

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14319266		
		Catalog # :	00158XT3E145T		
Frame	: 143/5T	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>	: 73.4 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.1303 sq.ft.lb		
Design	: B				
Output [HP]	1.5	1.5	1.5	1.5	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	4.10/2.05	2.40	2.33	2.27	
L. R. Amperes [A]	36.5/18.2	15.8	16.8	17.5	
LRC [A]	8.9x(Code L)	6.6x(Code H)	7.2x(Code J)	7.7x(Code K)	
No load current [A]	2.40/1.20	1.20	1.30	1.40	
Rated speed [RPM]	1755	1440	1445	1450	
Slip [%]	2.50	4.00	3.67	3.33	
Rated torque [ft.lb]	4.49	5.47	5.45	5.43	
Locked rotor torque [%]	270	200	229	250	
Breakdown torque [%]	350	260	290	320	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	25s (cold) 14s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level <sup>2</sup>	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	80.2	83.7	83.7	80.9
	50%	81.5	84.0	84.0	82.5
	75%	85.5	84.0	84.0	84.0
	100%	86.5	84.0	84.0	85.5
Power Factor	25%	0.34	0.39	0.35	0.33
	50%	0.58	0.66	0.62	0.58
	75%	0.70	0.77	0.74	0.71
	100%	0.78	0.83	0.81	0.79
Bearing type	: Drive end : 6205 2RS Non drive end : 6204 2RS	Foundation loads	Max. traction : 114 lb Max. compression : 188 lb		
Sealing	: Oil Seal Lip Seal				
Lubrication interval	: - -				
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 4.53A SF 1.15 SFA 5.21A					
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.			
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# 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

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# TORQUE AND CURRENT VS SPEED CURVE



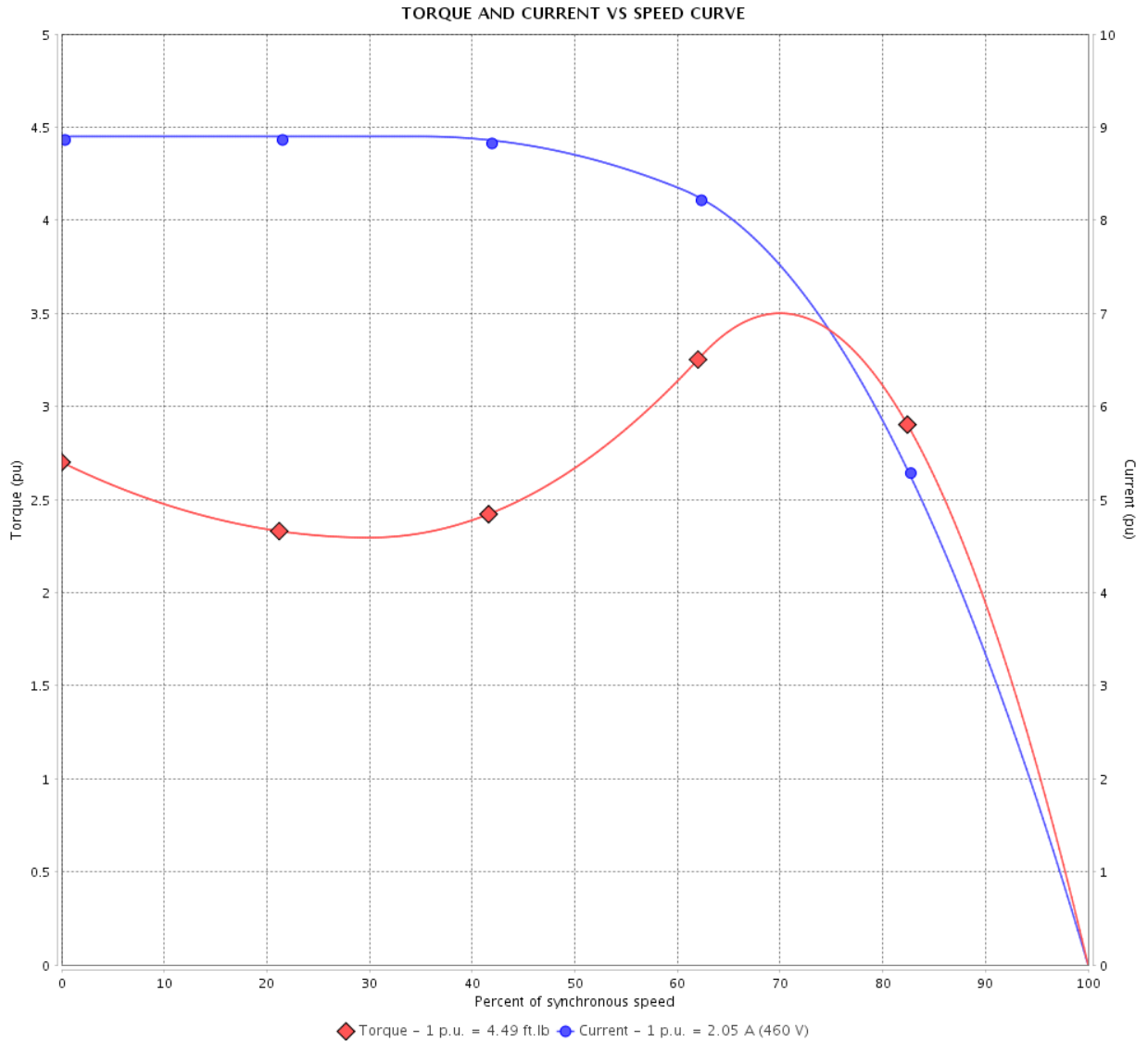
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T



Performance : 230/460 V 60 Hz 4P

Rated current : 4.10/2.05 A  
 LRC : 8.9  
 Rated torque : 4.49 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 350 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



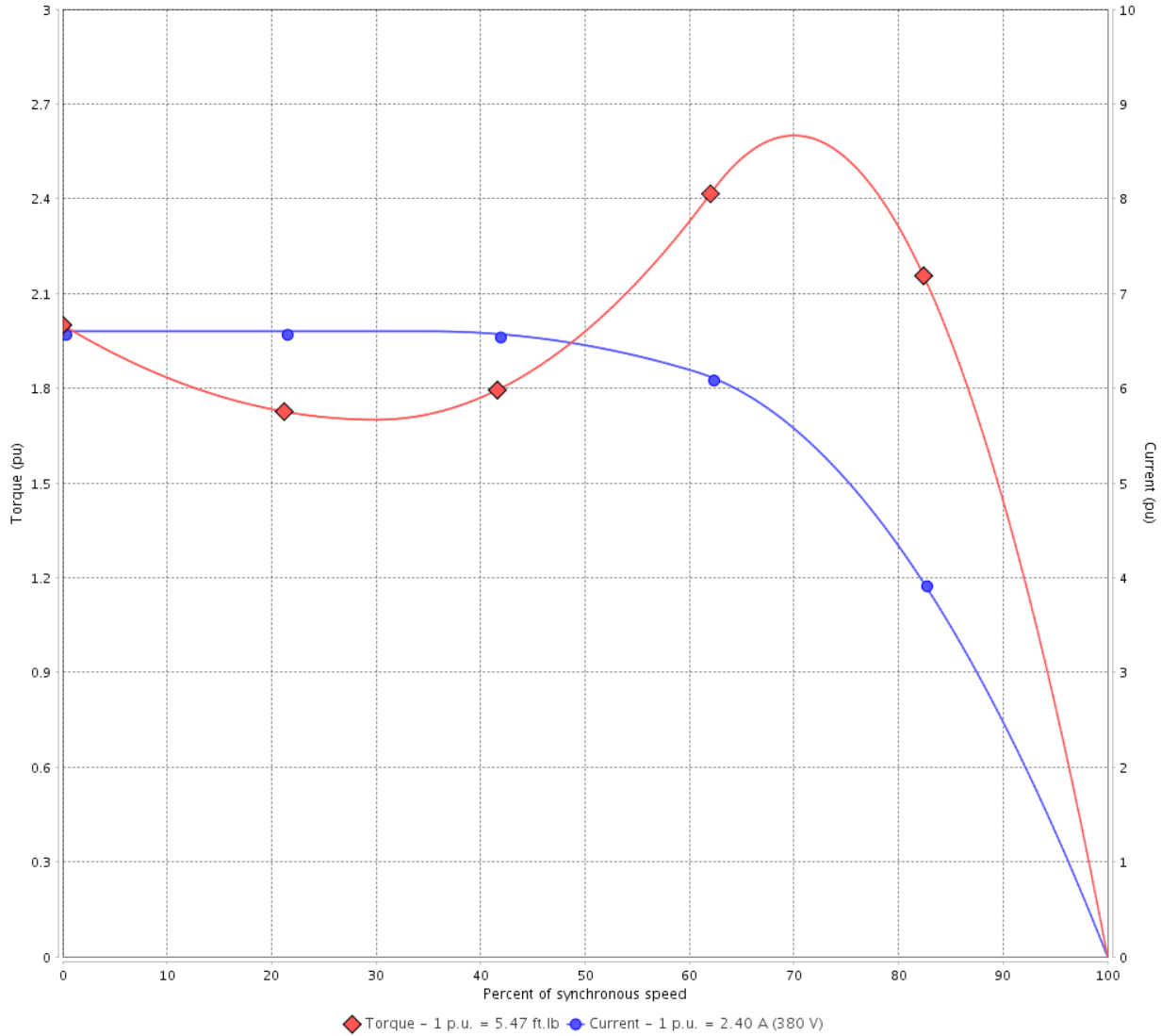
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 2.40 A	Moment of inertia (J)	: 0.1303 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 5.47 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



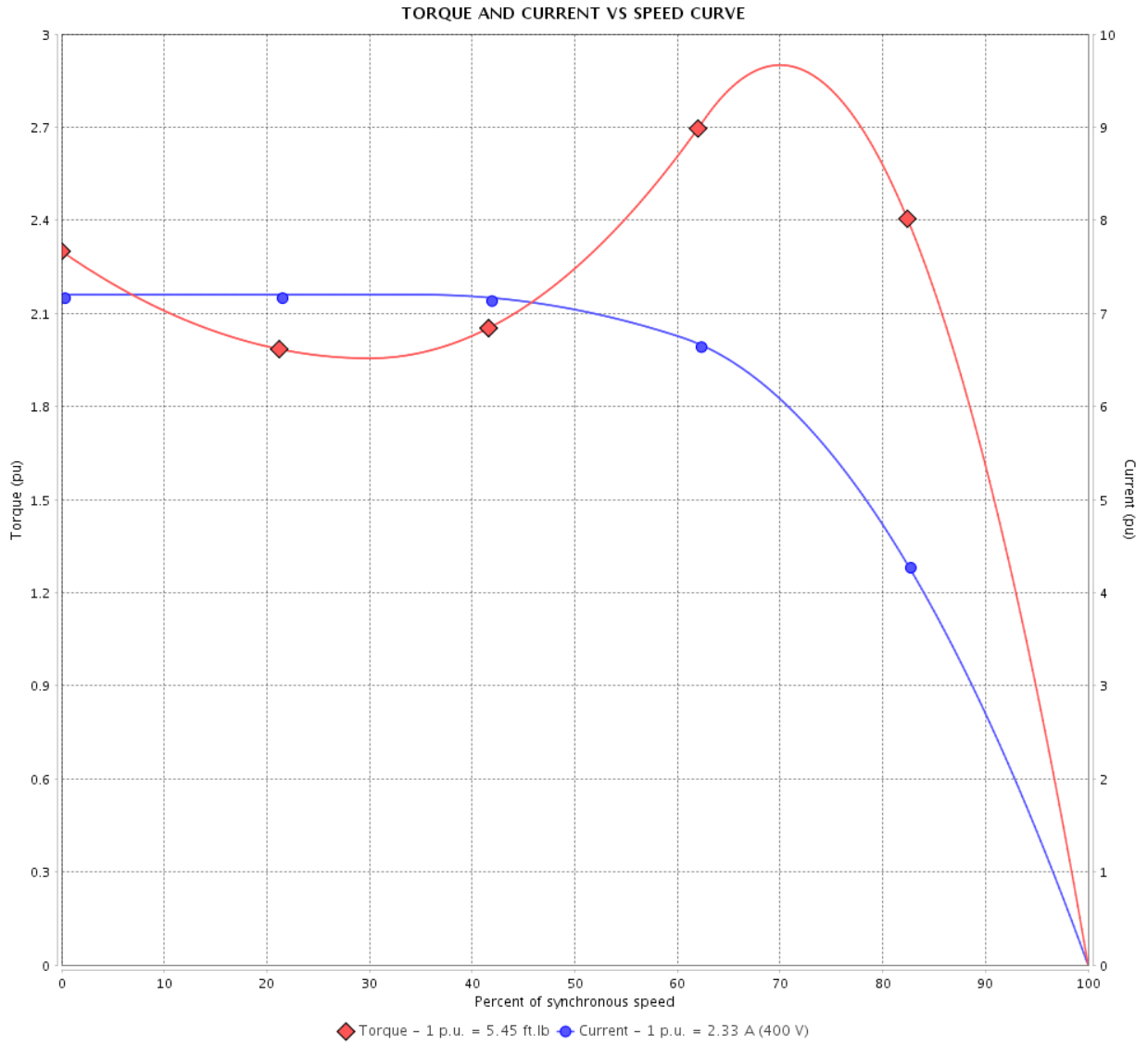
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T



Performance : 400 V 50 Hz 4P IE2

Rated current	: 2.33 A	Moment of inertia (J)	: 0.1303 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 5.45 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



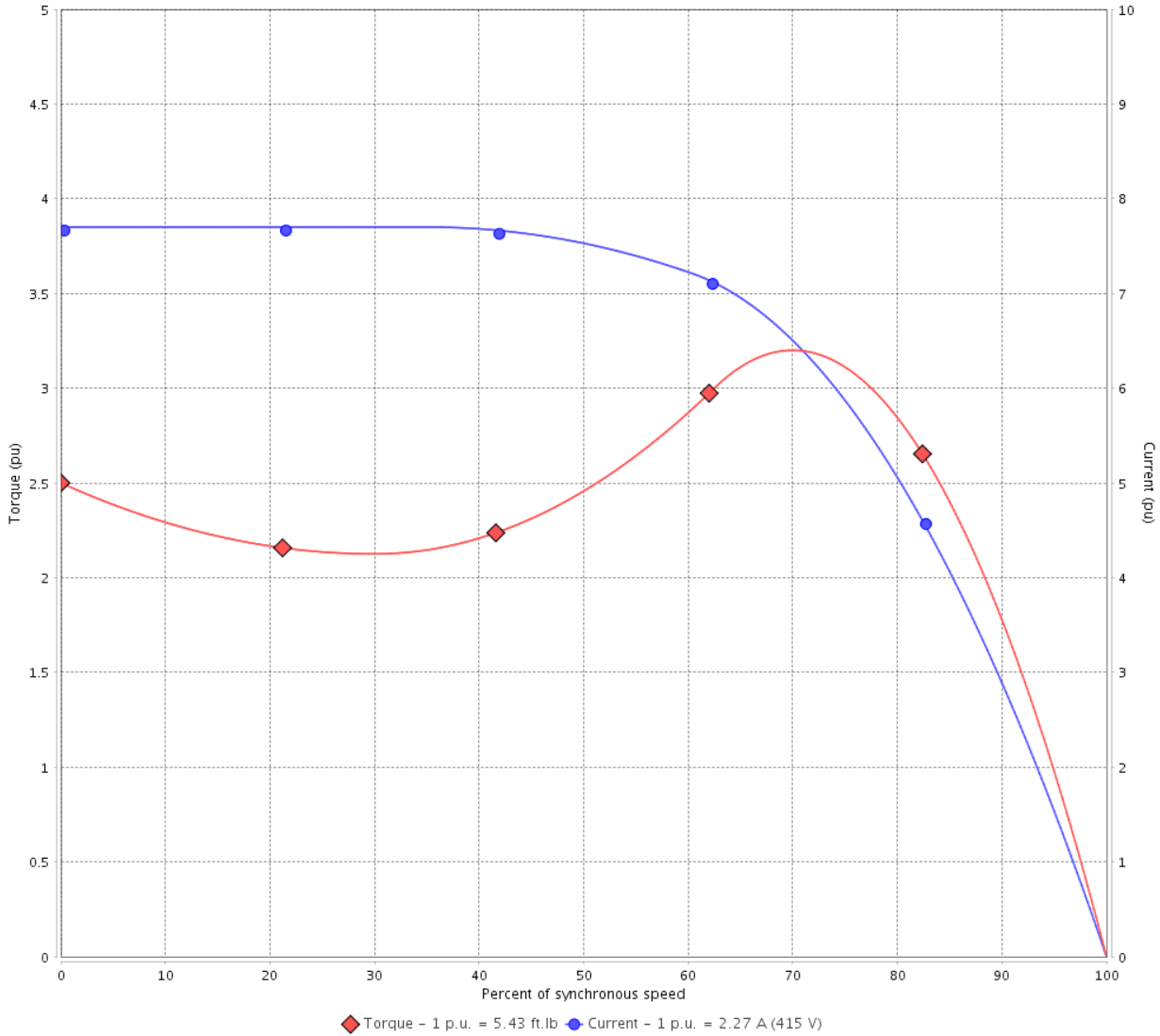
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 2.27 A	Moment of inertia (J)	: 0.1303 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 5.43 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

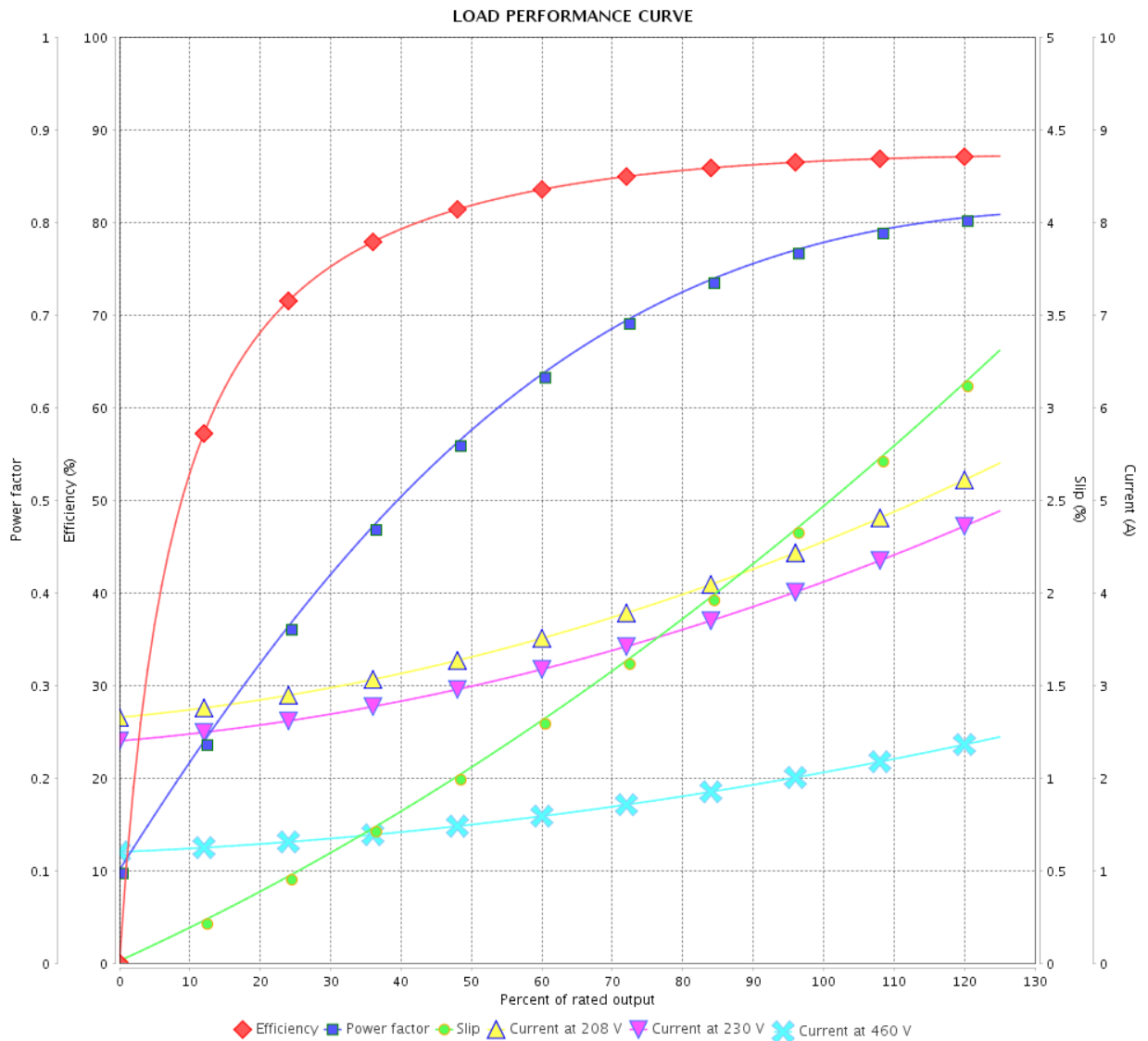


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T



Performance : 230/460 V 60 Hz 4P

Rated current : 4.10/2.05 A  
 LRC : 8.9  
 Rated torque : 4.49 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 350 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



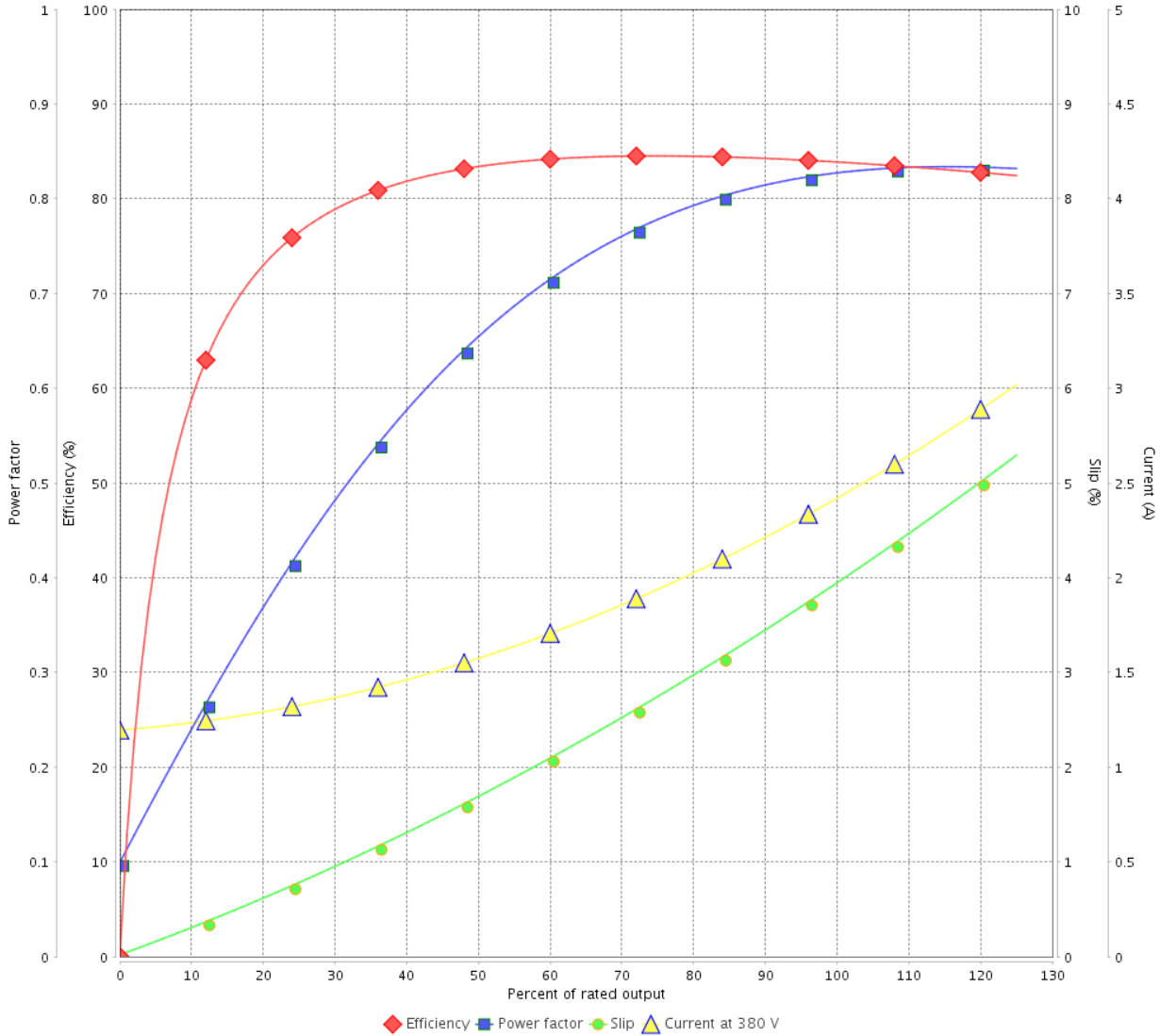
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 2.40 A  
 LRC : 6.6  
 Rated torque : 5.47 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 260 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

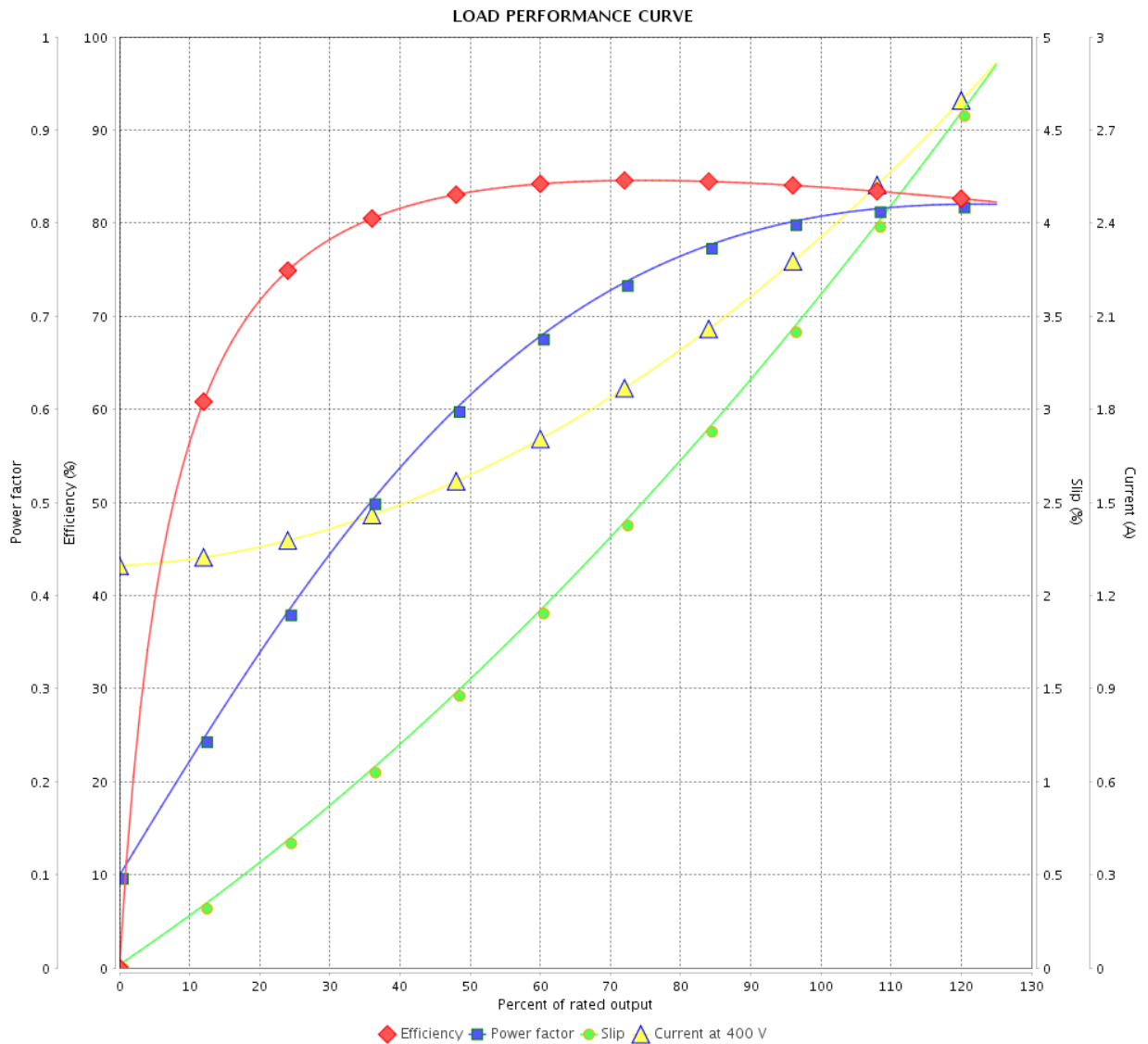


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T



Performance : 400 V 50 Hz 4P IE2

Rated current : 2.33 A  
 LRC : 7.2  
 Rated torque : 5.45 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 290 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



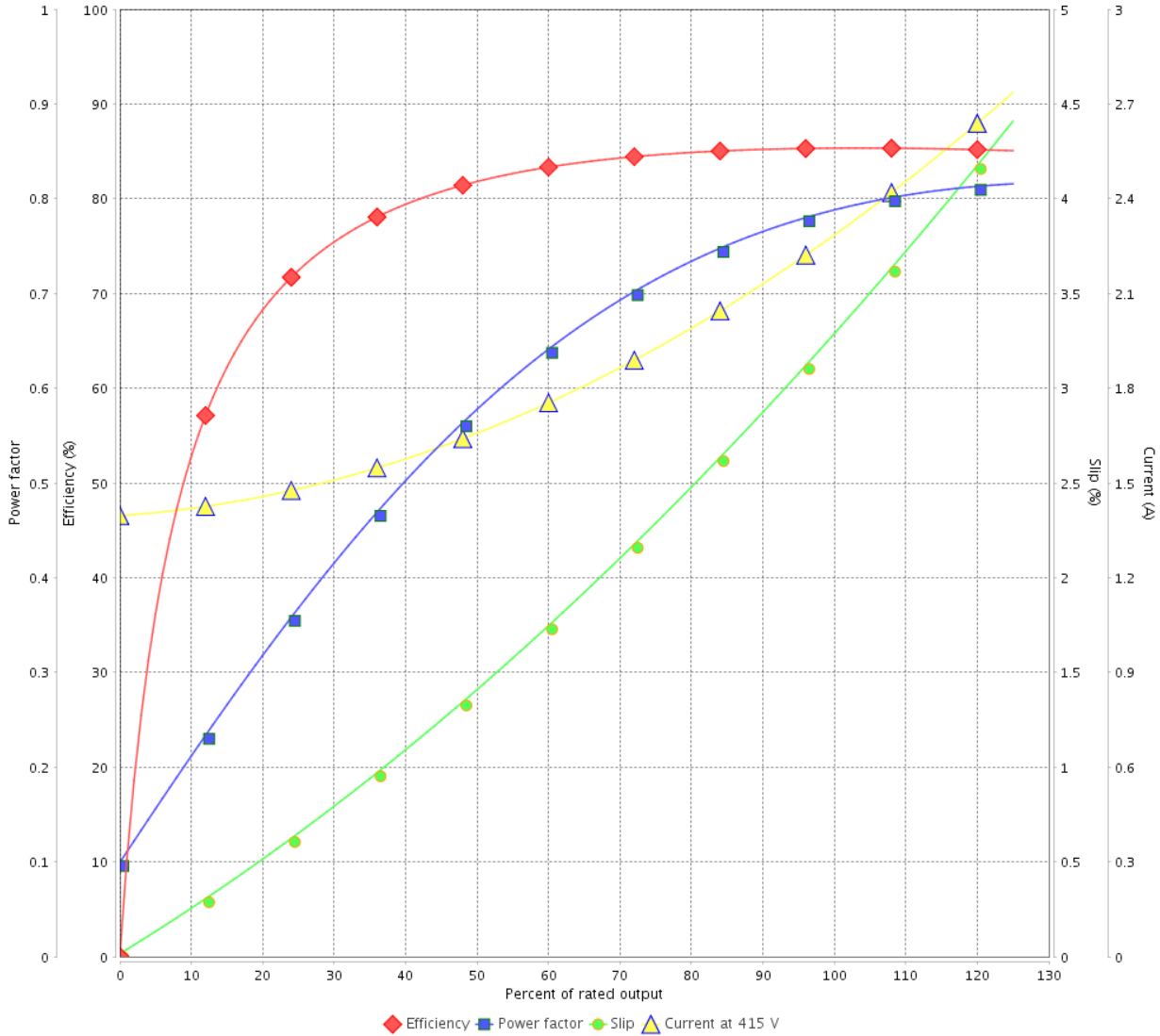
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current : 2.27 A  
 LRC : 7.7  
 Rated torque : 5.43 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14319266  
 Catalog # : 00158XT3E145T

Performance : 230/460 V 60 Hz 4P

Rated current : 4.10/2.05 A	Moment of inertia (J) : 0.1303 sq.ft.lb
LRC : 8.9	Duty cycle : Cont.(S1)
Rated torque : 4.49 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.15
Breakdown torque : 350 %	Temperature rise : 80 K
Rated speed : 1755 rpm	Design : B

Heating constant

Cooling constant

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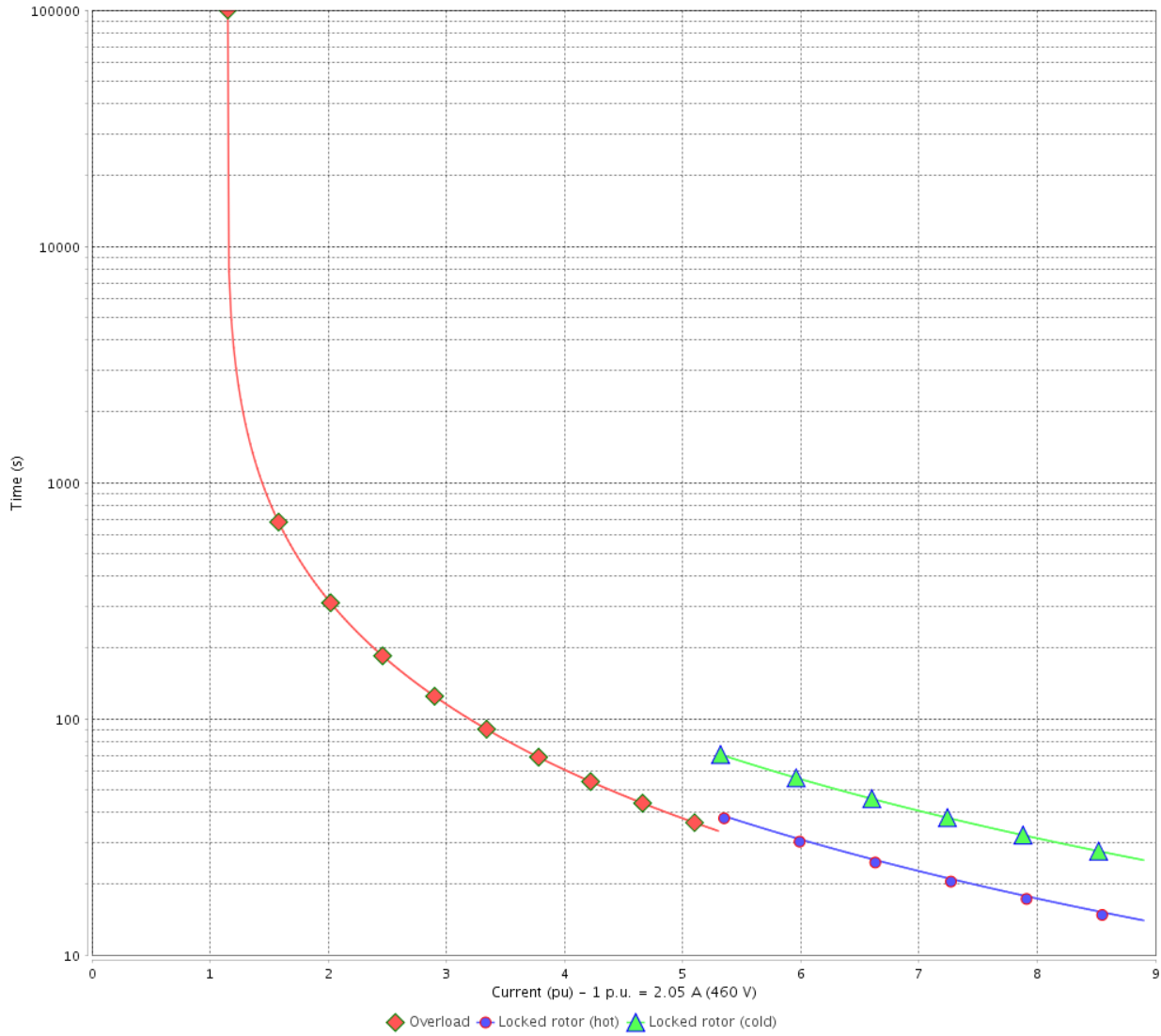
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Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14319266  
 Catalog # : 00158XT3E145T

Performance : 380 V 50 Hz 4P IE2

Rated current : 2.40 A	Moment of inertia (J) : 0.1303 sq.ft.lb
LRC : 6.6	Duty cycle : Cont.(S1)
Rated torque : 5.47 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1440 rpm	Design : B

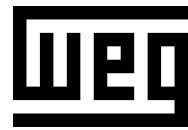
Heating constant

Cooling constant

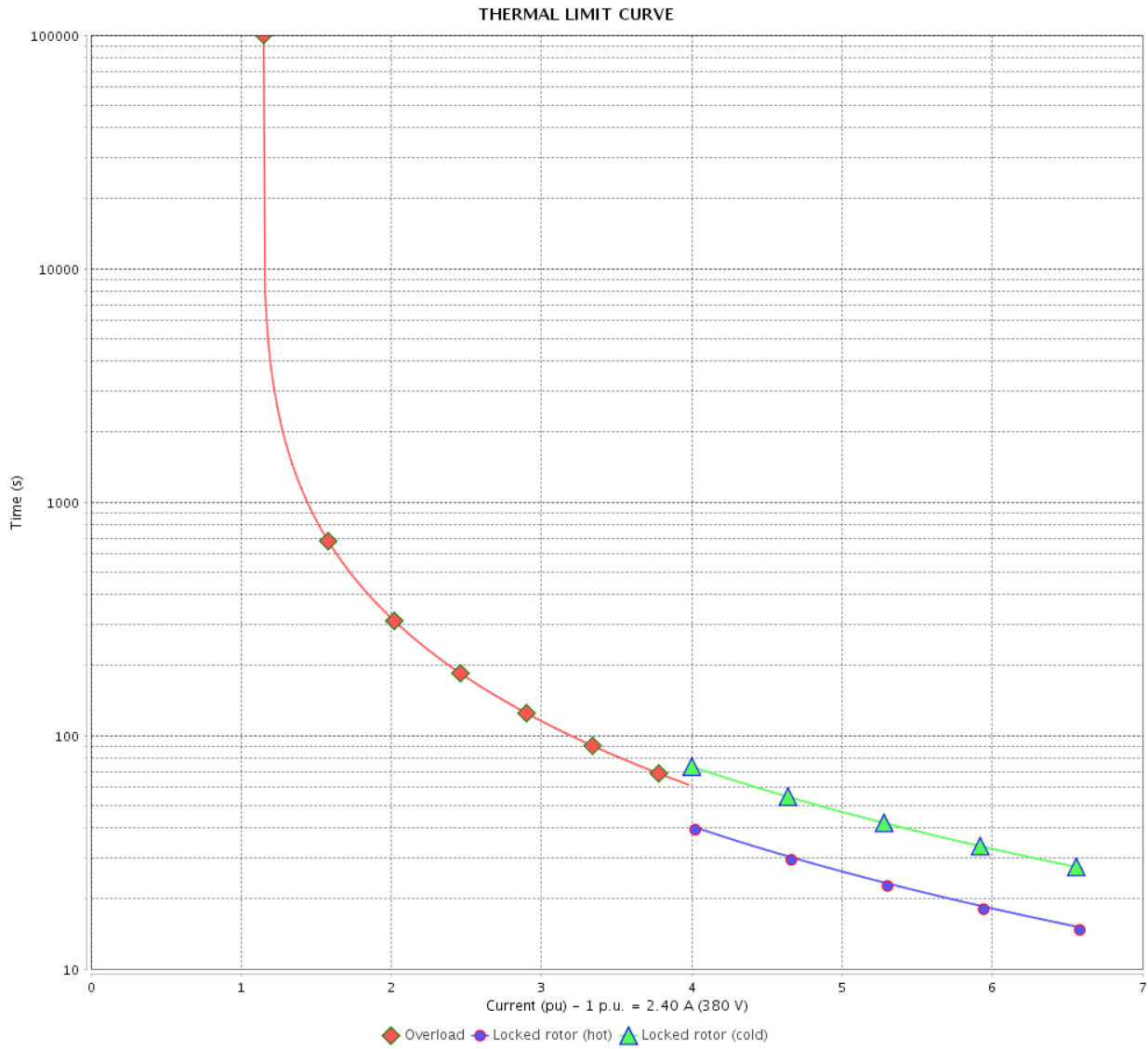
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Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14319266  
 Catalog # : 00158XT3E145T

Performance : 400 V 50 Hz 4P IE2

Rated current : 2.33 A	Moment of inertia (J) : 0.1303 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 5.45 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 1445 rpm	Design : B

Heating constant

Cooling constant

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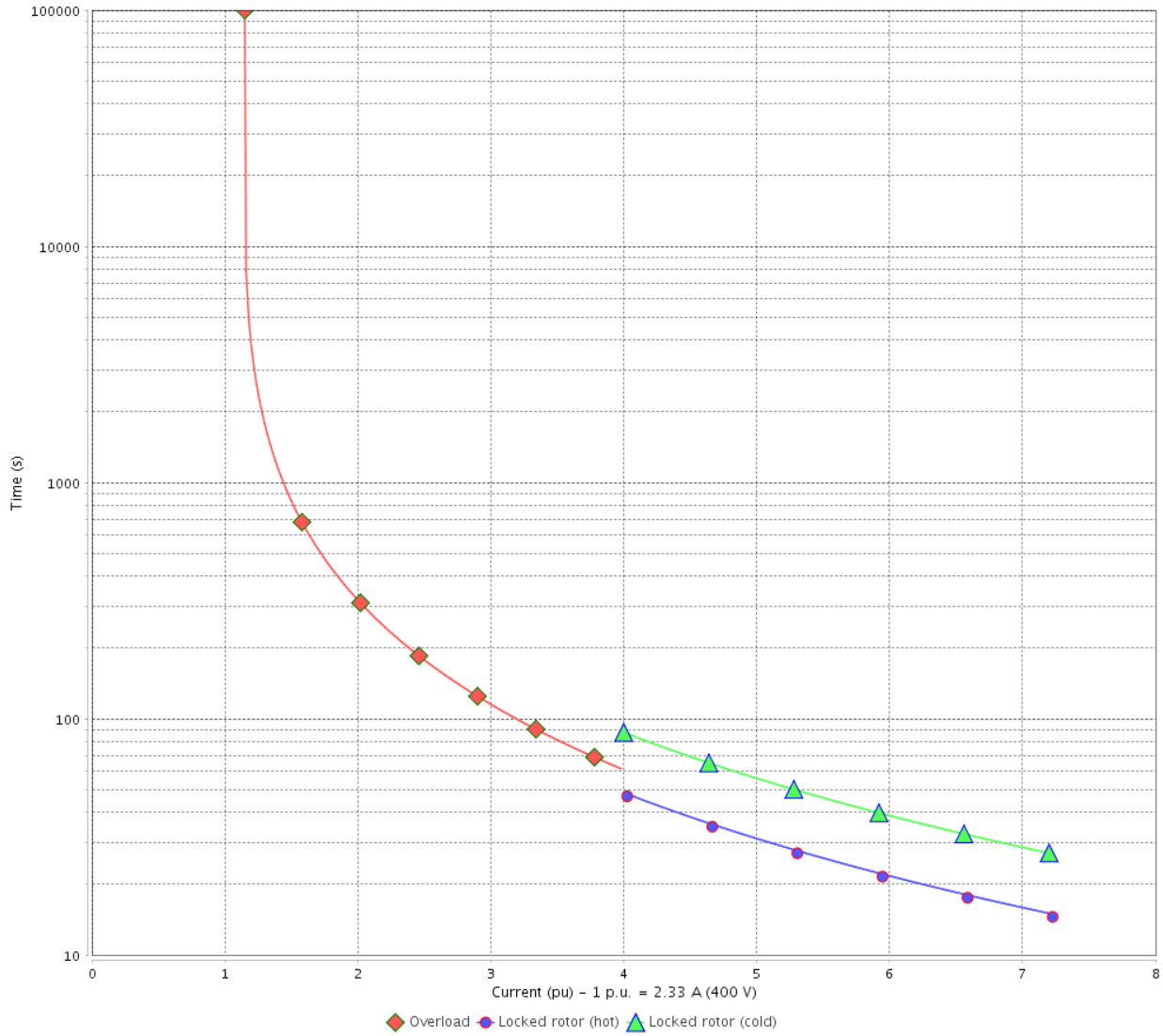
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14319266  
 Catalog # : 00158XT3E145T

Performance : 415 V 50 Hz 4P IE3

Rated current : 2.27 A	Moment of inertia (J) : 0.1303 sq.ft.lb
LRC : 7.7	Duty cycle : Cont.(S1)
Rated torque : 5.43 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1450 rpm	Design : B

Heating constant

Cooling constant

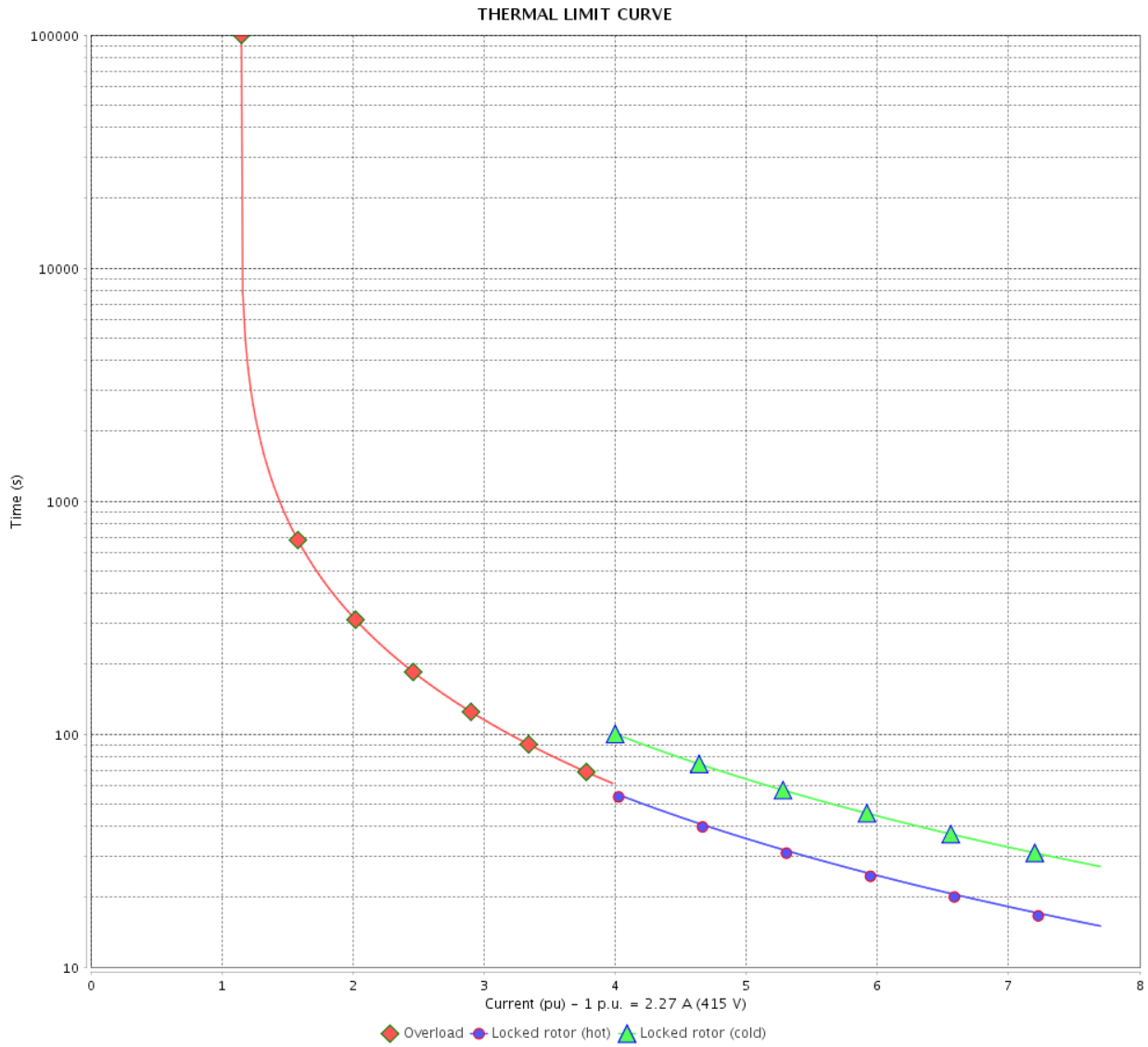
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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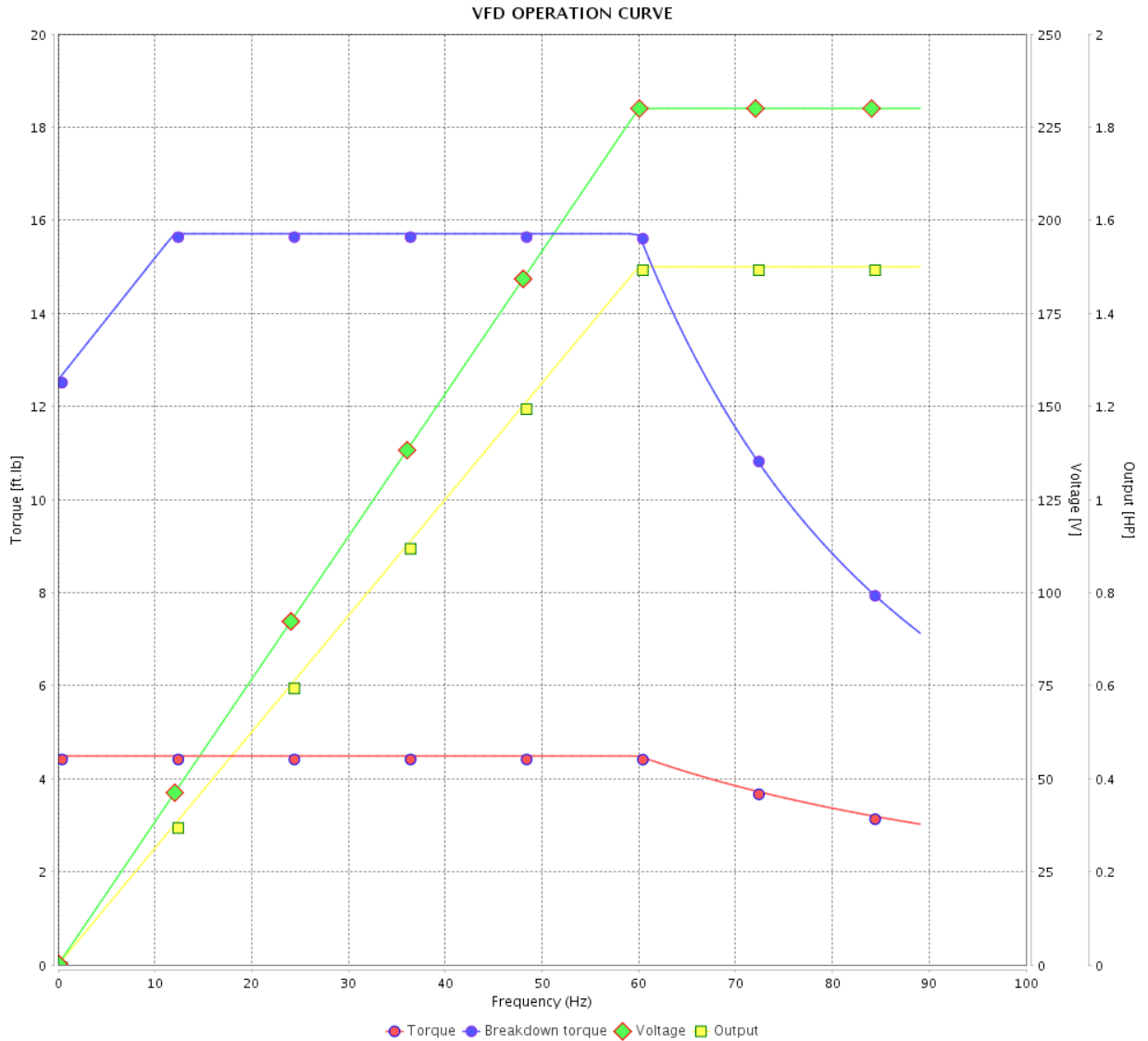
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14319266  
 Catalog # : 00158XT3E145T



Performance : 230/460 V 60 Hz 4P

Rated current : 4.10/2.05 A  
 LRC : 8.9  
 Rated torque : 4.49 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 350 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



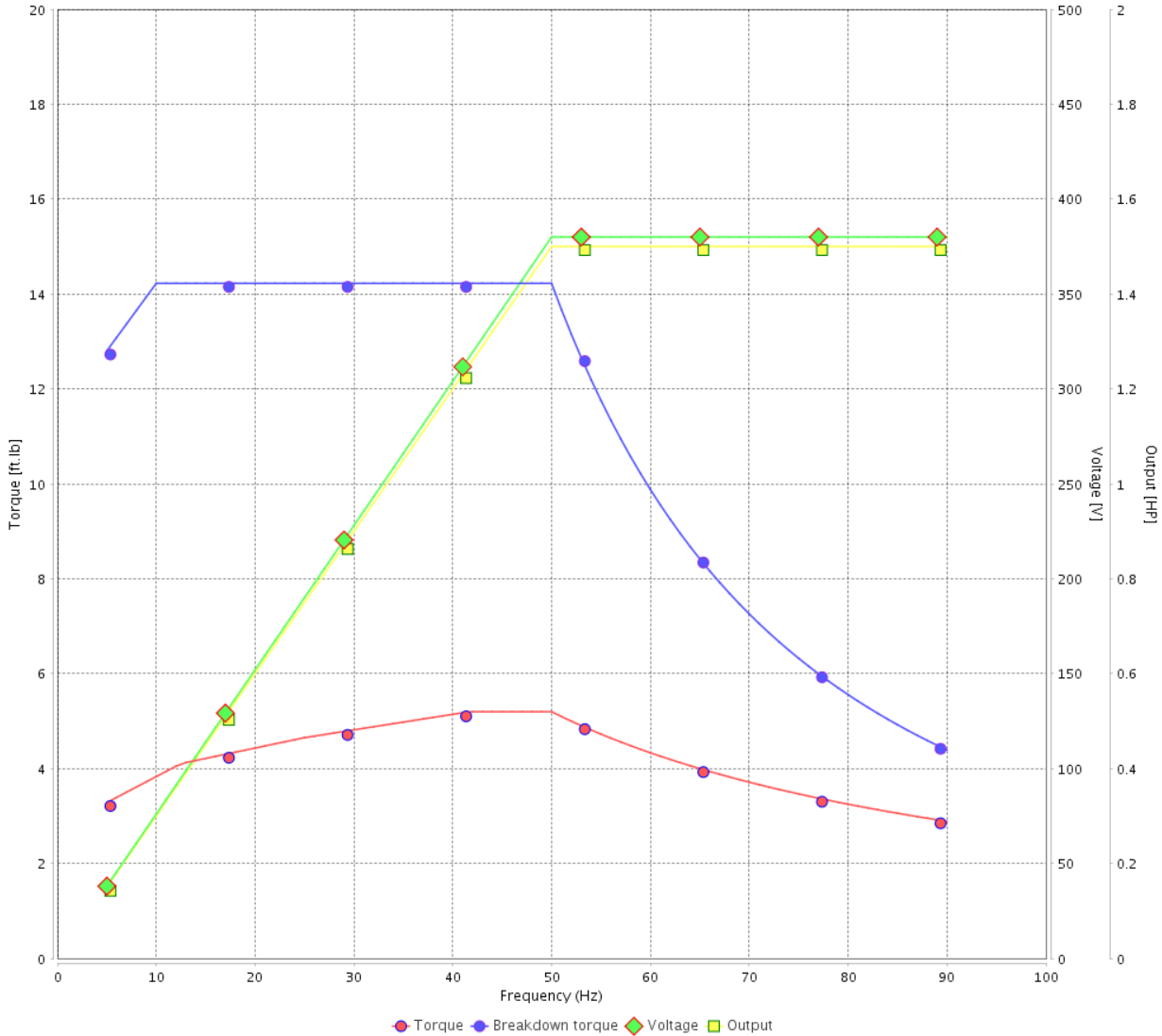
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 2.40 A  
 LRC : 6.6  
 Rated torque : 5.47 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 260 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

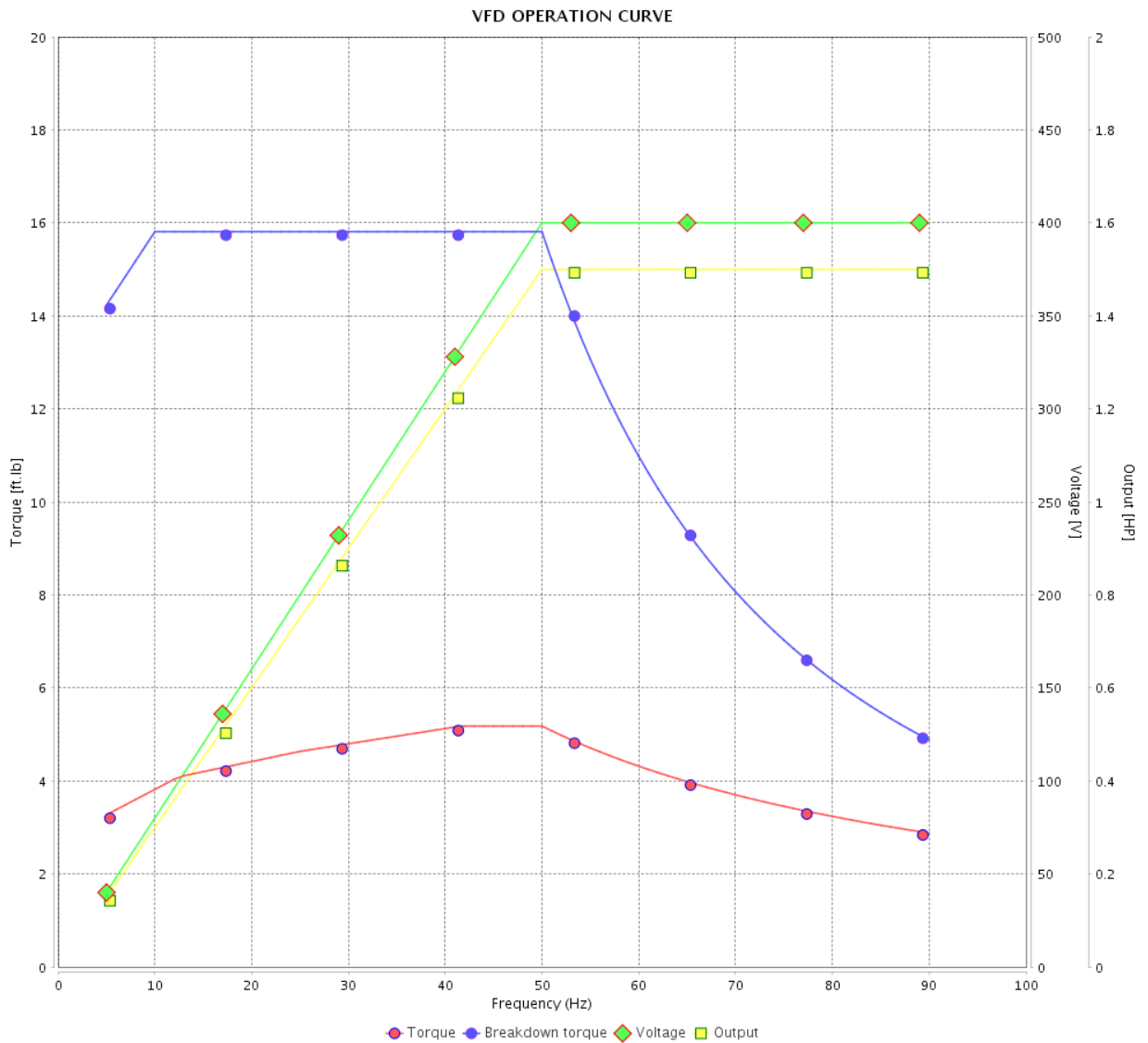


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14319266

Catalog # : 00158XT3E145T



Performance : 400 V 50 Hz 4P IE2

Rated current : 2.33 A  
 LRC : 7.2  
 Rated torque : 5.45 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 290 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



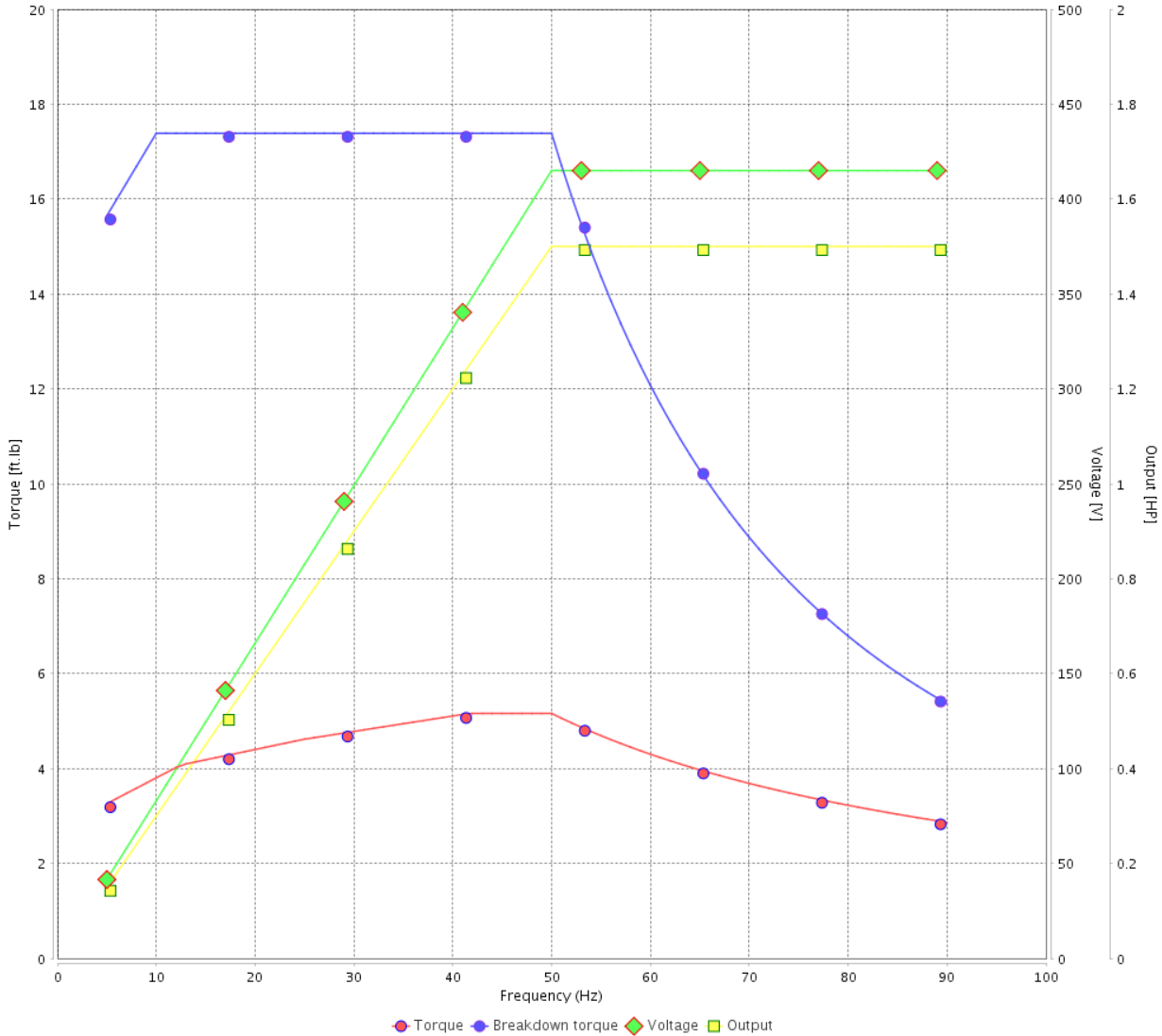
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Product code : 14319266

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VFD OPERATION CURVE

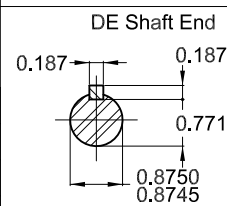
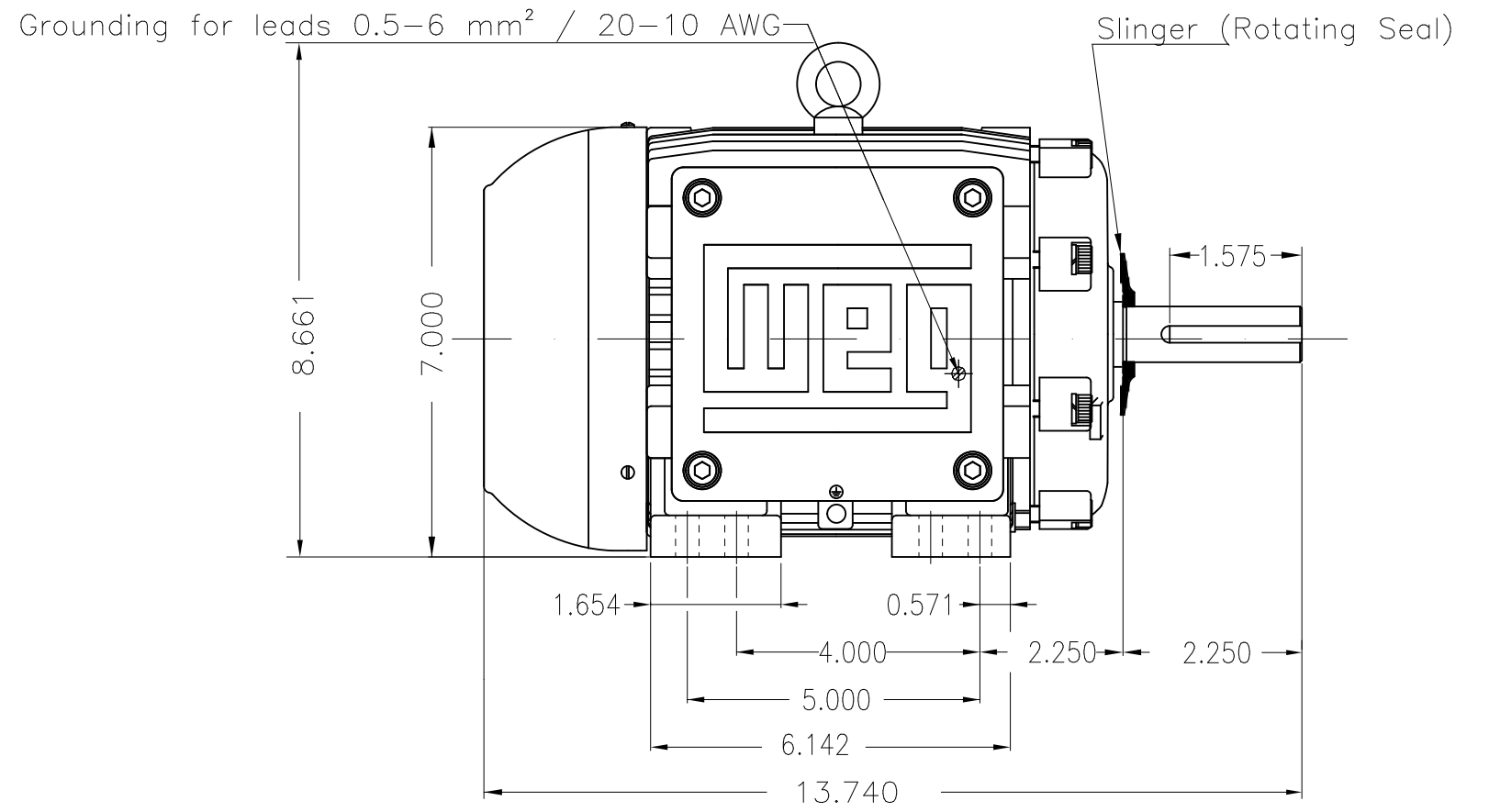
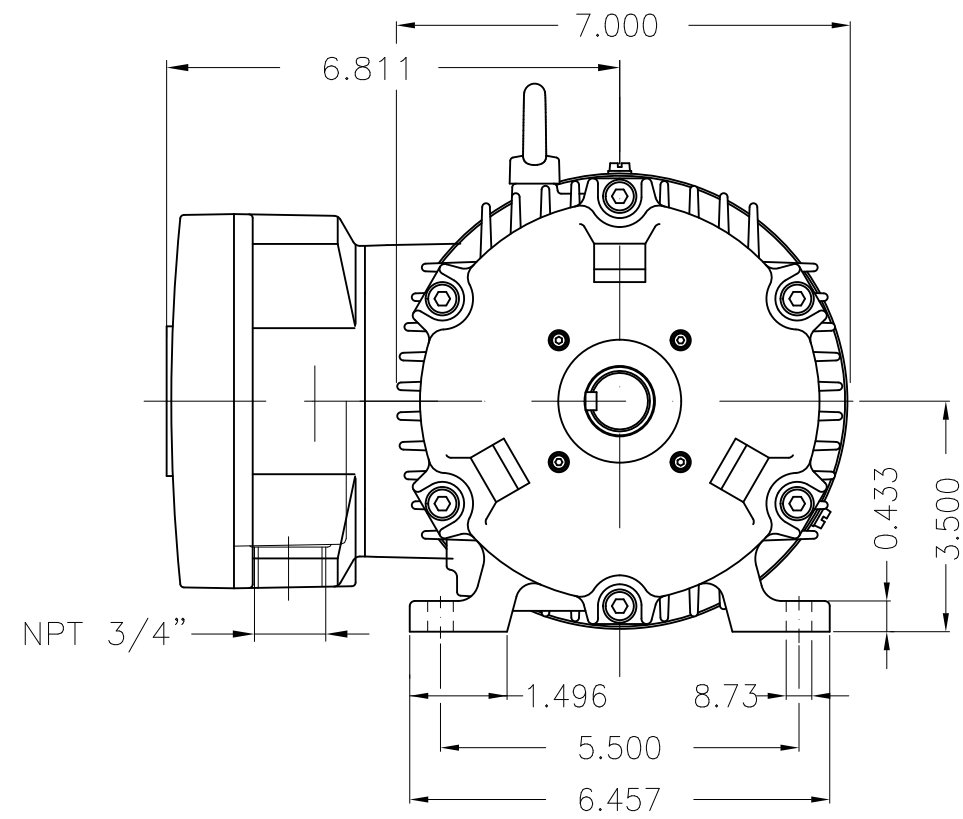


Performance : 415 V 50 Hz 4P IE3

Rated current : 2.27 A  
 LRC : 7.7  
 Rated torque : 5.43 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.1303 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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

1.5 HP 04 Poles 60 Hz

Dimensions in inches

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 143/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14319266

CC029A

*Inverter Duty Motor*  
*Severe Duty*

LISTED

MODEL 00158XT3E145T

PH 3 | FR 143/5T

HP(kW) 1.5(1.1)

HZ 60

IP55

V 230/460

A 4.10/2.05

RPM 1755

NEMA NOM EFF 86.5%

PF 0.78

SFA 4.71/2.36

DES B

INS CL F  $\Delta$ T 80 K | SF 1.15

ENCL TEFC

DUTY CONT.

CODE L

ALT 1000

m.a.s.l.

AMB 40°C

USABLE @208V

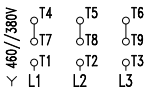
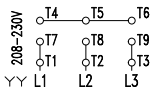
4.53 A

SF 1.15

SFA 5.21

AMB 55°C SF1.0

1.5HP 1.1kW 50Hz 380V 2.40A 1440RPM SF1.00 EFF 84.0% (IE2)



→ 6205-2RS MOBIL POLYREX EM

→ 6204-2RS

73 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.