

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: NEMA Premium Efficiency Three-Phase	
Product code :	13248860	
Catalog # :	00712OT3E254TC-SG	
Frame	: 254/6TC	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Design	: B	
Cooling method	: IC01 - ODP	
Mounting	: F-1	
Rotation <sup>1</sup>	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight <sup>2</sup>	: 202 lb	
Moment of inertia (J)	: 2.00 sq.ft.lb	
Output [HP]	7.5	
Poles	6	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	20.4/10.2	
L. R. Amperes [A]	104/52.0	
LRC [A]	5.1x(Code F)	
No load current [A]	10.7/5.37	
Rated speed [RPM]	1175	
Slip [%]	2.08	
Rated torque [ft.lb]	33.5	
Locked rotor torque [%]	200	
Breakdown torque [%]	229	
Service factor	1.15	
Temperature rise	80 K	
Locked rotor time	66s (cold) 37s (hot)	
Noise level <sup>2</sup>	59.0 dB(A)	
Efficiency (%)	25%	88.2
	50%	88.5
	75%	90.2
	100%	90.2
Power Factor	25%	0.33
	50%	0.56
	75%	0.68
	100%	0.75
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	
Sealing	: Without Without	
	: Bearing Seal Bearing Seal	
Lubrication interval	: 20000 h 20000 h	
Lubricant amount	: 13 g 8 g	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 288 lb	
	Max. compression : 490 lb	
Notes		
USABLE @208V 22.6A SF 1.00 SFA 22.6A		
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 by	Performed	
Checked by	Checked	
Date	Date	
13/04/2022		
Page	Revision	
1 / 16		

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



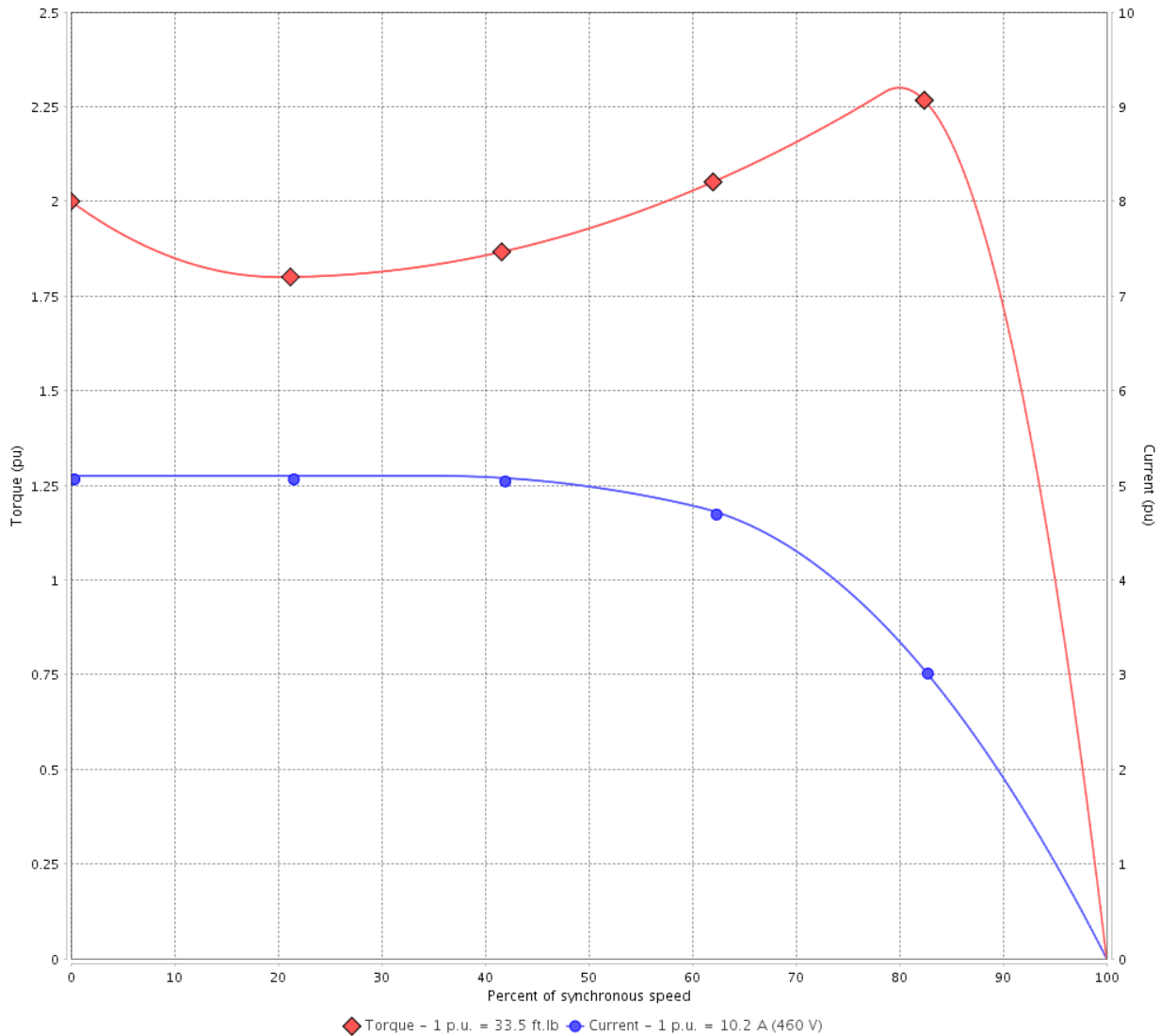
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 20.4/10.2 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 66s (cold) 37s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



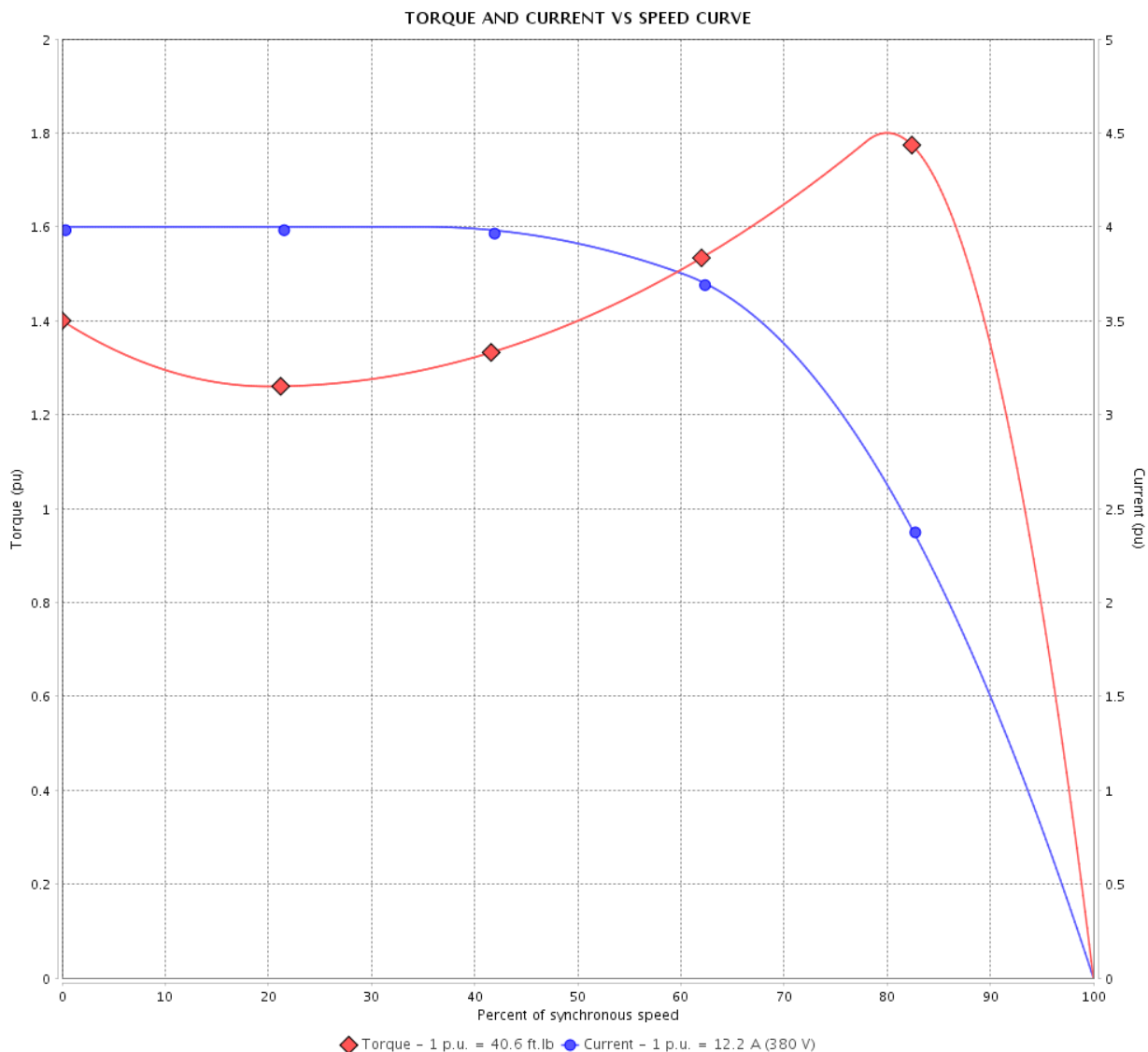
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG



Performance : 190/380 V 50 Hz 6P

Rated current	: 24.4/12.2 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 4.0	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.15
Breakdown torque	: 180 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



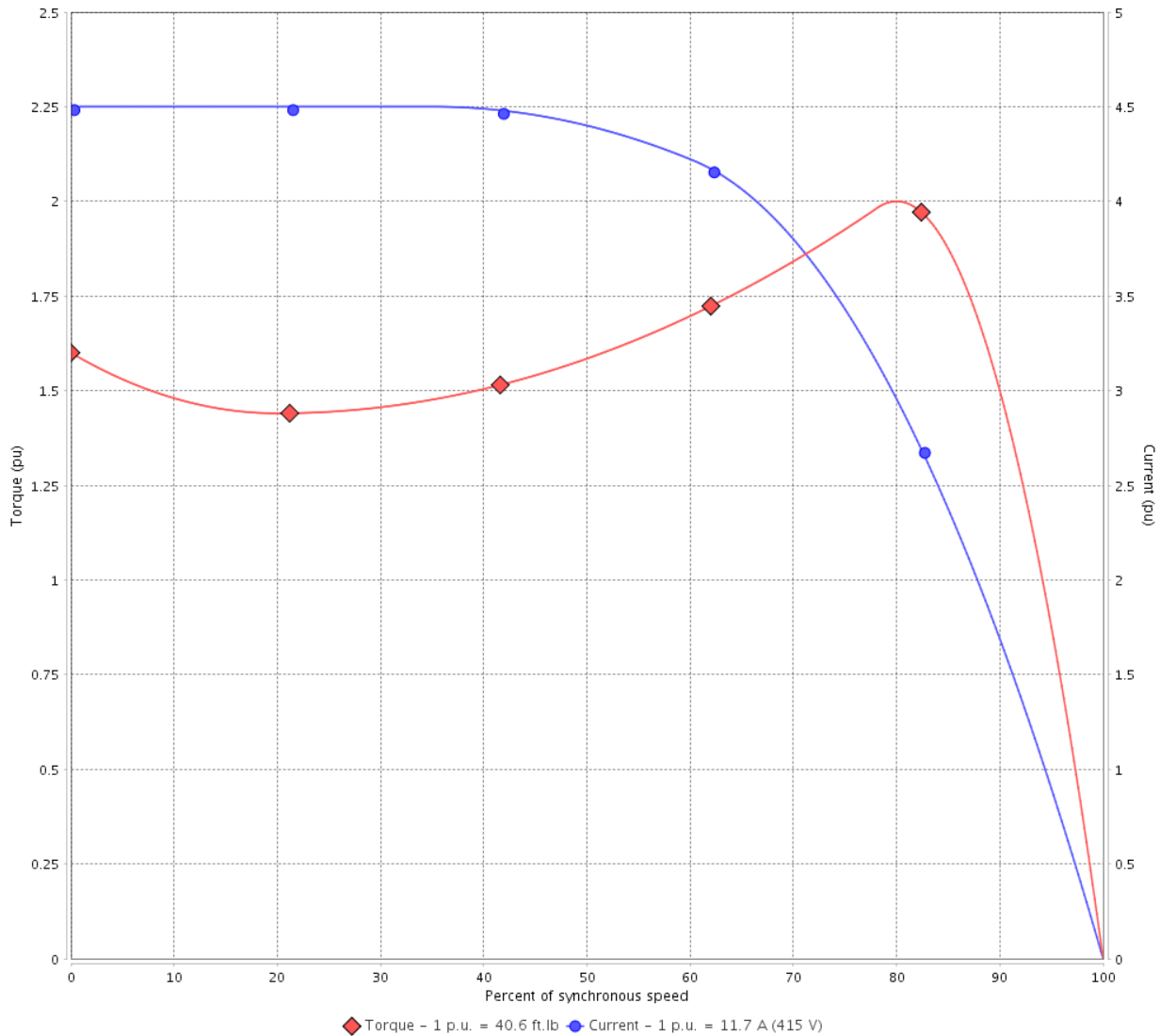
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 22.1/11.7 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 4.5	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

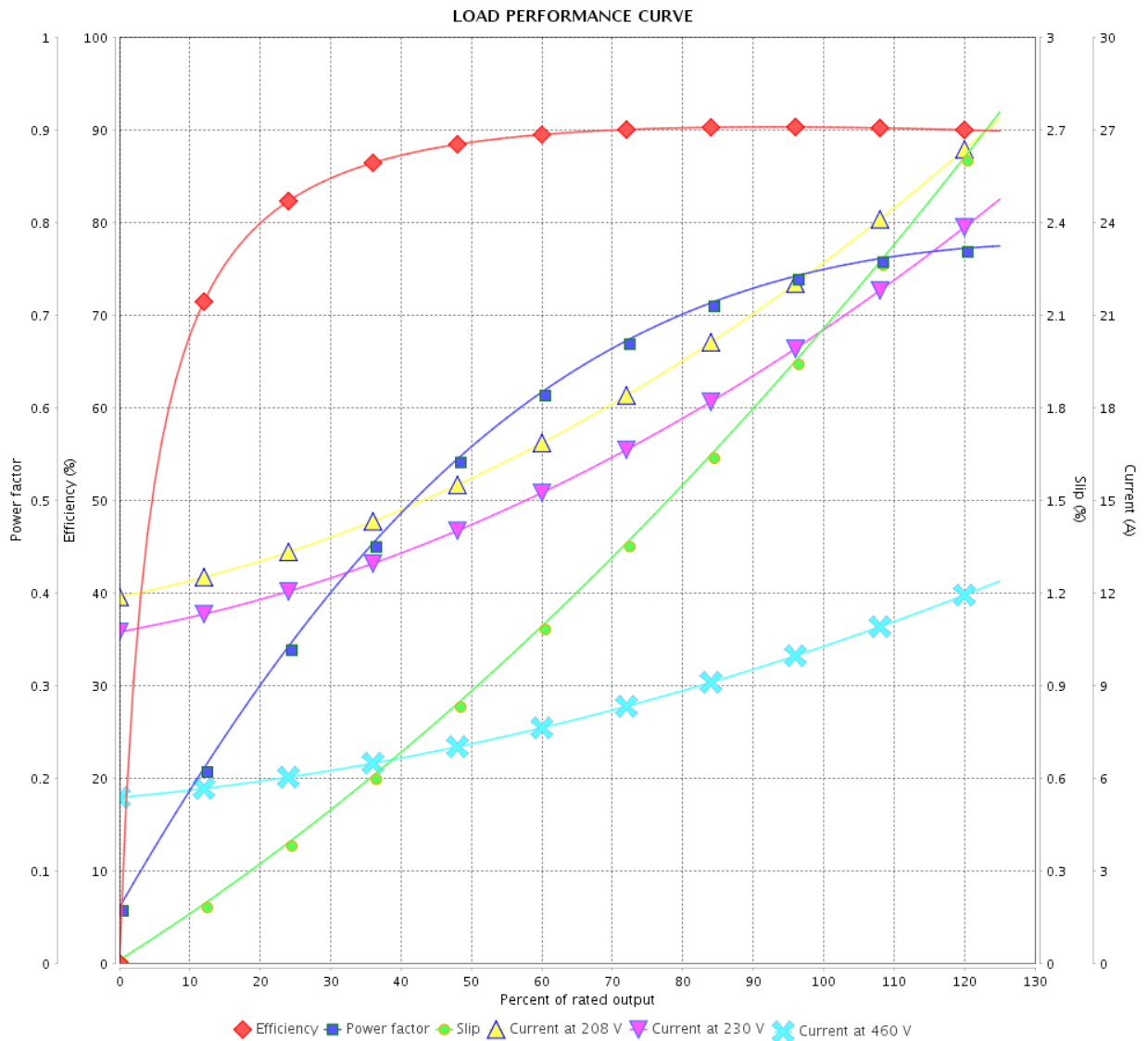


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG



Performance : 230/460 V 60 Hz 6P

Rated current : 20.4/10.2 A  
 LRC : 5.1  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.00 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				
Checked by			Page	Revision
Date	13/04/2022		5 / 16	

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

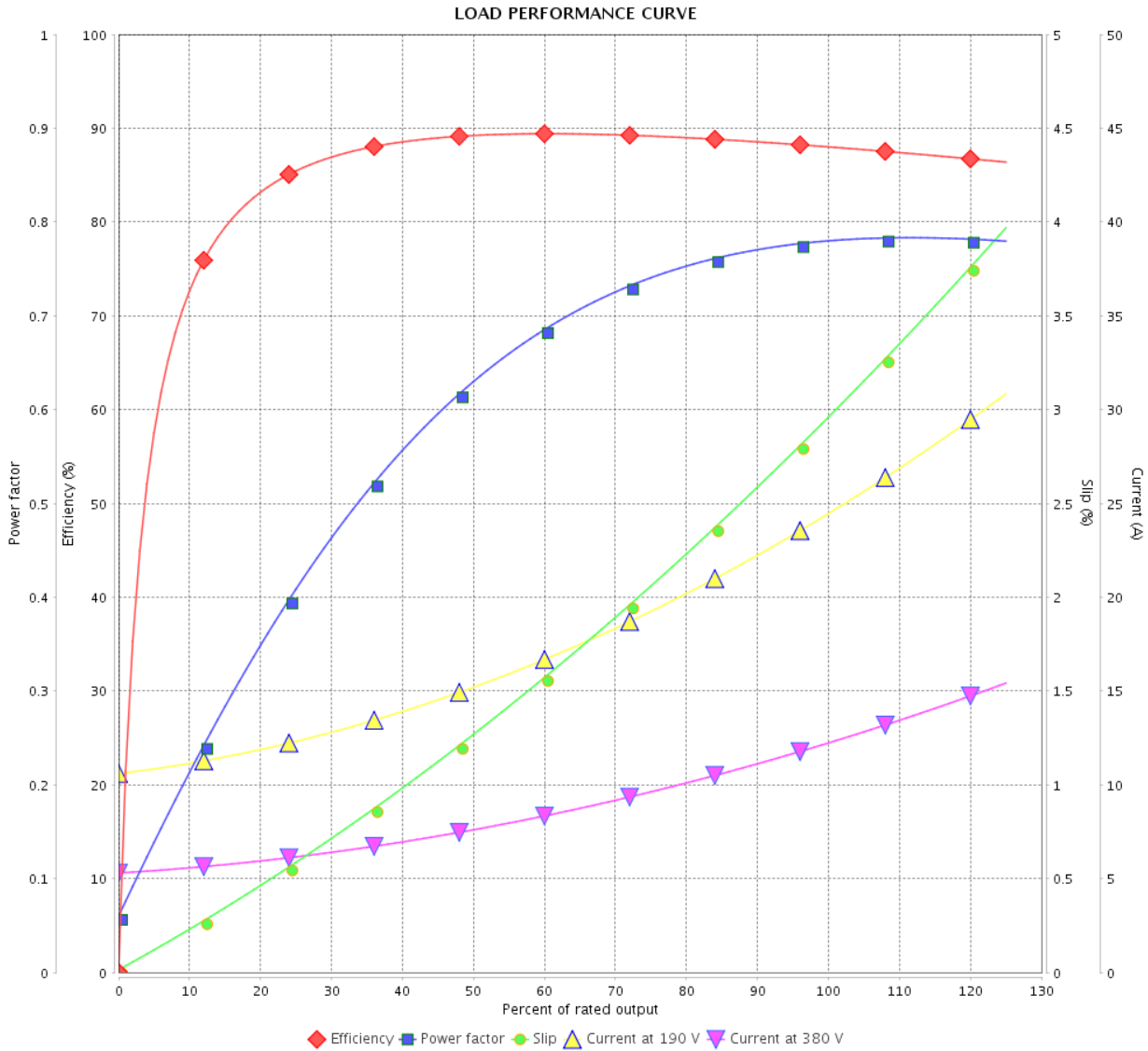


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG



Performance : 190/380 V 50 Hz 6P

Rated current : 24.4/12.2 A  
 LRC : 4.0  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 180 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.00 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				

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

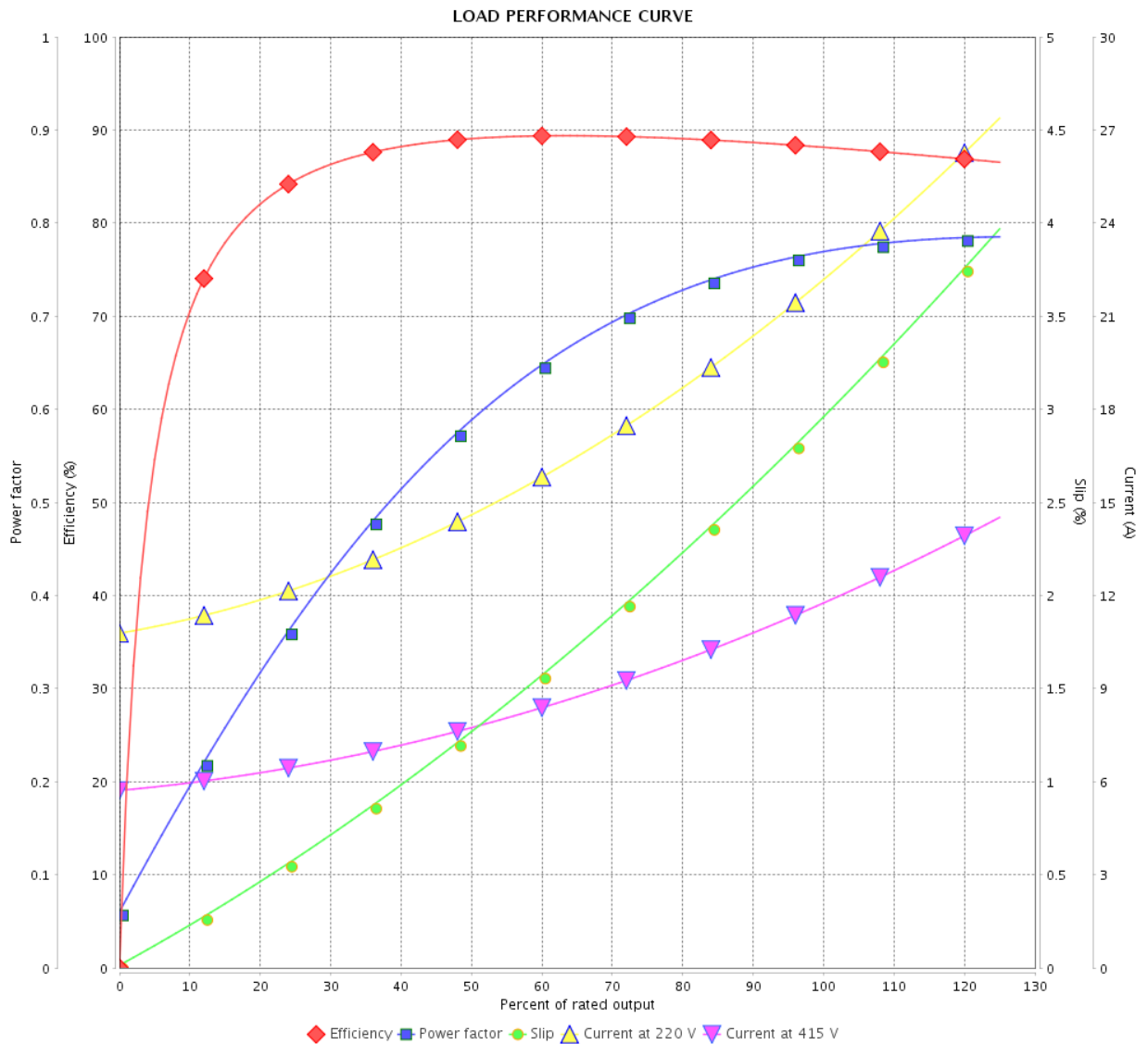


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG



Performance : 220/415 V 50 Hz 6P

Rated current : 22.1/11.7 A  
 LRC : 4.5  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.00 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				
			7 / 16	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 13248860  
Catalog # : 00712OT3E254TC-SG

Performance : 230/460 V 60 Hz 6P

Rated current	: 20.4/10.2 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		8 / 16	

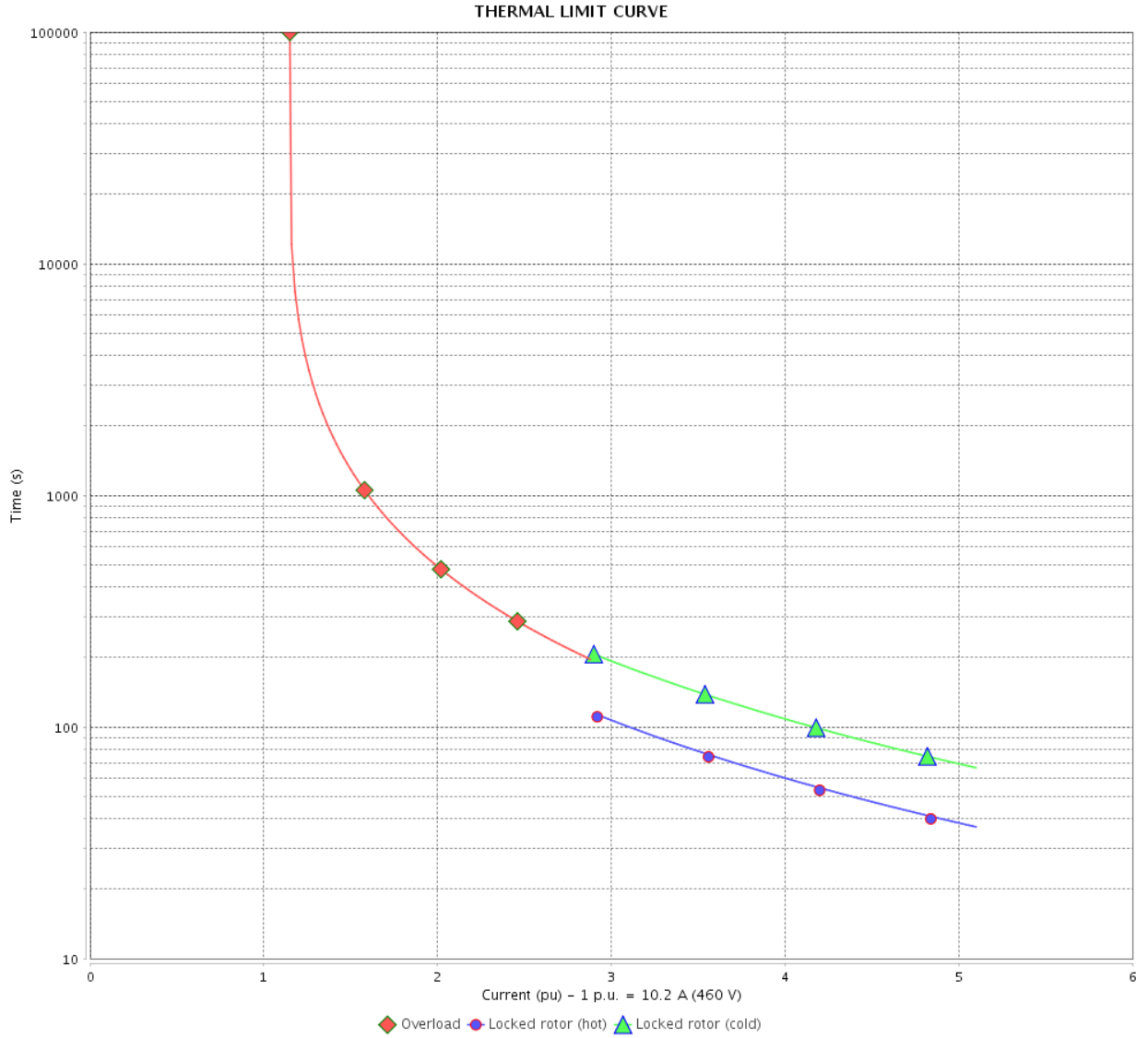


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			9 / 16	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 13248860  
Catalog # : 007120T3E254TC-SG

Performance : 190/380 V 50 Hz 6P

Rated current	: 24.4/12.2 A	Moment of inertia (J)	: 2.00 sq.ft.lb
LRC	: 4.0	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.15
Breakdown torque	: 180 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

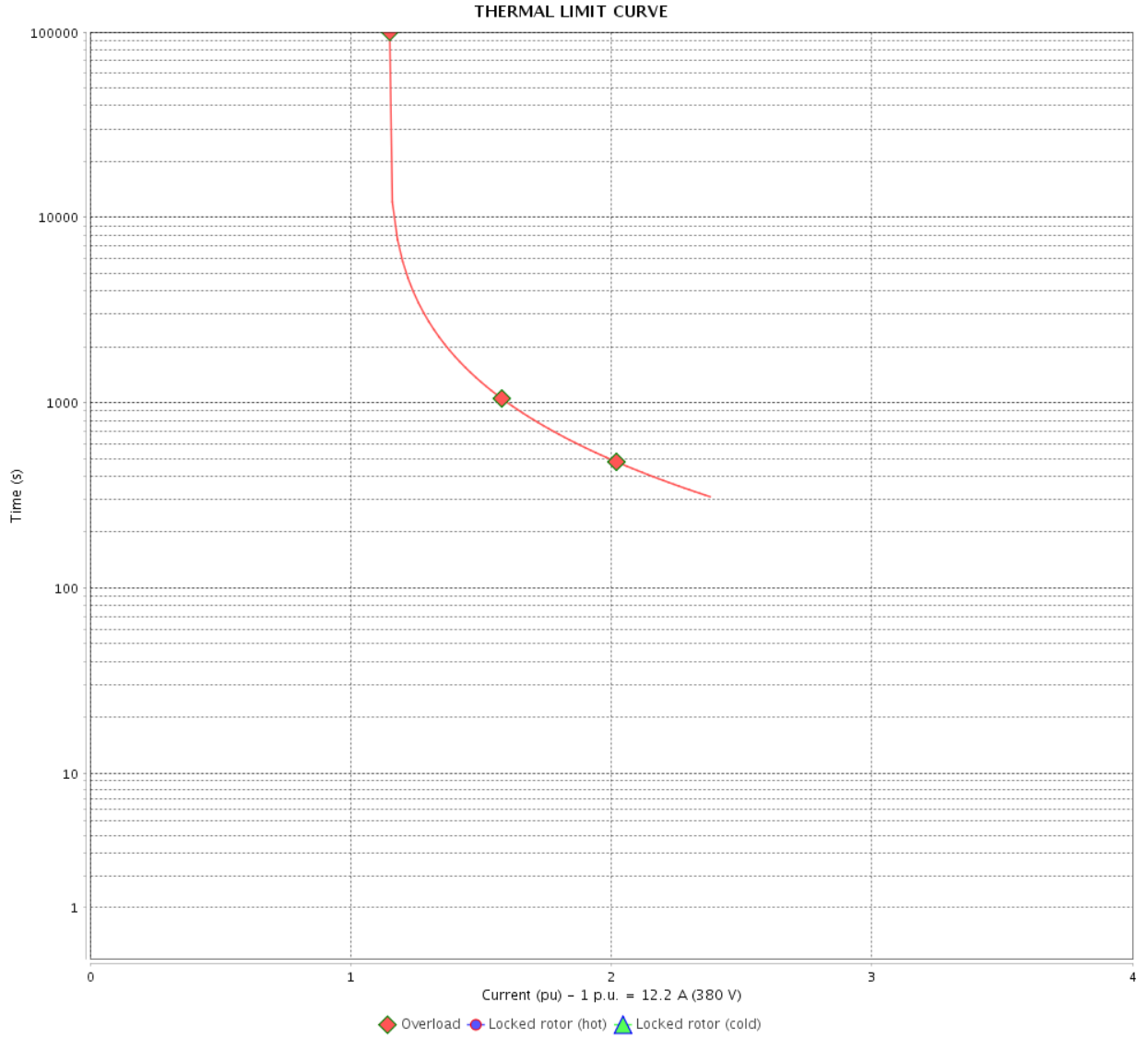
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 16	

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Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 16		
Date		13/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 13248860  
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Performance : 220/415 V 50 Hz 6P

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LRC	: 4.5	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

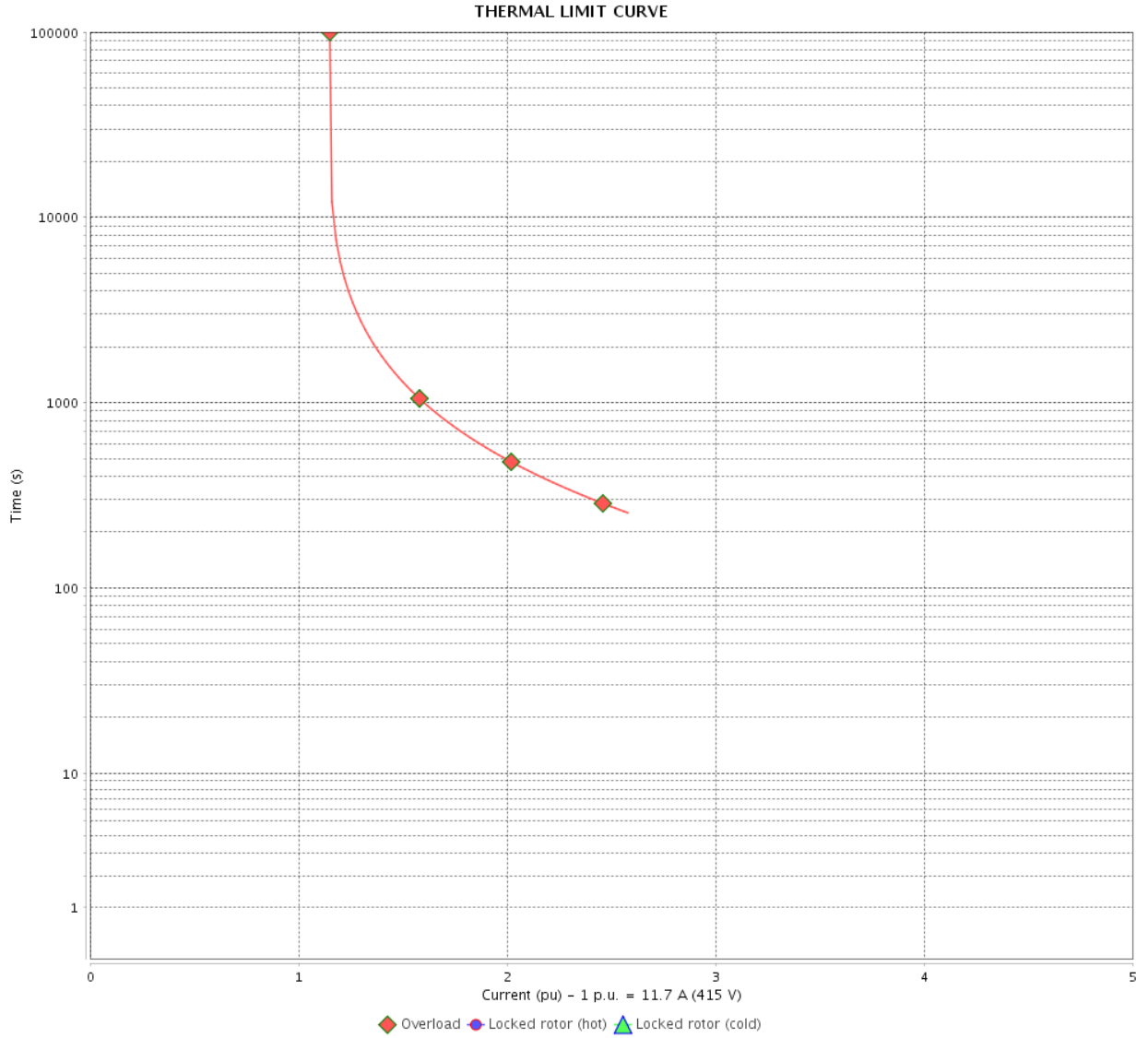
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		13/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



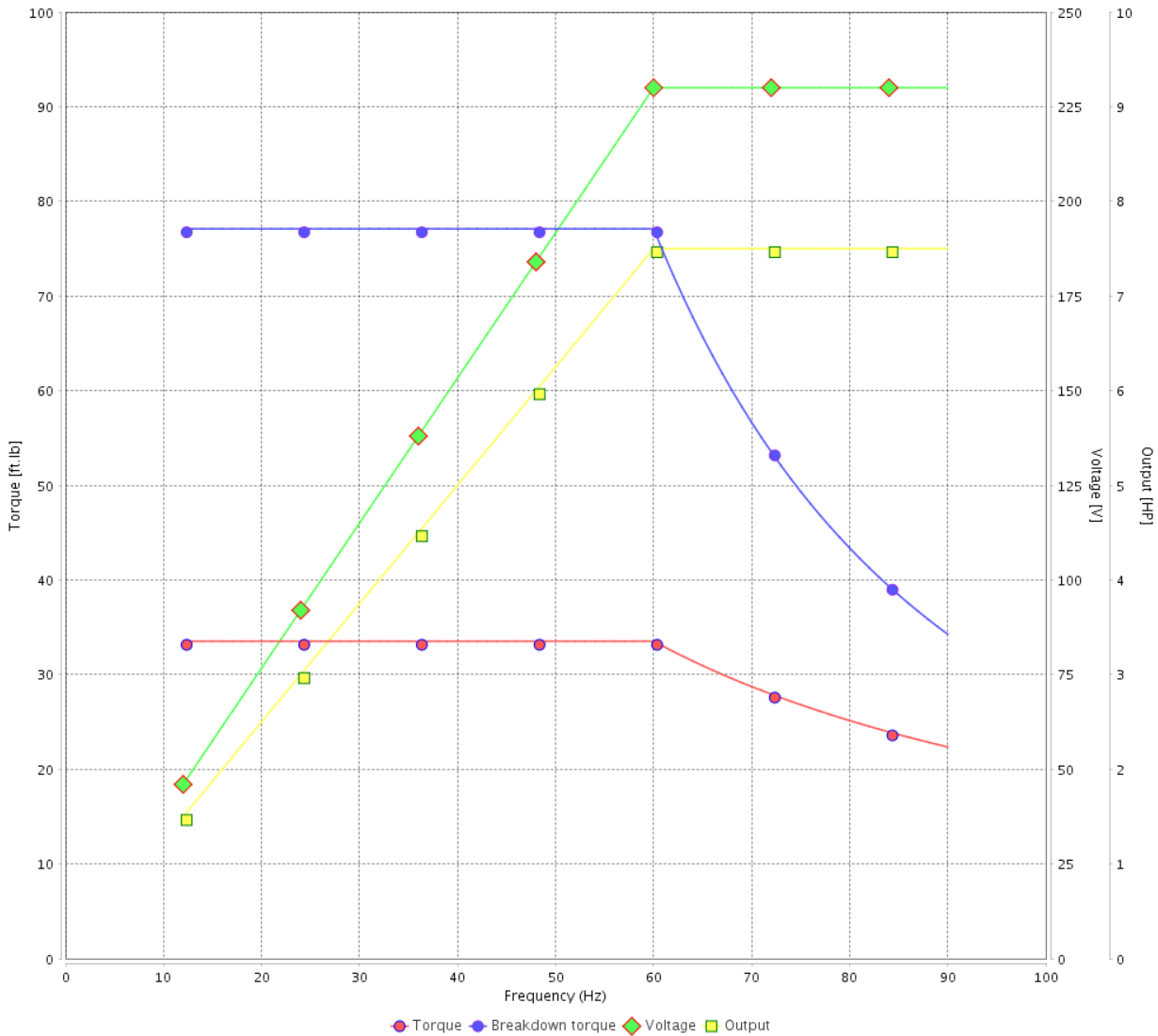
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 20.4/10.2 A  
 LRC : 5.1  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.00 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 14 / 16	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

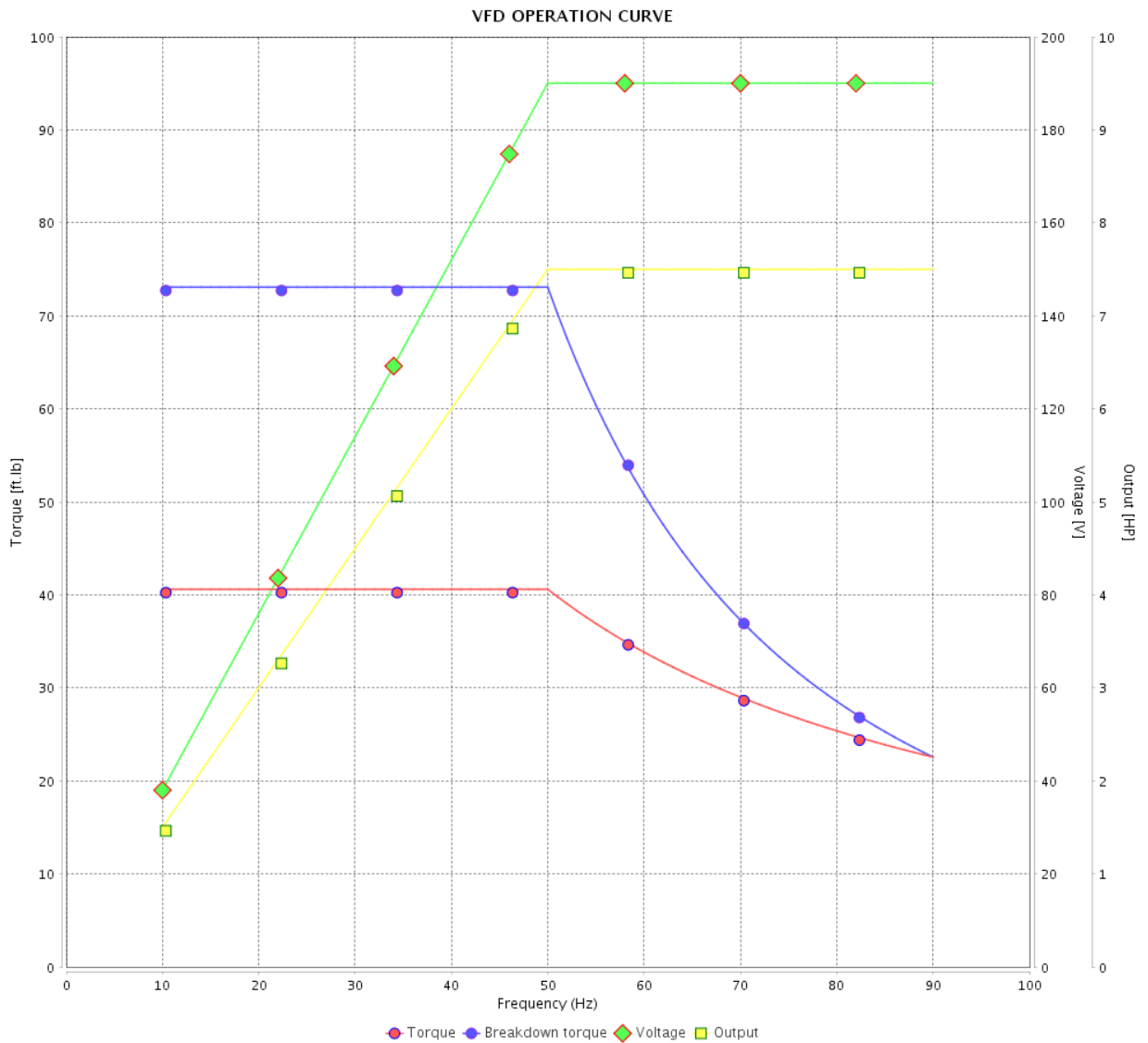


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Performance : 190/380 V 50 Hz 6P

Rated current : 24.4/12.2 A  
 LRC : 4.0  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 180 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 2.00 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 15 / 16	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



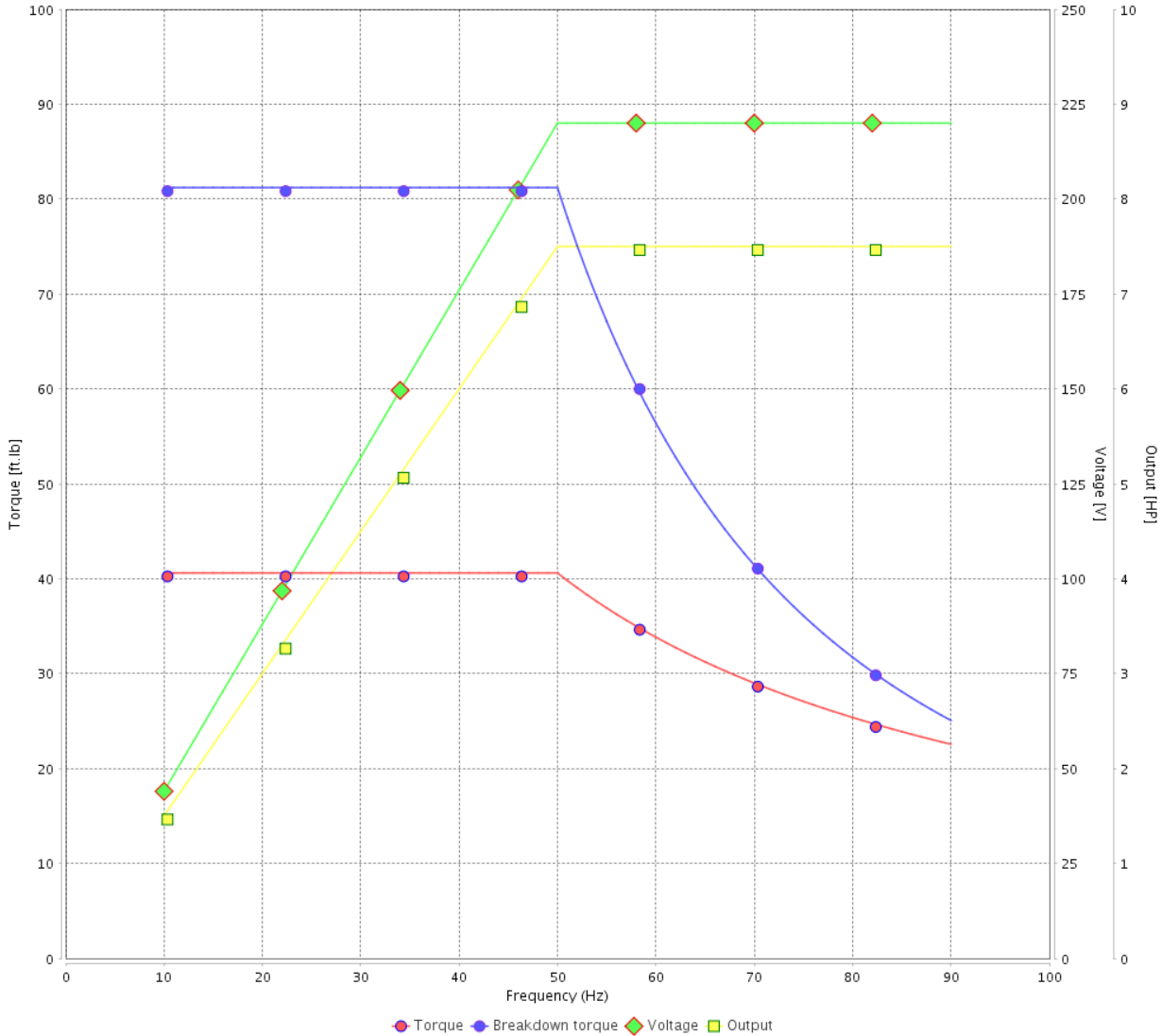
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248860

Catalog # : 007120T3E254TC-SG

VFD OPERATION CURVE



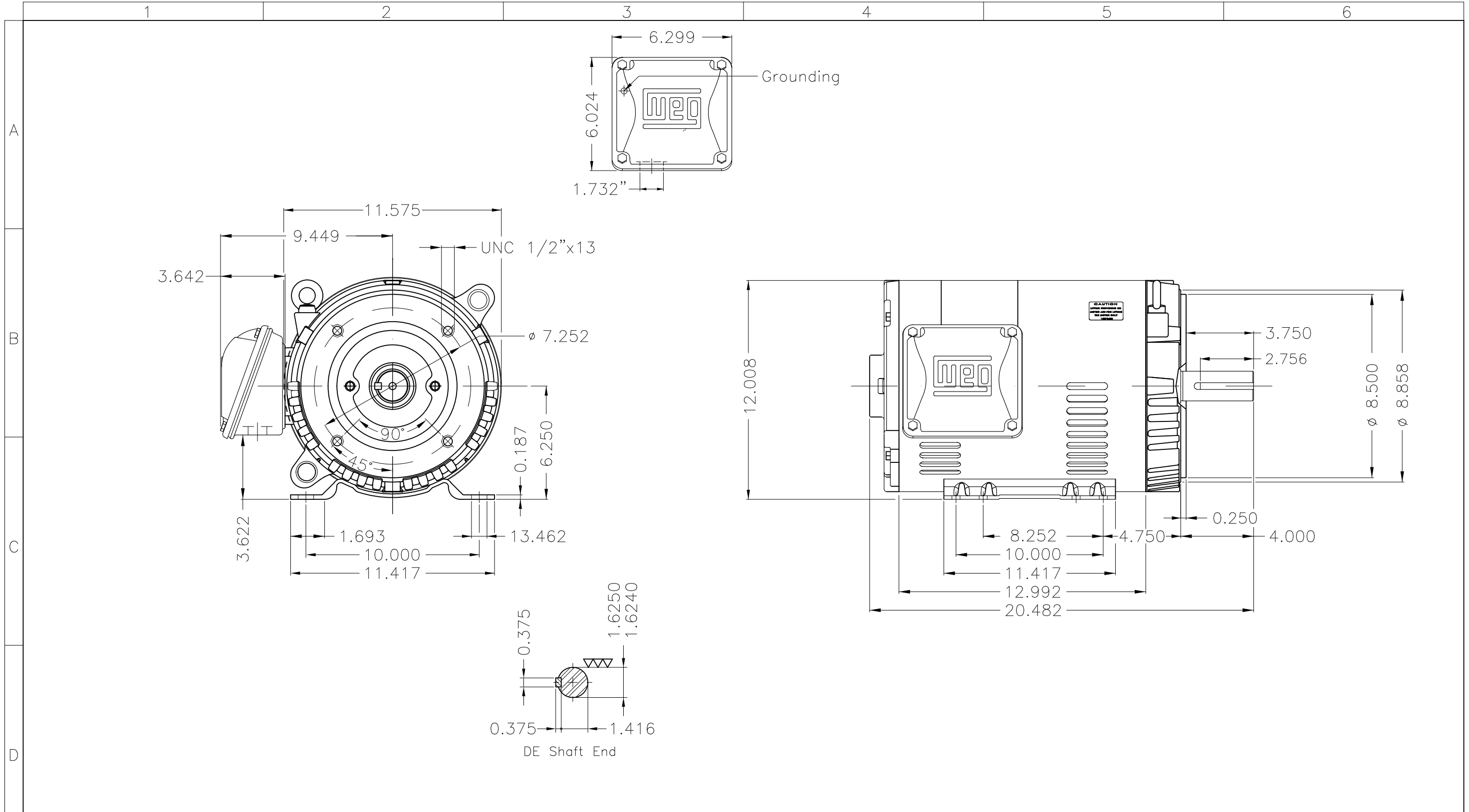
Performance : 220/415 V 50 Hz 6P

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 LRC : 4.5  
 Rated torque : 40.6 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 200 %  
 Rated speed : 970 rpm

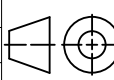
Moment of inertia (J) : 2.00 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	13/04/2022			





Internal AEGIS ground ring on the DE  
 Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting F-1/B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	 THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 254/6TC IP21 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

7.5 HP 06 Poles 60 Hz

Dimensions in inches XME A3



**PREVIEW**  
WDD

**WEG**  
**NEMA**  
**Premium**3PT9  
C US LISTED

MADE IN MEXICO

MAT: 13248860 CC029A

W01.T00IC0X0N

MODEL 007120T3E254TC-SG

22JAN2019 S/N:

PH 3 FR 254/6TC HP(KW) 7.5(5.5) Hz 60

V 230/460

RPM 1175

A 20.4/10.2 DUTY CONT.

SFA 23.5/11.7

CODE F DES B

SF 1.15 INS CL F AT 80K AMB 40°C ENCL ODP

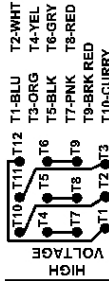
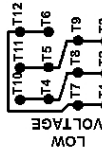
PF 0.75

NEMA NOM.EFF. 90.2%

ALT 1000 m.a.s.l. USABLE @ 208V 22.5A SF1.00

ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.15

24.4-21.7/12.2-11.5A 970RPM EFF 88.0% (IE3) IEC 60034-1



△△ L1 L2 L3  
INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

Inverter duty For 60Hz use on VPWM 1000:1 VT, 5:1 CT

DE: 6309-Z-C3 ODE: 6208-Z-C3 MOBIL POLYREX EM 20000h

WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

AVERTISSEMENT: Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

