

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		11355724
			Catalog # :		03009ET3E364T-W22
Frame		: 364/5T	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>		: 812 lb
Protection degree		: IP55	Moment of inertia (J)		: 23.5 sq.ft.lb
Design		: B			
Output [HP]	30	30	30	30	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	75.2/37.6	45.5	42.7	42.2	
L. R. Amperes [A]	466/233	223	235	249	
LRC [A]	6.2x(Code G)	4.9x(Code E)	5.5x(Code F)	5.9x(Code G)	
No load current [A]	29.4/14.7	14.4	15.3	16.0	
Rated speed [RPM]	880	720	725	730	
Slip [%]	2.22	4.00	3.33	2.67	
Rated torque [ft.lb]	179	219	217	216	
Locked rotor torque [%]	160	120	140	150	
Breakdown torque [%]	229	190	190	200	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	105 K	105 K	105 K	
Locked rotor time	64s (cold) 36s (hot)	48s (cold) 27s (hot)	48s (cold) 27s (hot)	48s (cold) 27s (hot)	
Noise level <sup>2</sup>	60.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%				
	50%	91.5	90.5	90.5	90.5
	75%	91.7	90.6	90.6	90.6
	100%	91.7	89.5	90.6	90.6
Power Factor	25%				
	50%	0.63	0.70	0.66	0.63
	75%	0.73	0.79	0.76	0.75
	100%	0.80	0.82	0.82	0.80
Bearing type		Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads	
Sealing		: WSeal	: WSeal	Max. traction : 1071 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 1883 lb	
Lubricant amount		: 27 g	: 27 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 81.8A SF 1.10 SFA 90.0A					
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 / 21	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



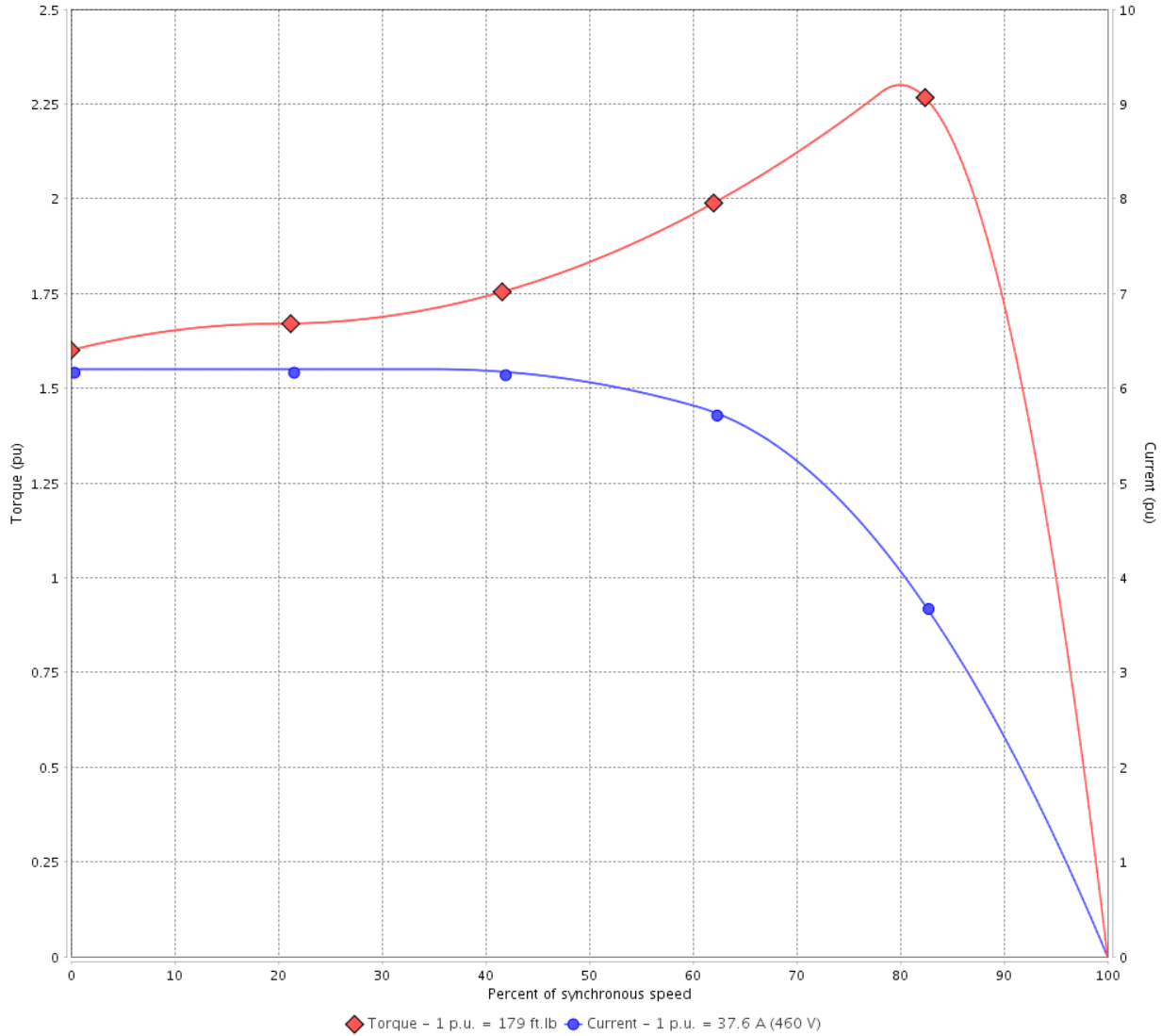
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 8P

Rated current	: 75.2/37.6 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 179 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.25
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Locked rotor time : 64s (cold) 36s (hot)

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

# TORQUE AND CURRENT VS SPEED CURVE



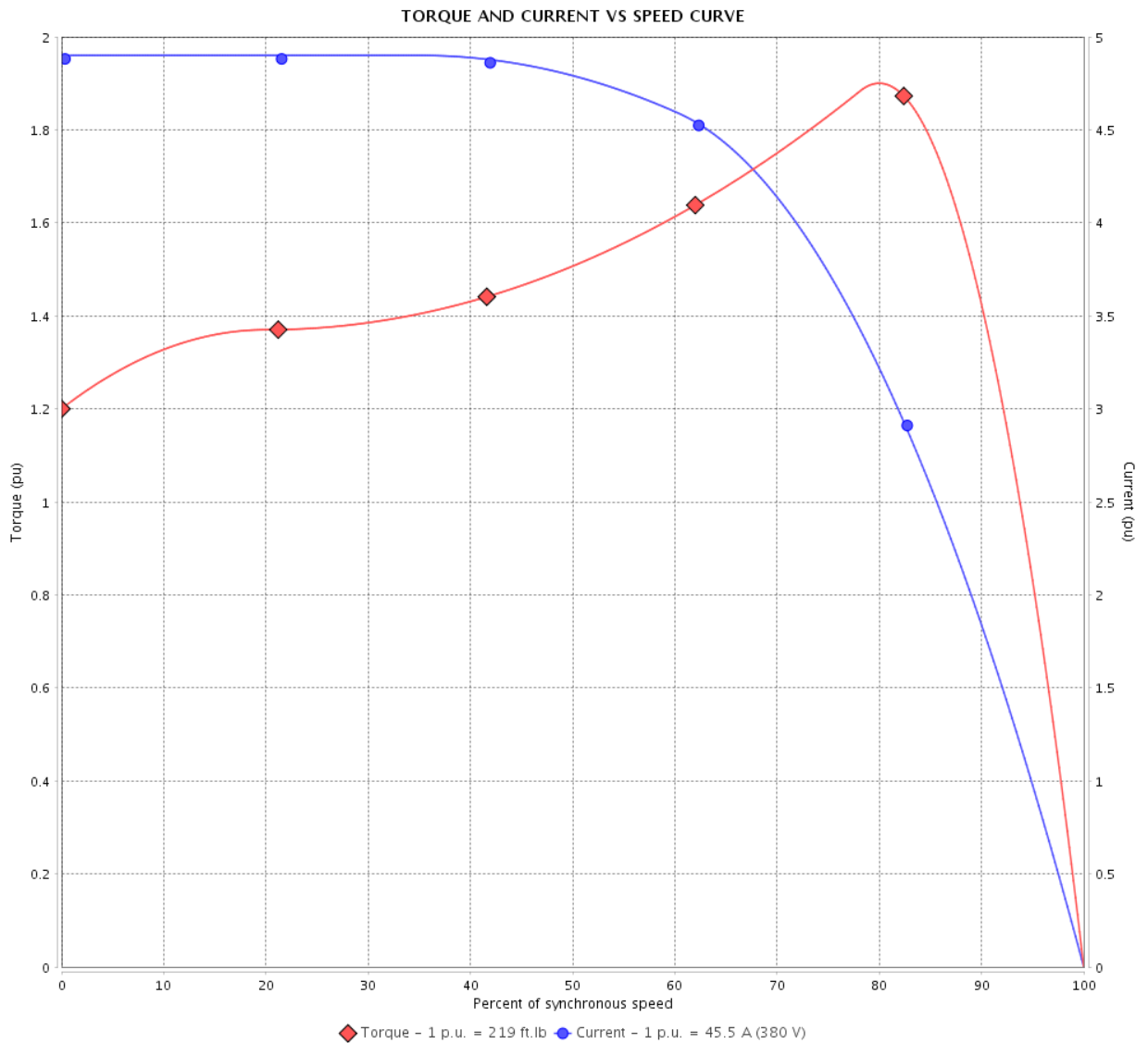
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 380 V 50 Hz 8P IE2

Rated current	: 45.5 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 219 ft.lb	Insulation class	: F
Locked rotor torque	: 120 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



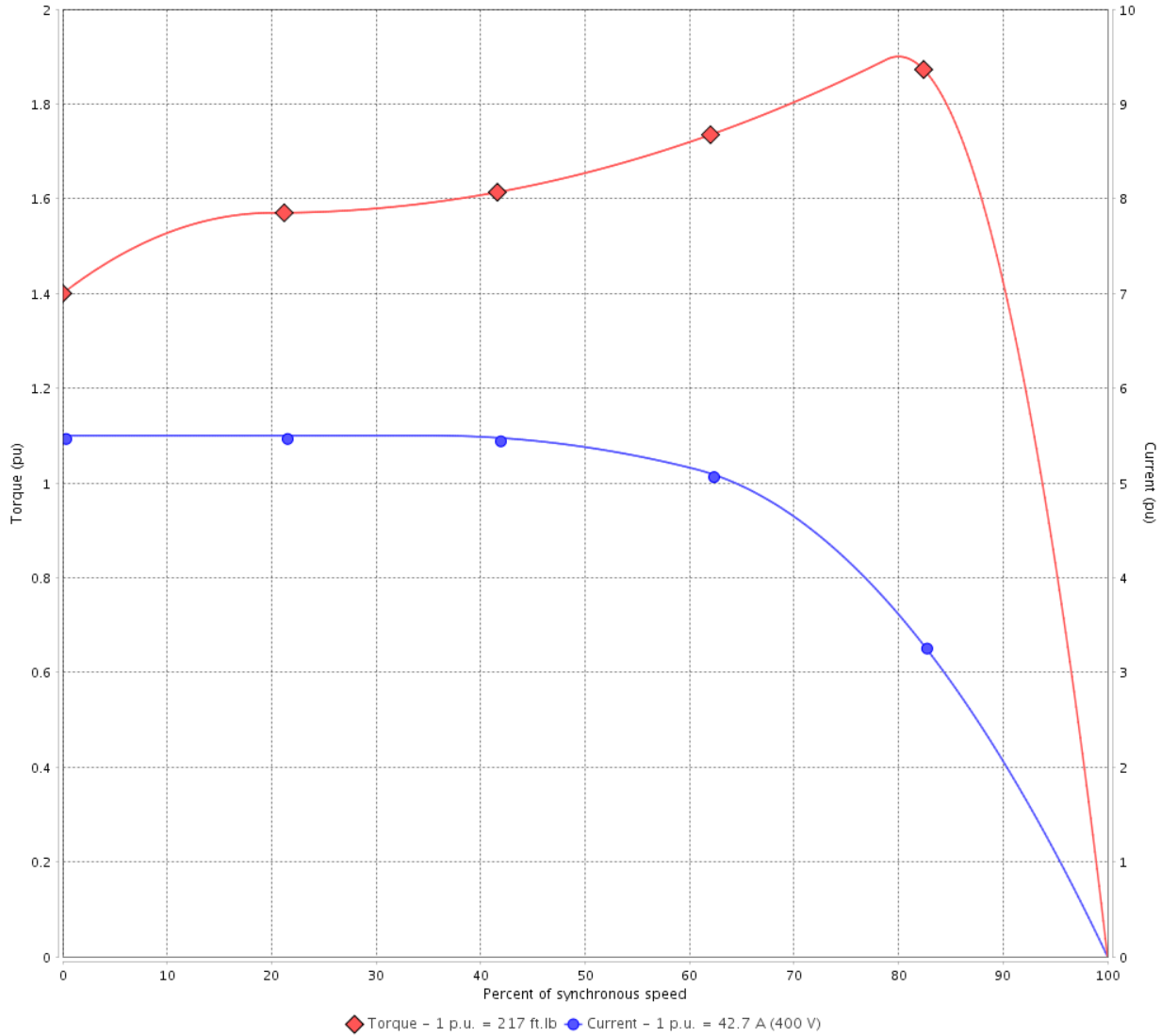
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current	: 42.7 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 217 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (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



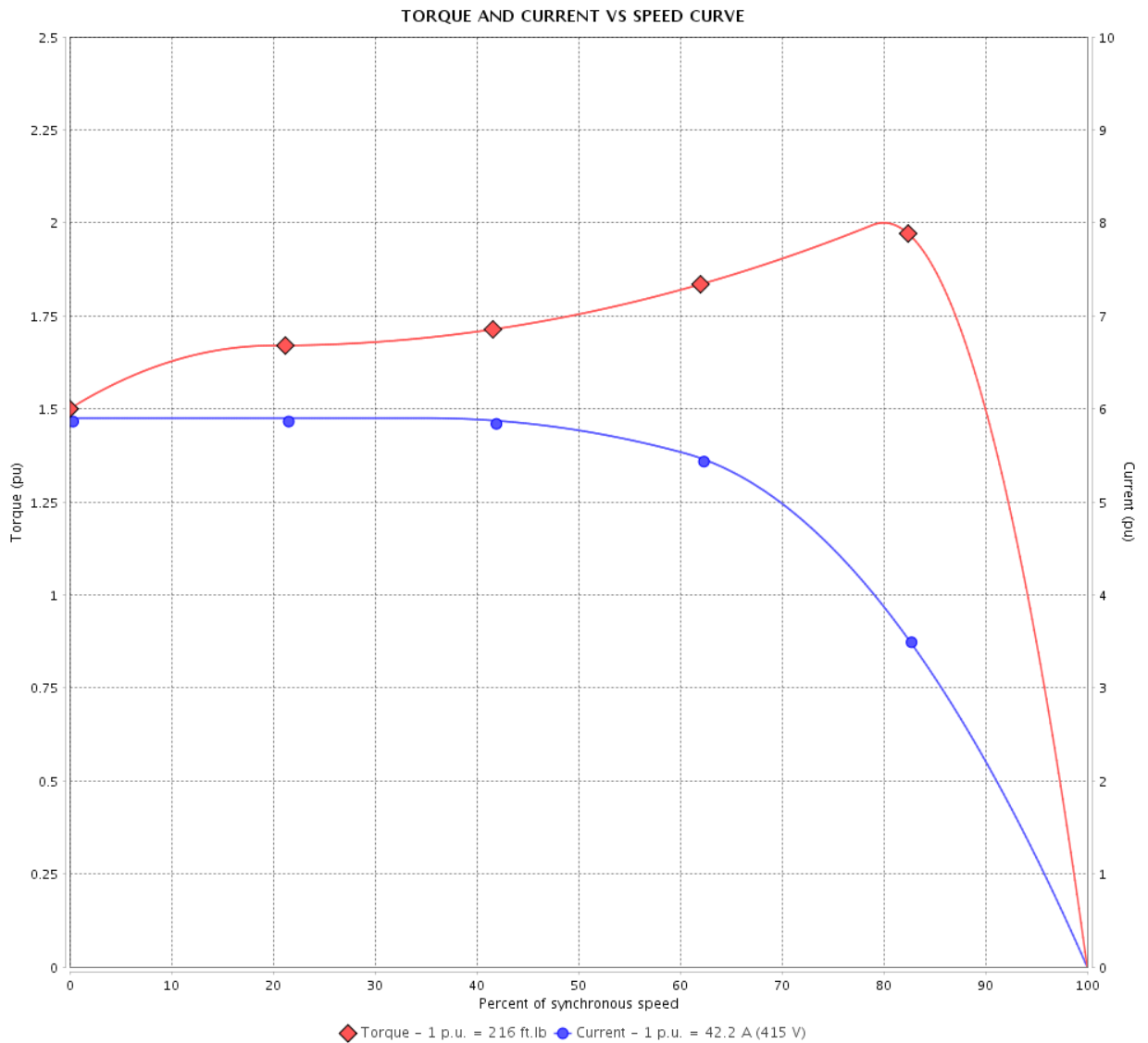
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current	: 42.2 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 216 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 730 rpm	Design	: B

Locked rotor time : 48s (cold) 27s (hot)

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

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

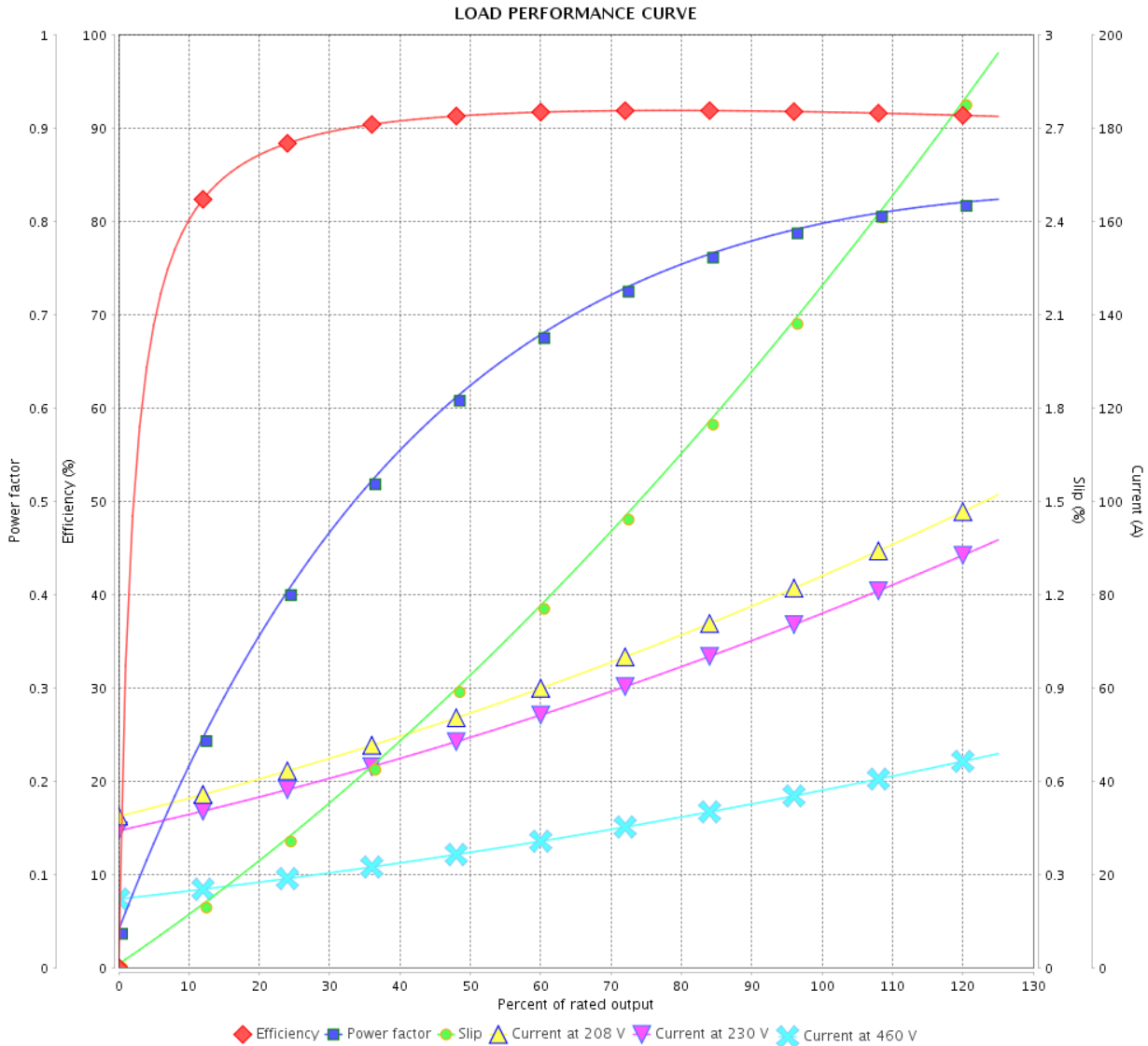


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 230/460 V 60 Hz 8P

Rated current : 75.2/37.6 A  
 LRC : 6.2  
 Rated torque : 179 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 229 %  
 Rated speed : 880 rpm

Moment of inertia (J) : 23.5 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

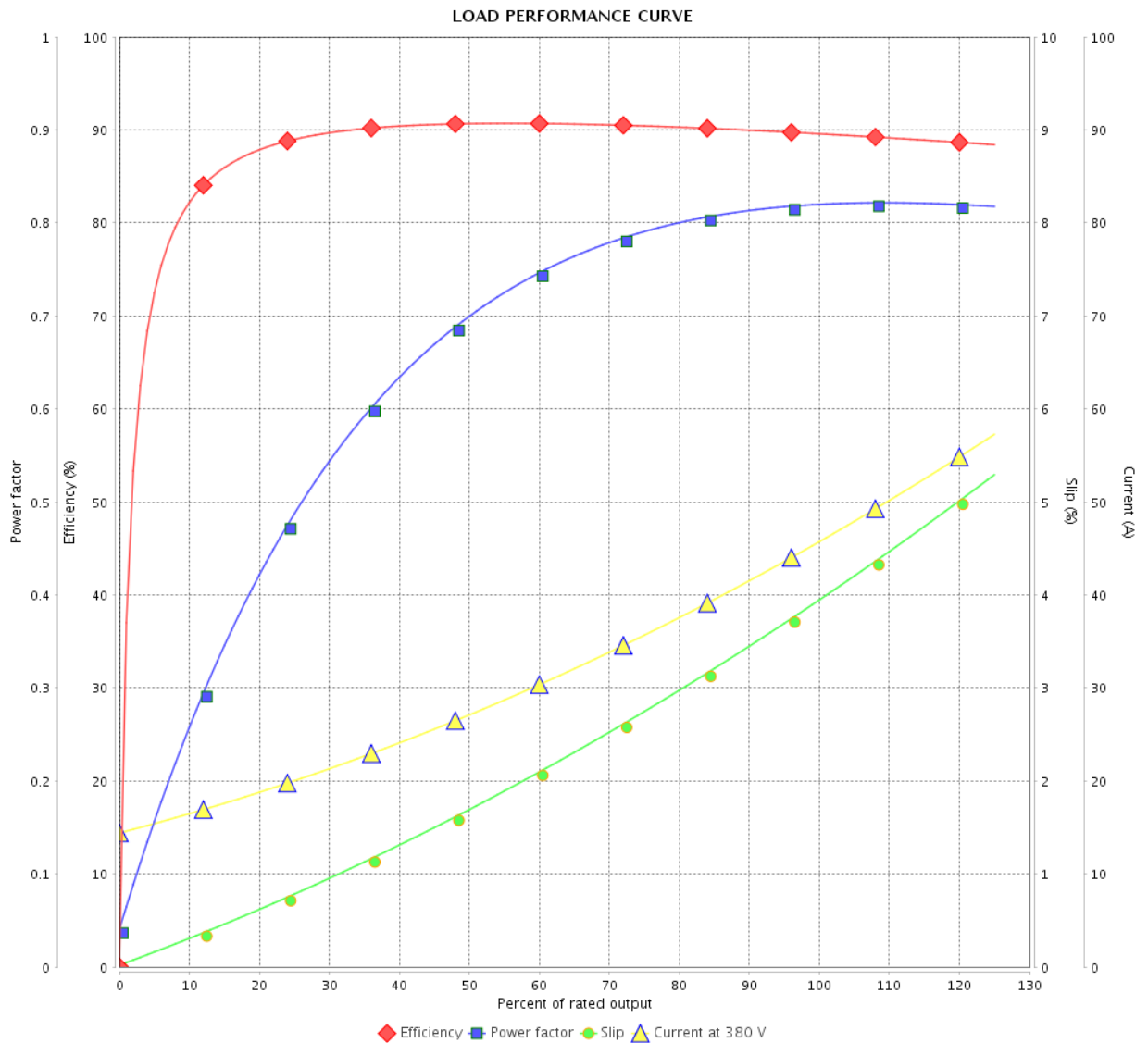


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 380 V 50 Hz 8P IE2

Rated current : 45.5 A  
 LRC : 4.9  
 Rated torque : 219 ft.lb  
 Locked rotor torque : 120 %  
 Breakdown torque : 190 %  
 Rated speed : 720 rpm

Moment of inertia (J) : 23.5 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 21		
Date		14/04/2022		





# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

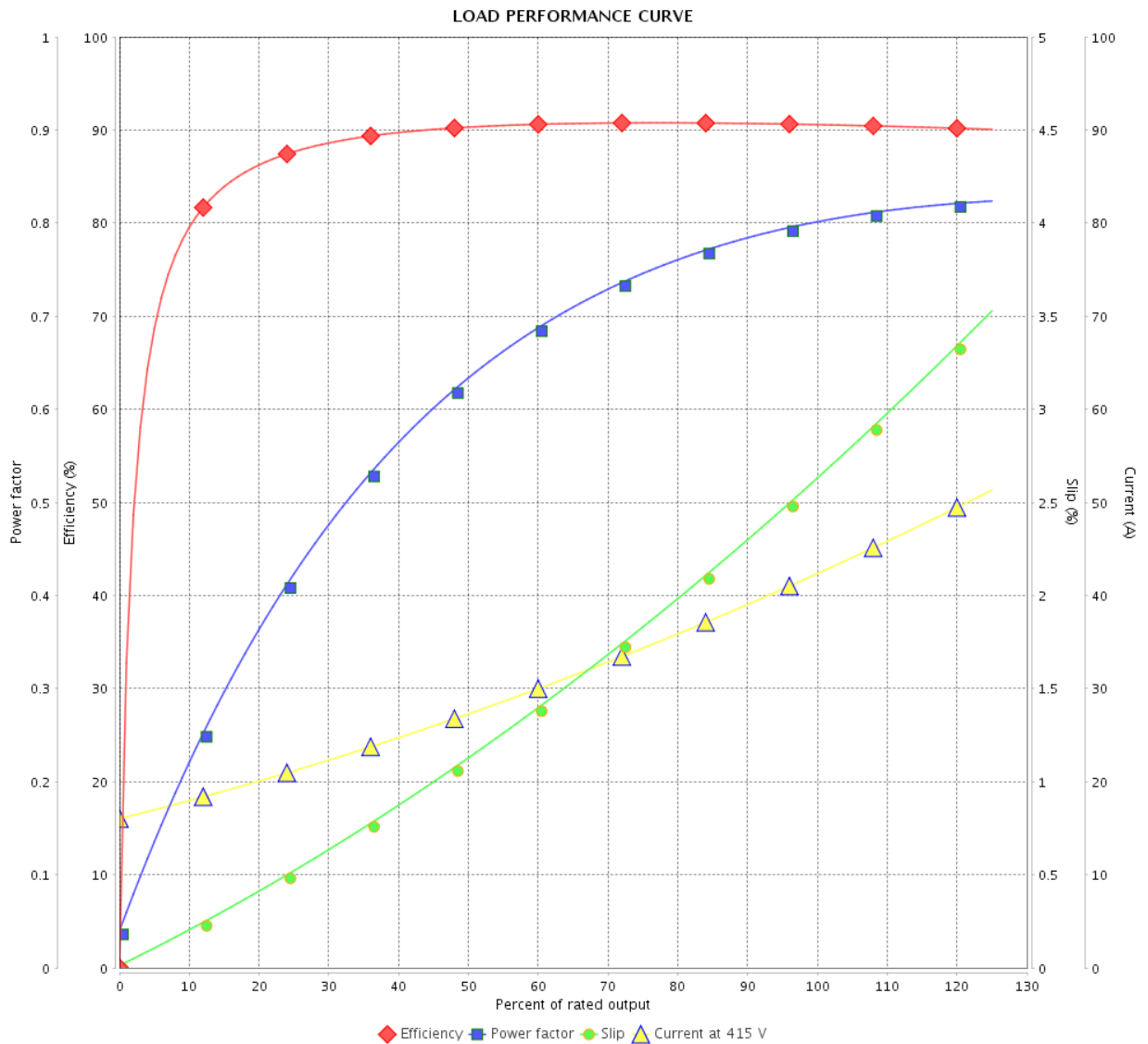


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current : 42.2 A  
 LRC : 5.9  
 Rated torque : 216 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 200 %  
 Rated speed : 730 rpm

Moment of inertia (J) : 23.5 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		9 / 21		
Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11355724  
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Performance : 230/460 V 60 Hz 8P

Rated current	: 75.2/37.6 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 179 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.25
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Heating constant

Cooling constant

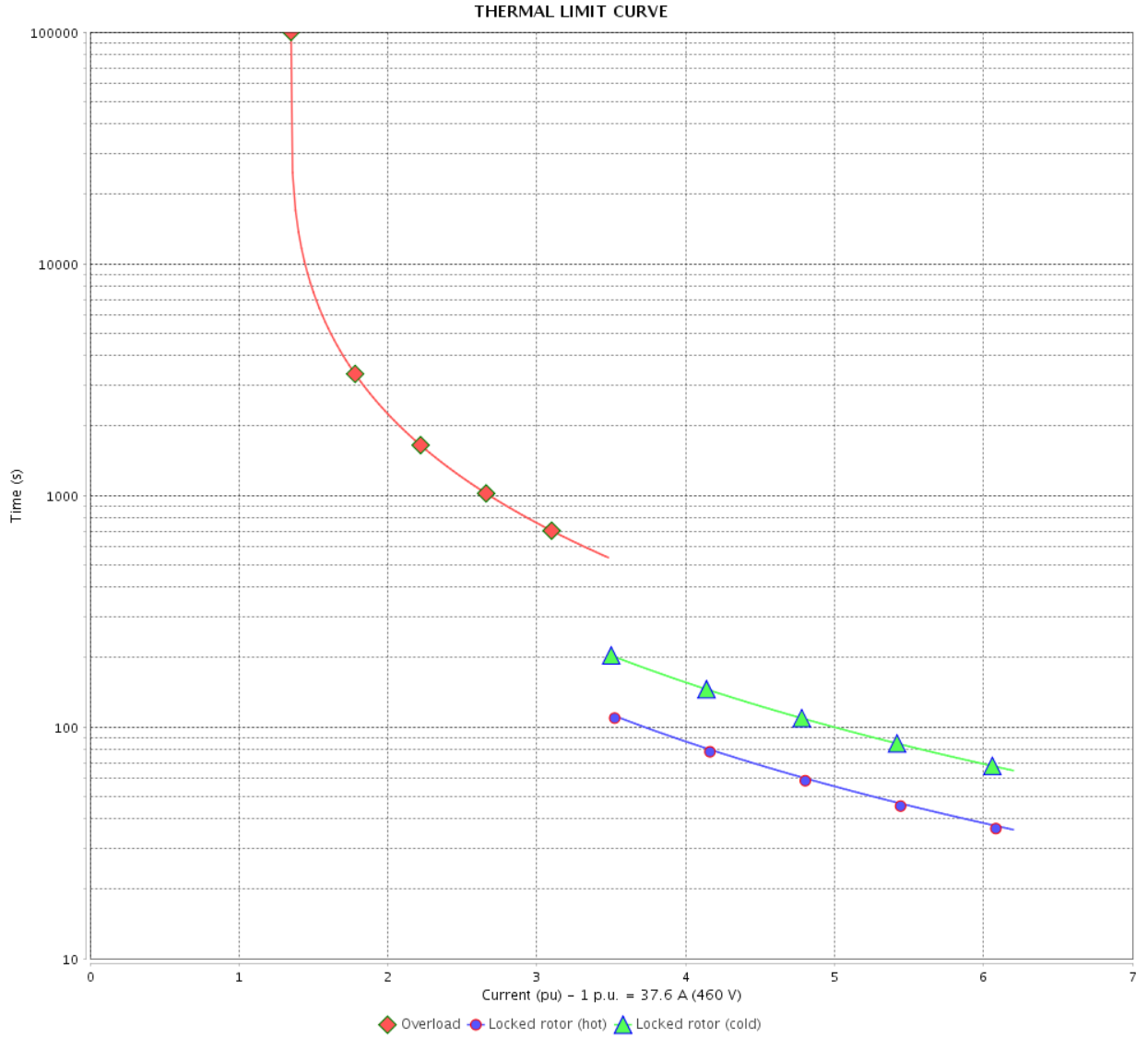
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		10 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date		14/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11355724  
Catalog # : 03009ET3E364T-W22

Performance : 380 V 50 Hz 8P IE2

Rated current	: 45.5 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 219 ft.lb	Insulation class	: F
Locked rotor torque	: 120 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 720 rpm	Design	: B

Heating constant

Cooling constant

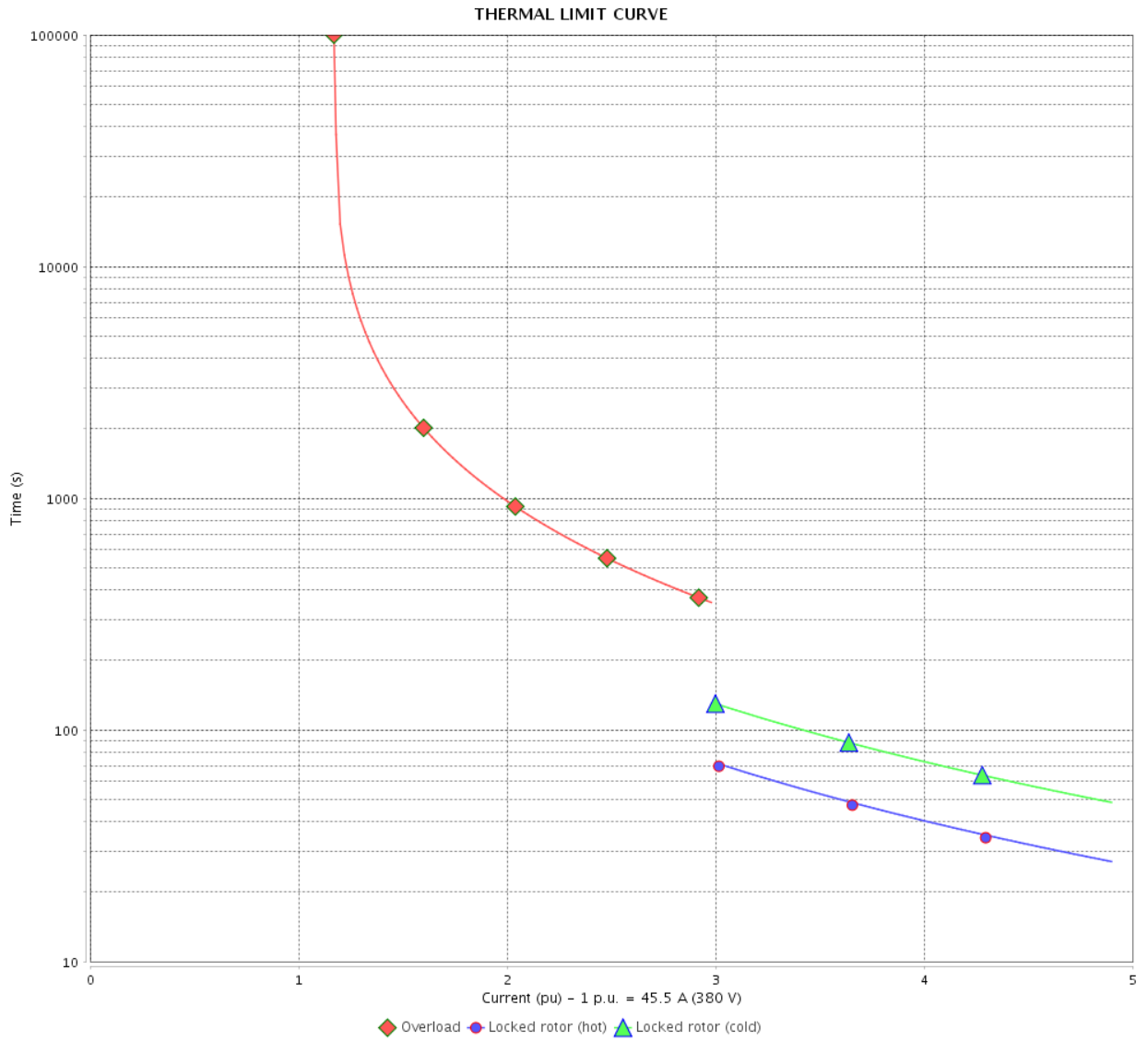
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Performed by				
Checked by			Page	Revision
Date	14/04/2022		12 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

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## Three Phase Induction Motor - Squirrel Cage



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Performance : 400 V 50 Hz 8P IE3

Rated current	: 42.7 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 217 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Heating constant

Cooling constant

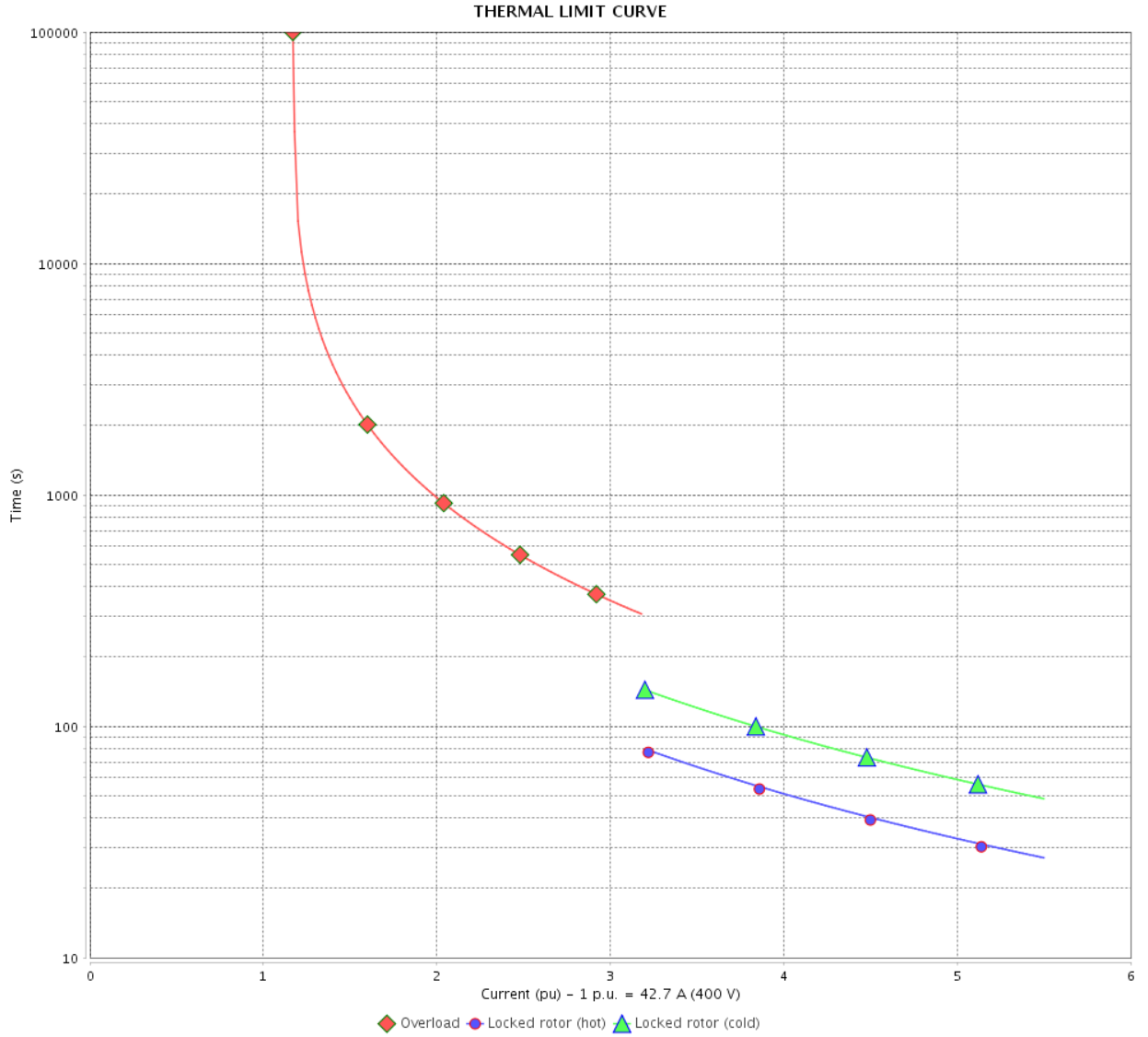
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Performed by				
Checked by			Page	Revision
Date	14/04/2022		14 / 21	

# THERMAL LIMIT CURVE

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

# THERMAL LIMIT CURVE

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Catalog # : 03009ET3E364T-W22

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LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 216 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 730 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	

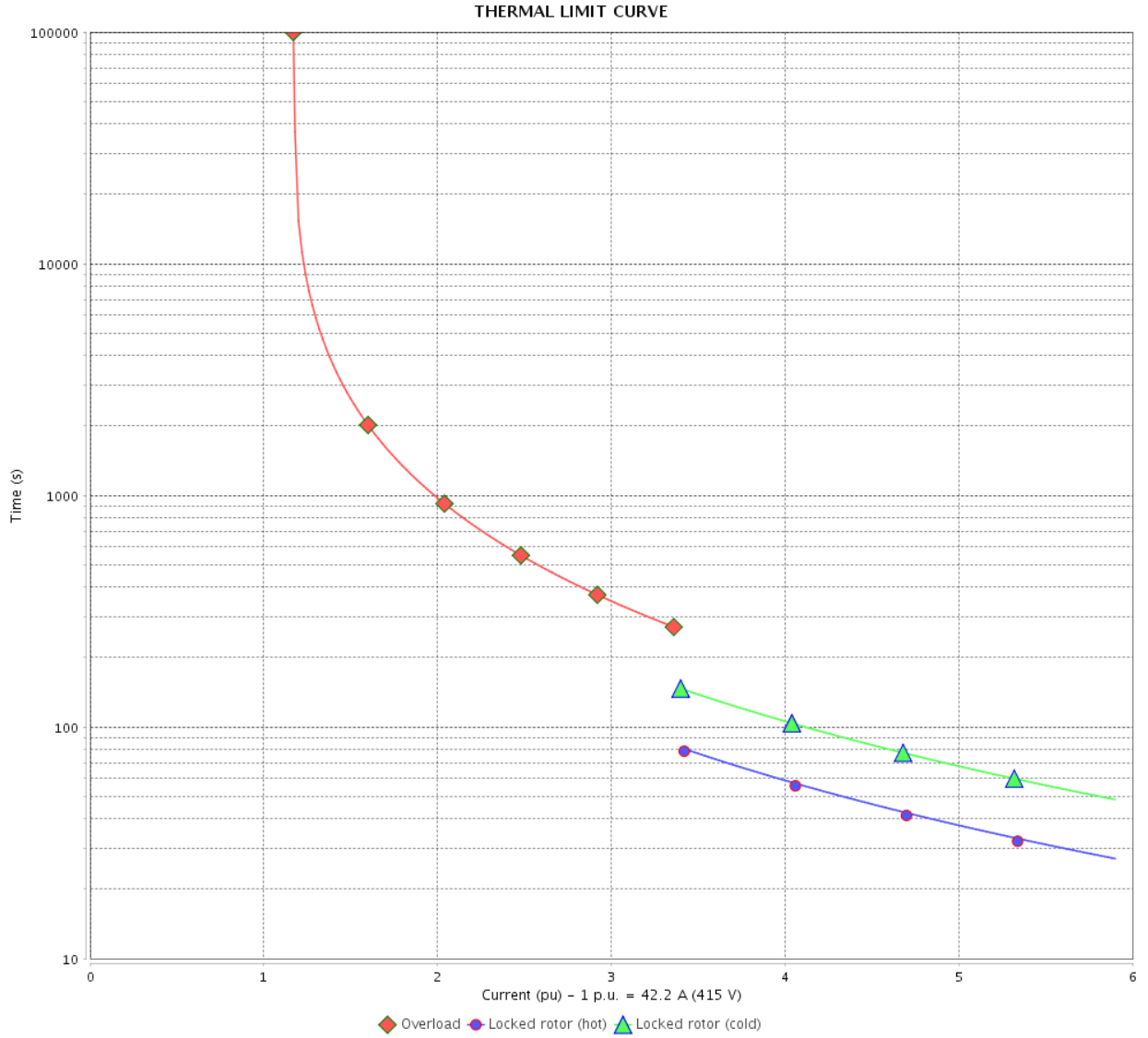


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



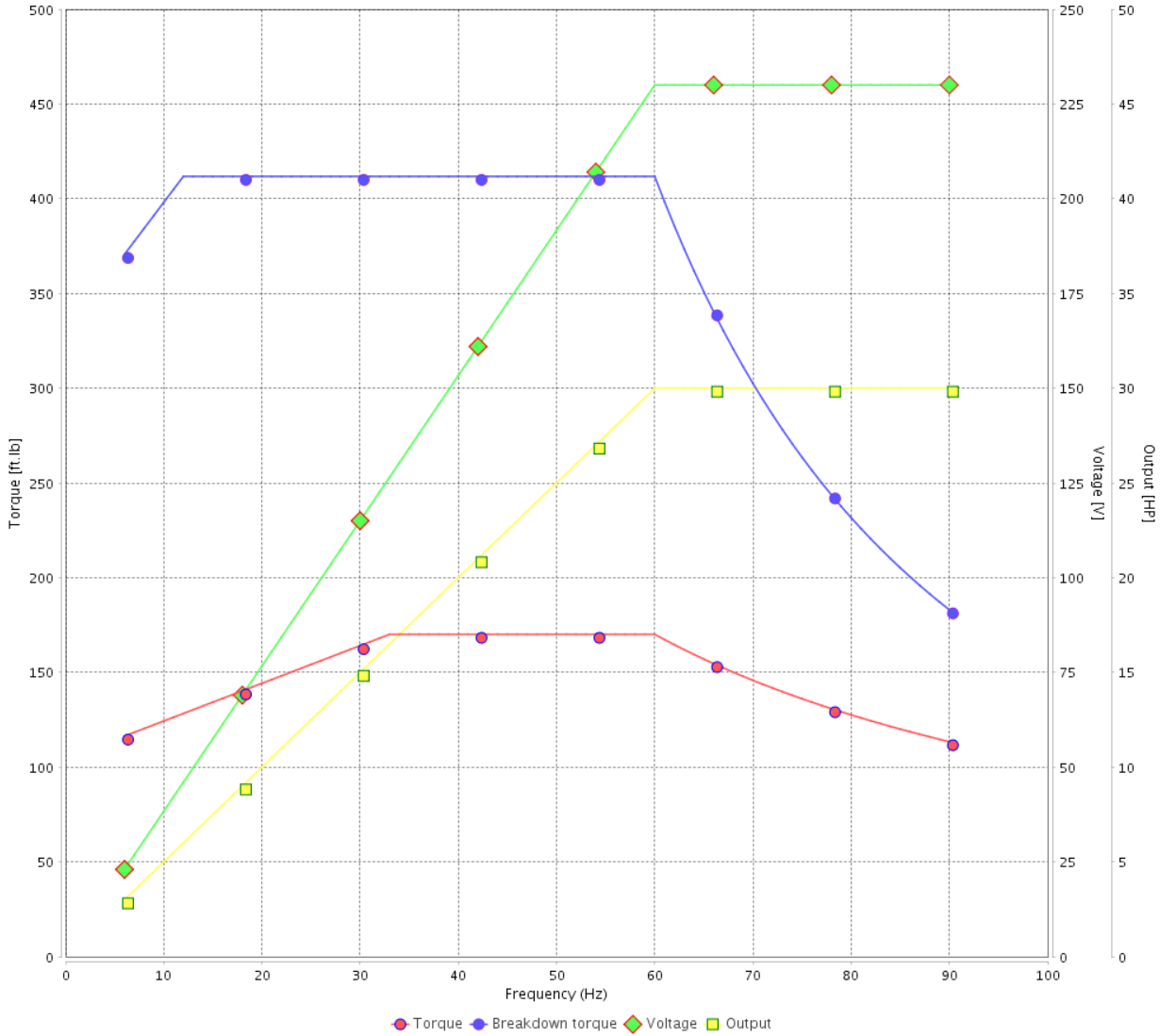
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 8P

Rated current : 75.2/37.6 A  
 LRC : 6.2  
 Rated torque : 179 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 229 %  
 Rated speed : 880 rpm

Moment of inertia (J) : 23.5 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			

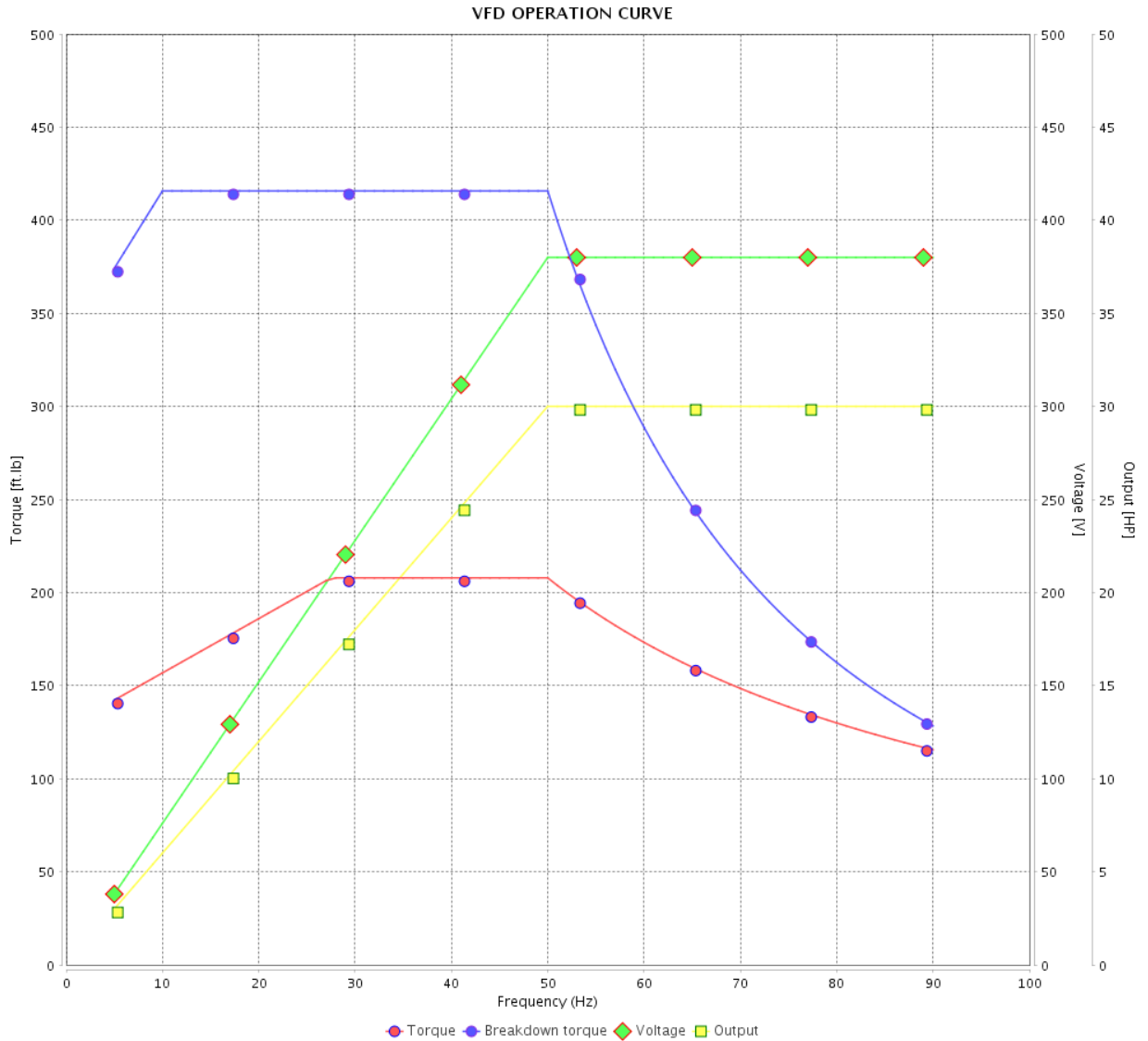
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

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 Product code : 11355724  
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Performance : 380 V 50 Hz 8P IE2

Rated current	: 45.5 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 219 ft.lb	Insulation class	: F
Locked rotor torque	: 120 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 720 rpm	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

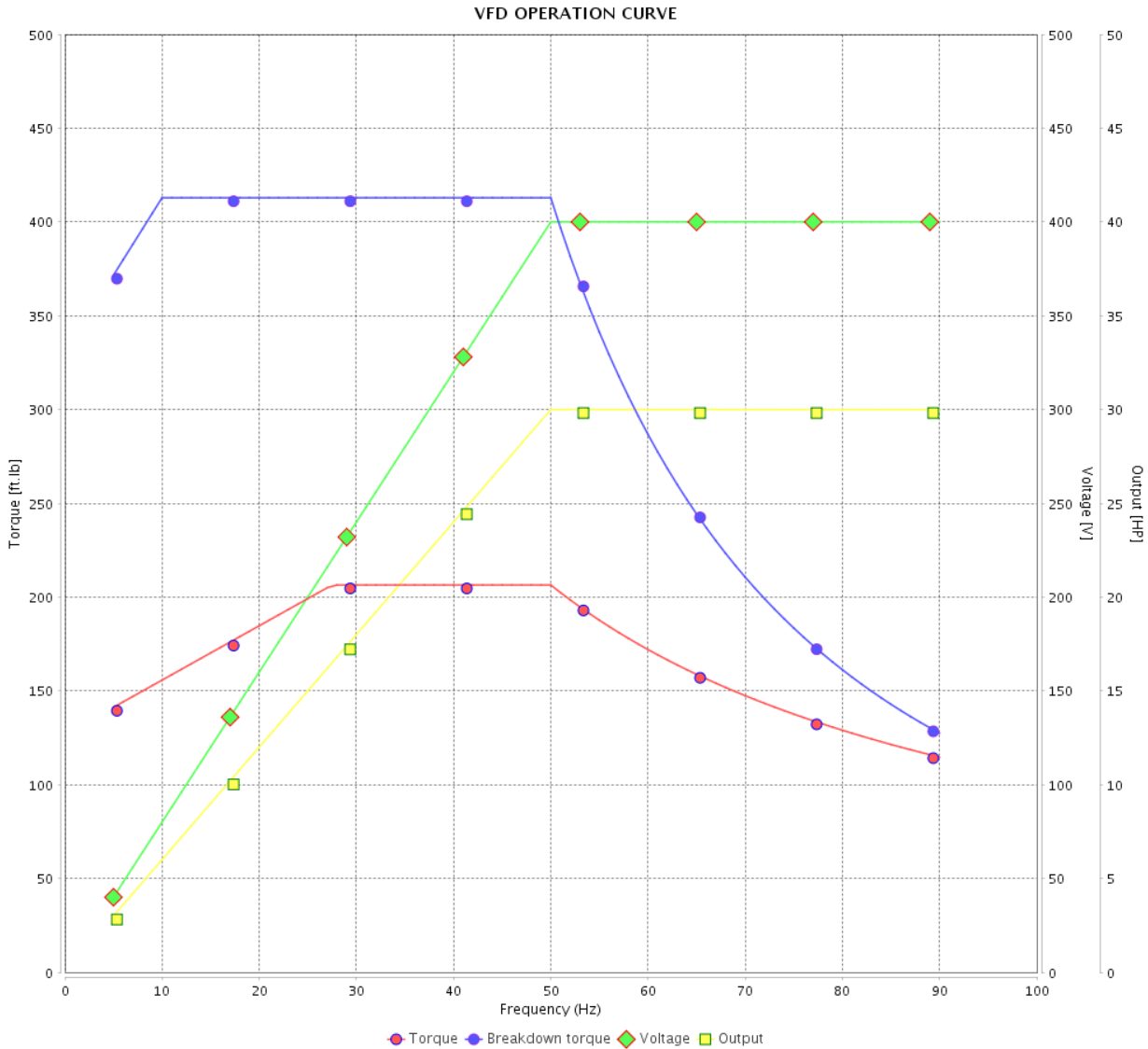


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11355724

Catalog # : 03009ET3E364T-W22



Performance : 400 V 50 Hz 8P IE3

Rated current	: 42.7 A	Moment of inertia (J)	: 23.5 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 217 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	14/04/2022			

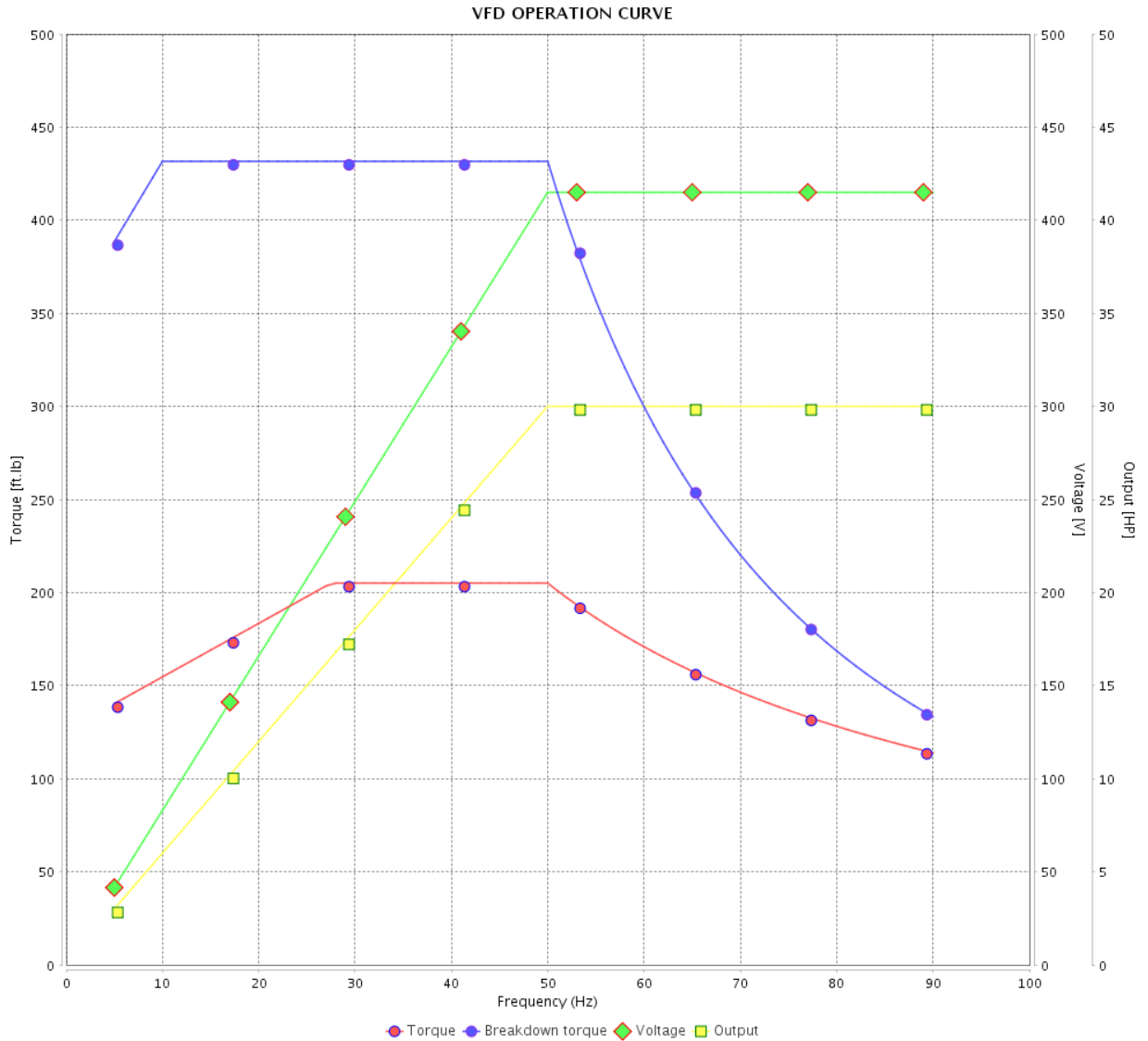
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Customer :

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 Product code : 11355724  
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Performance : 415 V 50 Hz 8P IE3

Rated current : 42.2 A	Moment of inertia (J) : 23.5 sq.ft.lb
LRC : 5.9	Duty cycle : Cont.(S1)
Rated torque : 216 ft.lb	Insulation class : F
Locked rotor torque : 150 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 105 K
Rated speed : 730 rpm	Design : B

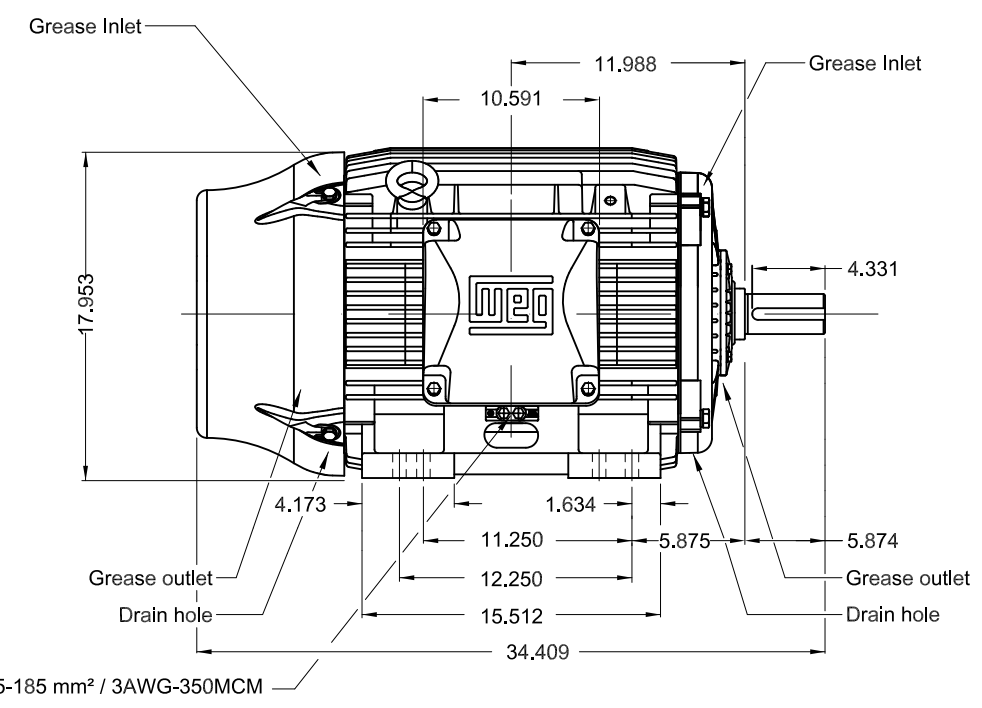
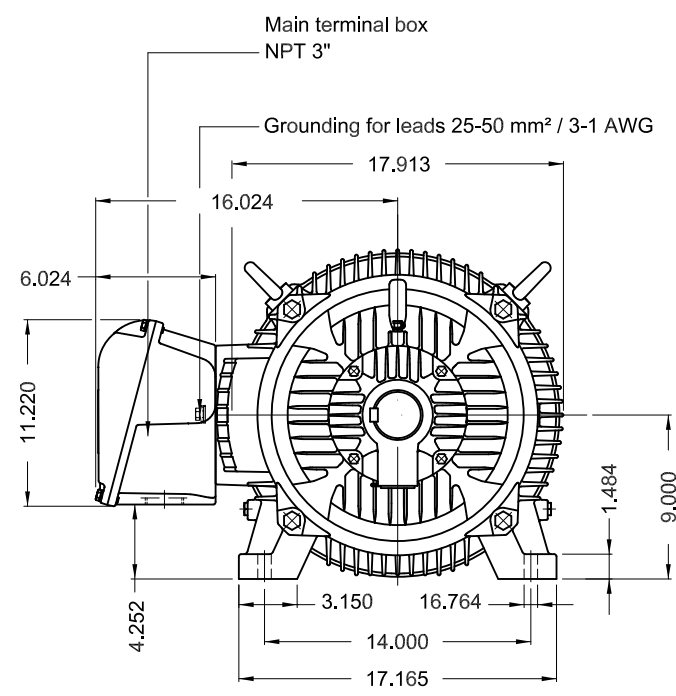
Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 21 / 21
Checked by				
Date	14/04/2022			

1 2 3 4 5 6

A

B

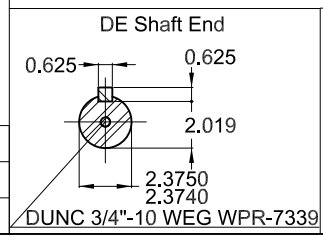
C



D

E

Color RAL 5009  
 Painting plan 203A  
 Mounting B3R(D)



30 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 364/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW  
 WDD



SHEET 1 / 1

Dimensions in inches XME A3



FOR SAFE AREA  
Mod.TE1BFOXON  
CC029A



For use on 60Hz  
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 - T4  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 03009ET3E364T-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 364/5T 1000m.a.s.l. IP55 TEFC 812lb

V 230/460 A 75.2/37.6

HP 30 kW 22

SF 1.25 SFA 94.0/47.0

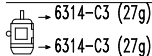
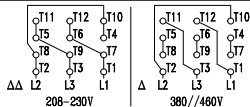
RPM 880 PF 0.80

AMB 40°C INS cl. F DT80K NEMA NOM EFF 91.7%

DUTY CONT. DES B Code G

USABLE @208V 81.8A SF 1.10 SFA 90.0

30HP 22kW 50Hz 380V 45.0A 720RPM SF 1.00 EFF 90.6% (IE3)



MOBIL POLYREX EM (20000h)



MADE IN BRAZIL  
11355724