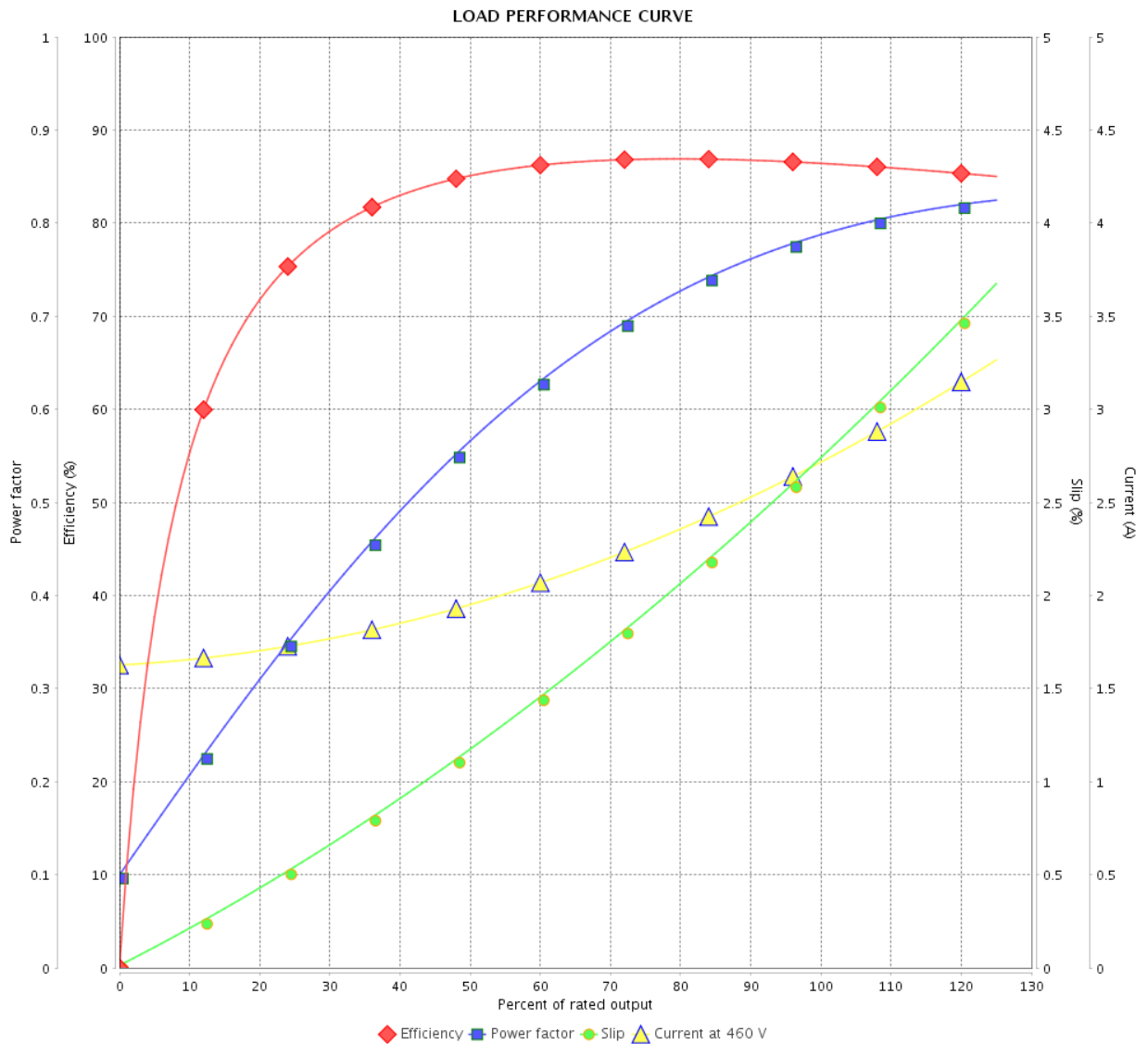


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 460 V 60 Hz 4P

Rated current : 2.76 A  
 LRC : 8.3  
 Rated torque : 6.00 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1561 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		Revision
Checked by		9 / 36		
Date		14/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



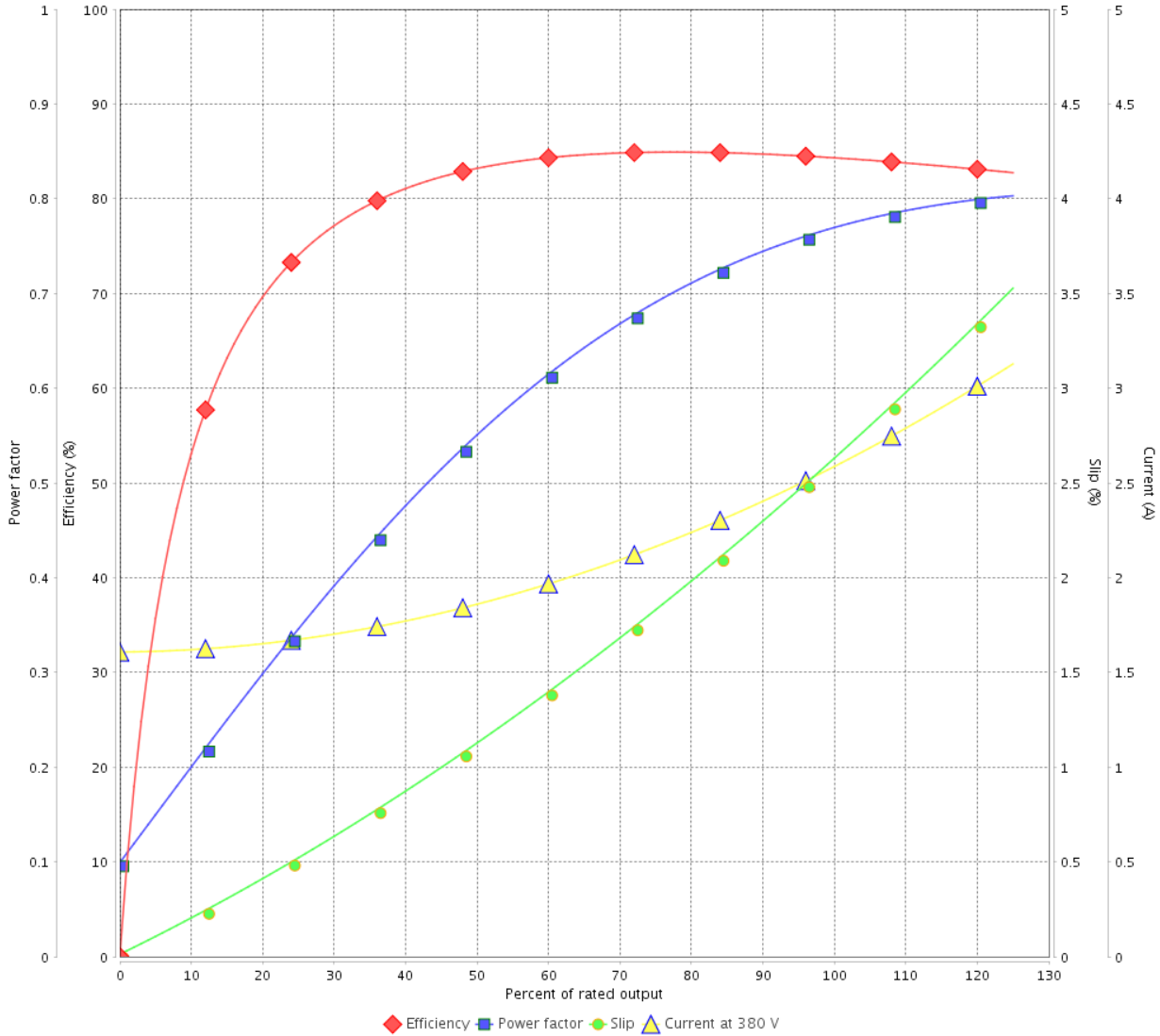
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current : 2.57 A  
 LRC : 8.2  
 Rated torque : 5.40 ft.lb  
 Locked rotor torque : 290 %  
 Breakdown torque : 330 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.1561 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 10 / 36	Revision
Checked by				
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

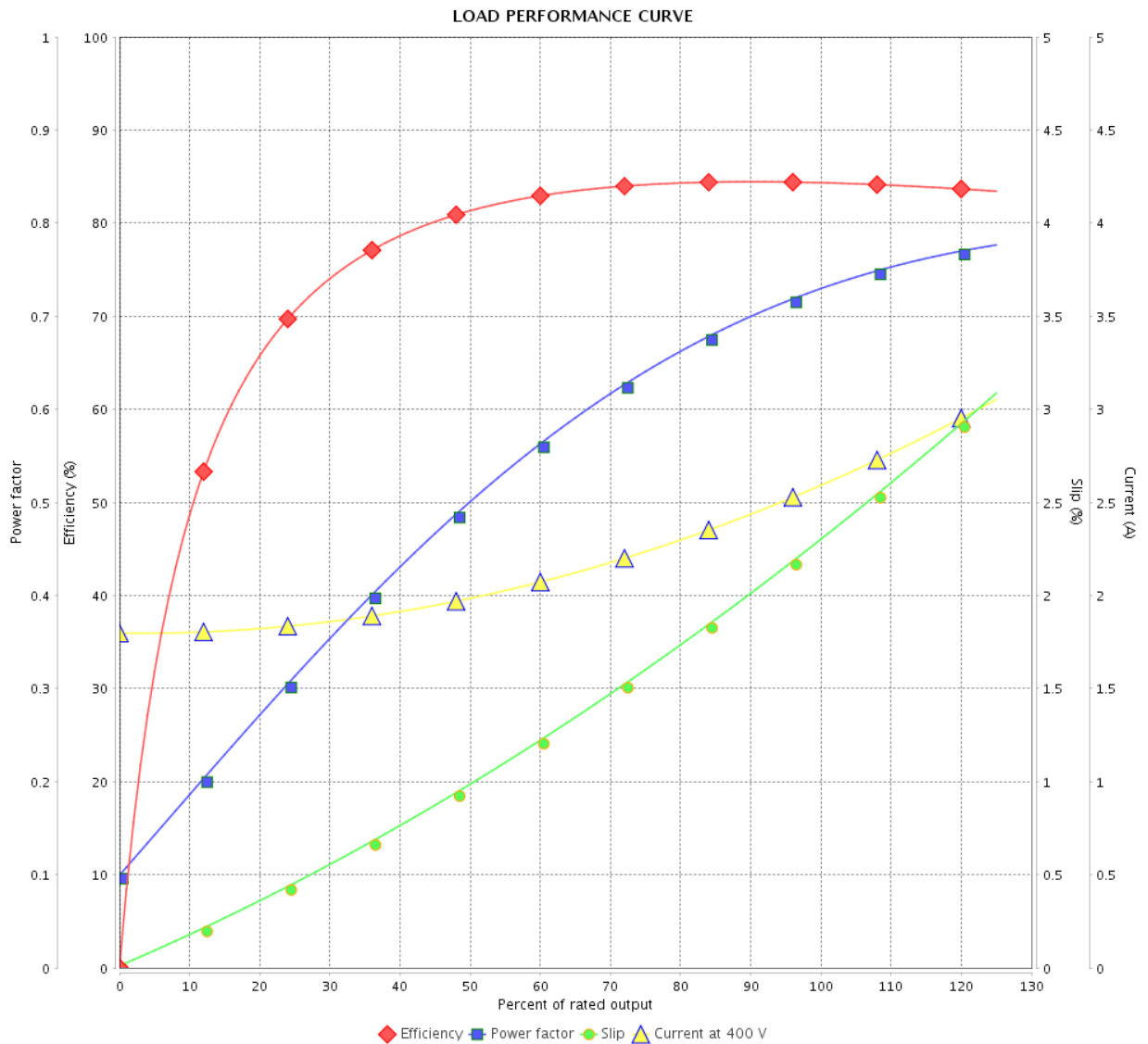


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 400 V 50 Hz 4P IE3

Rated current : 2.57 A  
 LRC : 8.7  
 Rated torque : 5.38 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 380 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1561 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		Revision
Checked by		11 / 36		
Date		14/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



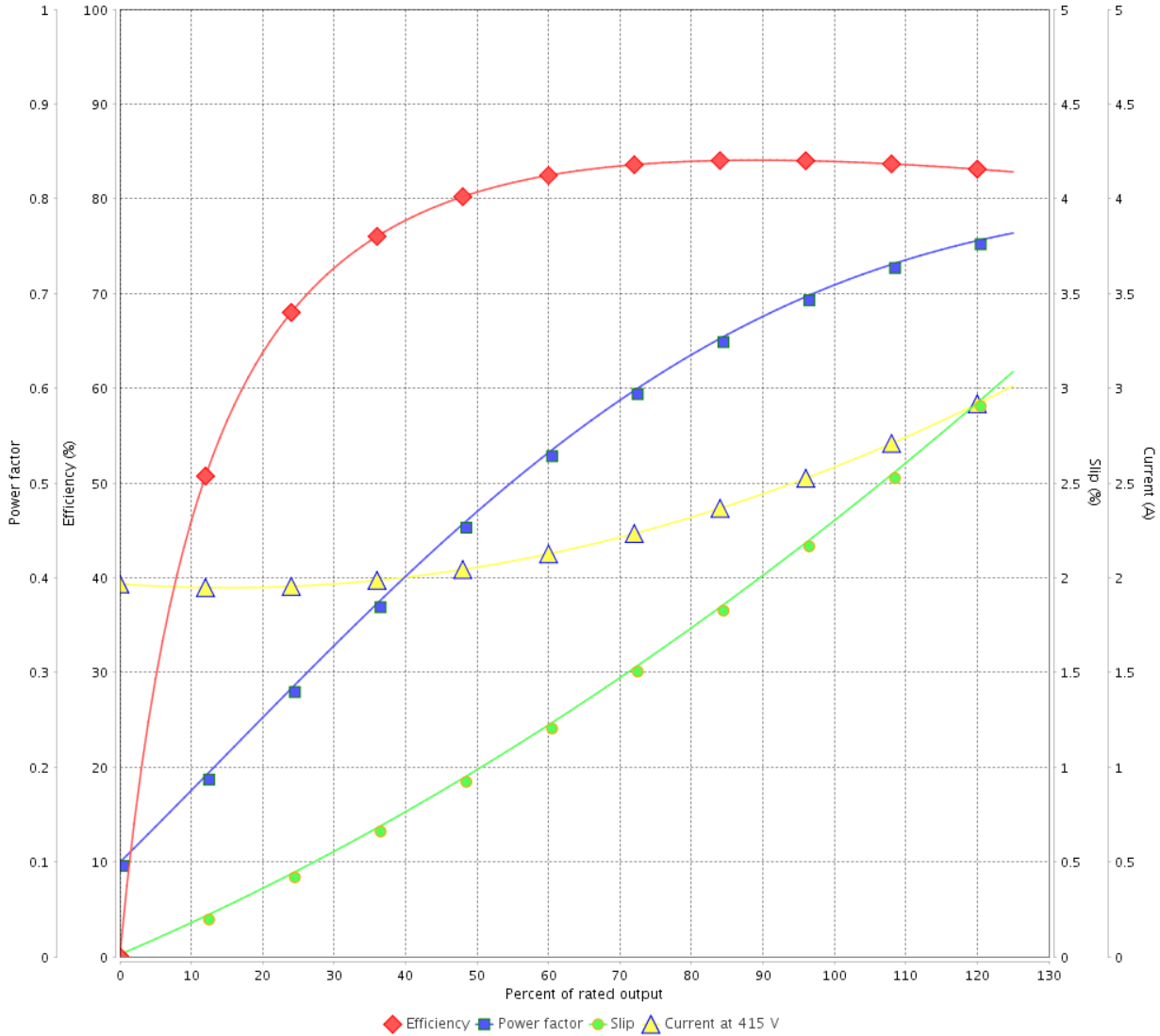
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current : 2.56 A  
 LRC : 8.4  
 Rated torque : 5.38 ft.lb  
 Locked rotor torque : 350 %  
 Breakdown torque : 409 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1561 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 12 / 36	Revision
Checked by				
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

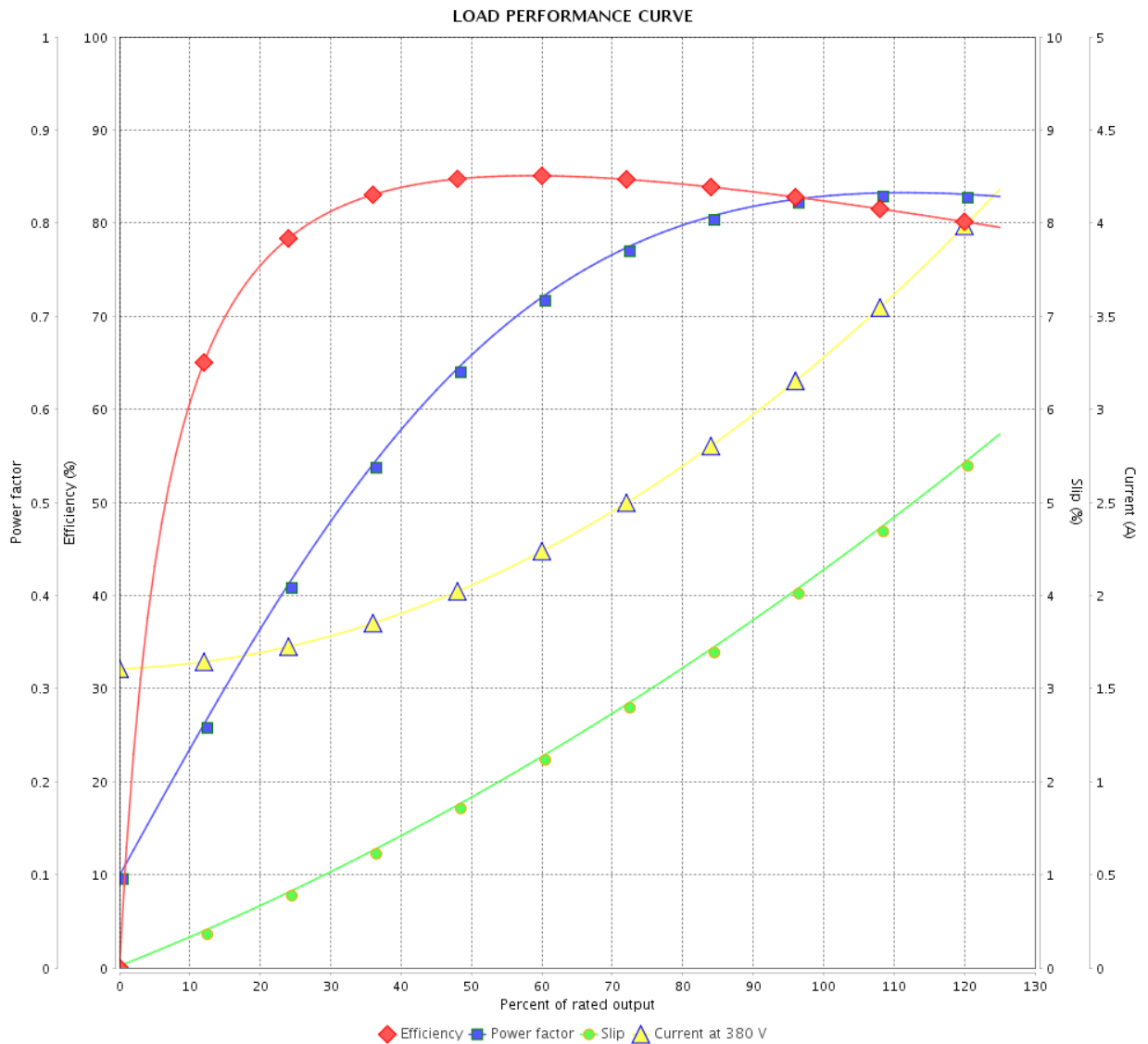


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 380 V 50 Hz 4P IE1

Rated current : 3.33 A  
 LRC : 6.0  
 Rated torque : 7.32 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.1561 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	Revision
Checked by			13 / 36	
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



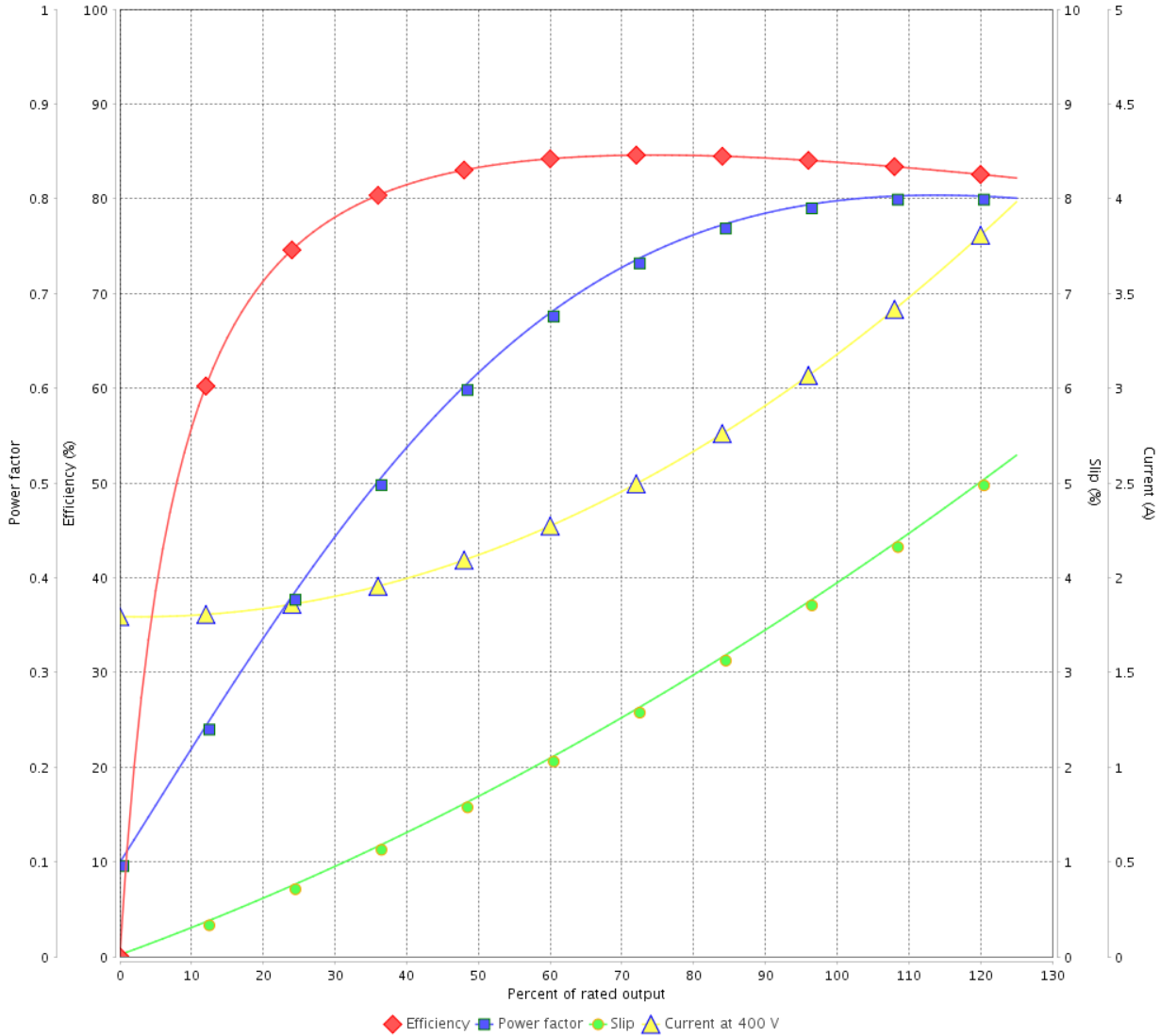
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE2

Rated current : 3.22 A  
 LRC : 6.6  
 Rated torque : 7.29 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.1561 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 14 / 36	Revision
Checked by				
Date	14/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

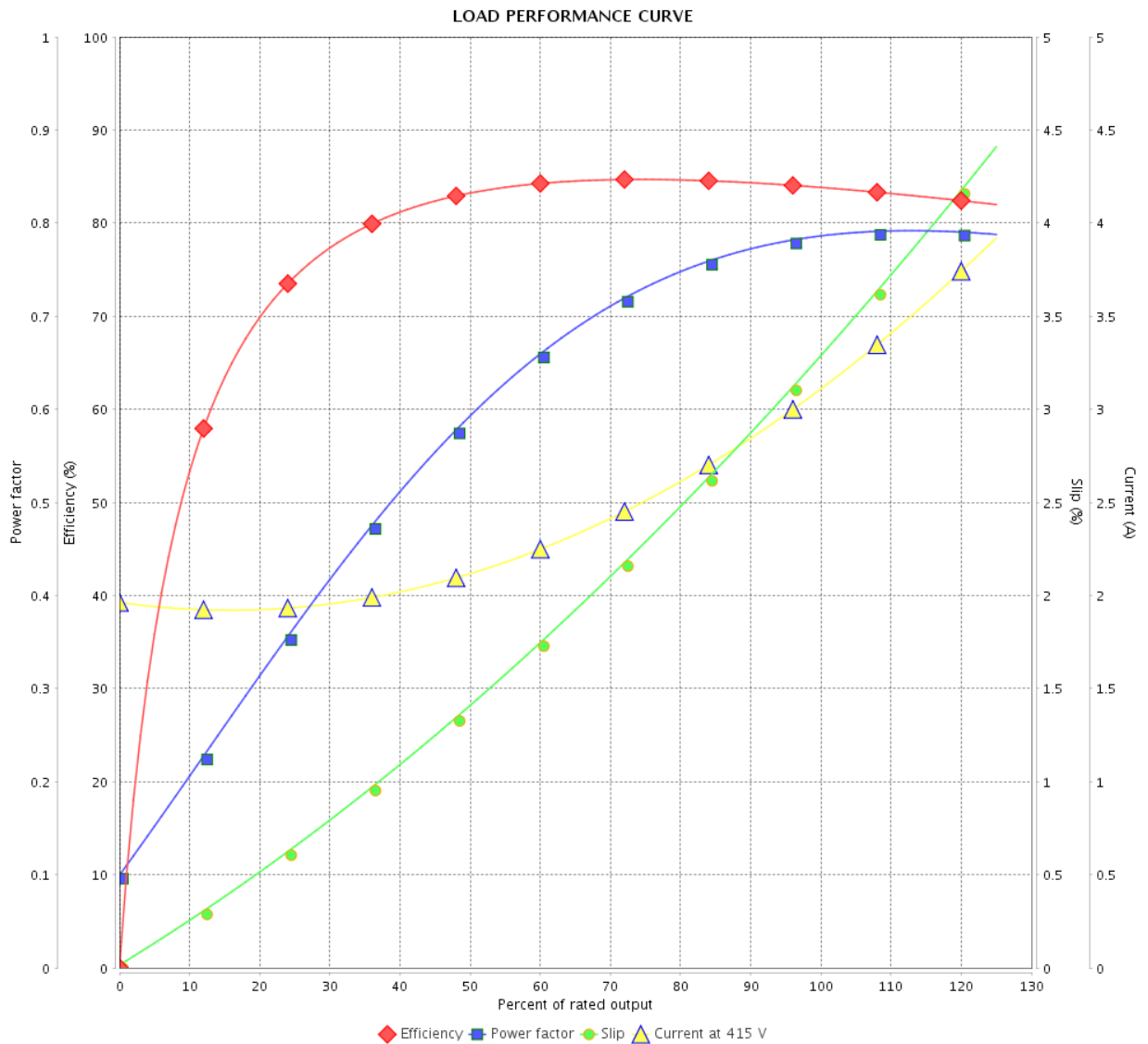


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 415 V 50 Hz 4P IE2

Rated current : 3.14 A  
 LRC : 7.3  
 Rated torque : 7.24 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.1561 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		Revision
Checked by		15 / 36		
Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 460 V 60 Hz 4P

Rated current	: 2.76 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.3	Duty cycle	: Cont.(S1)
Rated torque	: 6.00 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1750 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		16 / 36	

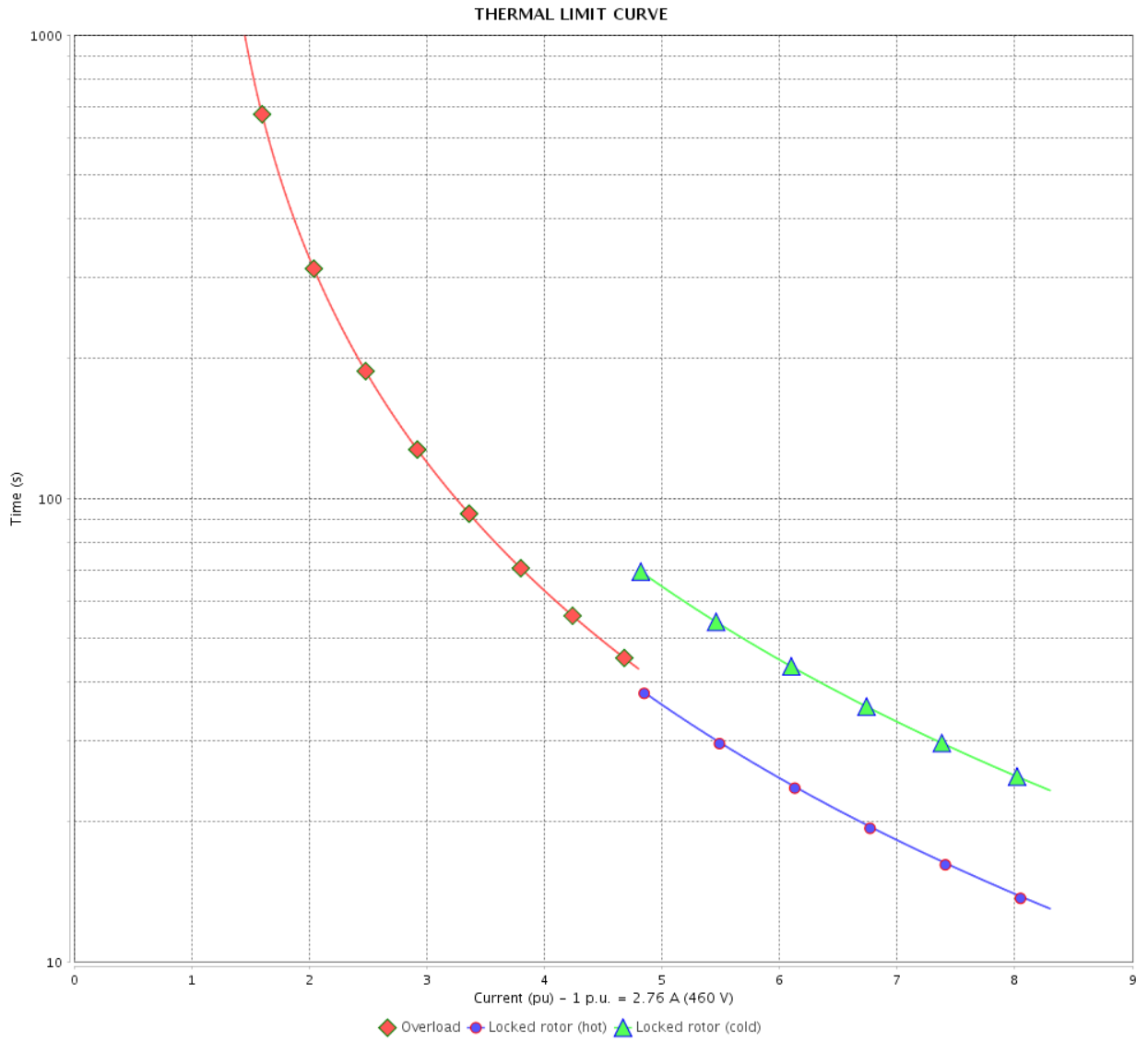


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		17 / 36		
Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 380 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 5.40 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

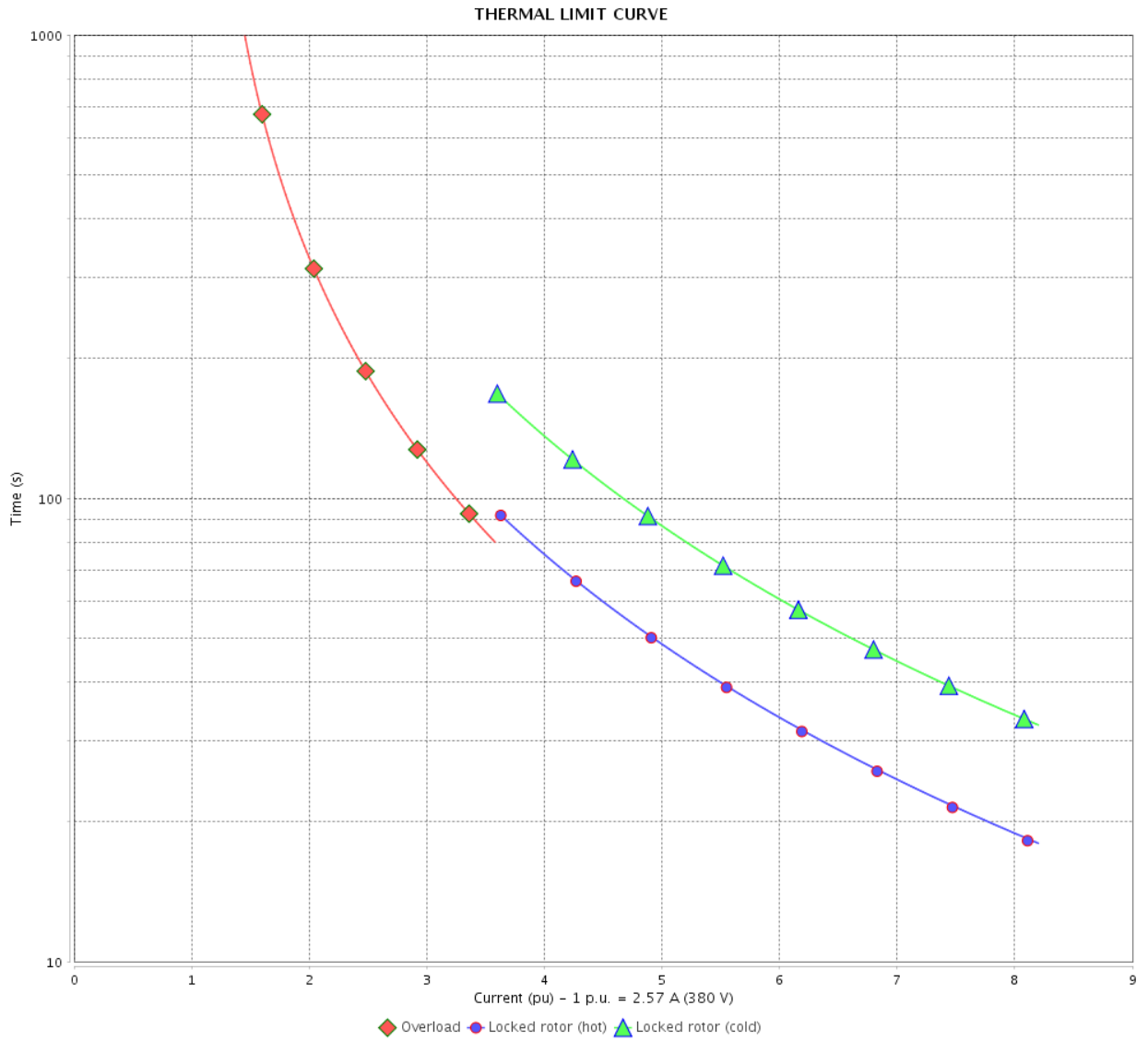
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		18 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		19 / 36		
Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 400 V 50 Hz 4P IE3

Rated current	: 2.57 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 5.38 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.25
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

Heating constant

Cooling constant

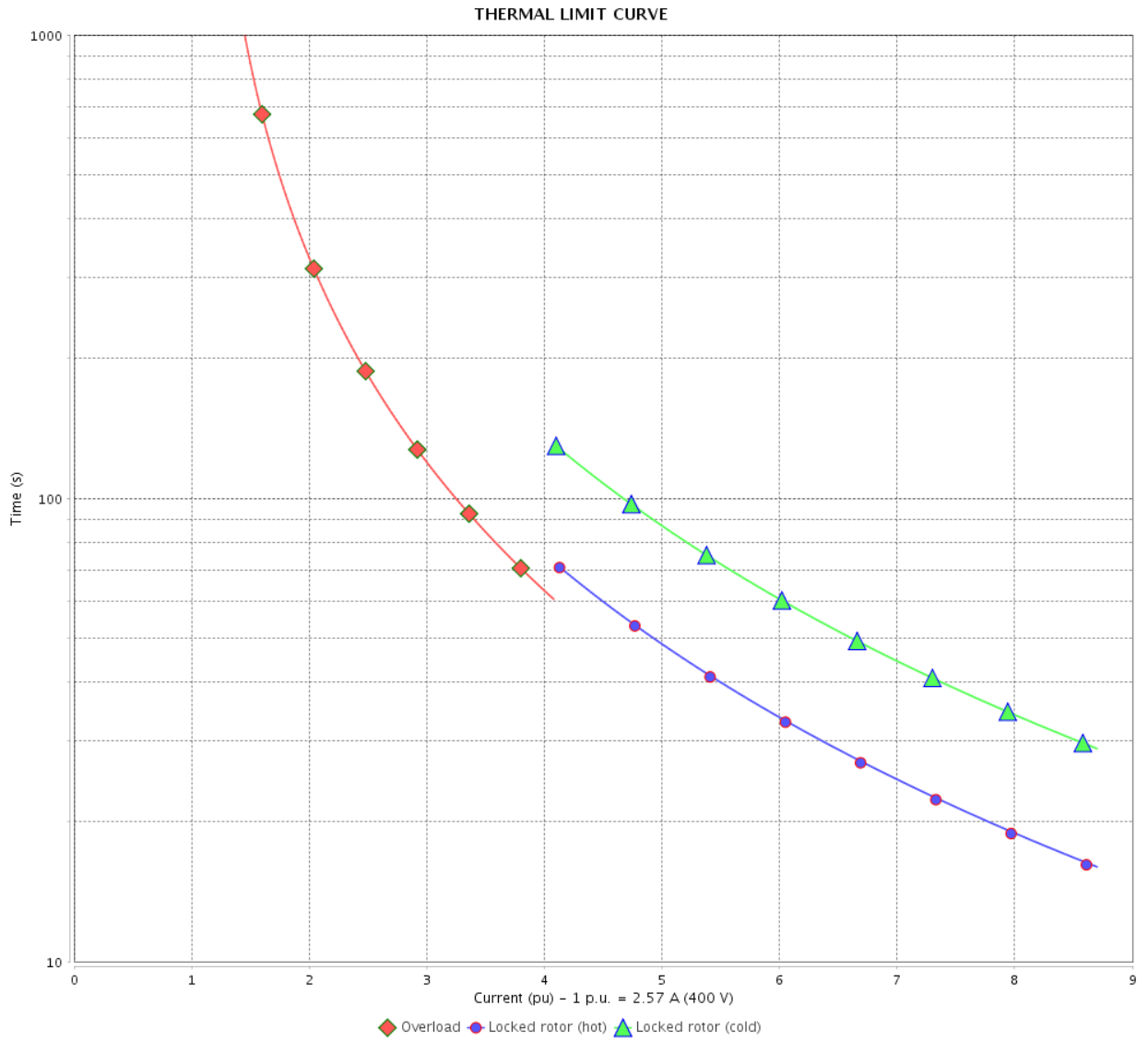
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		20 / 36	

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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



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

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 415 V 50 Hz 4P IE3

Rated current	: 2.56 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 8.4	Duty cycle	: Cont.(S1)
Rated torque	: 5.38 ft.lb	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.25
Breakdown torque	: 409 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

Heating constant

Cooling constant

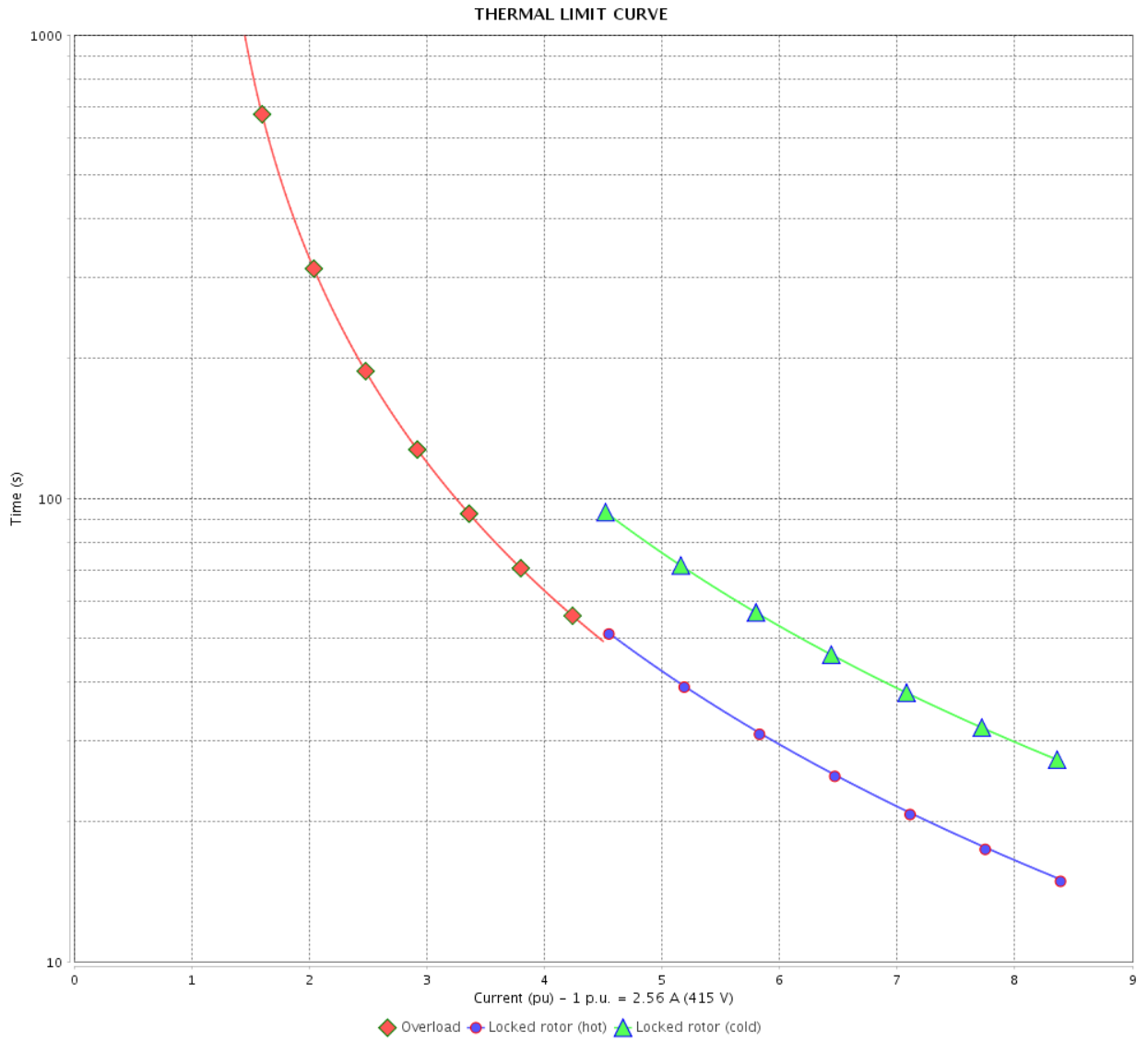
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		22 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 380 V 50 Hz 4P IE1

Rated current	: 3.33 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.32 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1435 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		24 / 36	

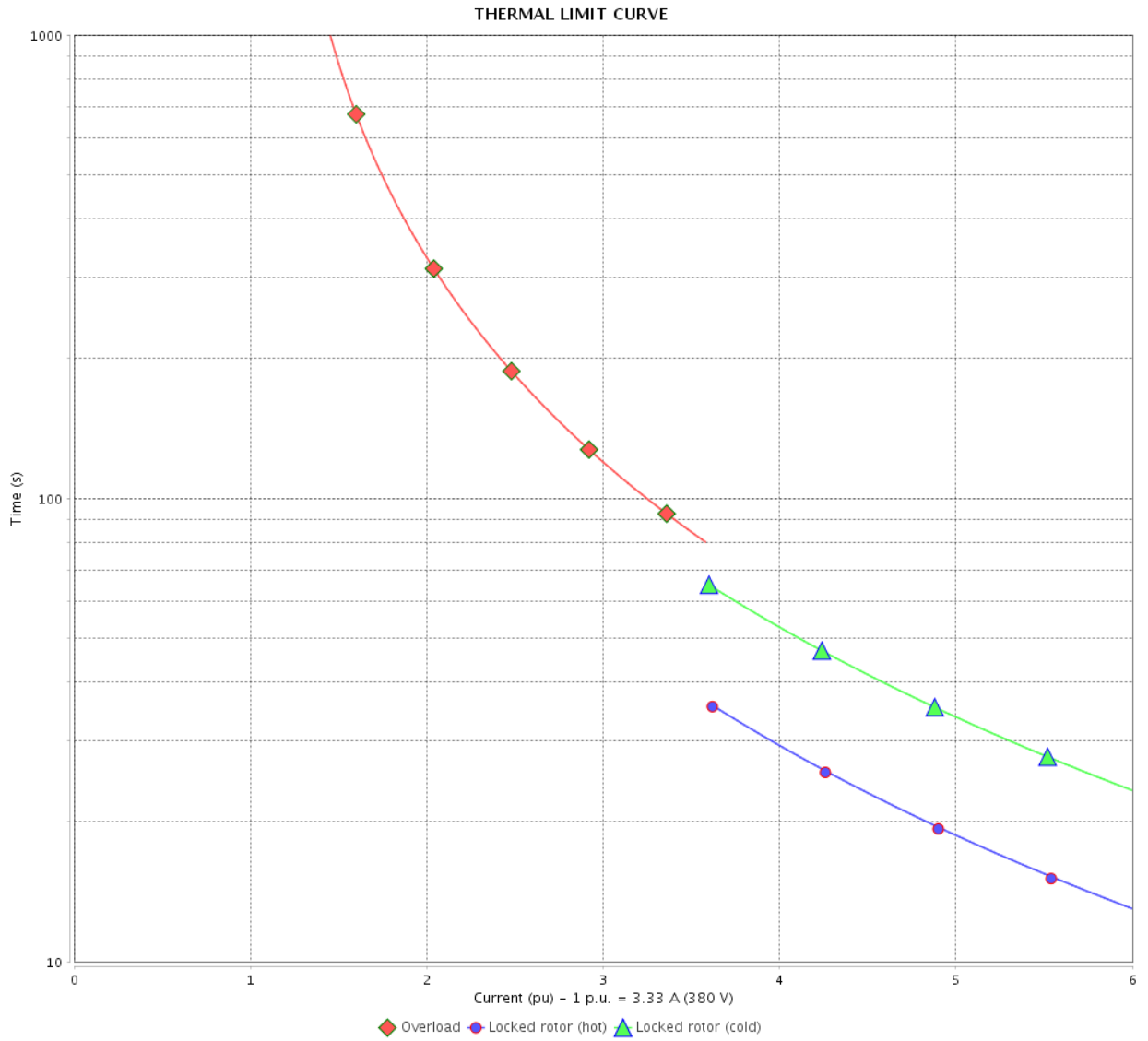


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 400 V 50 Hz 4P IE2

Rated current	: 3.22 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 7.29 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm	Design	: B

Heating constant

Cooling constant

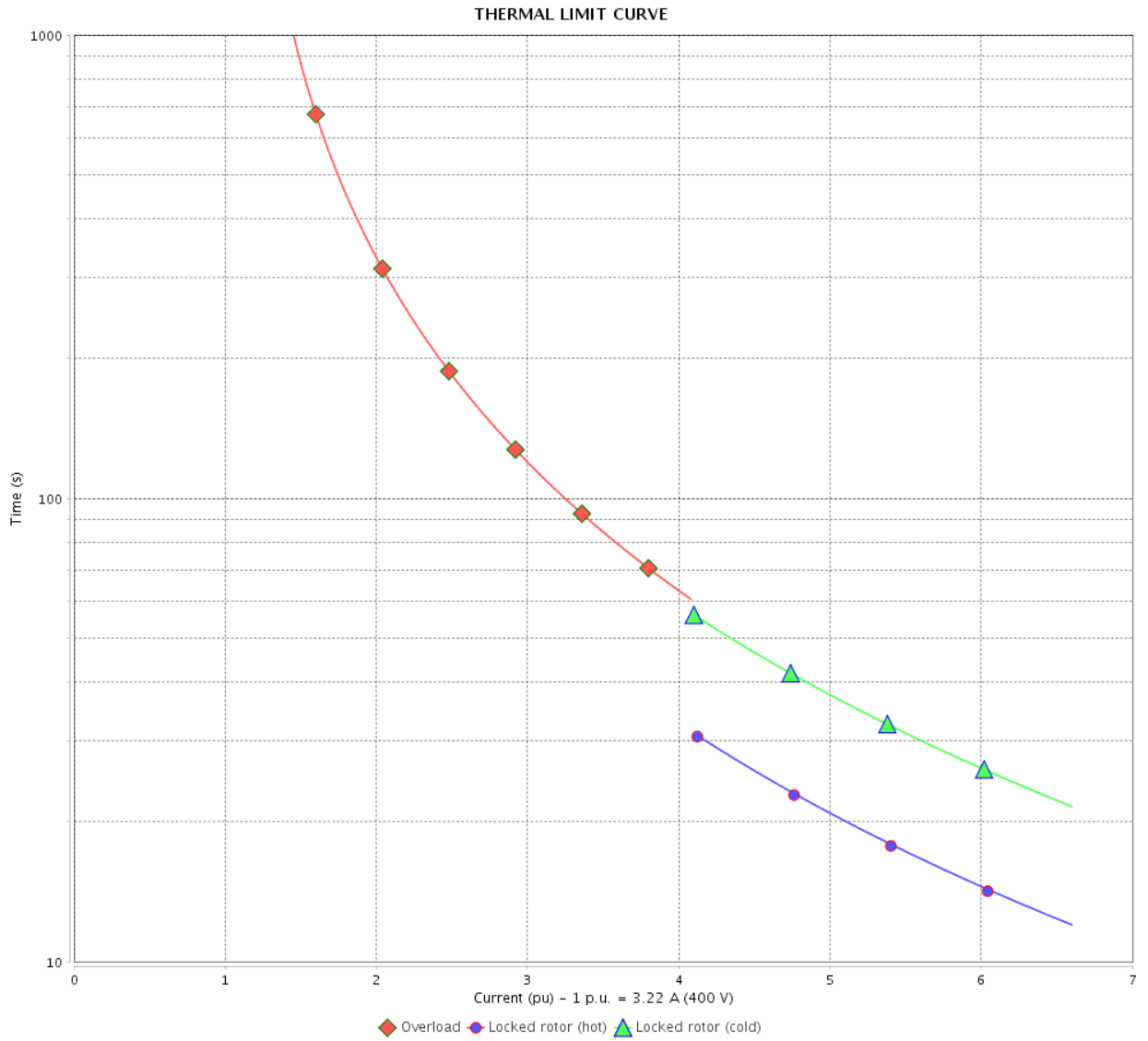
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		26 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12822412  
Catalog # : 00218ST3QUIER145TC-W2

Performance : 415 V 50 Hz 4P IE2

Rated current	: 3.14 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 7.24 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

Heating constant

Cooling constant

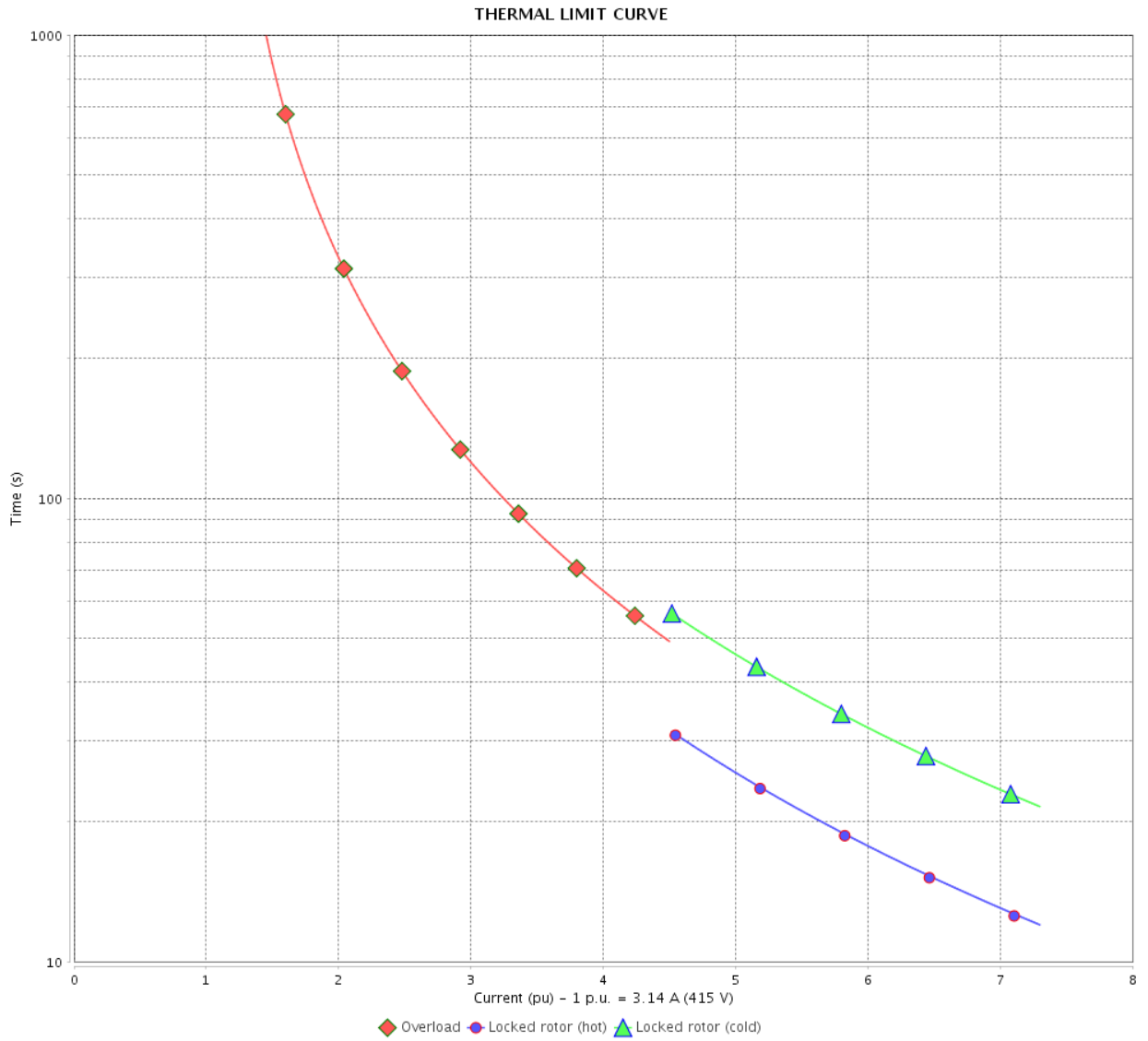
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		28 / 36	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		29 / 36		
Date		14/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

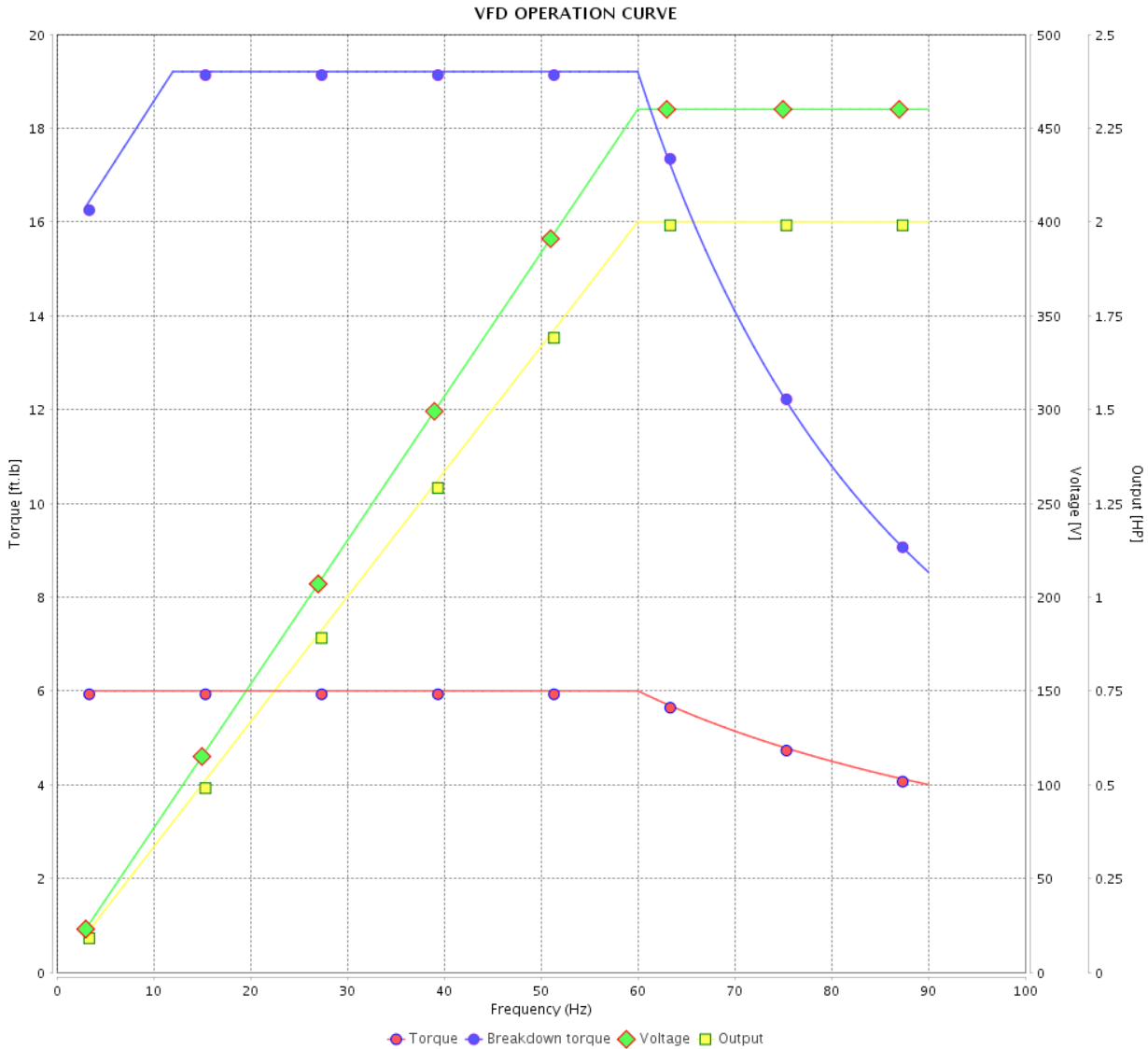


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2



Performance : 460 V 60 Hz 4P

Rated current : 2.76 A  
 LRC : 8.3  
 Rated torque : 6.00 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1561 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	Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

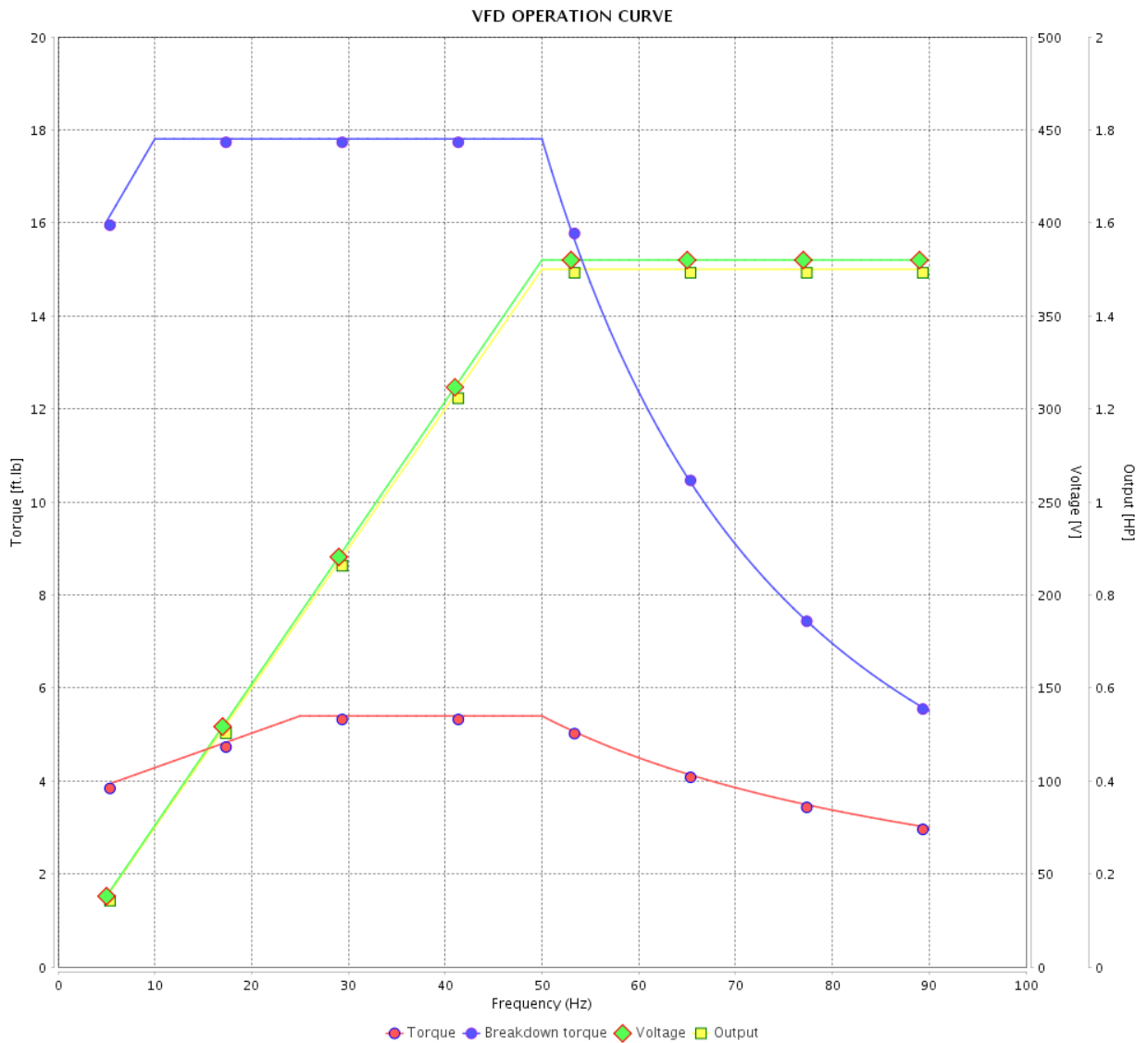


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 380 V 50 Hz 4P IE3

Rated current : 2.57 A  
 LRC : 8.2  
 Rated torque : 5.40 ft.lb  
 Locked rotor torque : 290 %  
 Breakdown torque : 330 %  
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.1561 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 31 / 36	Revision
Checked by				
Date	14/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



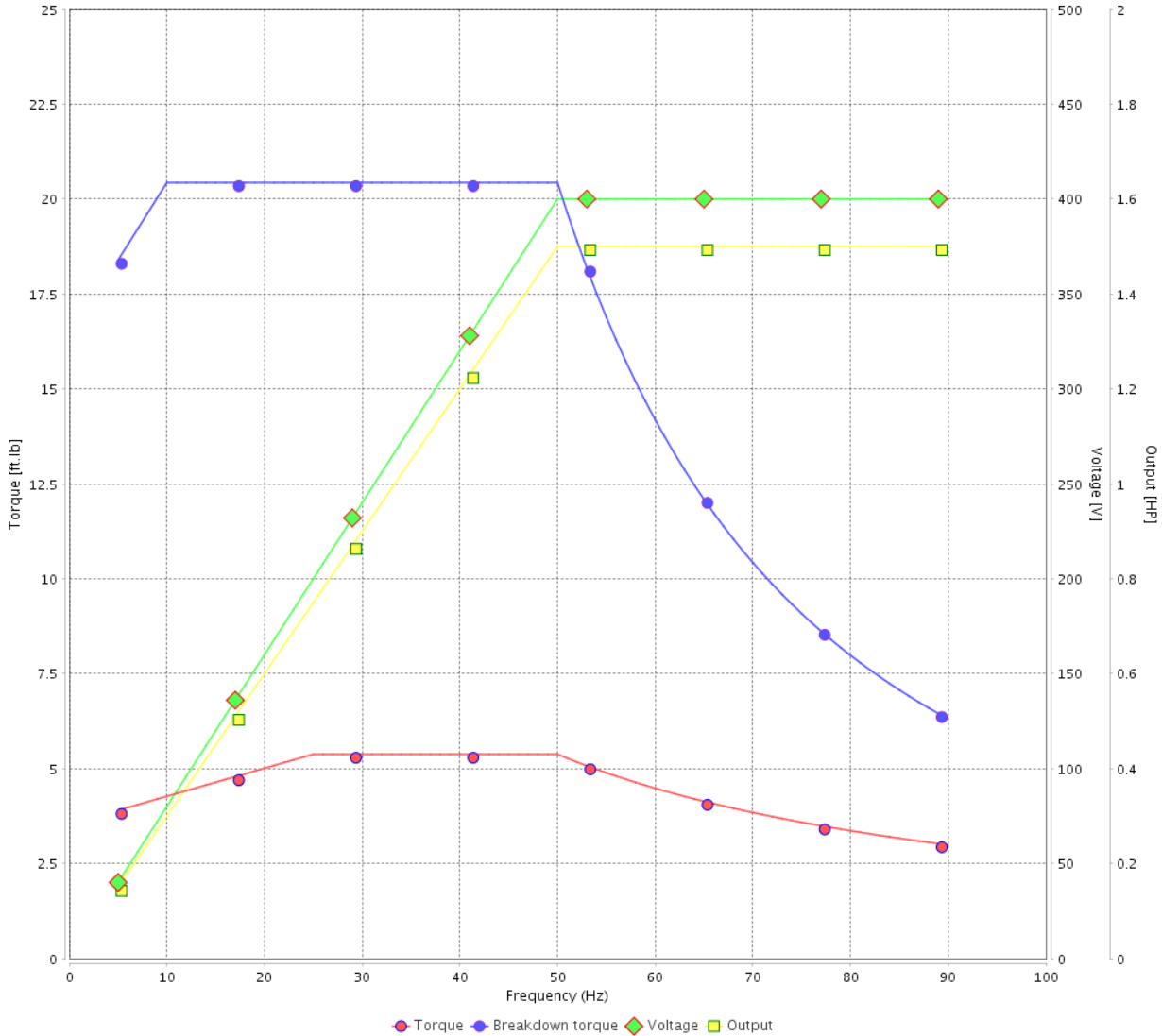
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 2.57 A  
 LRC : 8.7  
 Rated torque : 5.38 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 380 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1561 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	Revision
Checked by				
Date				



# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

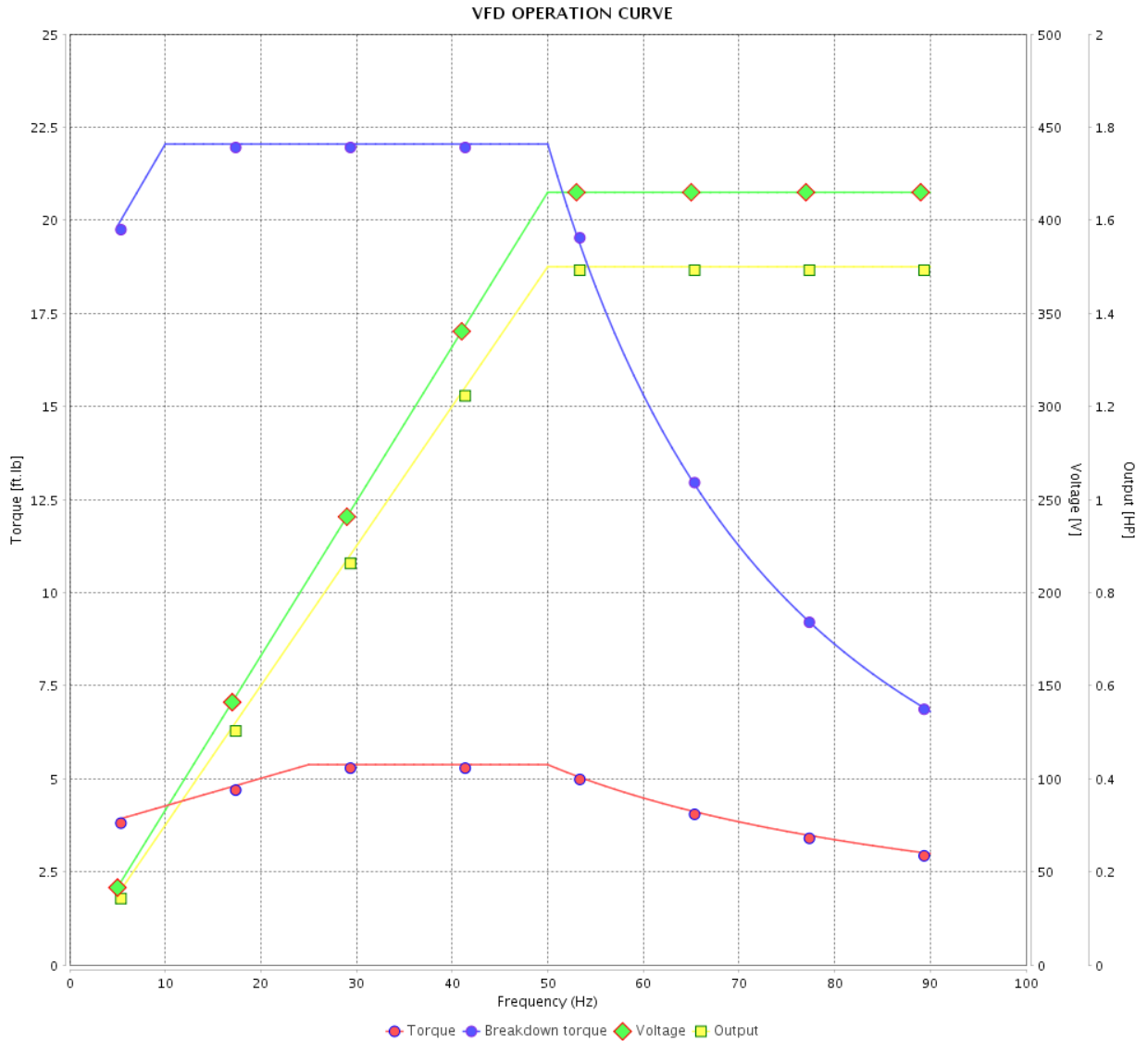


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 415 V 50 Hz 4P IE3

Rated current : 2.56 A  
 LRC : 8.4  
 Rated torque : 5.38 ft.lb  
 Locked rotor torque : 350 %  
 Breakdown torque : 409 %  
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.1561 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 33 / 36	Revision
Checked by				
Date	14/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



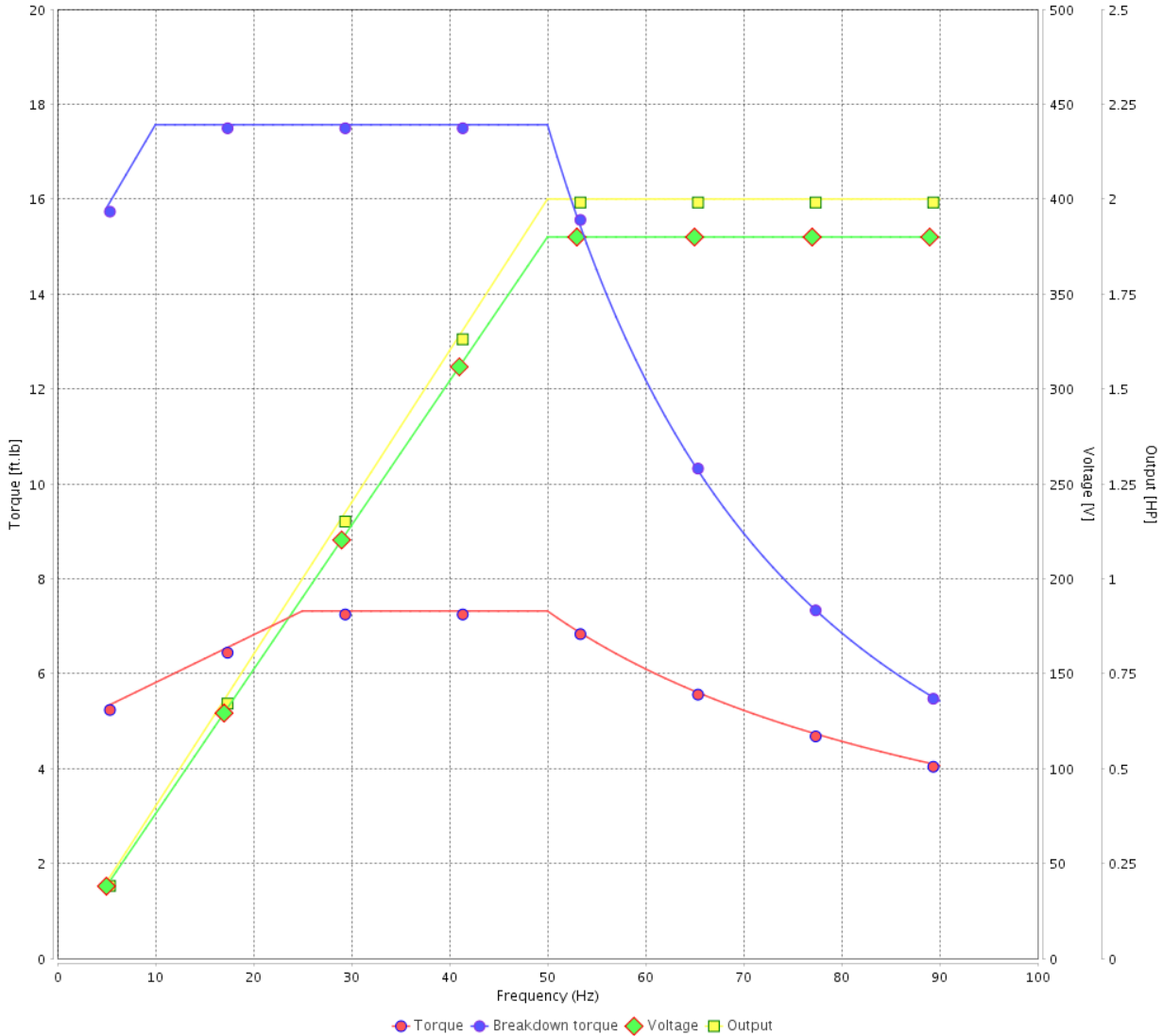
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QUIER145TC-W2

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE1

Rated current : 3.33 A  
 LRC : 6.0  
 Rated torque : 7.32 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.1561 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 34 / 36	Revision
Checked by				
Date	14/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

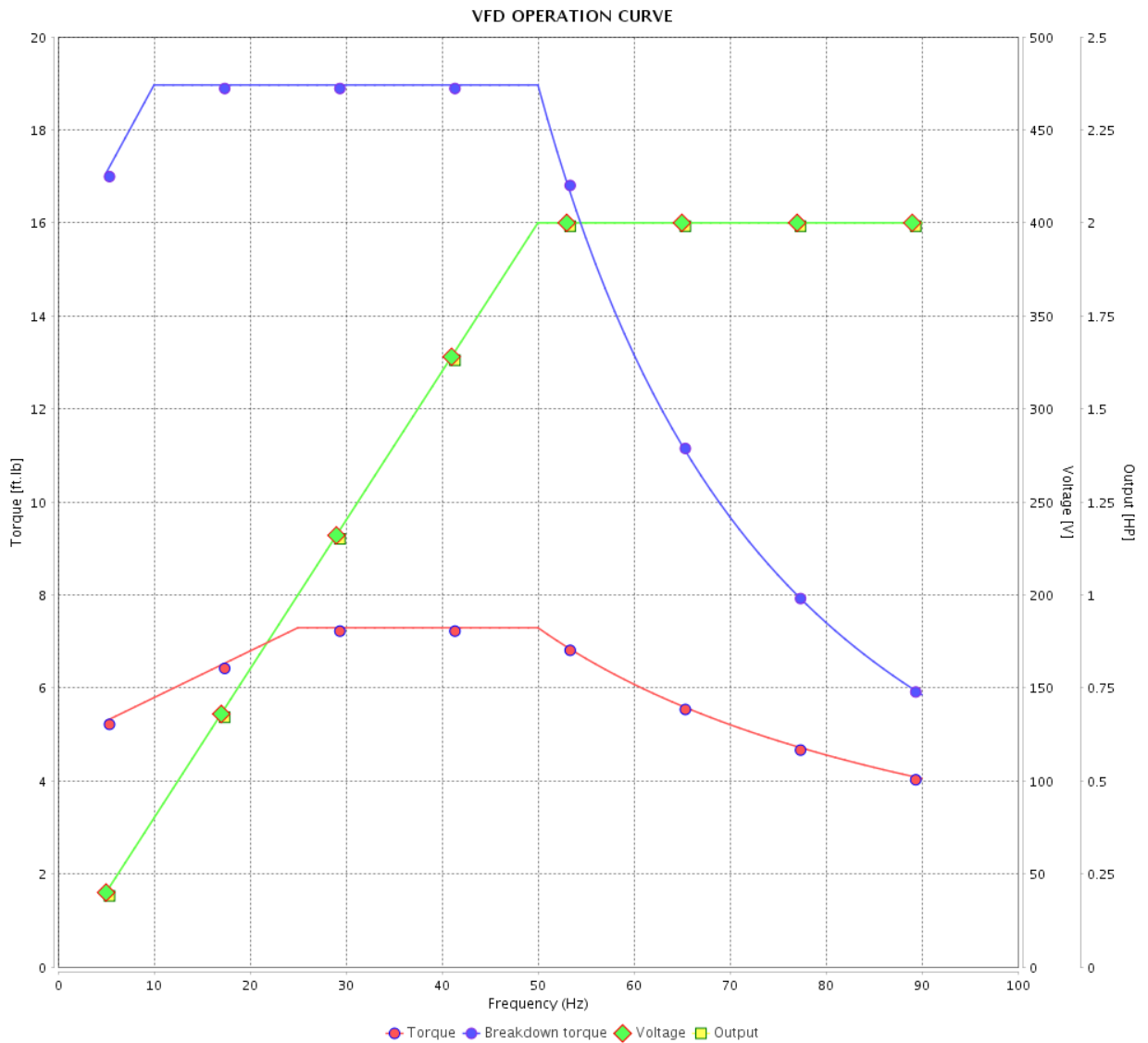


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

Catalog # : 00218ST3QIER145TC-W2



Performance : 400 V 50 Hz 4P IE2

Rated current : 3.22 A  
 LRC : 6.6  
 Rated torque : 7.29 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.1561 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		Revision
Checked by		35 / 36		
Date		14/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

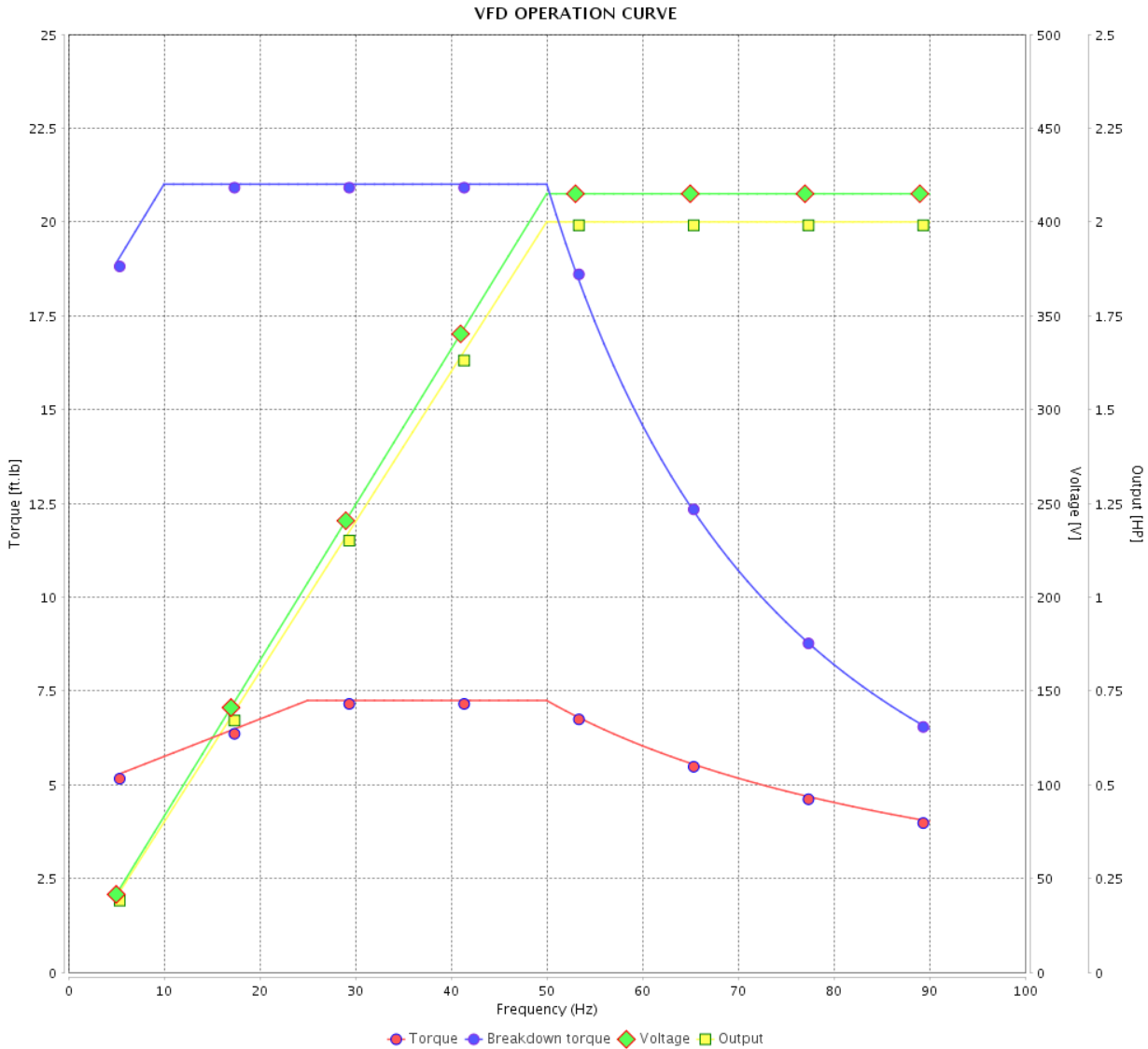


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12822412

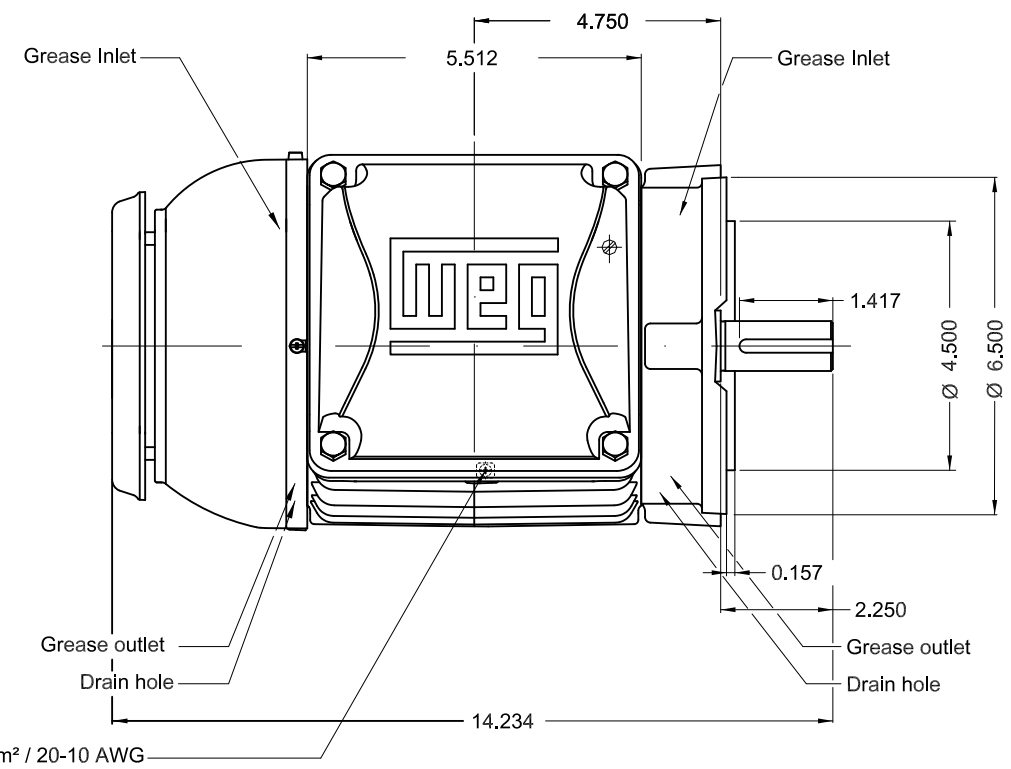
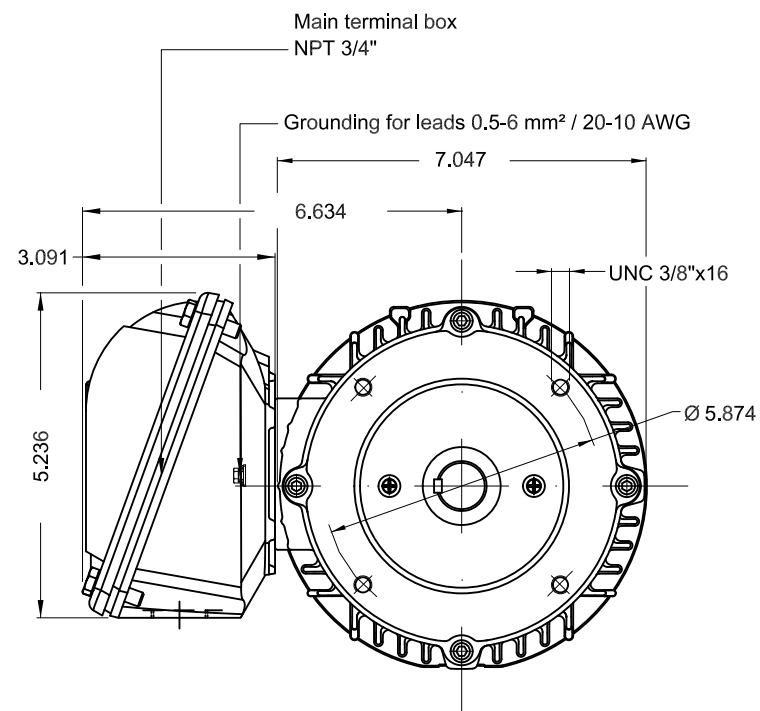
Catalog # : 00218ST3QUIER145TC-W2



Performance : 415 V 50 Hz 4P IE2

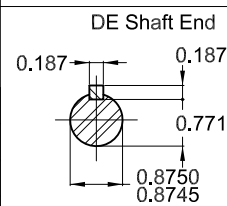
Rated current	: 3.14 A	Moment of inertia (J)	: 0.1561 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 7.24 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 36 / 36	Revision
Checked by				
Date	14/04/2022			



Grounding for leads 0.5-6 mm<sup>2</sup> / 20-10 AWG

Color RAL 5009  
 Painting plan 202E  
 Mounting NEMA W-6  
 Mounting V18



2 HP 04 Poles 60 Hz

A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 145TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1

Dimensions in inches

XME A3

MADE IN BRAZIL  
12822412



**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 00218ST3QIER145TC-W2

Inverter Duty Motor  
Severe Duty

**IEEE**  
841-2009



FOR SAFE AREA  
Mod. TE1BFOXON  
CC029A

PH3 60Hz Fr. 145TC 1000m.a.s.l. IP55 TEFC 59lb

V 460

A 2.76

HP 2.0

kW 1.5

SF 1.25

SFA 3.45

RPM 1750

PF 0.79

AMB 40°C

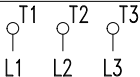
INS cl. F DT80K

NEMA NOM EFF 86.5%

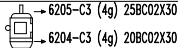
DUTY CONT.

DES B Code L

GUARANT. EFF 84.0%



460V



MOBIL POLYREX EM (20000h)

