

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14437424		
		Catalog # :	00309XT3E215T		
Frame	: 213/5T	Cooling method	: IC411 - TEFC		
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	: 209 lb		
Protection degree	: IP55	Moment of inertia (J)	: 1.79 sq.ft.lb		
Design	: B				
Output [HP]	3	3	3	3	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	8.84/4.42	5.33	5.20	5.08	
L. R. Amperes [A]	62.8/31.4	30.9	32.2	33.5	
LRC [A]	7.1x(Code K)	5.8x(Code H)	6.2x(Code J)	6.6x(Code K)	
No load current [A]	5.60/2.80	2.80	3.00	3.20	
Rated speed [RPM]	870	705	710	715	
Slip [%]	3.33	6.00	5.33	4.67	
Rated torque [ft.lb]	18.1	22.3	22.2	22.0	
Locked rotor torque [%]	210	180	210	240	
Breakdown torque [%]	270	200	229	260	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	57s (cold) 32s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	
Noise level ²	52.0 dB(A)	48.0 dB(A)	48.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%	83.7	83.0	82.1	83.4
	50%	84.0	82.5	82.5	82.5
	75%	85.5	82.5	82.5	84.0
	100%	85.5	81.5	82.5	82.5
Power Factor	25%	0.30	0.35	0.31	0.28
	50%	0.54	0.61	0.54	0.51
	75%	0.65	0.71	0.66	0.64
	100%	0.73	0.77	0.74	0.73
Bearing type	: <u>Drive end</u> 6308 2RS <u>Non drive end</u> 6207 2RS	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 219 lb		
Lubrication interval	: - -	Max. compression	: 427 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 9.82A SF 1.15 SFA 11.3A					
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 / 22		

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



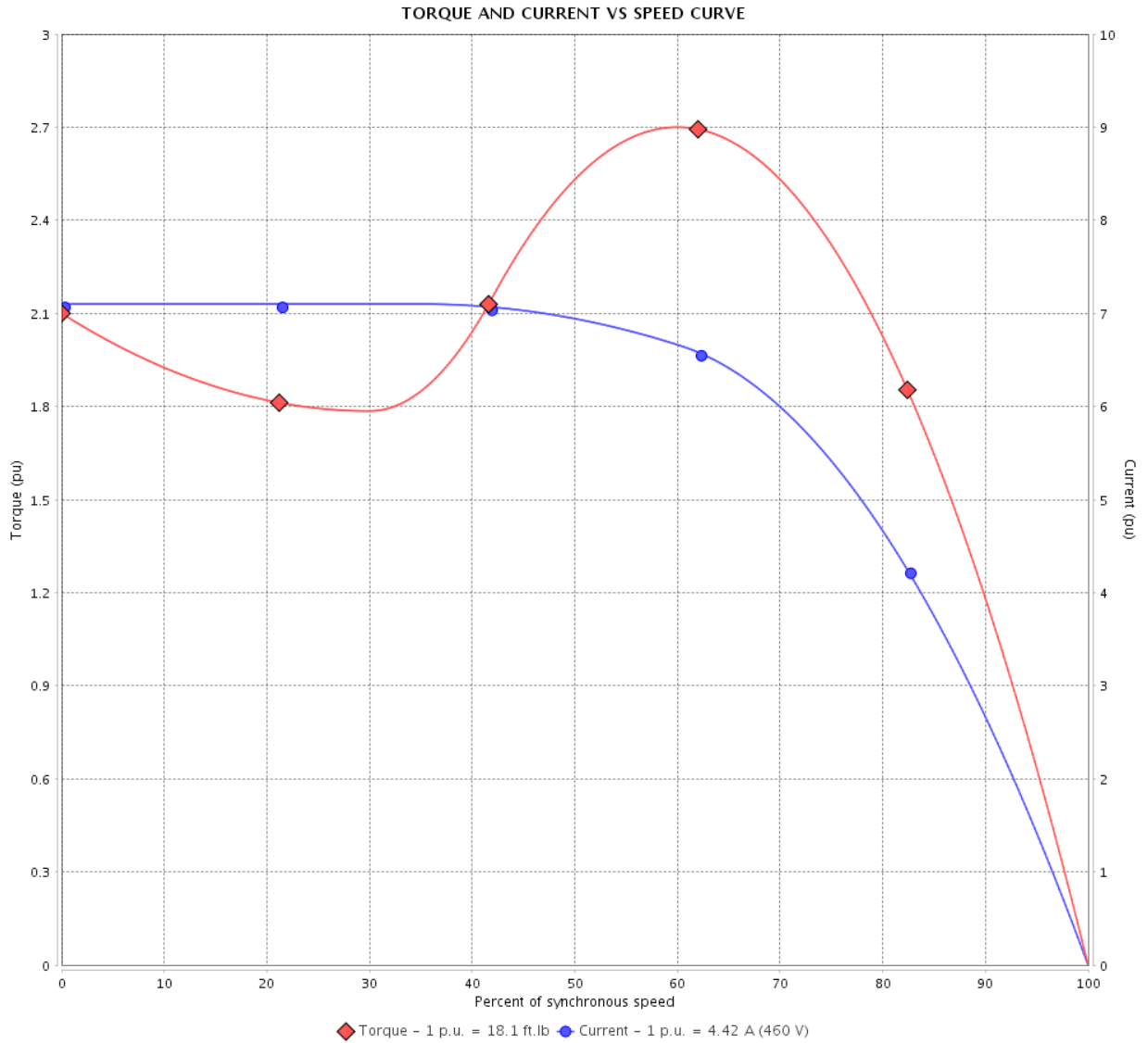
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 230/460 V 60 Hz 8P

Rated current : 8.84/4.42 A
 LRC : 7.1
 Rated torque : 18.1 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 270 %
 Rated speed : 870 rpm

Moment of inertia (J) : 1.79 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 57s (cold) 32s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 22	
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



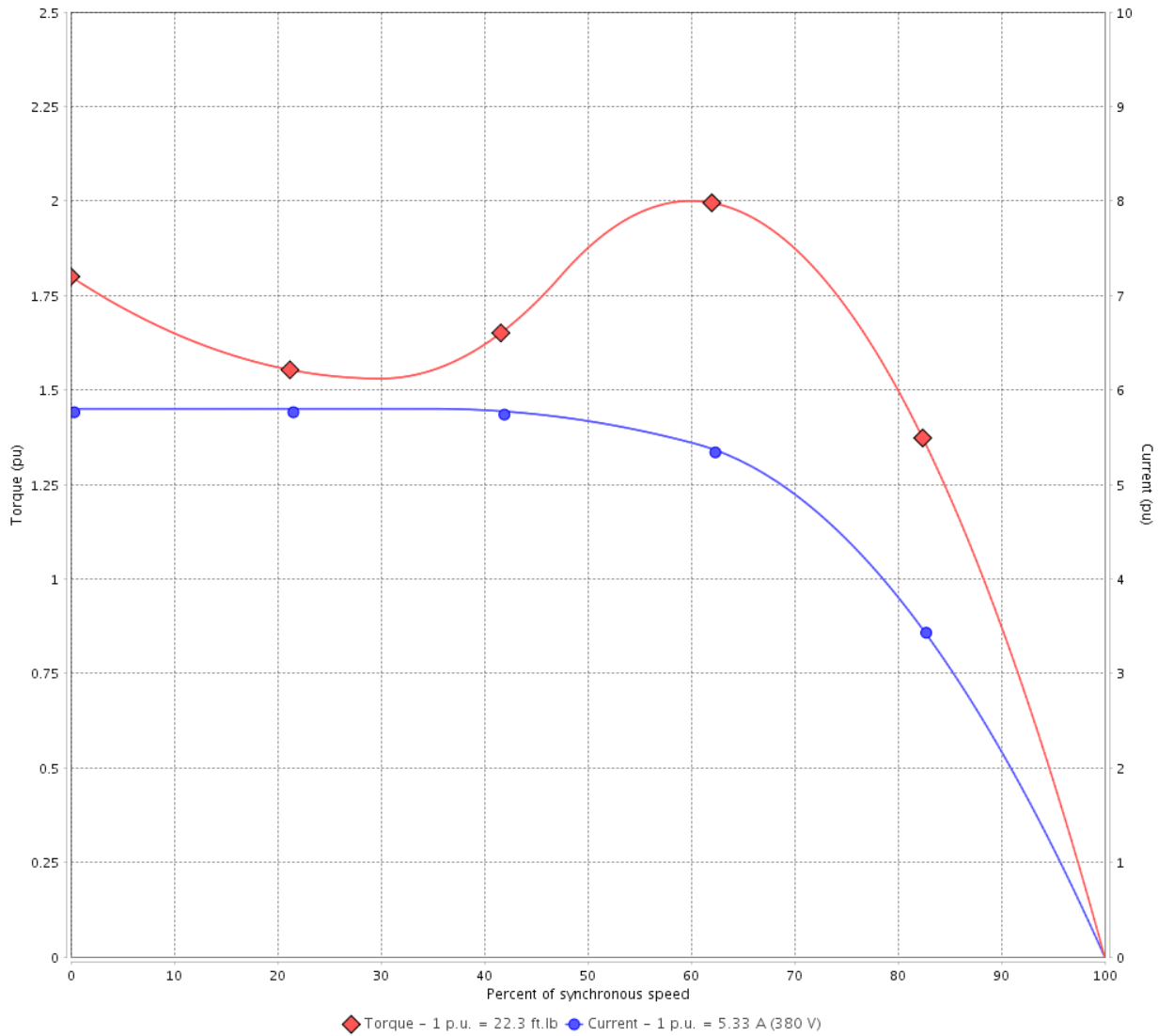
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE2

Rated current	: 5.33 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.3 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 705 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



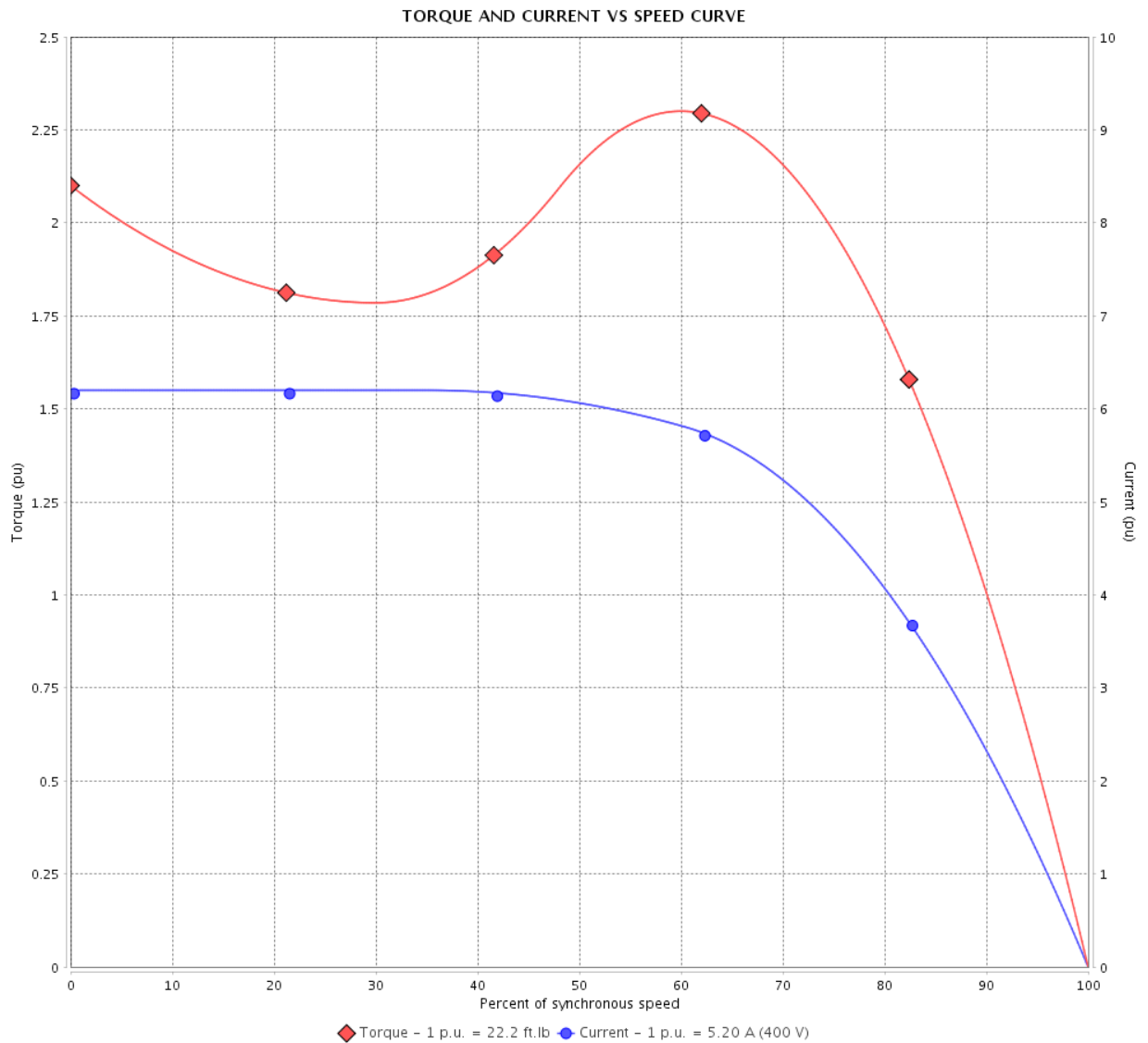
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 400 V 50 Hz 8P IE3

Rated current : 5.20 A
 LRC : 6.2
 Rated torque : 22.2 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 710 rpm

Moment of inertia (J) : 1.79 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



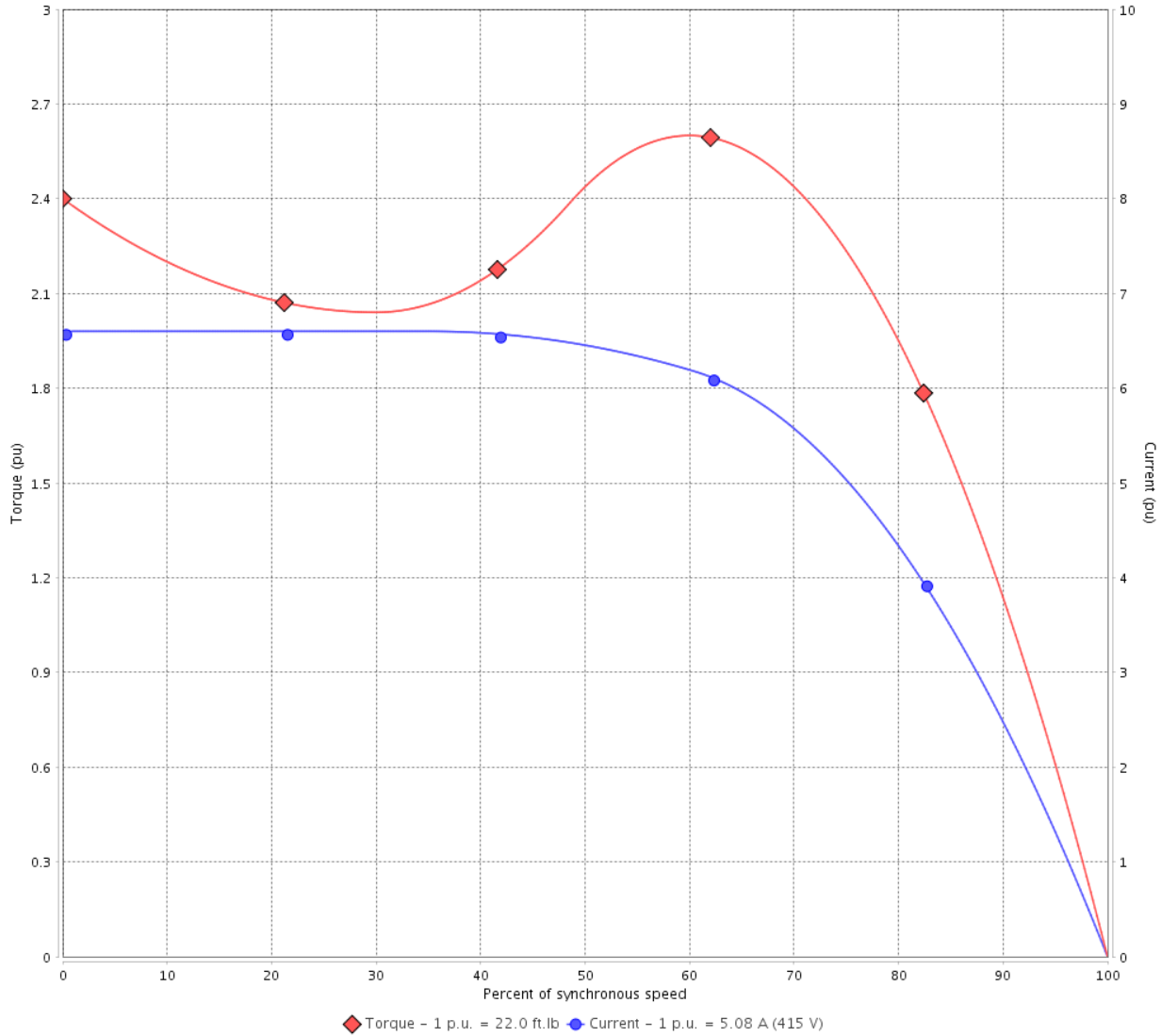
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE3

Rated current	: 5.08 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 22.0 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 22	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

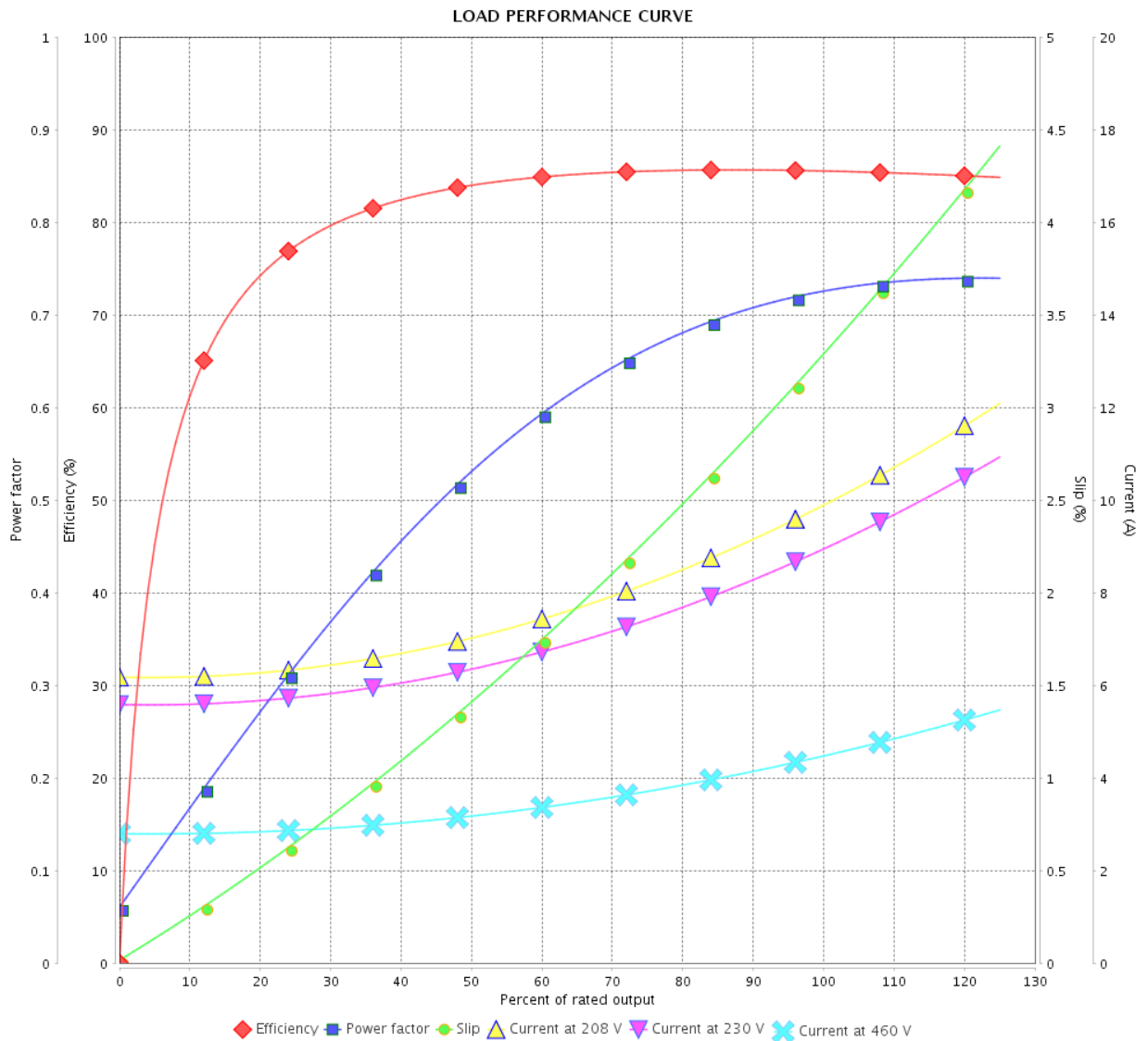


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 230/460 V 60 Hz 8P

Rated current : 8.84/4.42 A
 LRC : 7.1
 Rated torque : 18.1 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 270 %
 Rated speed : 870 rpm

Moment of inertia (J) : 1.79 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			7 / 22	
Date	13/04/2022			

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Three Phase Induction Motor - Squirrel Cage



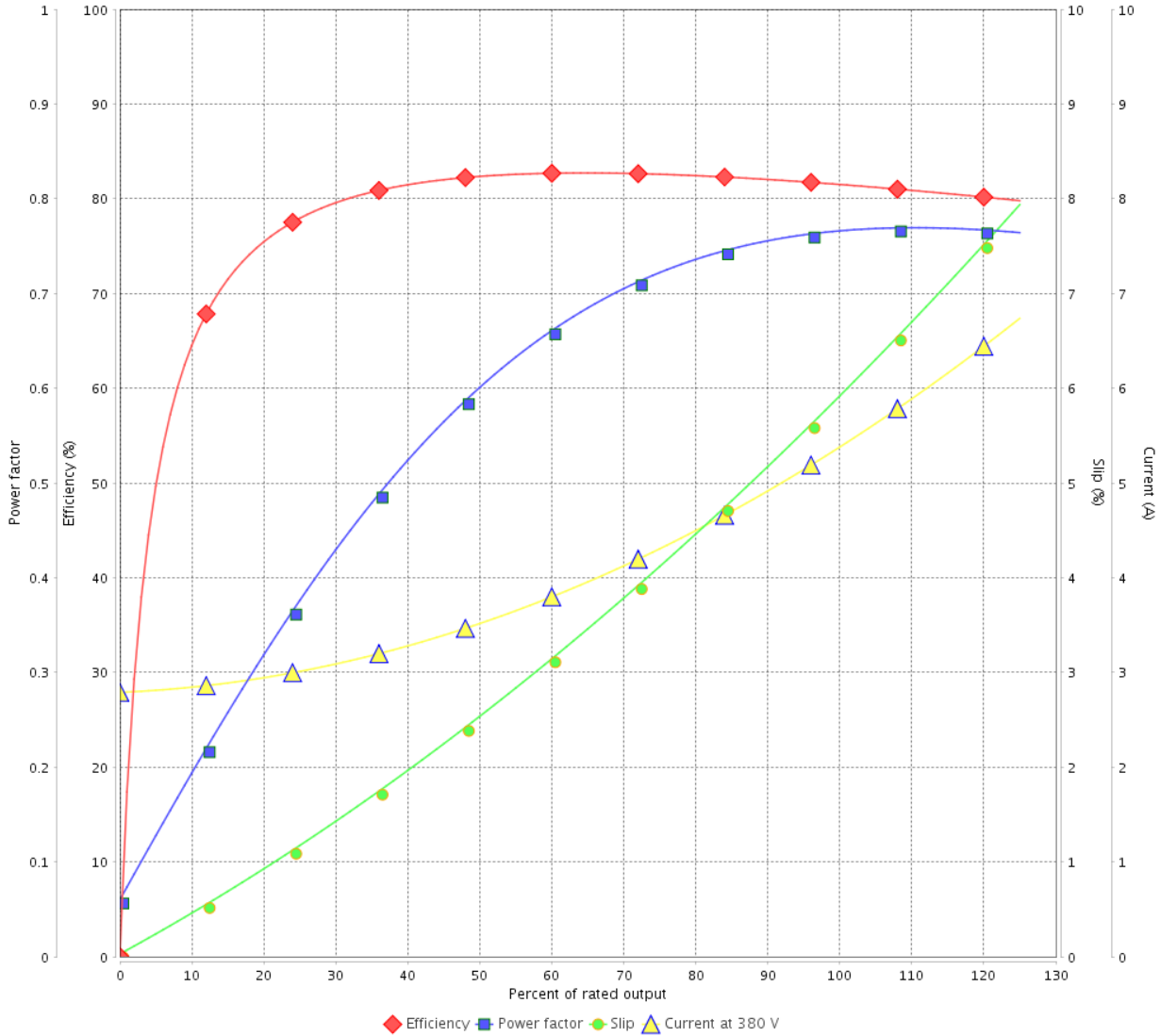
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 8P IE2

Rated current : 5.33 A
 LRC : 5.8
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 705 rpm

Moment of inertia (J) : 1.79 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			8 / 22	
Date	13/04/2022			

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Three Phase Induction Motor - Squirrel Cage

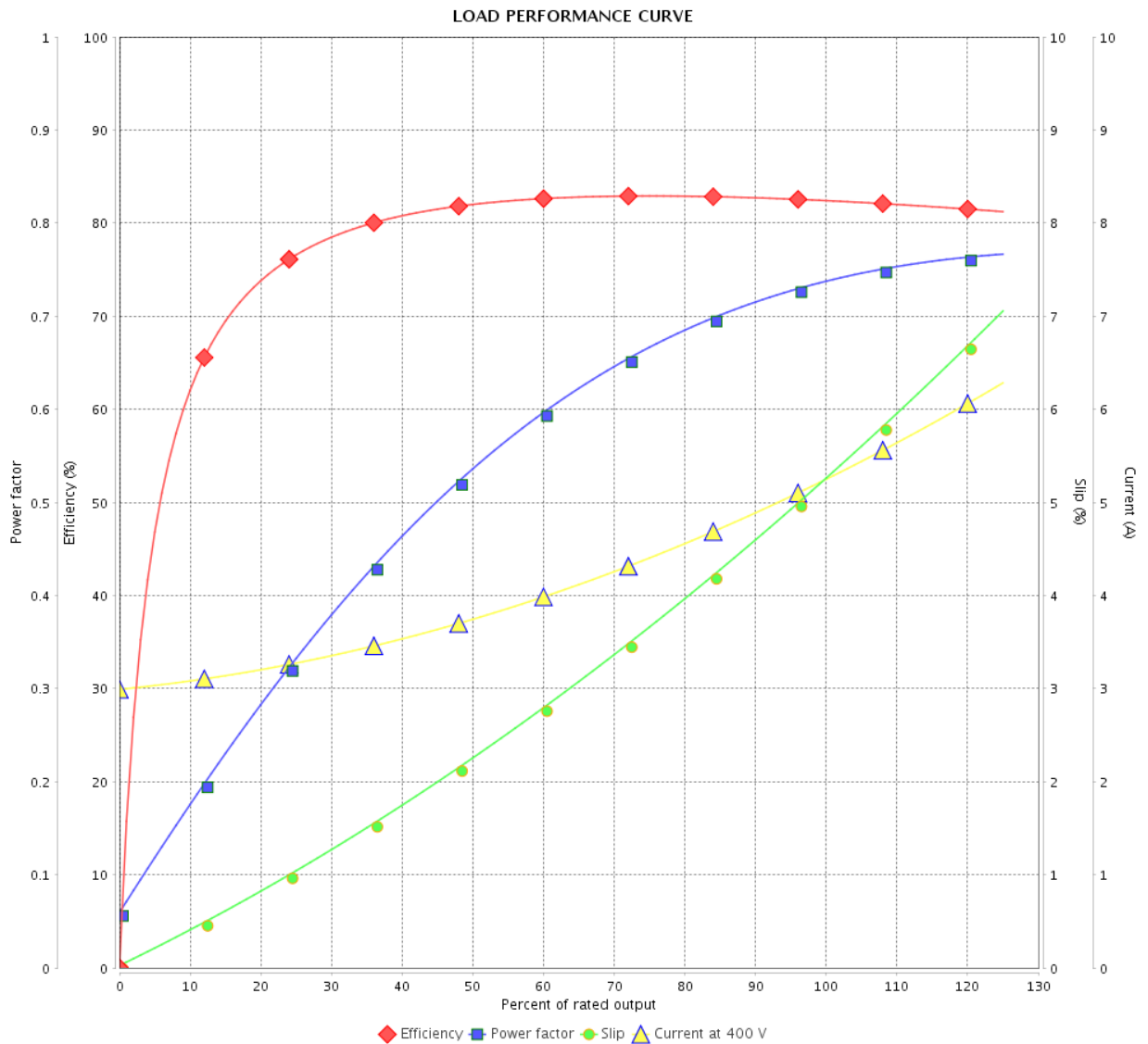


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 400 V 50 Hz 8P IE3

Rated current : 5.20 A
 LRC : 6.2
 Rated torque : 22.2 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 710 rpm

Moment of inertia (J) : 1.79 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				

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



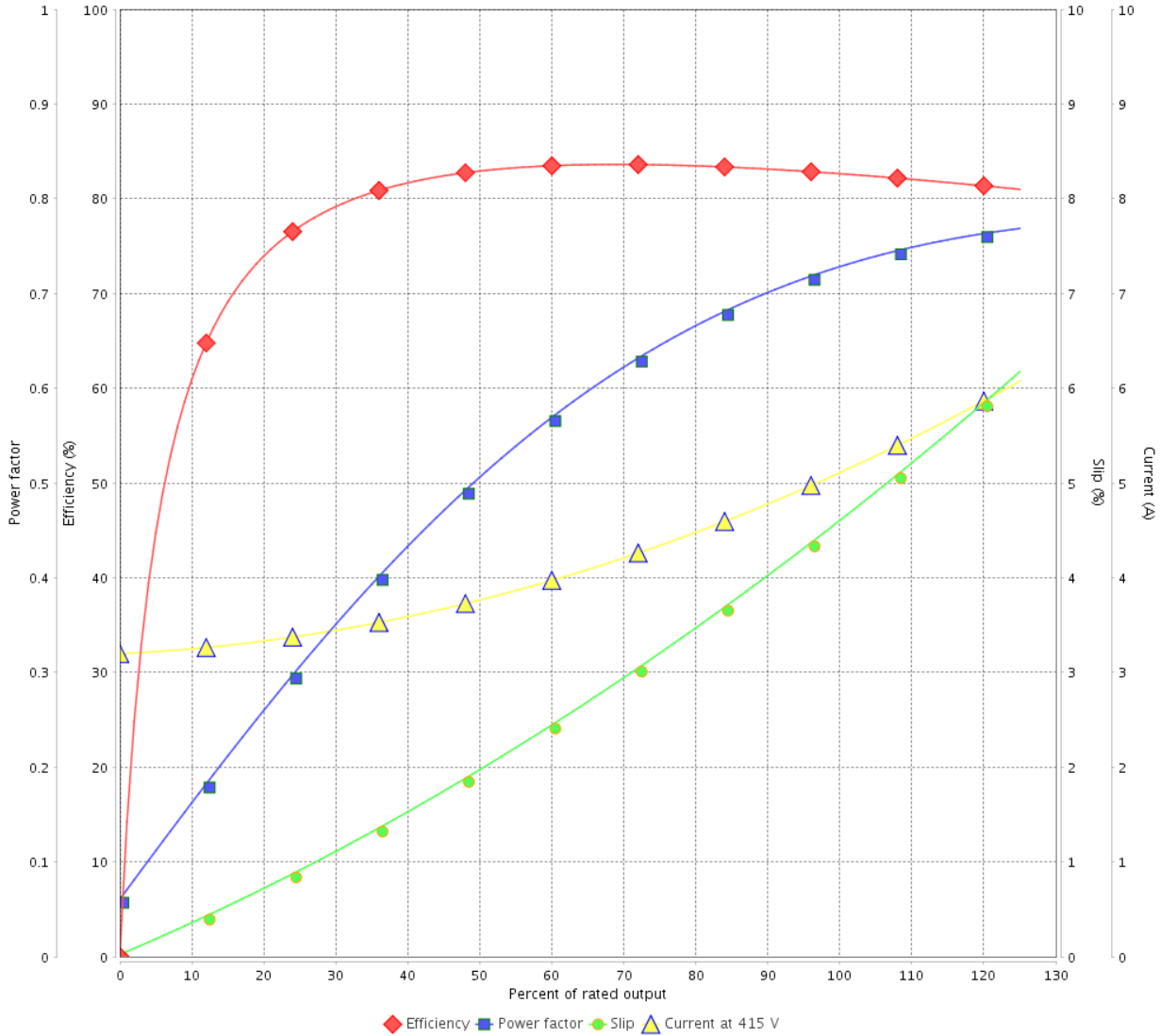
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 8P IE3

Rated current	: 5.08 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 22.0 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			10 / 22	
Date	13/04/2022			

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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 Catalog # : 00309XT3E215T

Performance : 230/460 V 60 Hz 8P

Rated current : 8.84/4.42 A	Moment of inertia (J) : 1.79 sq.ft.lb
LRC : 7.1	Duty cycle : Cont.(S1)
Rated torque : 18.1 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.15
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 870 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 11 / 22	Revision
Checked by				
Date	13/04/2022			

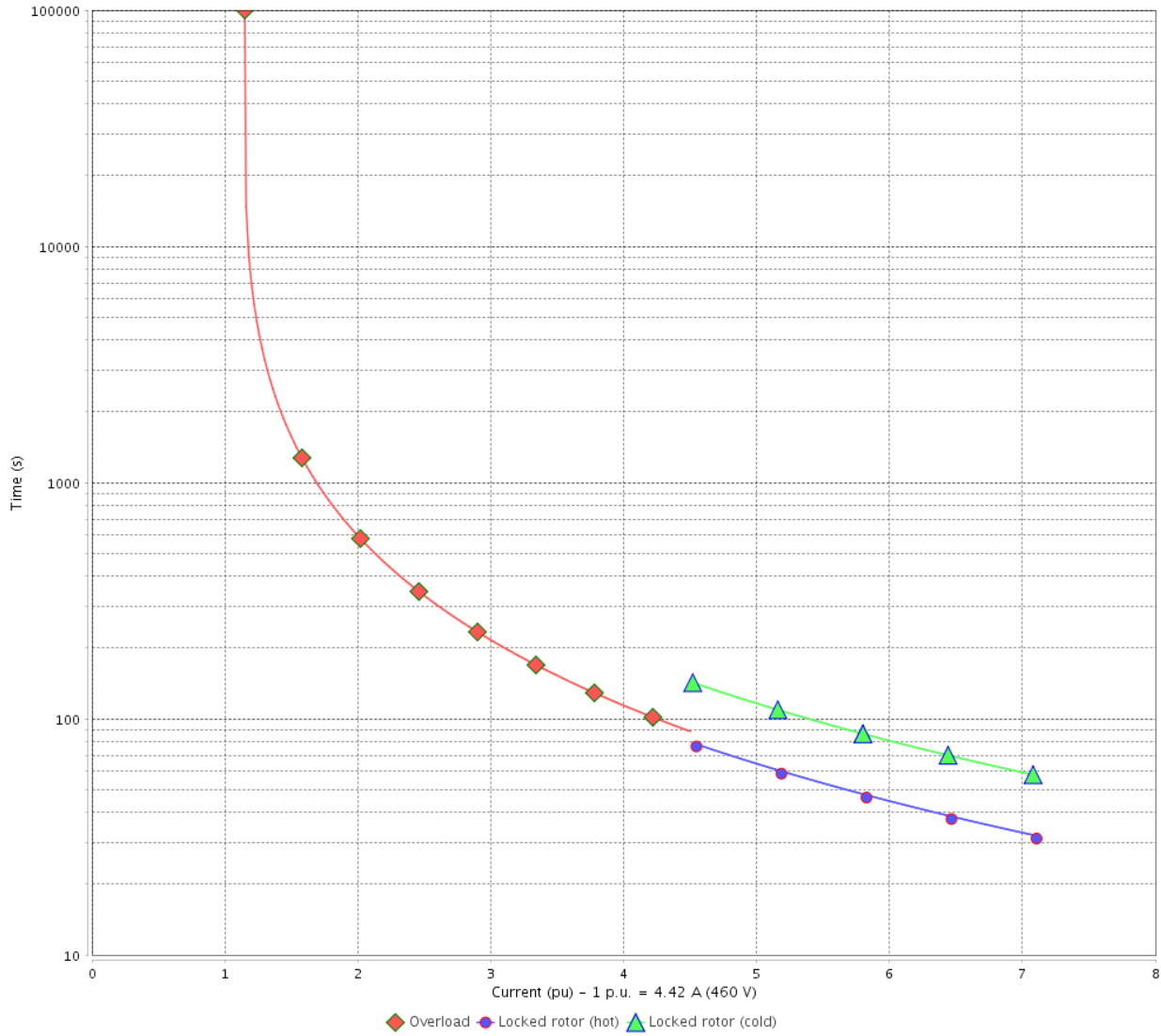
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date				

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14437424
 Catalog # : 00309XT3E215T

Performance : 380 V 50 Hz 8P IE2

Rated current : 5.33 A	Moment of inertia (J) : 1.79 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 22.3 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 705 rpm	Design : B

Heating constant

Cooling constant

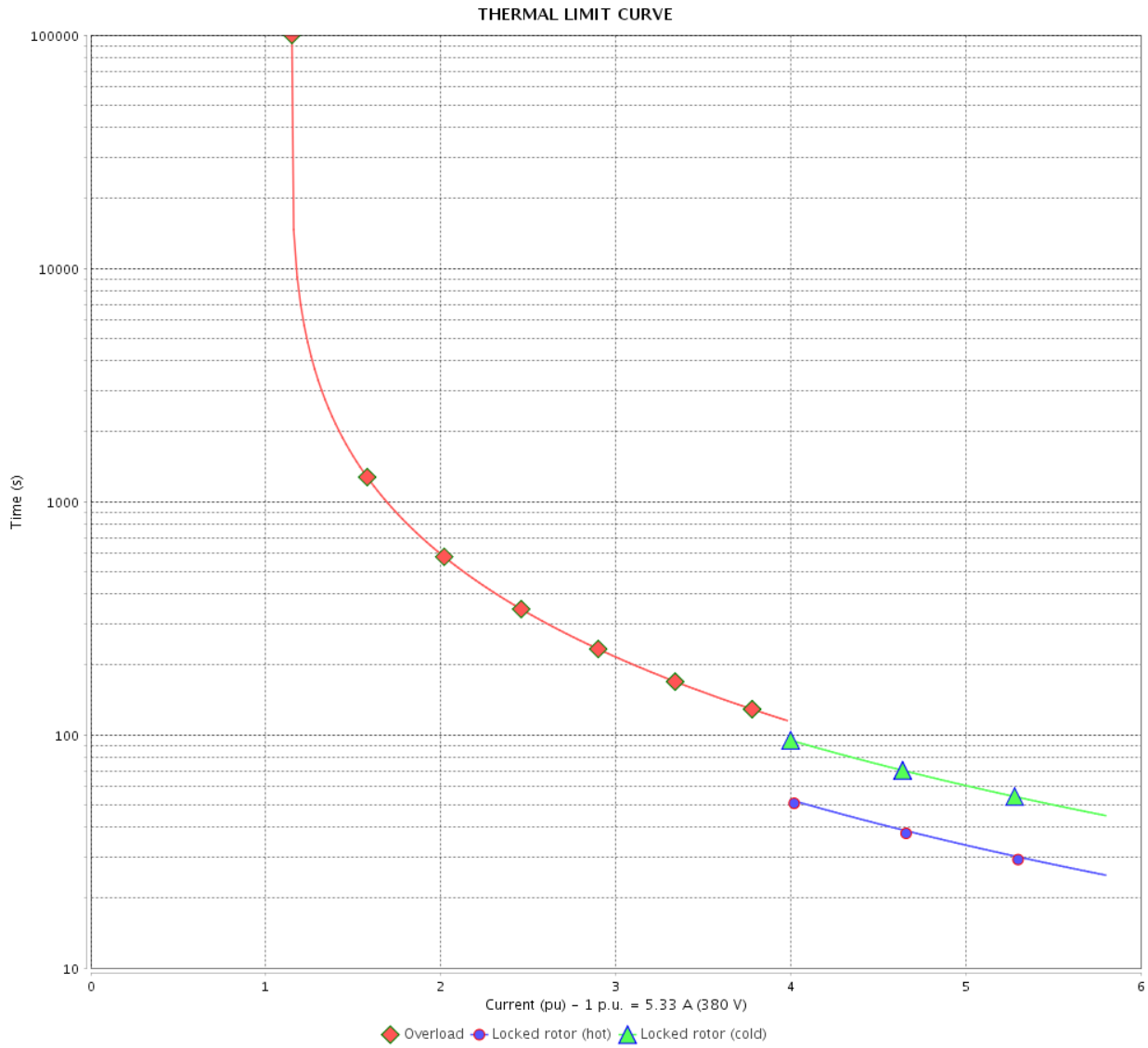
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Performed by			Page 13 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14437424
 Catalog # : 00309XT3E215T

Performance : 400 V 50 Hz 8P IE3

Rated current : 5.20 A	Moment of inertia (J) : 1.79 sq.ft.lb
LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 22.2 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 710 rpm	Design : B

Heating constant

Cooling constant

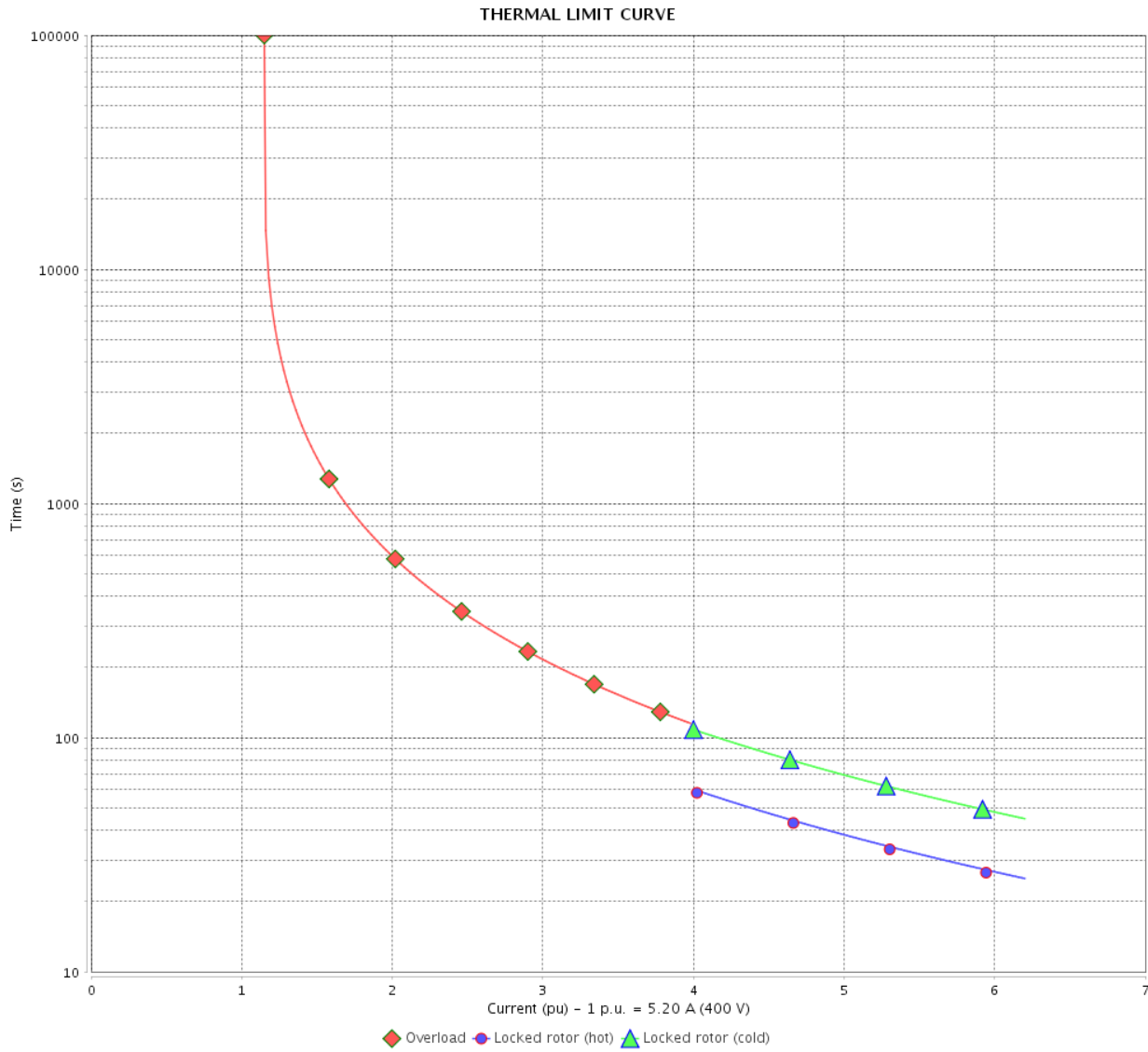
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Performed by			Page 15 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		16 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14437424
 Catalog # : 00309XT3E215T

Performance : 415 V 50 Hz 8P IE3

Rated current : 5.08 A	Moment of inertia (J) : 1.79 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 22.0 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 22	Revision
Checked by				
Date	13/04/2022			

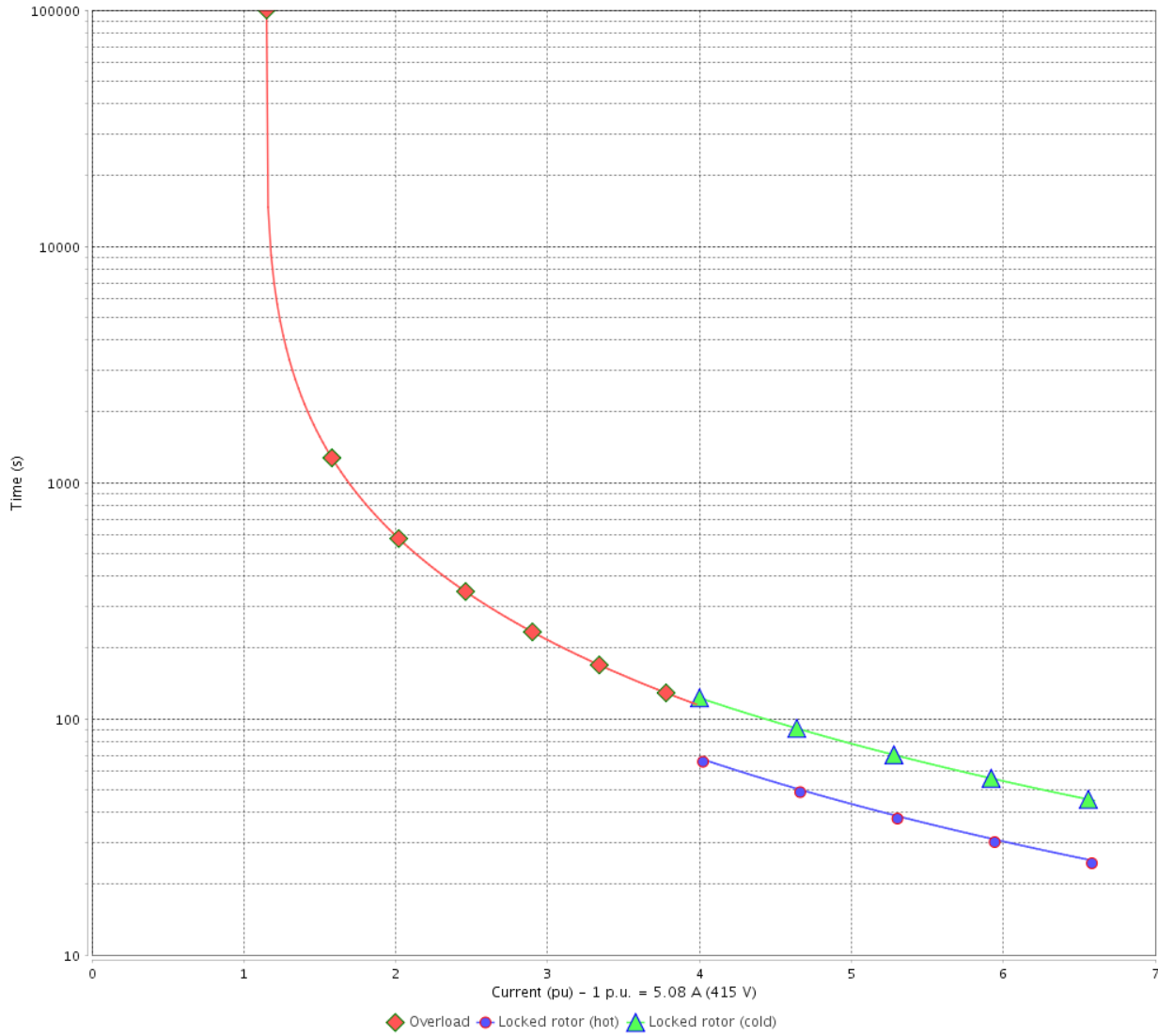
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		18 / 22		
Date		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

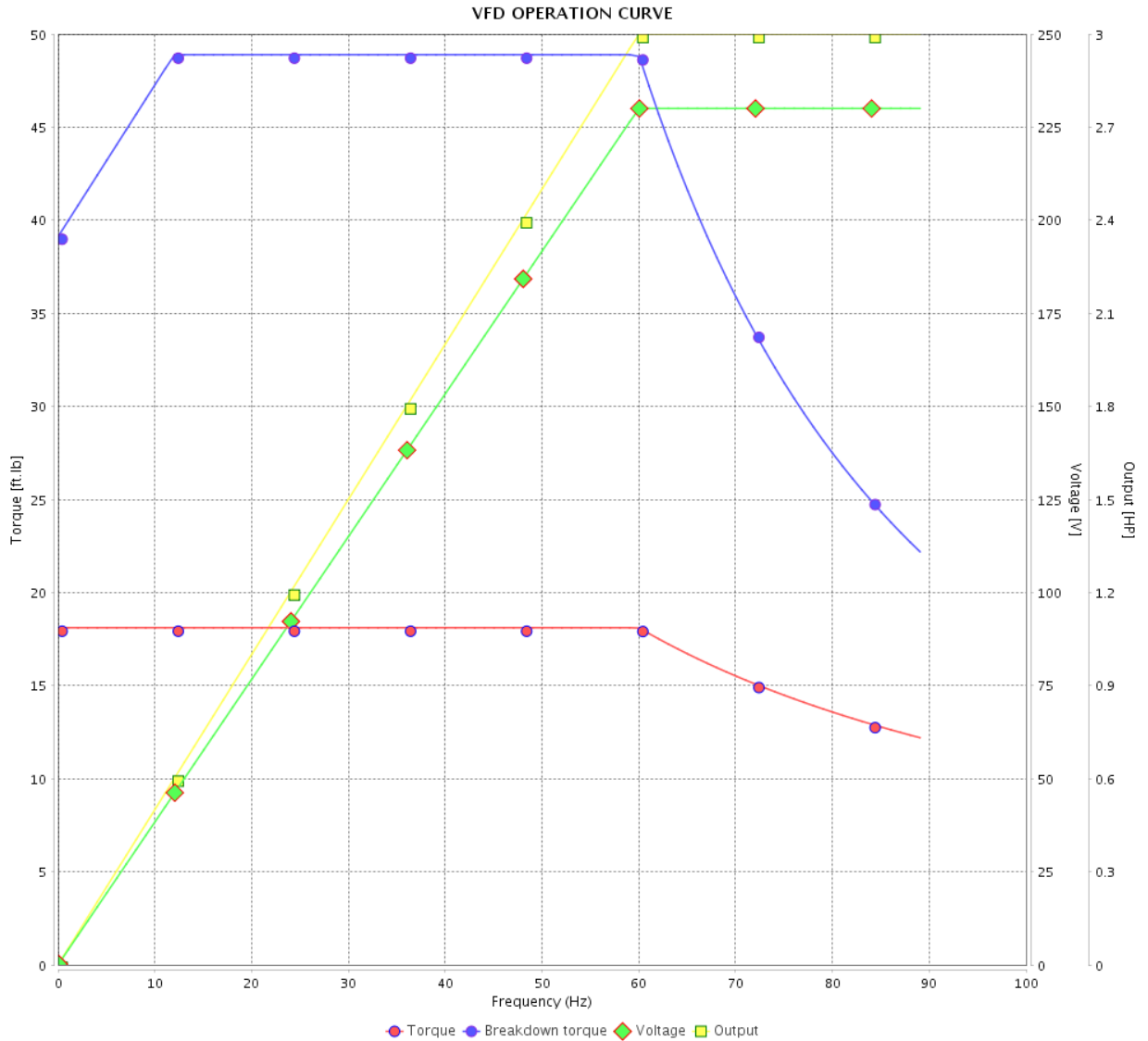


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 230/460 V 60 Hz 8P

Rated current : 8.84/4.42 A
 LRC : 7.1
 Rated torque : 18.1 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 270 %
 Rated speed : 870 rpm

Moment of inertia (J) : 1.79 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			19 / 22	
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

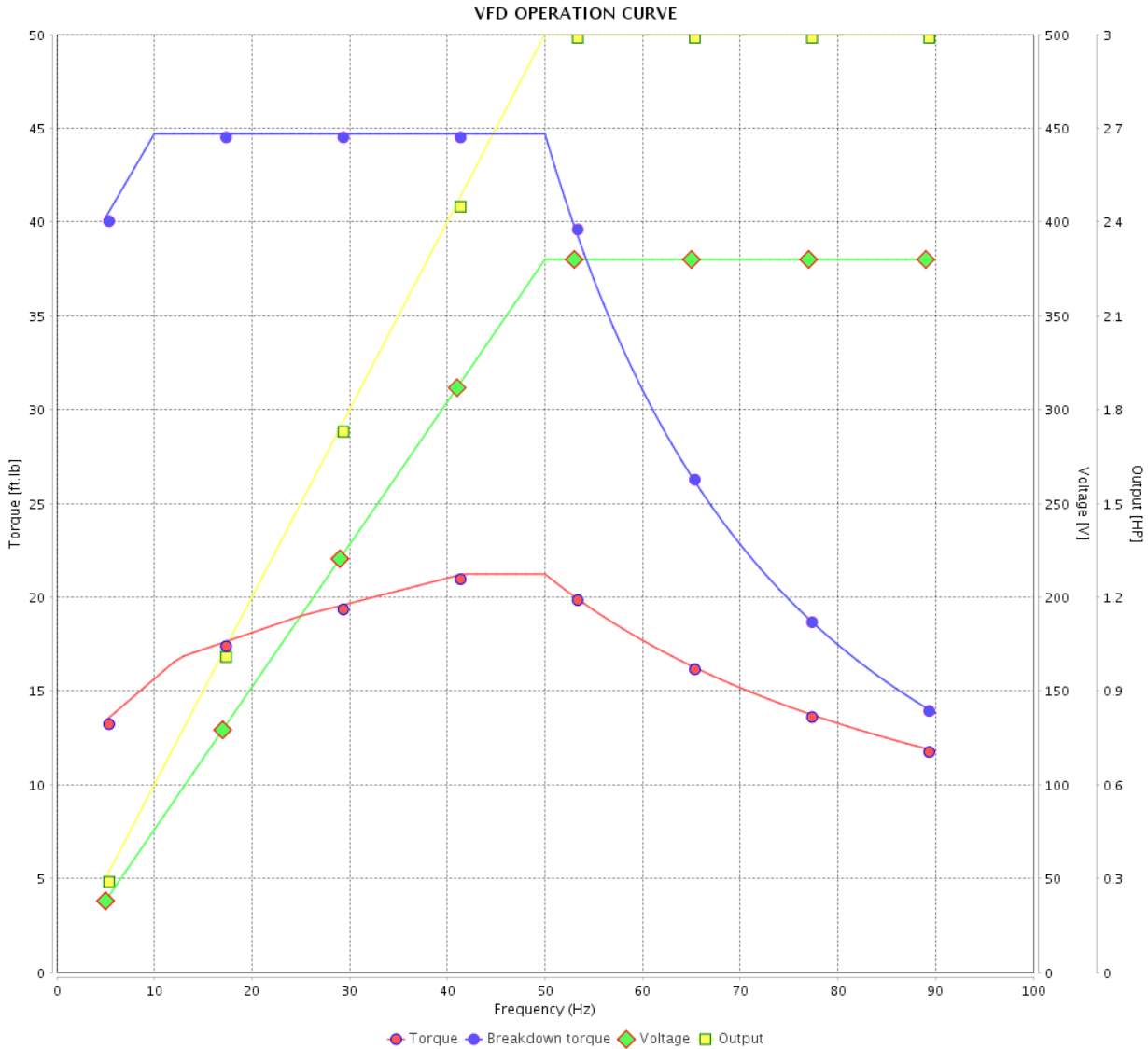


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 380 V 50 Hz 8P IE2

Rated current : 5.33 A
 LRC : 5.8
 Rated torque : 22.3 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 705 rpm

Moment of inertia (J) : 1.79 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 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

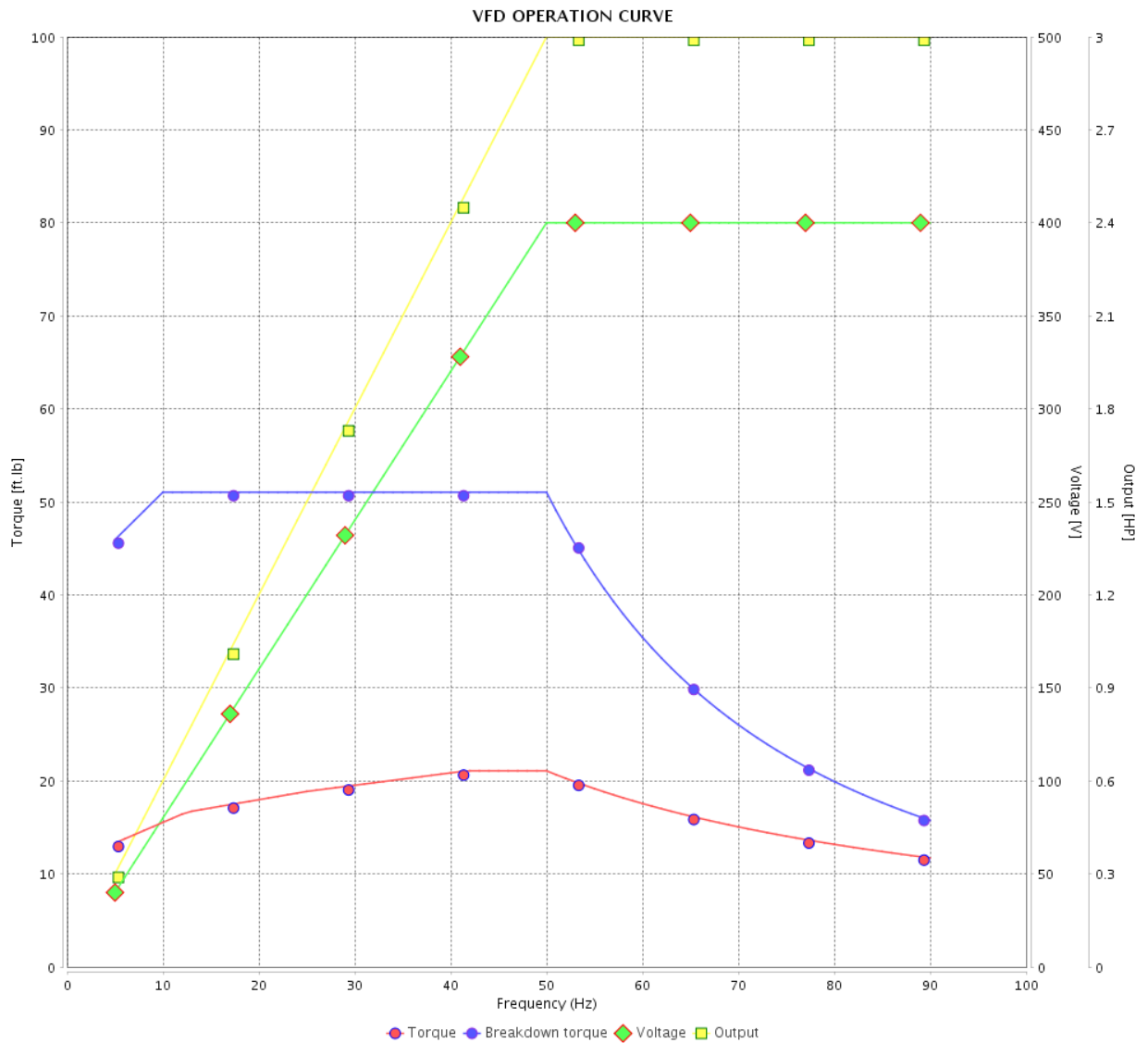


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14437424

Catalog # : 00309XT3E215T



Performance : 400 V 50 Hz 8P IE3

Rated current : 5.20 A
 LRC : 6.2
 Rated torque : 22.2 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 229 %
 Rated speed : 710 rpm

Moment of inertia (J) : 1.79 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 / 22		
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

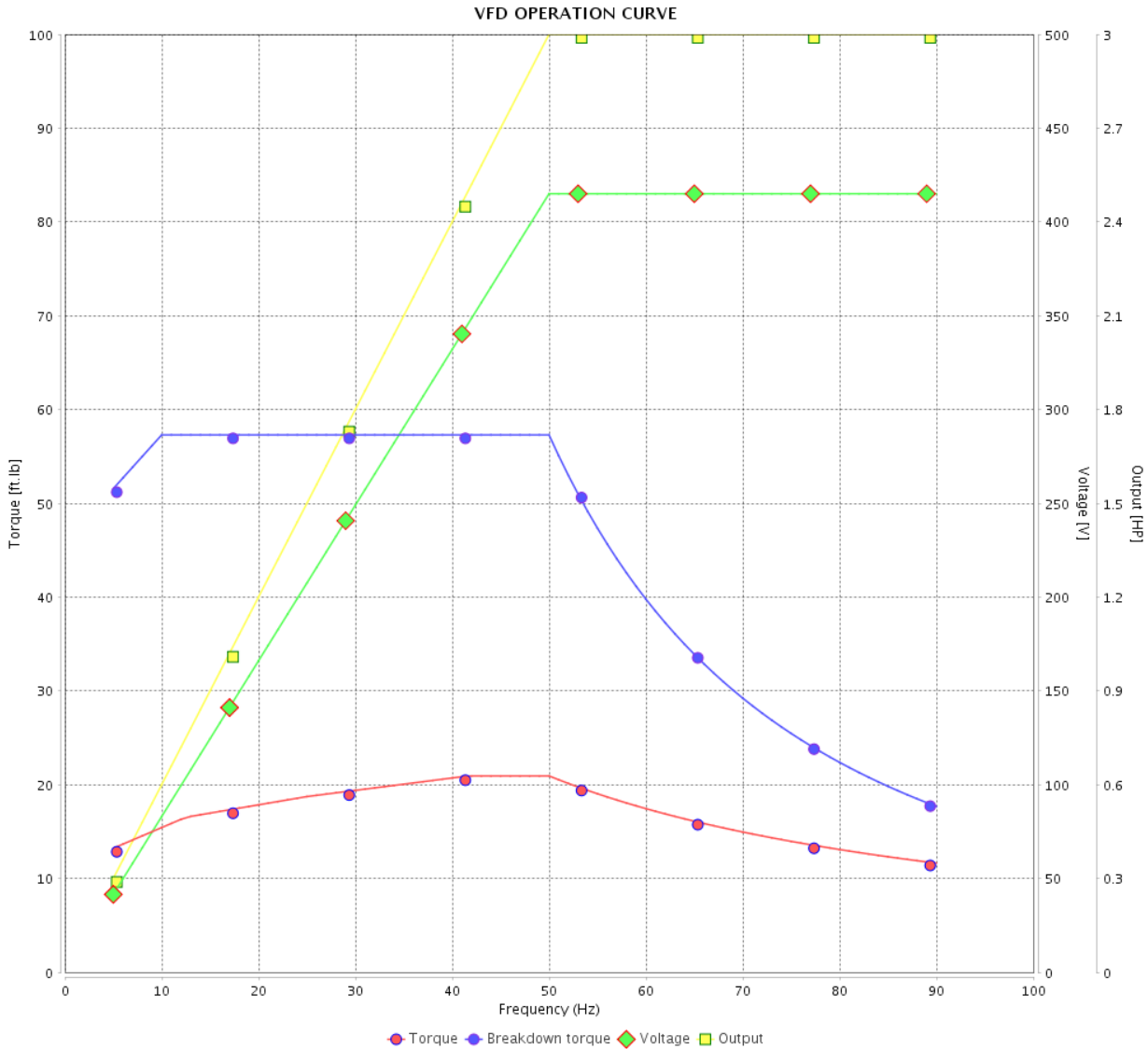


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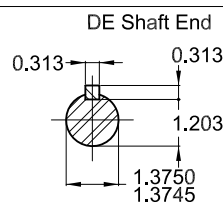
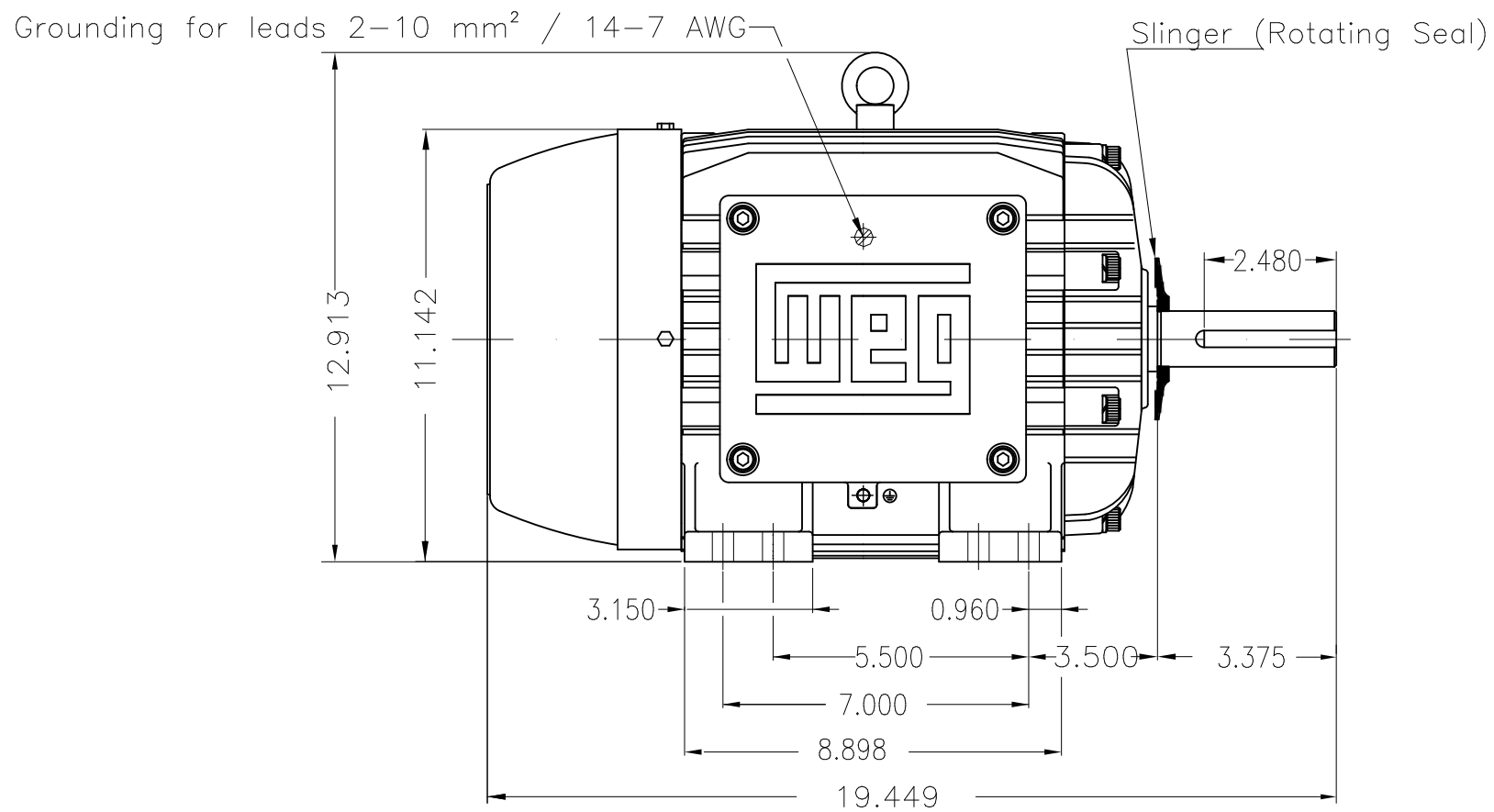
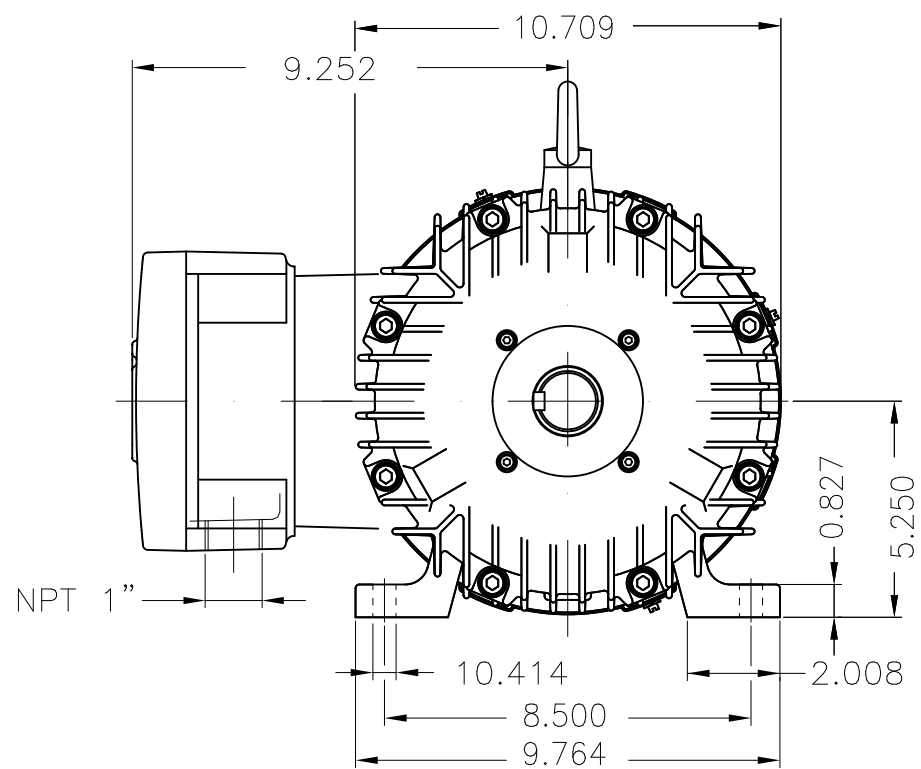


Performance : 415 V 50 Hz 8P IE3

Rated current : 5.08 A
 LRC : 6.6
 Rated torque : 22.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 260 %
 Rated speed : 715 rpm

Moment of inertia (J) : 1.79 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				



Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B3R(D)

3 HP 08 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 213/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**
Premium

14437424

CC029A

Inverter Duty Motor
Severe Duty

MODEL 00309XT3E215T

PH 3 FR 213/5T

HP(kW) 3.0(2.2)

HZ 60

IP55

V 230/460

A 8.84/4.42

RPM 870

NEMA NOM EFF 85.5%

PF 0.73

SFA 10.2/5.08

DES B

INS CL F Δ T 80 K SF 1.15

ENCL TEFC

DUTY CONT.

CODE K

ALT 1000

m.a.s.l.

AMB 40°C

USABLE @208V

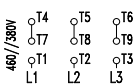
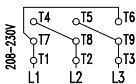
9.82 A

SF 1.15

SFA 11.3

AMB 55°C SF1.0

3.0HP 2.2kW 50Hz 380V 5.33A 705RPM SF1.00 EFF 81.5% (IE2)



→ 6308-2RS MOBIL POLYREX EM

→ 6207-2RS

205 Lbs

TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 20:1CT, 1.0SF, T3C, AMB 40°C.