

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	13163403	
		Catalog # :	00718OT3E213TC-SG	
Frame	: 213/5TC	Cooling method	: IC01 - ODP	
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	: 125 lb	
Design	: B	Moment of inertia (J)	: 1.03 sq.ft.lb	
Output [HP]	7.5	7.5	7.5	
Poles	4	4	4	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	18.5/9.25	22.2/11.1	20.0/10.6	
L. R. Amperes [A]	133/66.6	129/64.4	130/68.9	
LRC [A]	7.2x(Code H)	5.8x(Code G)	6.5x(Code H)	
No load current [A]	8.79/4.39	8.64/4.32	8.88/4.71	
Rated speed [RPM]	1770	1455	1460	
Slip [%]	1.67	3.00	2.67	
Rated torque [ft.lb]	22.3	27.1	27.0	
Locked rotor torque [%]	240	170	190	
Breakdown torque [%]	320	229	250	
Service factor	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	23s (cold) 13s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level ²	59.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%	88.6	89.6	
	50%	89.5	88.9	
	75%	90.2	88.5	
	100%	91.0	87.4	
Power Factor	25%	0.39	0.42	
	50%	0.65	0.69	
	75%	0.77	0.80	
	100%	0.82	0.86	
Bearing type	: <u>Drive end</u> 6208 ZZ <u>Non drive end</u> 6206 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 318 lb	
		Max. compression	: 443 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 20.5A SF 1.00 SFA 20.5A				
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	13/04/2022		1 / 16	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



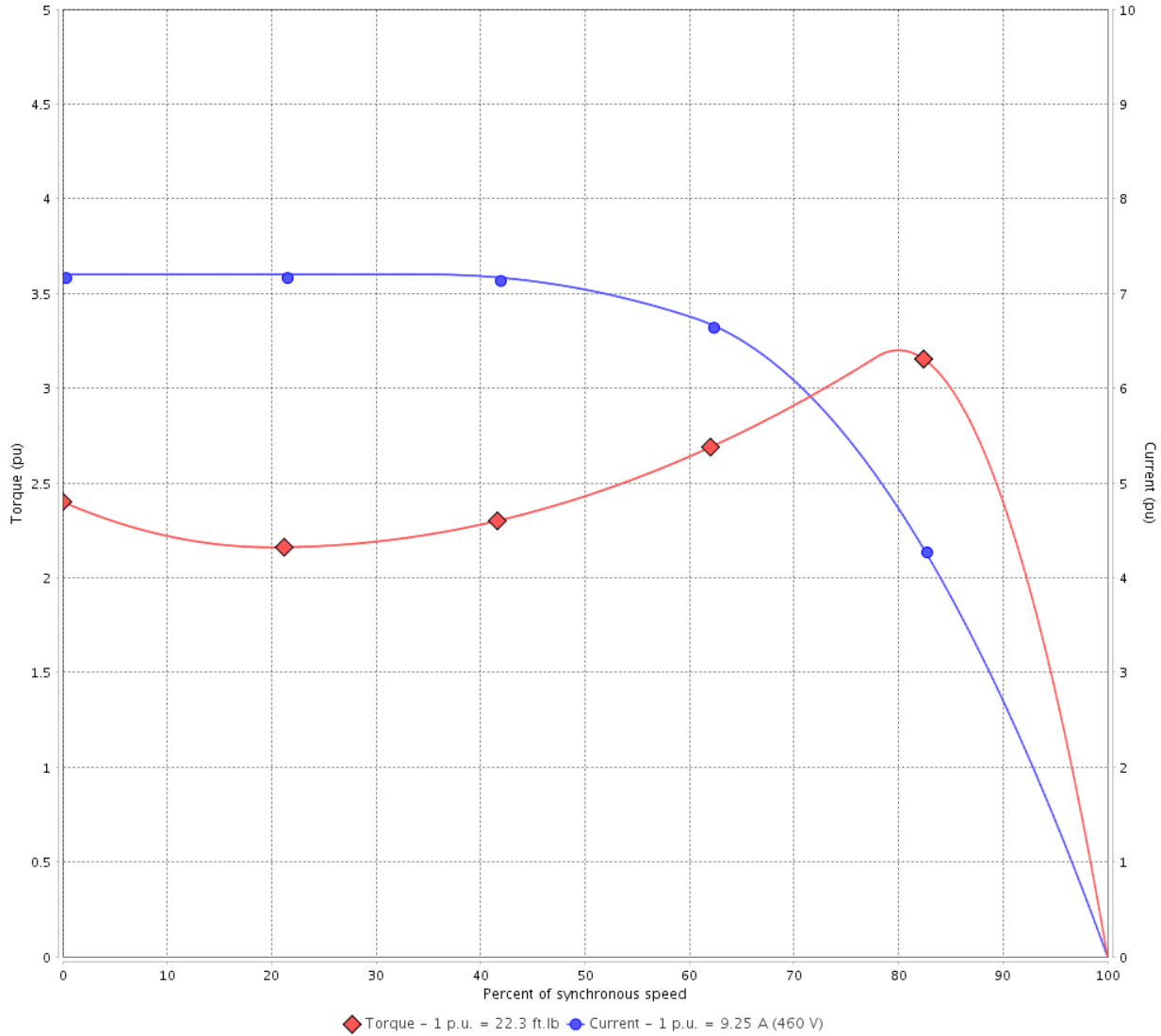
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 18.5/9.25 A	Moment of inertia (J)	: 1.03 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

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



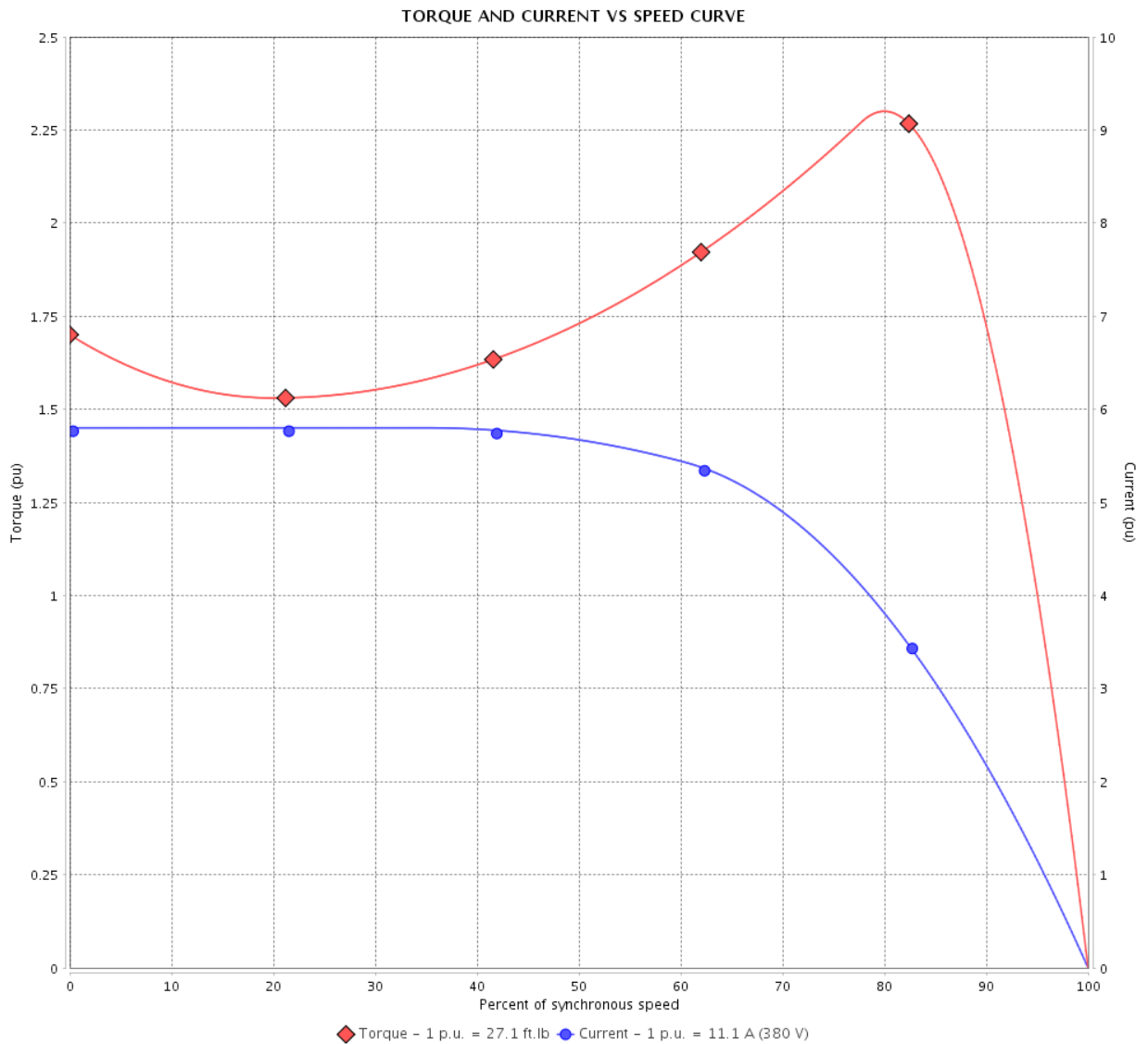
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A
 LRC : 5.8
 Rated torque : 27.1 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 229 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 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



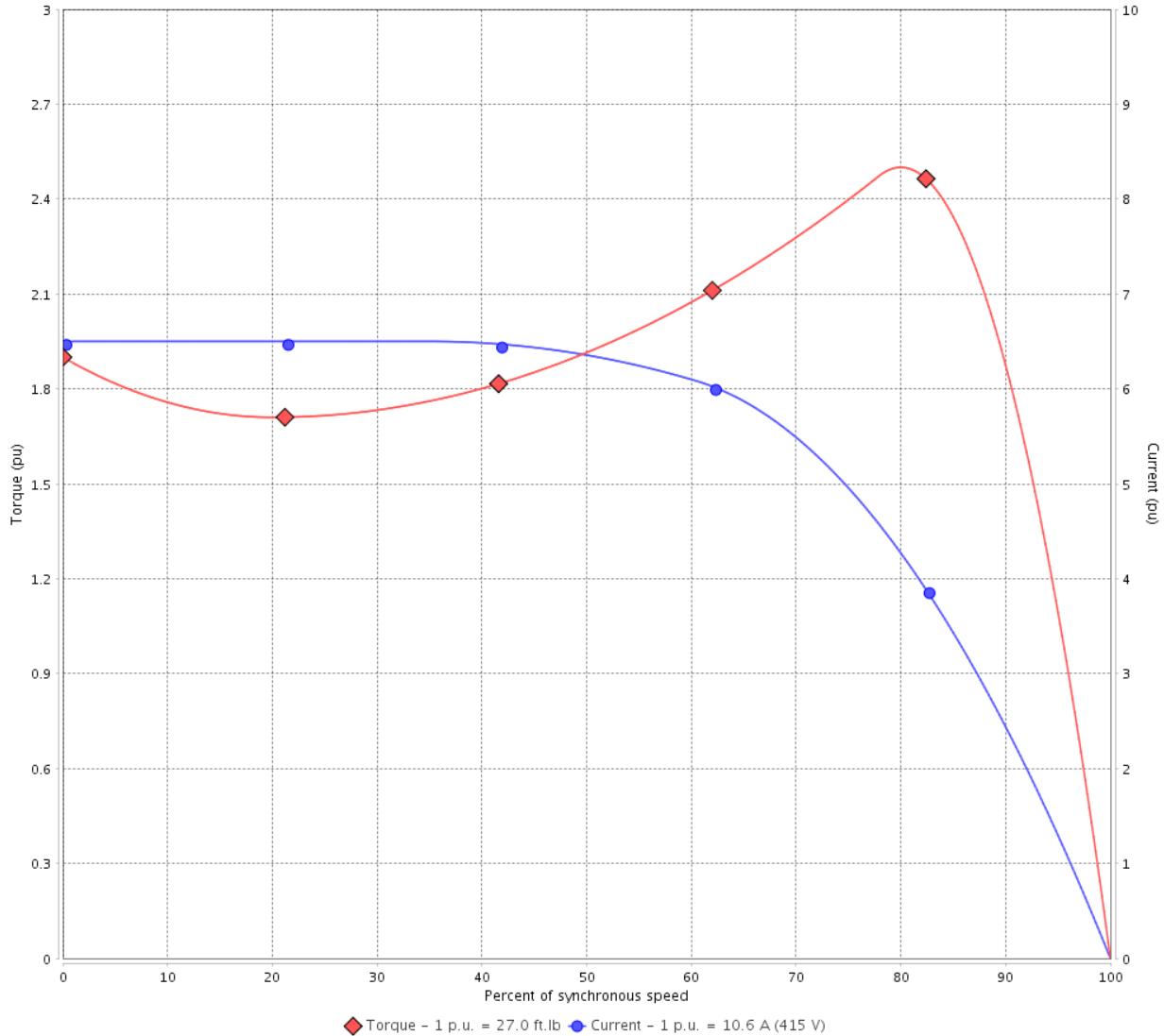
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 20.0/10.6 A	Moment of inertia (J)	: 1.03 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

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

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

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

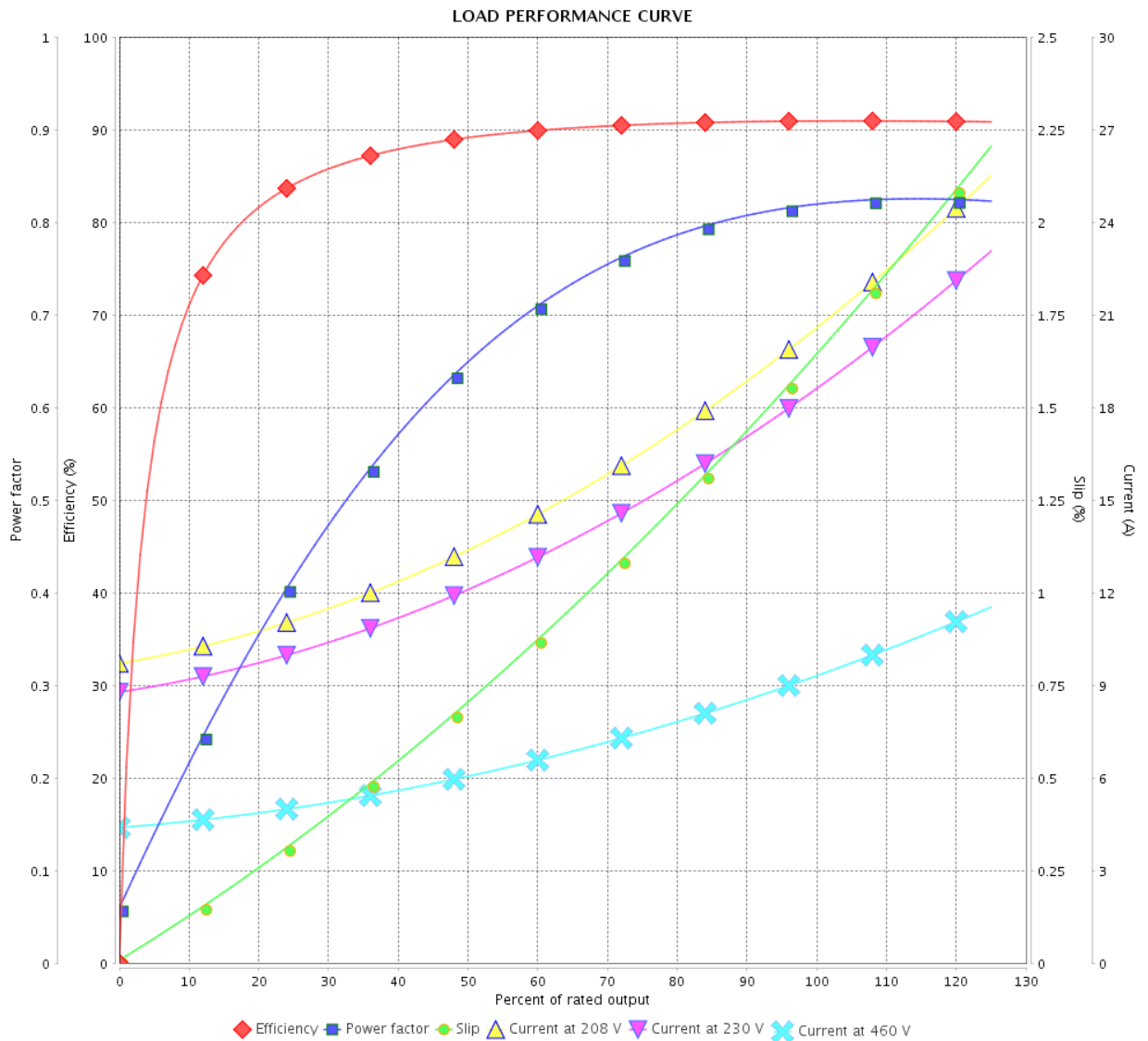


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 00718OT3E213TC-SG



Performance : 230/460 V 60 Hz 4P

Rated current : 18.5/9.25 A
 LRC : 7.2
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 320 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 1.03 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		5 / 16		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



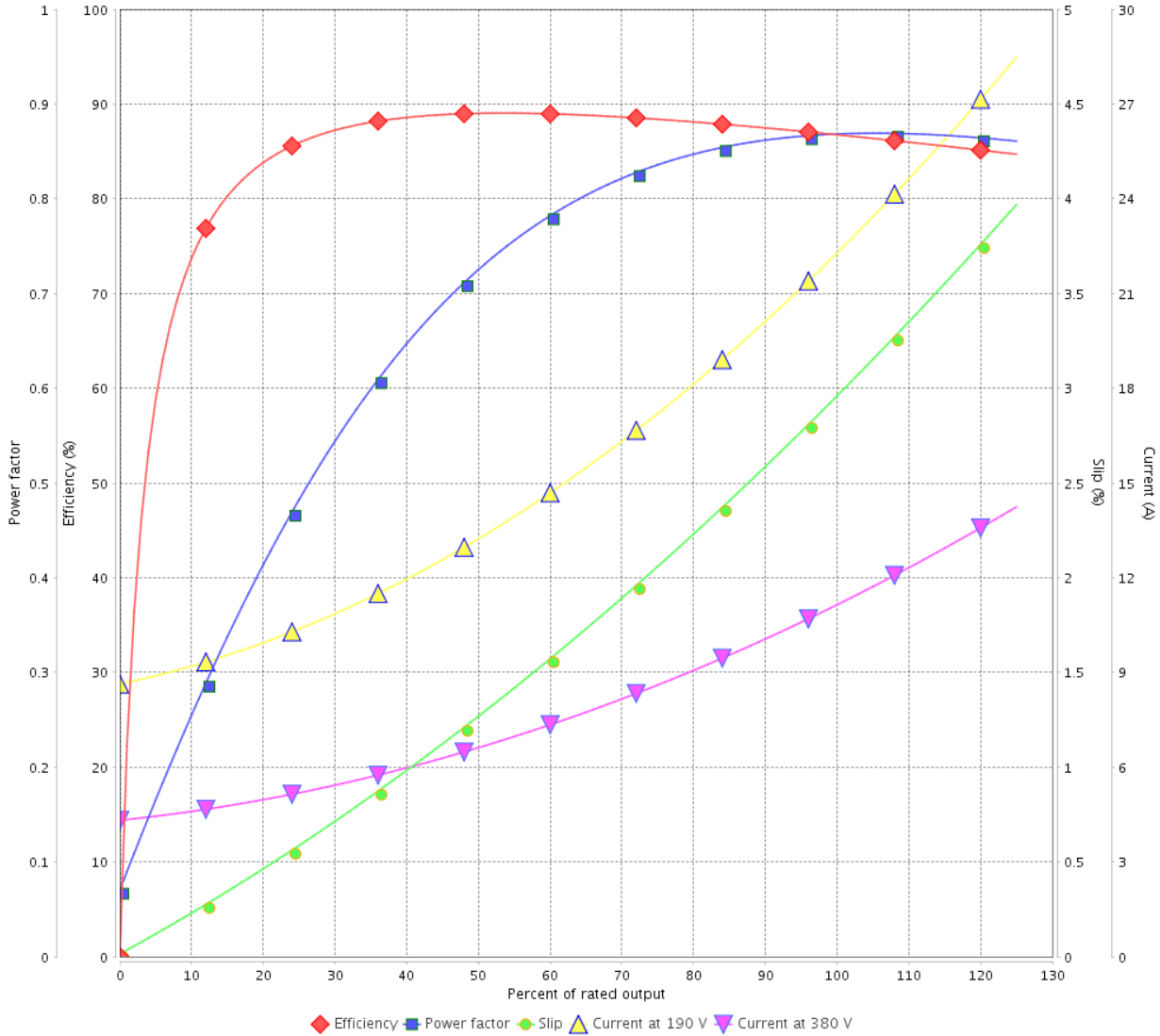
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A
 LRC : 5.8
 Rated torque : 27.1 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 229 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 1.03 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 6 / 16	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

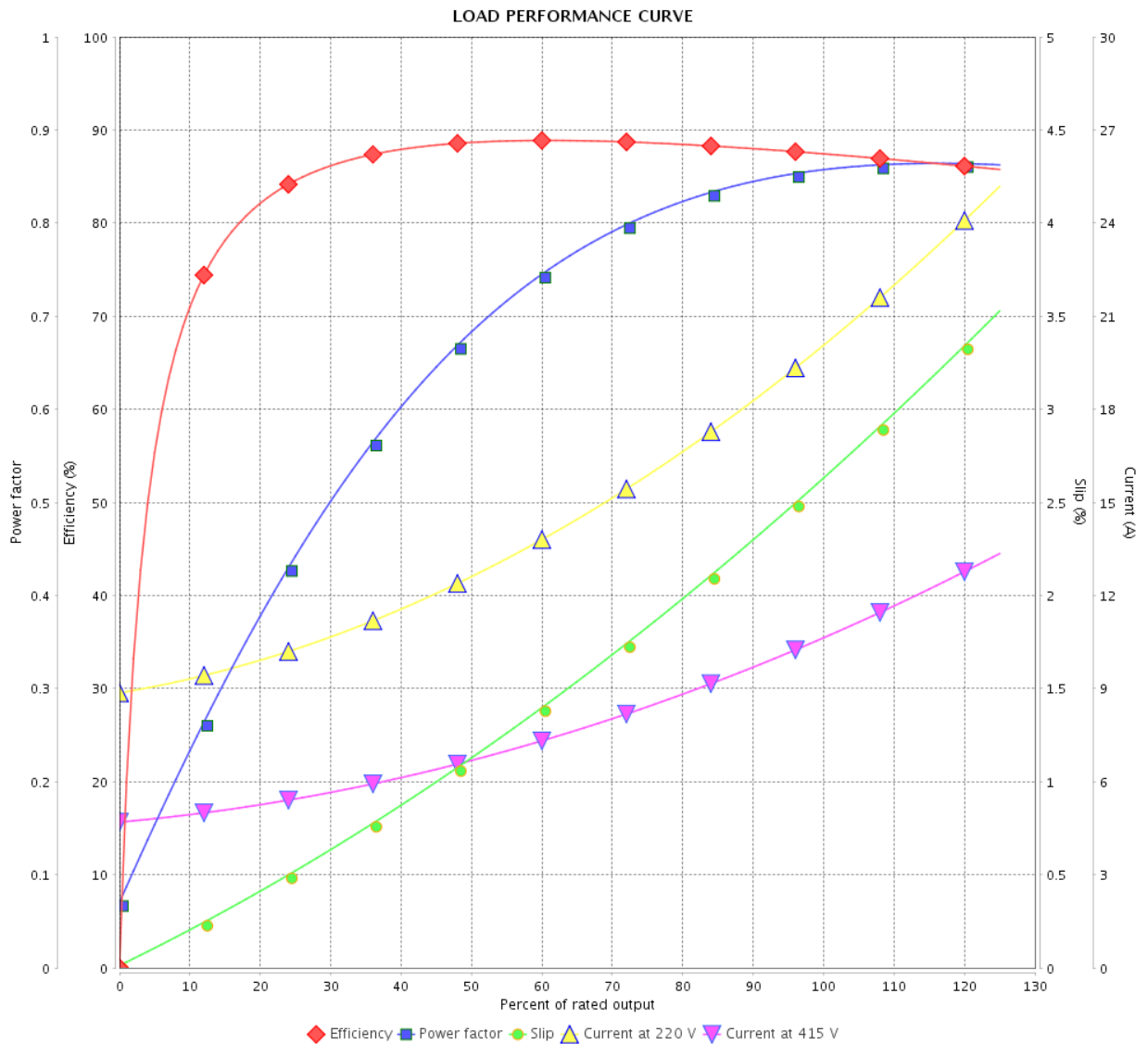


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 00718OT3E213TC-SG



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A
 LRC : 6.5
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.03 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 : 13163403
Catalog # : 00718OT3E213TC-SG

Performance : 230/460 V 60 Hz 4P

Rated current	: 18.5/9.25 A	Moment of inertia (J)	: 1.03 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Heating constant

Cooling constant

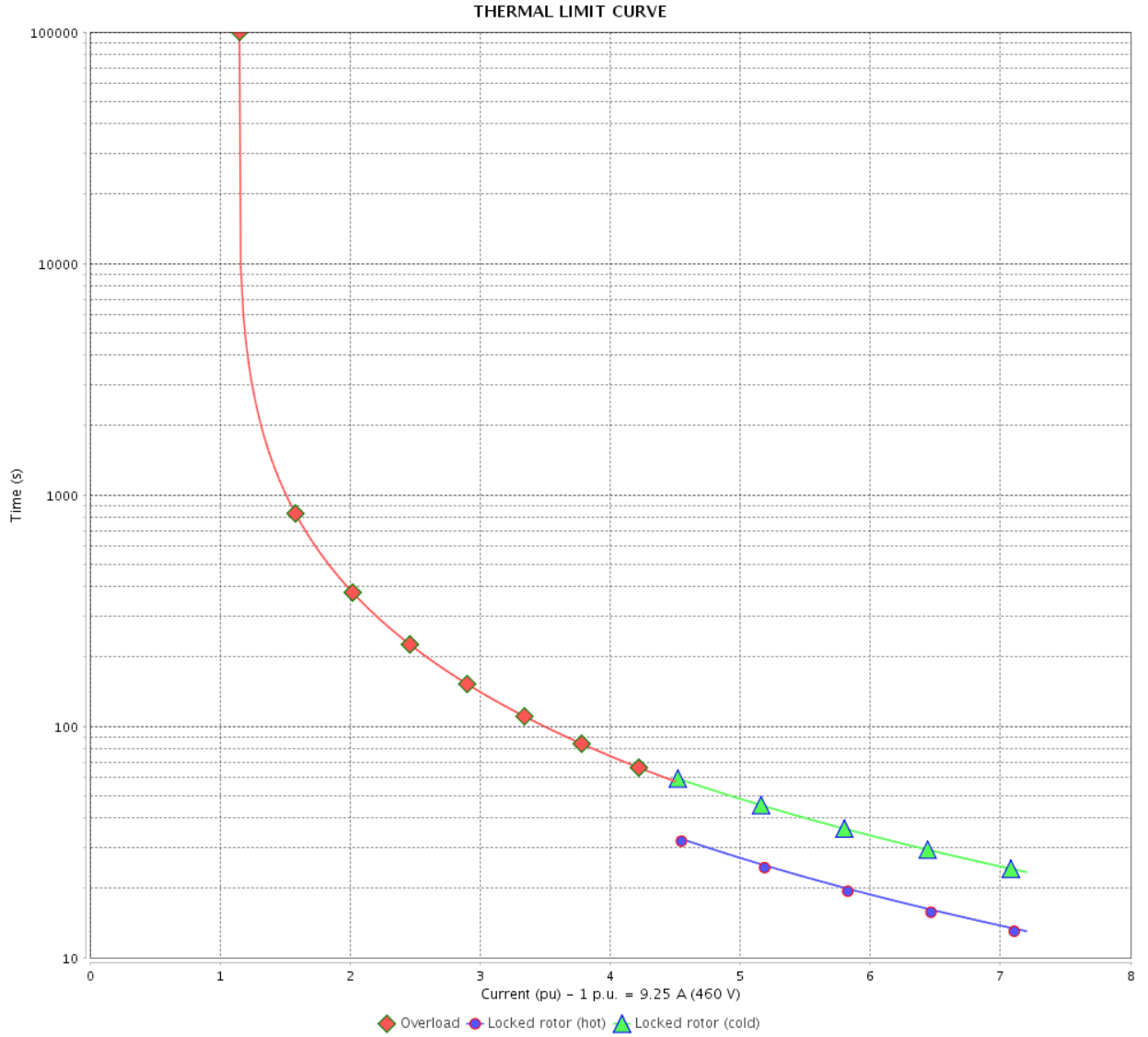
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		8 / 16	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		9 / 16		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 13163403
Catalog # : 00718OT3E213TC-SG

Performance : 190/380 V 50 Hz 4P

Rated current	: 22.2/11.1 A	Moment of inertia (J)	: 1.03 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

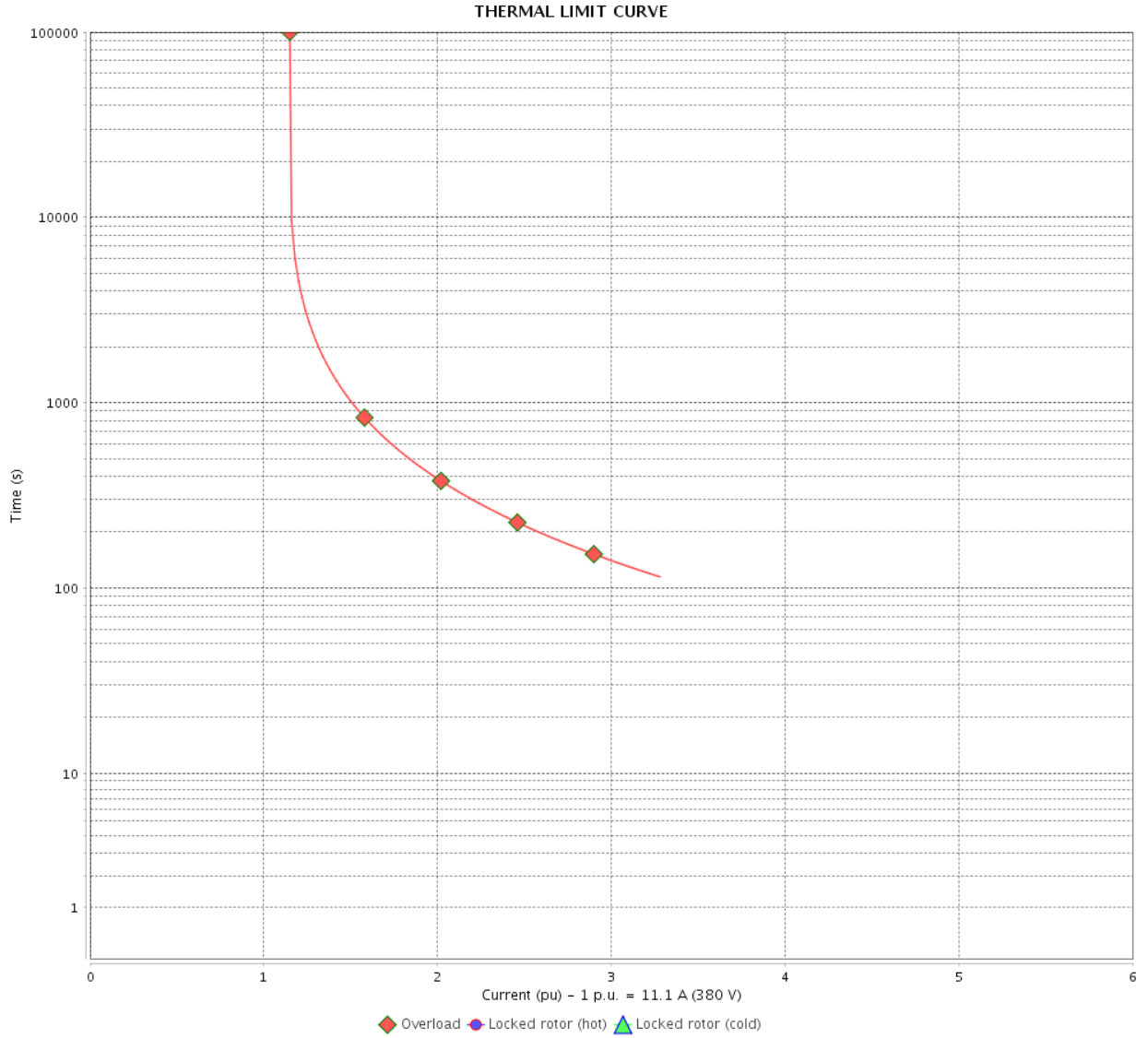
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 16	

THERMAL LIMIT CURVE

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 : 13163403
Catalog # : 00718OT3E213TC-SG

Performance : 220/415 V 50 Hz 4P

Rated current	: 20.0/10.6 A	Moment of inertia (J)	: 1.03 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.0 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Heating constant

Cooling constant

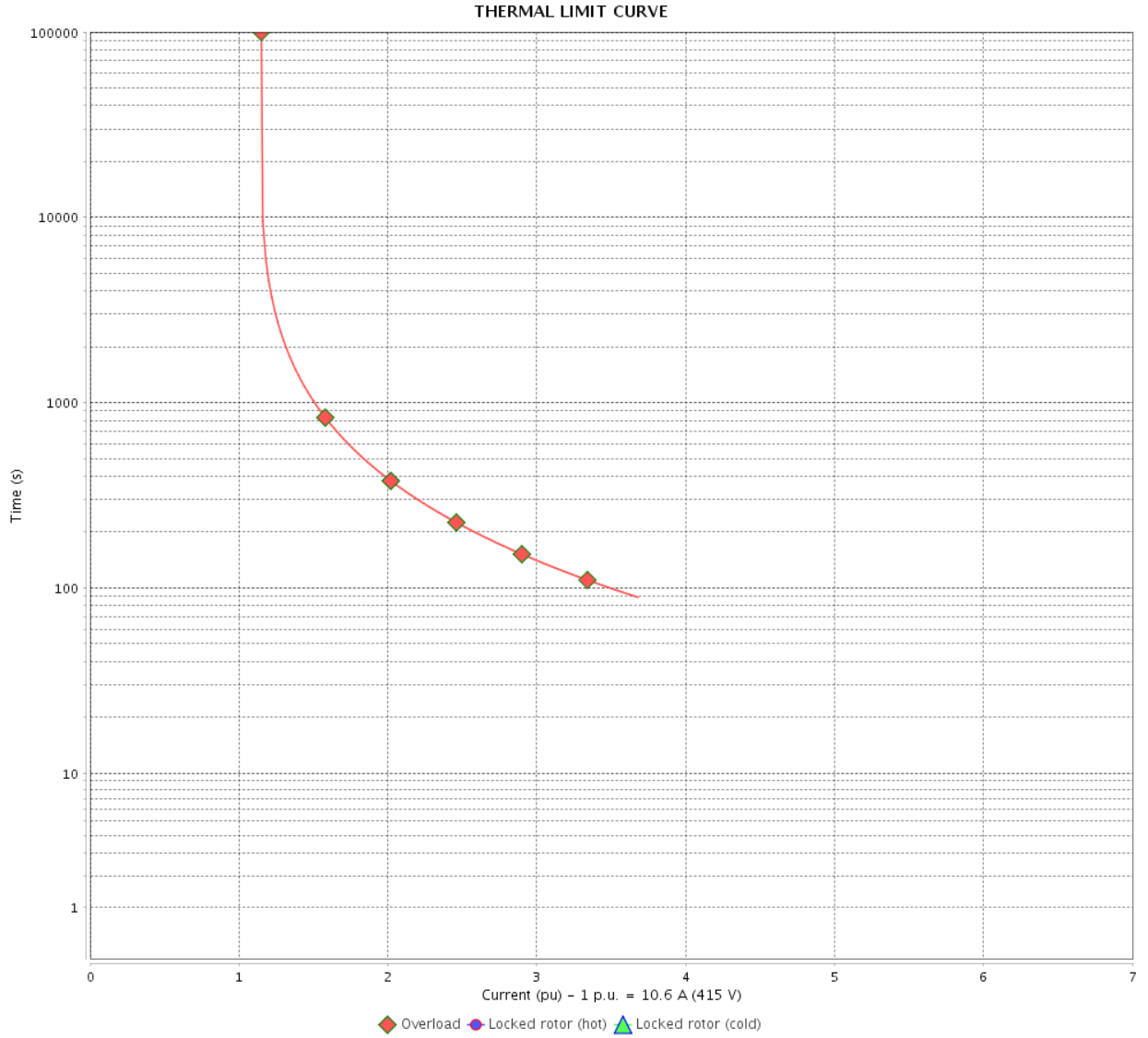
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 16	

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



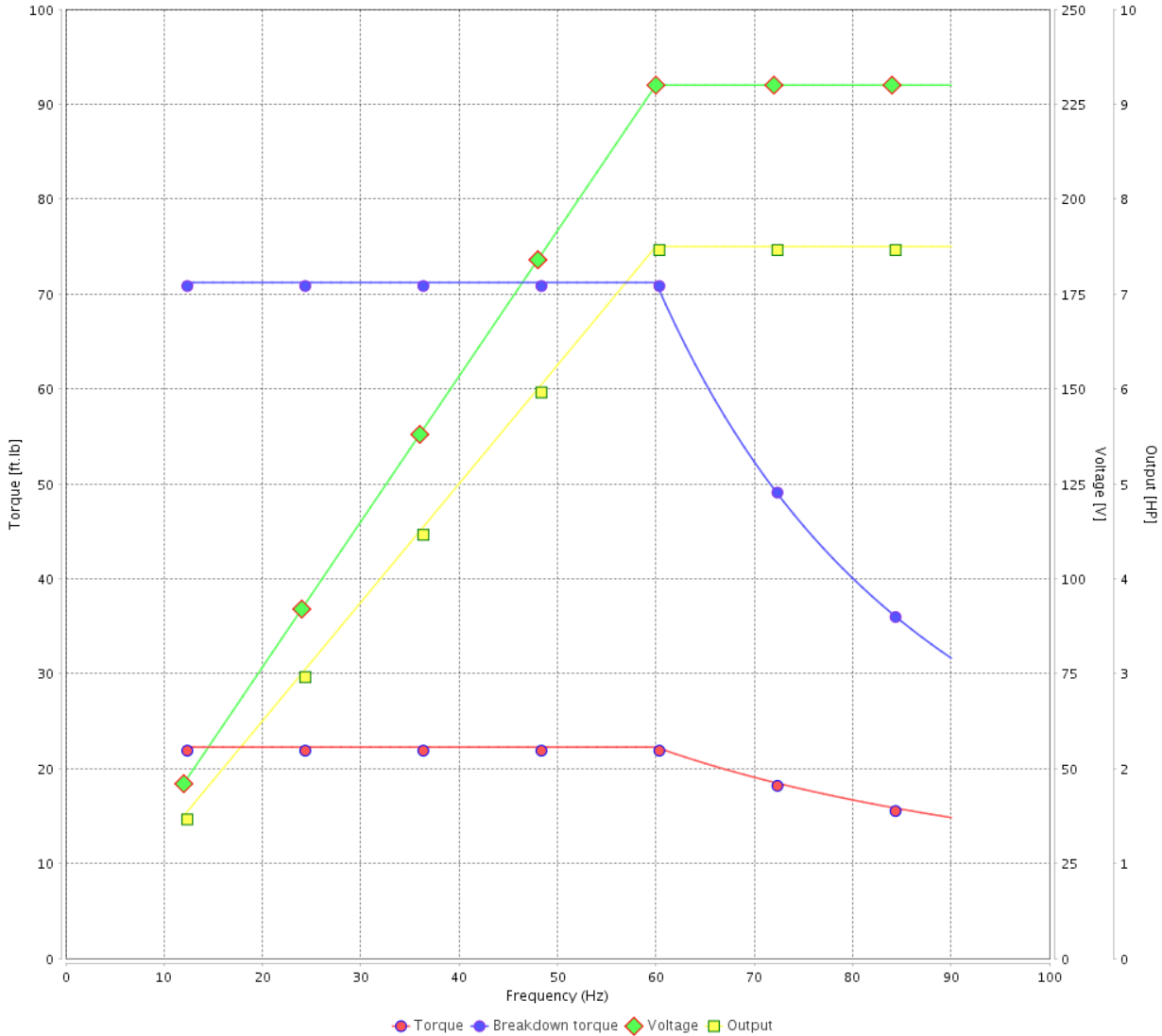
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 18.5/9.25 A
 LRC : 7.2
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 320 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 1.03 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			

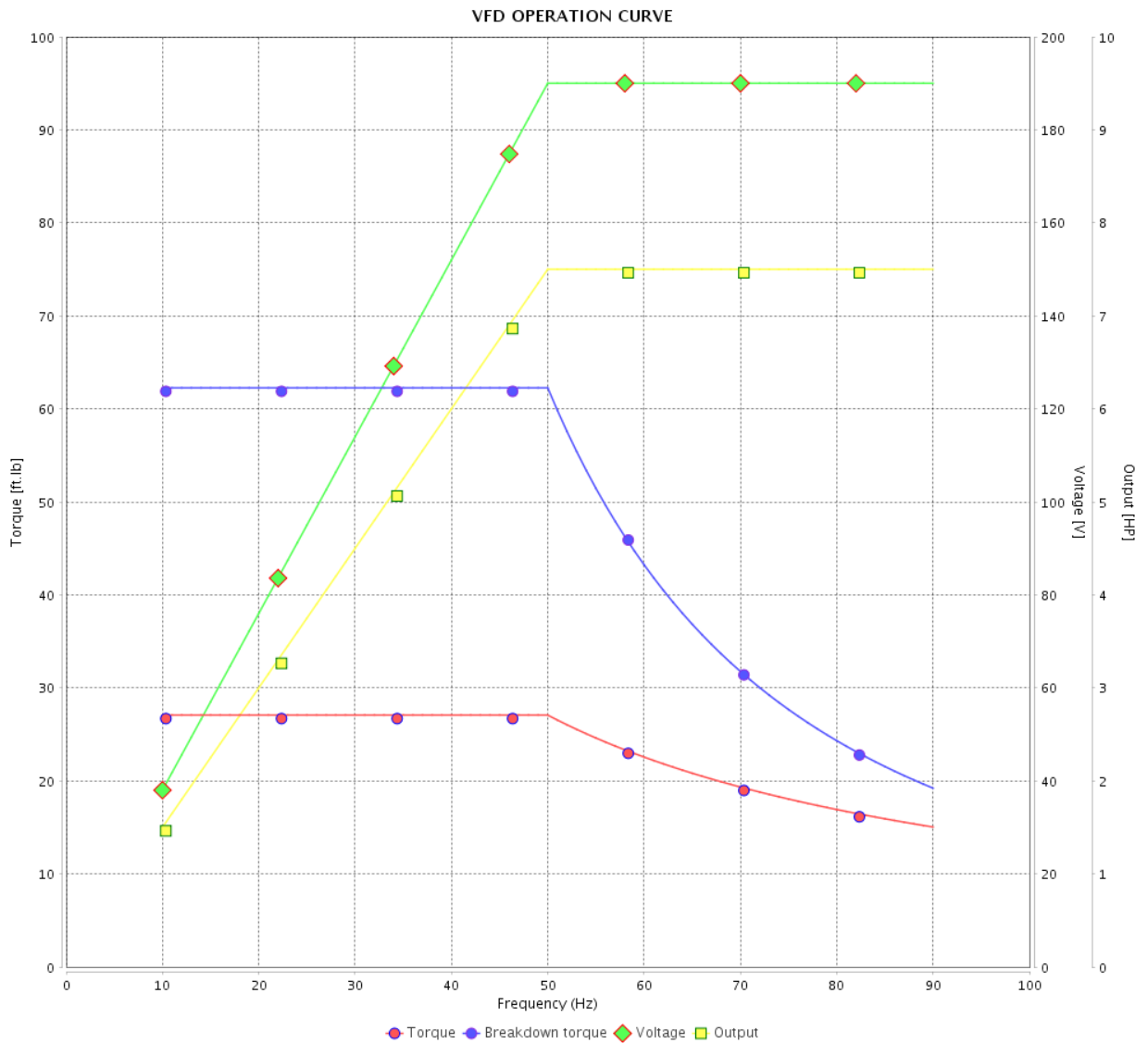
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 13163403
 Catalog # : 007180T3E213TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 22.2/11.1 A	Moment of inertia (J) : 1.03 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 27.1 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.15
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1455 rpm	Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 16		
Date		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



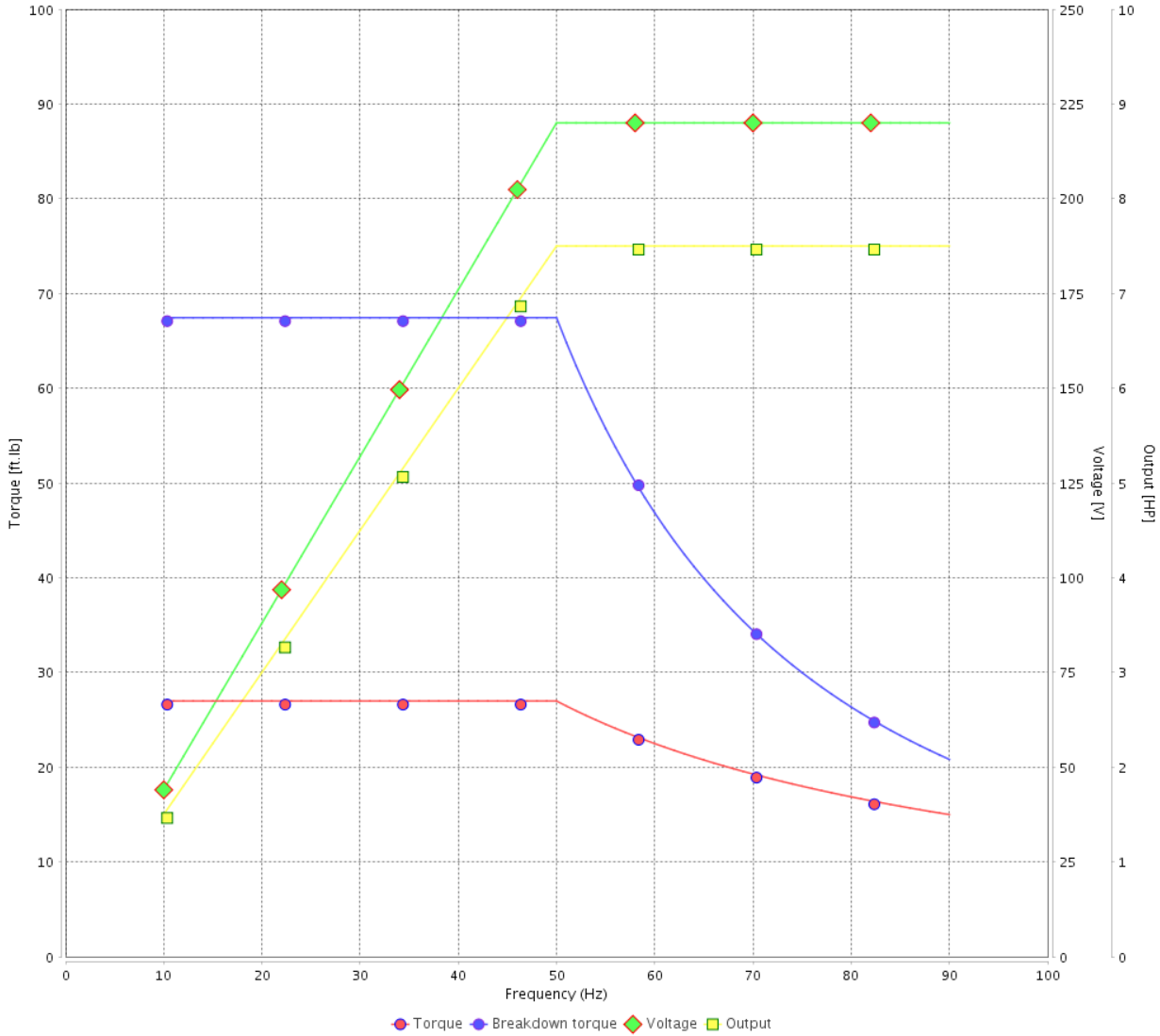
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163403

Catalog # : 007180T3E213TC-SG

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 4P

Rated current : 20.0/10.6 A
 LRC : 6.5
 Rated torque : 27.0 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 250 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 1.03 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			

1 2 3 4 5 6

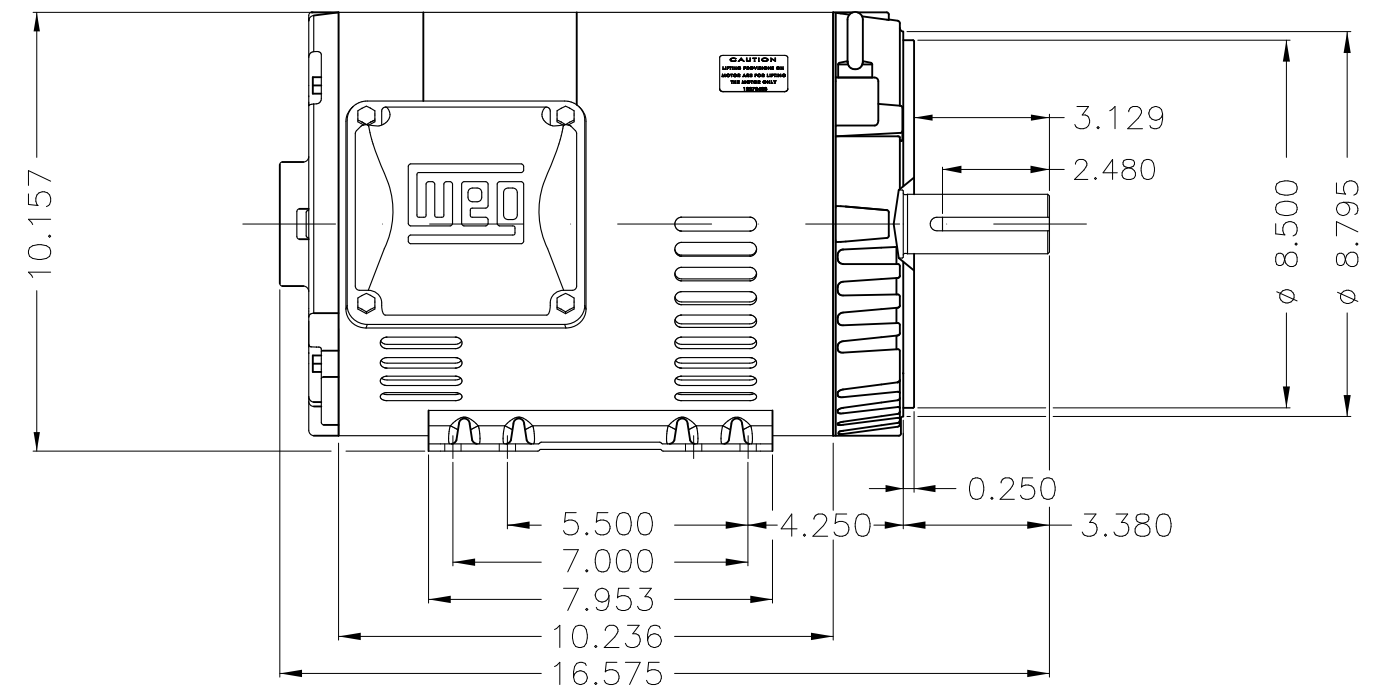
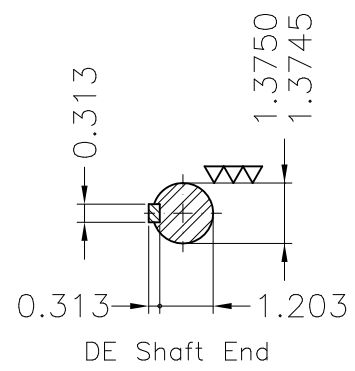
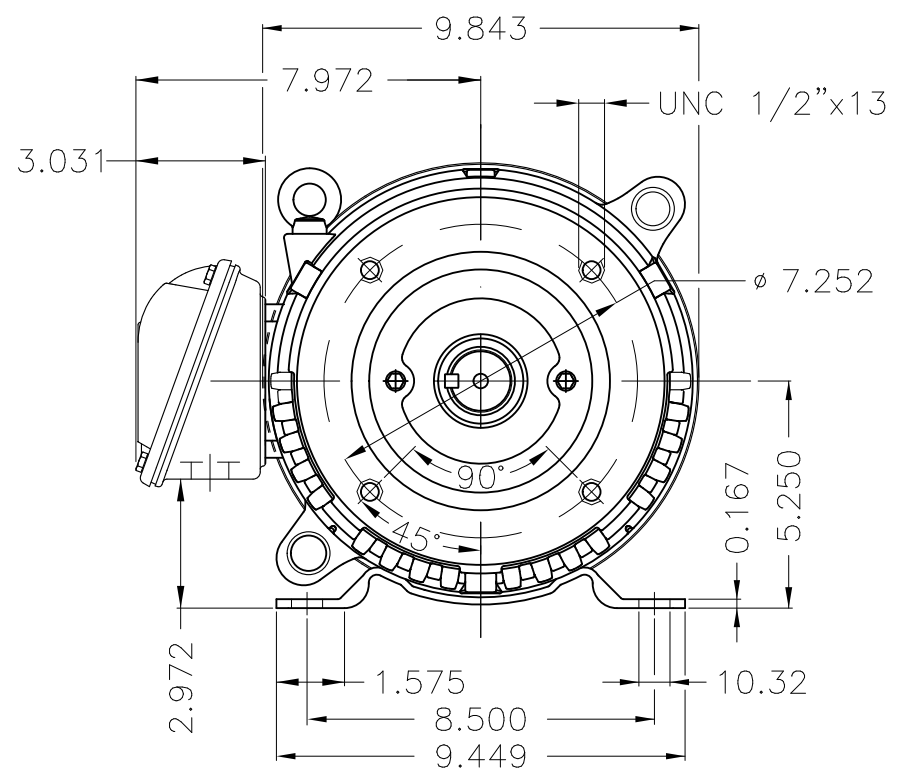
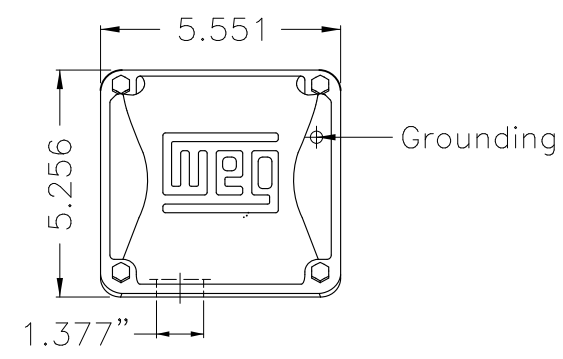
A

B

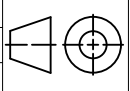
C

D

E



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 213/5TC IP21 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET		1 / 1	

7.5 HP 04 Poles 60 Hz

A

PREVIEW
WDD



Dimensions in inches XME A3

**NEMA**
Premium

MADE IN MEXICO

MAT: 13163403 CC029A**W01.T00IC0X0N****MODEL 007180T3E213TC-SG****24MAR2022 S/N:**

PH 3	Hz 60	HP 7.5
FR 213/5TC		KW 5.5
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 18.5/9.25
INS CL F AT 80K		SFA 21.3/10.6
AMB 40°C	DES B	SF 1.15
ENCL ODP	CODE H	PF 0.82
USABLE @ 208V 20.5A		RPM 1770
SF1.00		NEMA NOM. EFF 91.0%

ALTERNATE RATING: 7.5HP 50Hz 190-220/380-415V SF1.15
22.2-19.6/11.1-10.4A 1455RPM EFF 86.7% (IE1) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6208-ZZ	ODE 6206-ZZ	MOBIL POLYREX EM
-------------------	--------------------	-------------------------



T1-BLU T2-WHT
 T3-ORG T4-YEL
 T5-BLK T6-GRY
 T7-PNK T8-RED
 T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

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.

