

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14422358		
		Catalog # :	00109XT3E182T		
Frame	: 182/4T	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>	: 123 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.3991 sq.ft.lb		
Design	: B				
Output [HP]	1	1	1	1	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	4.80/2.40	2.52	2.56	2.61	
L. R. Amperes [A]	28.8/14.4	15.1	15.4	15.7	
LRC [A]	6.0x(Code N)	6.0x(Code L)	6.0x(Code M)	6.0x(Code N)	
No load current [A]	3.20/1.60	1.60	1.70	1.80	
Rated speed [RPM]	875	715	715	720	
Slip [%]	2.78	4.67	4.67	4.00	
Rated torque [ft.lb]	6.00	7.34	7.34	7.29	
Locked rotor torque [%]	300	240	270	300	
Breakdown torque [%]	350	250	280	310	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	39s (cold) 22s (hot)	39s (cold) 22s (hot)	39s (cold) 22s (hot)	39s (cold) 22s (hot)	
Noise level <sup>2</sup>	50.0 dB(A)	46.0 dB(A)	46.0 dB(A)	46.0 dB(A)	
Efficiency (%)	25%	73.7	74.4	71.5	68.4
	50%	74.0	74.7	72.0	70.0
	75%	75.5	75.5	75.5	74.0
	100%	75.5	75.5	75.5	75.5
Power Factor	25%	0.18	0.22	0.20	0.19
	50%	0.32	0.38	0.35	0.33
	75%	0.42	0.50	0.46	0.43
	100%	0.52	0.60	0.56	0.53
Bearing type	: Drive end : 6307 2RS Non drive end : 6206 2RS	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 82 lb		
Lubrication interval	: - -	Max. compression	: 206 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 5.09A SF 1.15 SFA 5.85A					
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



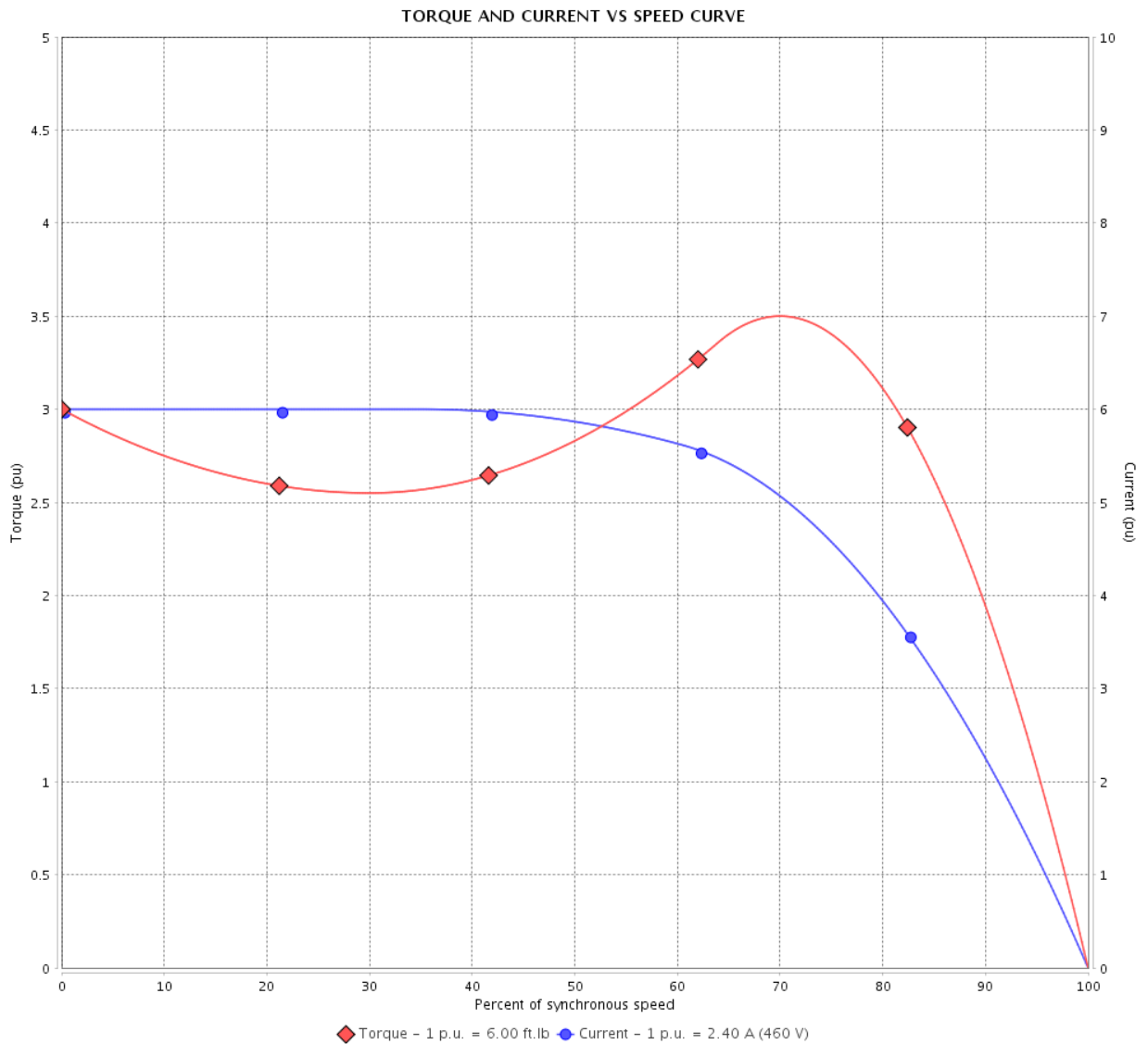
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 230/460 V 60 Hz 8P

Rated current : 4.80/2.40 A  
 LRC : 6.0  
 Rated torque : 6.00 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 875 rpm

Moment of inertia (J) : 0.3991 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



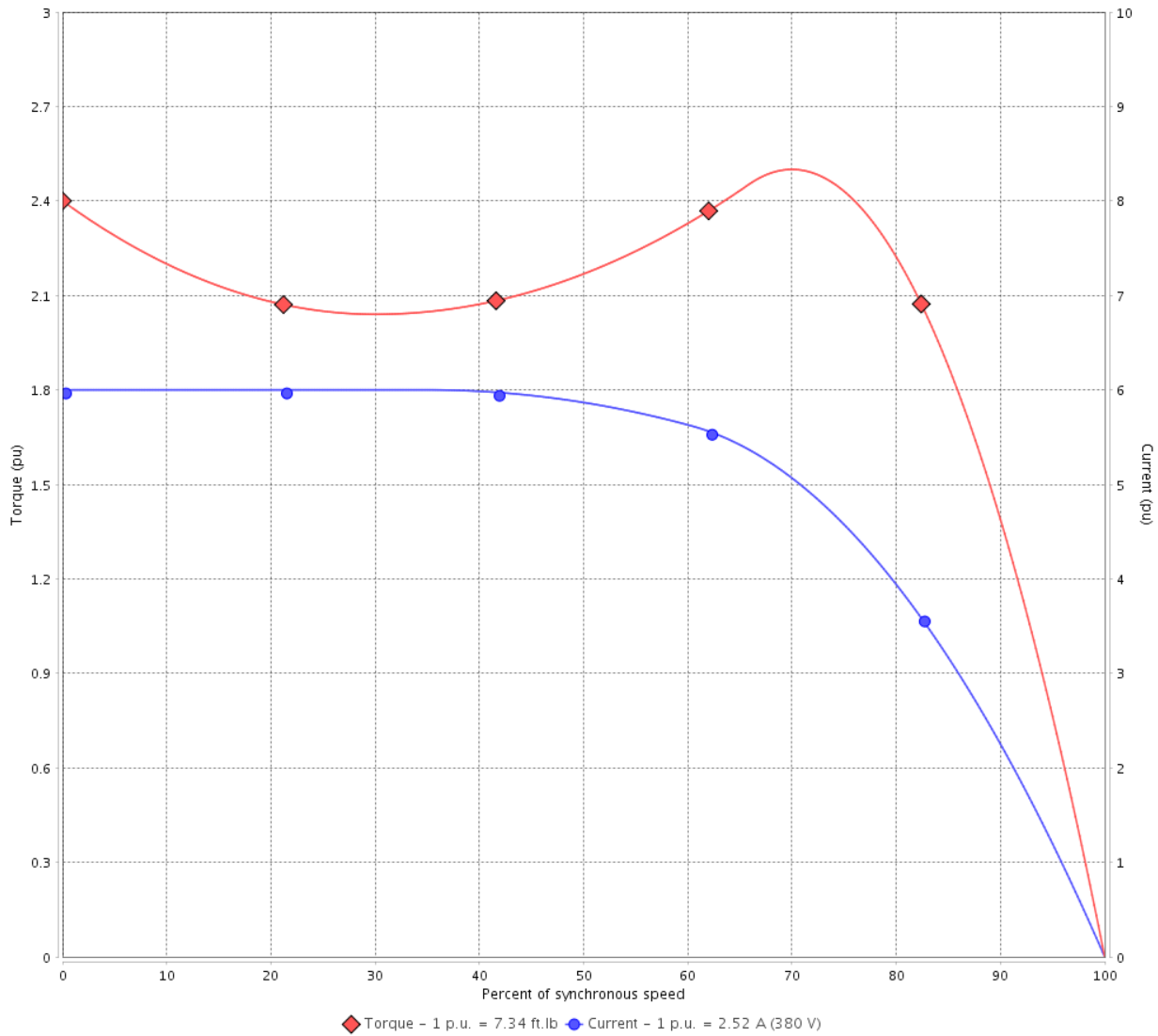
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current	: 2.52 A	Moment of inertia (J)	: 0.3991 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.34 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



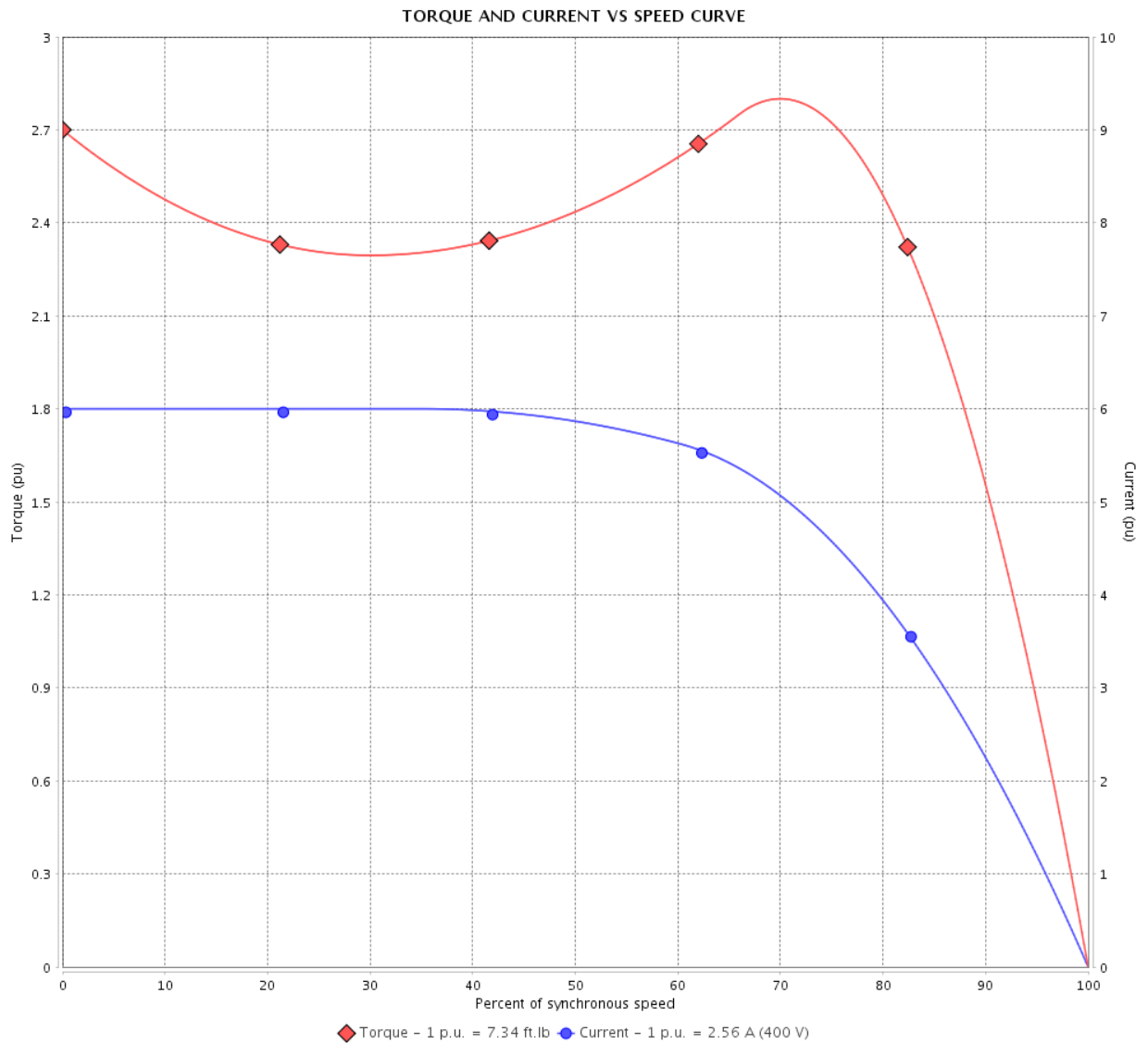
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 400 V 50 Hz 8P IE3

Rated current	: 2.56 A	Moment of inertia (J)	: 0.3991 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.34 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



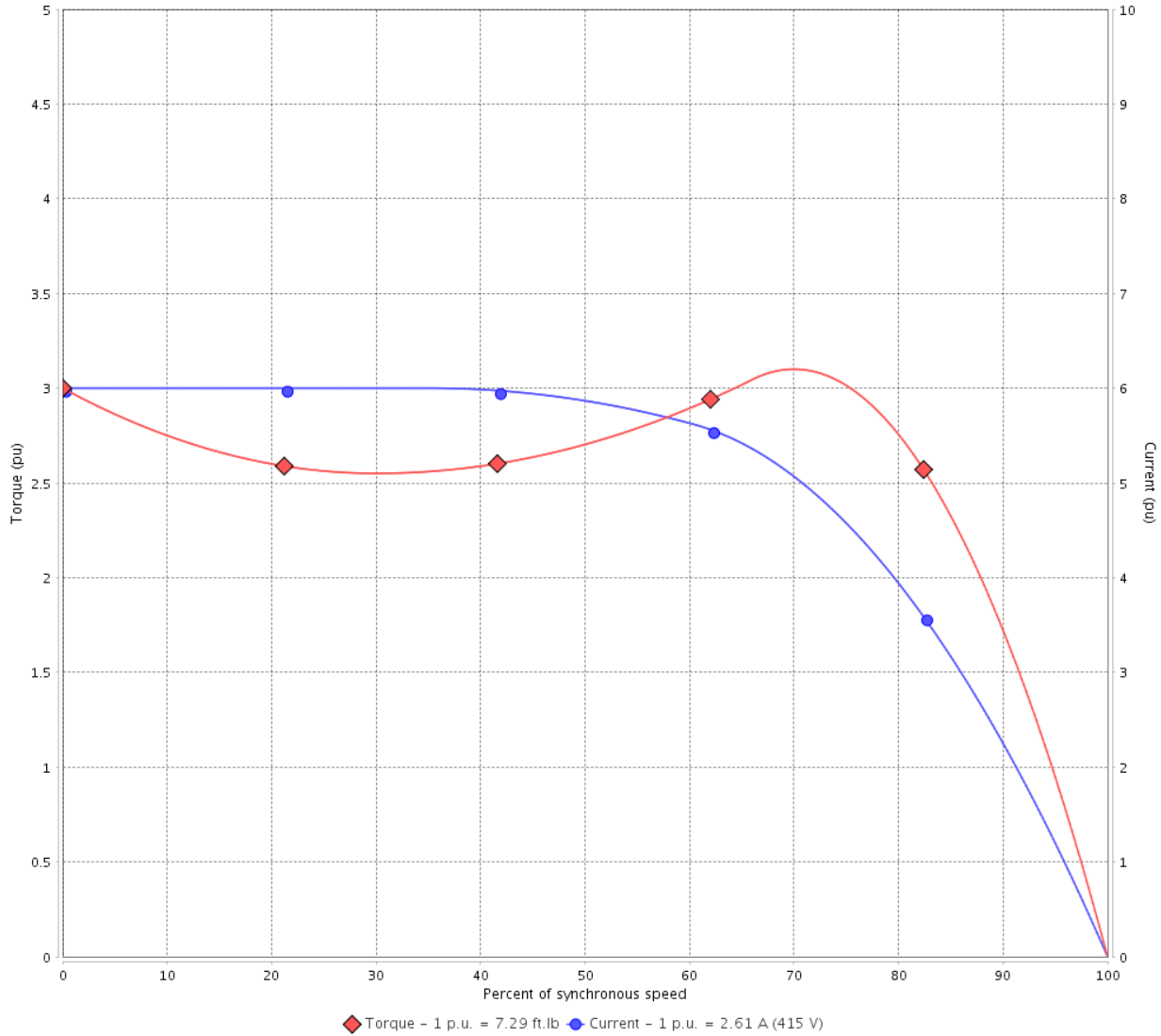
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE3

Rated current	: 2.61 A	Moment of inertia (J)	: 0.3991 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 7.29 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

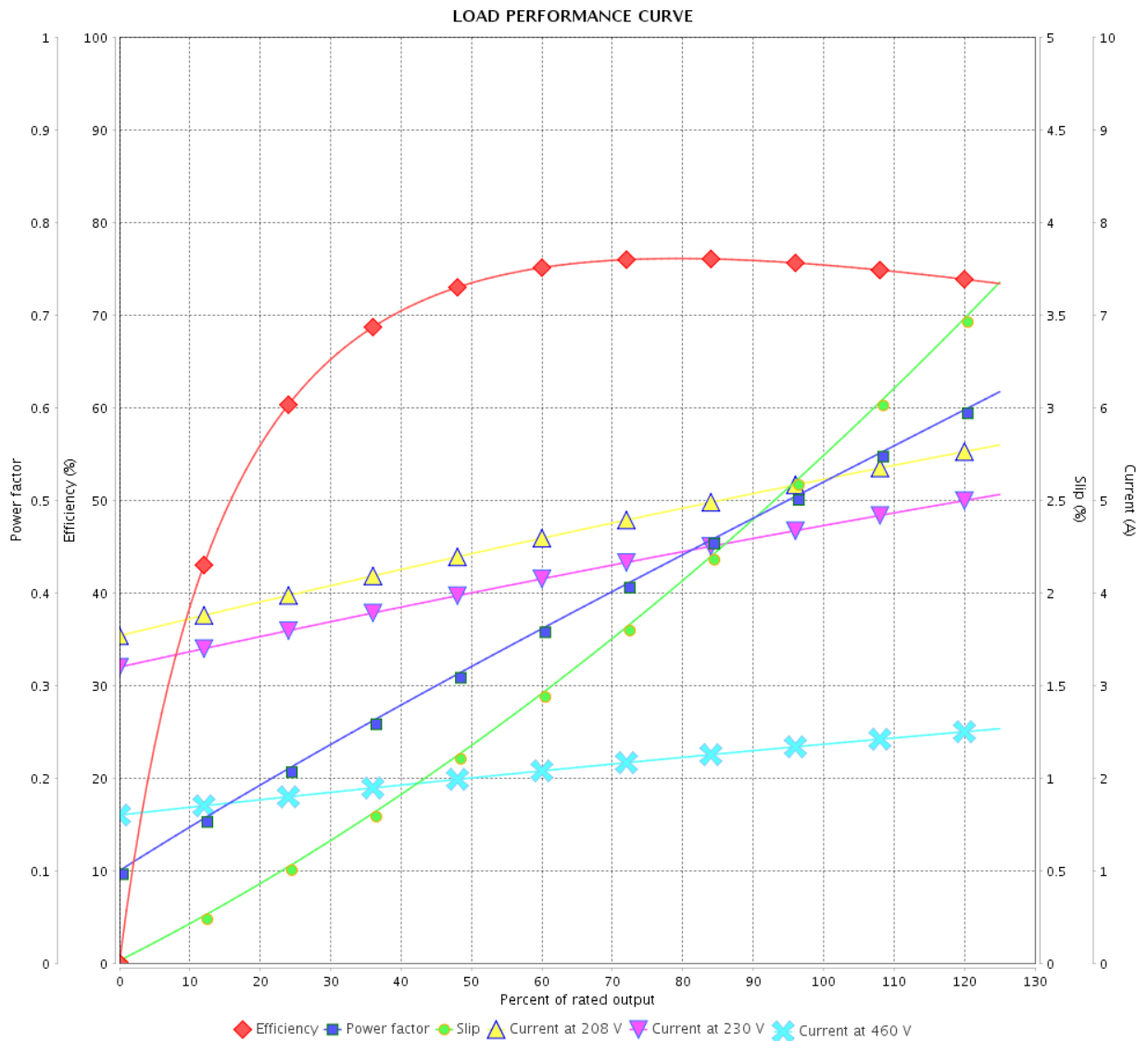


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 230/460 V 60 Hz 8P

Rated current : 4.80/2.40 A  
 LRC : 6.0  
 Rated torque : 6.00 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 875 rpm

Moment of inertia (J) : 0.3991 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



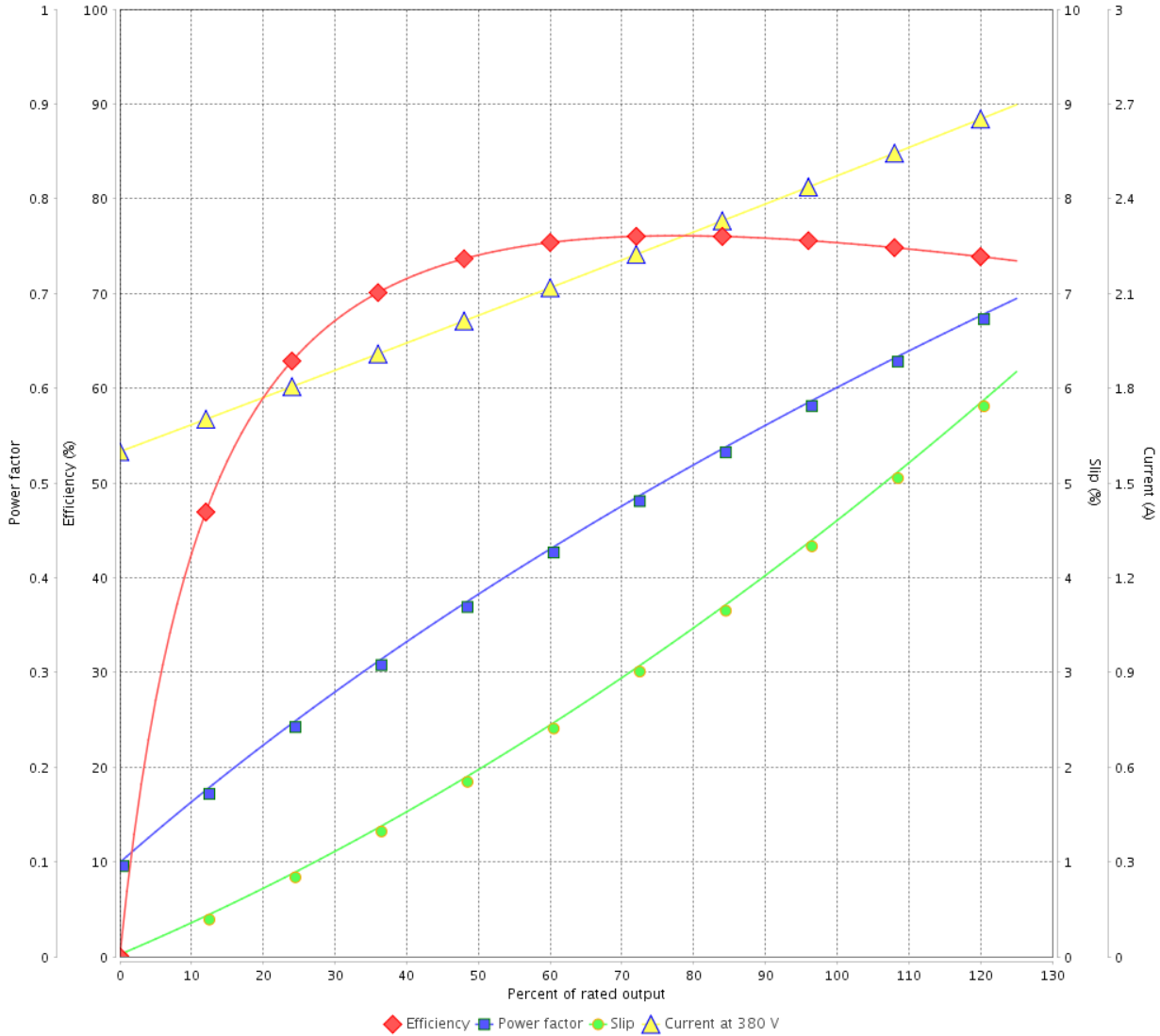
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current : 2.52 A  
 LRC : 6.0  
 Rated torque : 7.34 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.3991 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

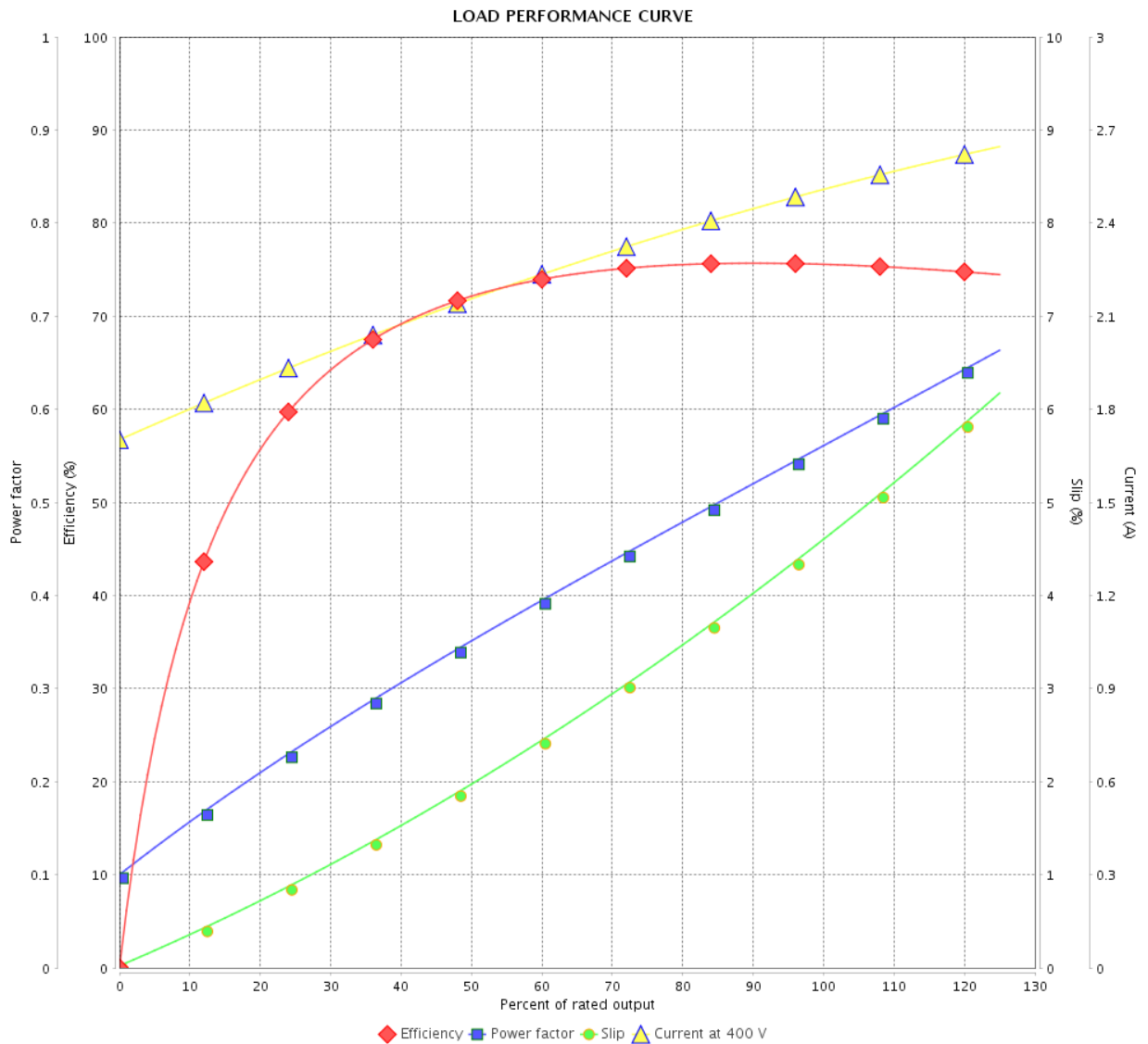


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 400 V 50 Hz 8P IE3

Rated current : 2.56 A  
 LRC : 6.0  
 Rated torque : 7.34 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 280 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.3991 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



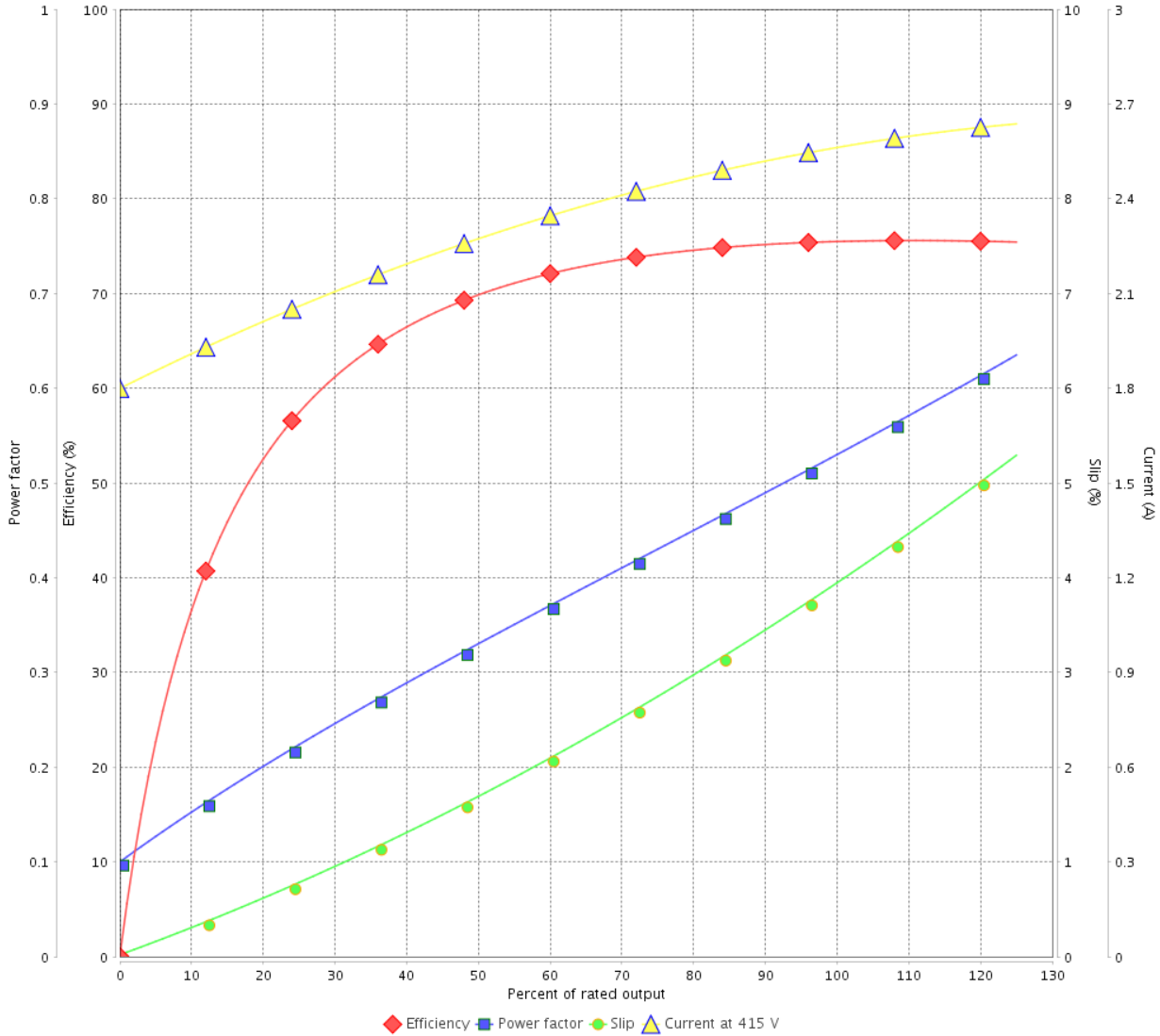
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Performance : 415 V 50 Hz 8P IE3

Rated current : 2.61 A  
 LRC : 6.0  
 Rated torque : 7.29 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 310 %  
 Rated speed : 720 rpm

Moment of inertia (J) : 0.3991 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



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 Product code : 14422358  
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Performance : 230/460 V 60 Hz 8P

Rated current : 4.80/2.40 A	Moment of inertia (J) : 0.3991 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 6.00 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.15
Breakdown torque : 350 %	Temperature rise : 80 K
Rated speed : 875 rpm	Design : B

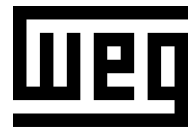
Heating constant

Cooling constant

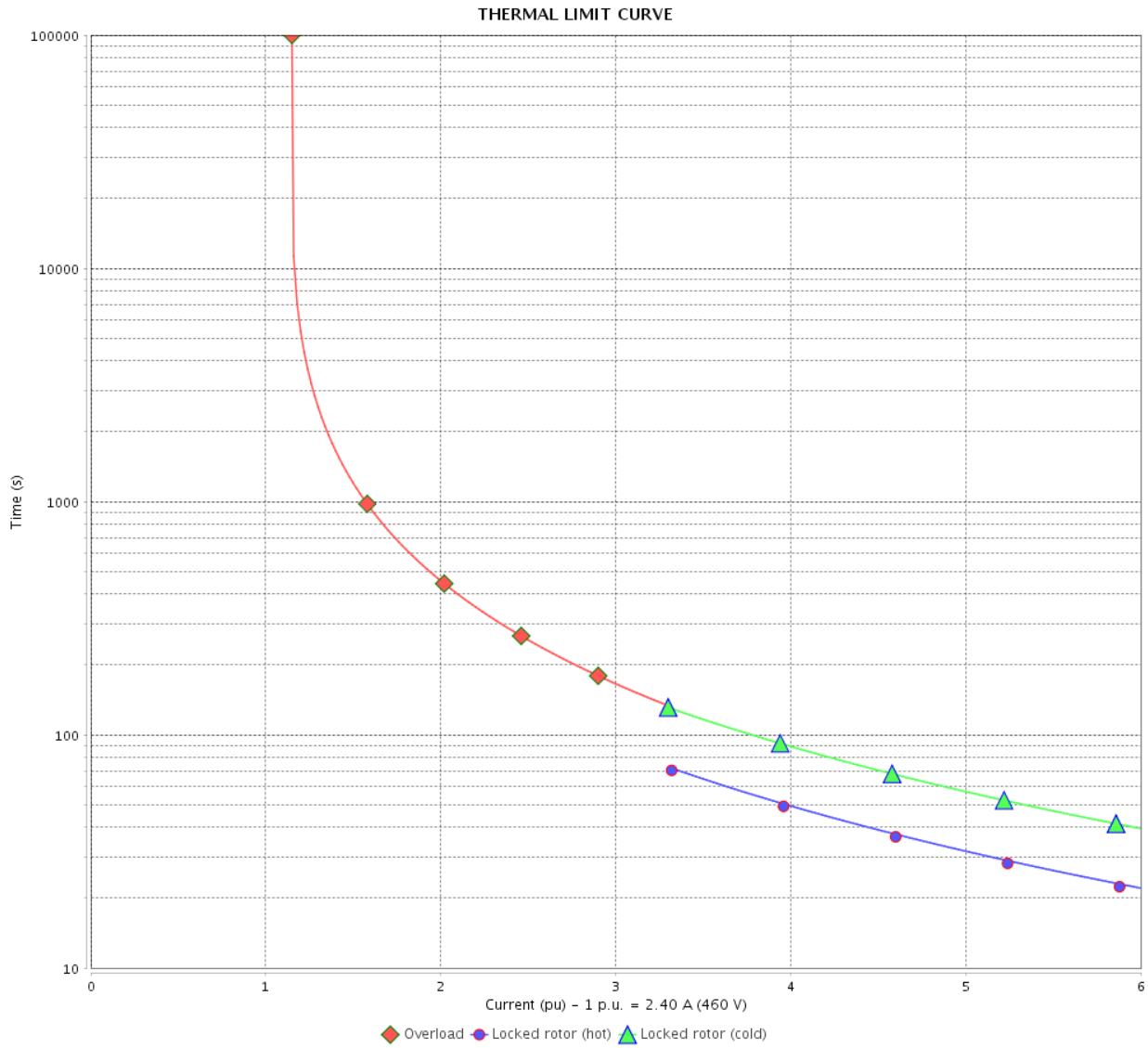
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14422358  
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Performance : 380 V 50 Hz 8P IE3

Rated current : 2.52 A	Moment of inertia (J) : 0.3991 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 7.34 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

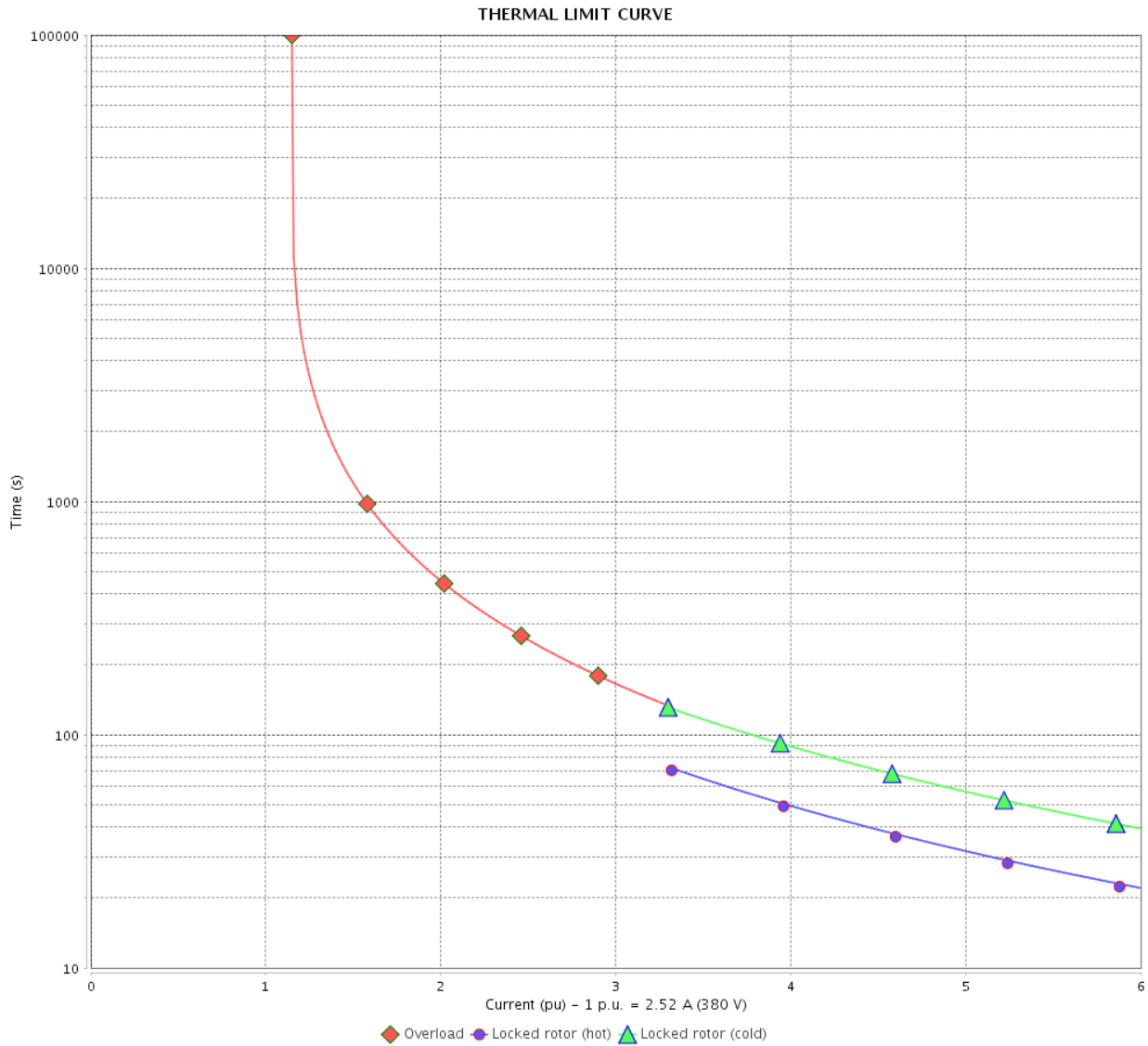
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14422358  
 Catalog # : 00109XT3E182T

Performance : 400 V 50 Hz 8P IE3

Rated current : 2.56 A	Moment of inertia (J) : 0.3991 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 7.34 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

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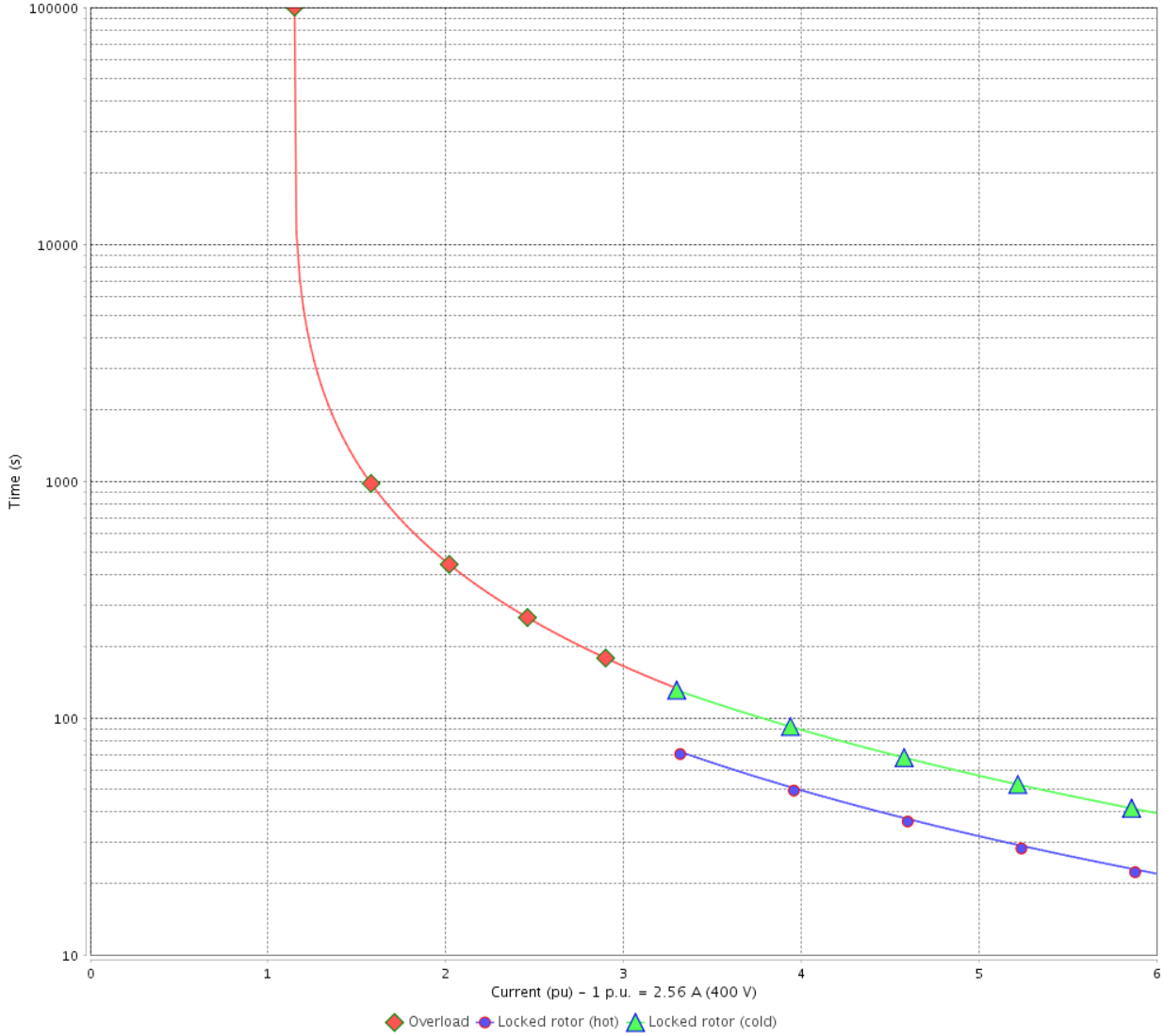
# THERMAL LIMIT CURVE

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 : 14422358  
 Catalog # : 00109XT3E182T

Performance : 415 V 50 Hz 8P IE3

Rated current : 2.61 A	Moment of inertia (J) : 0.3991 sq.ft.lb
LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 7.29 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 720 rpm	Design : B

Heating constant

Cooling constant

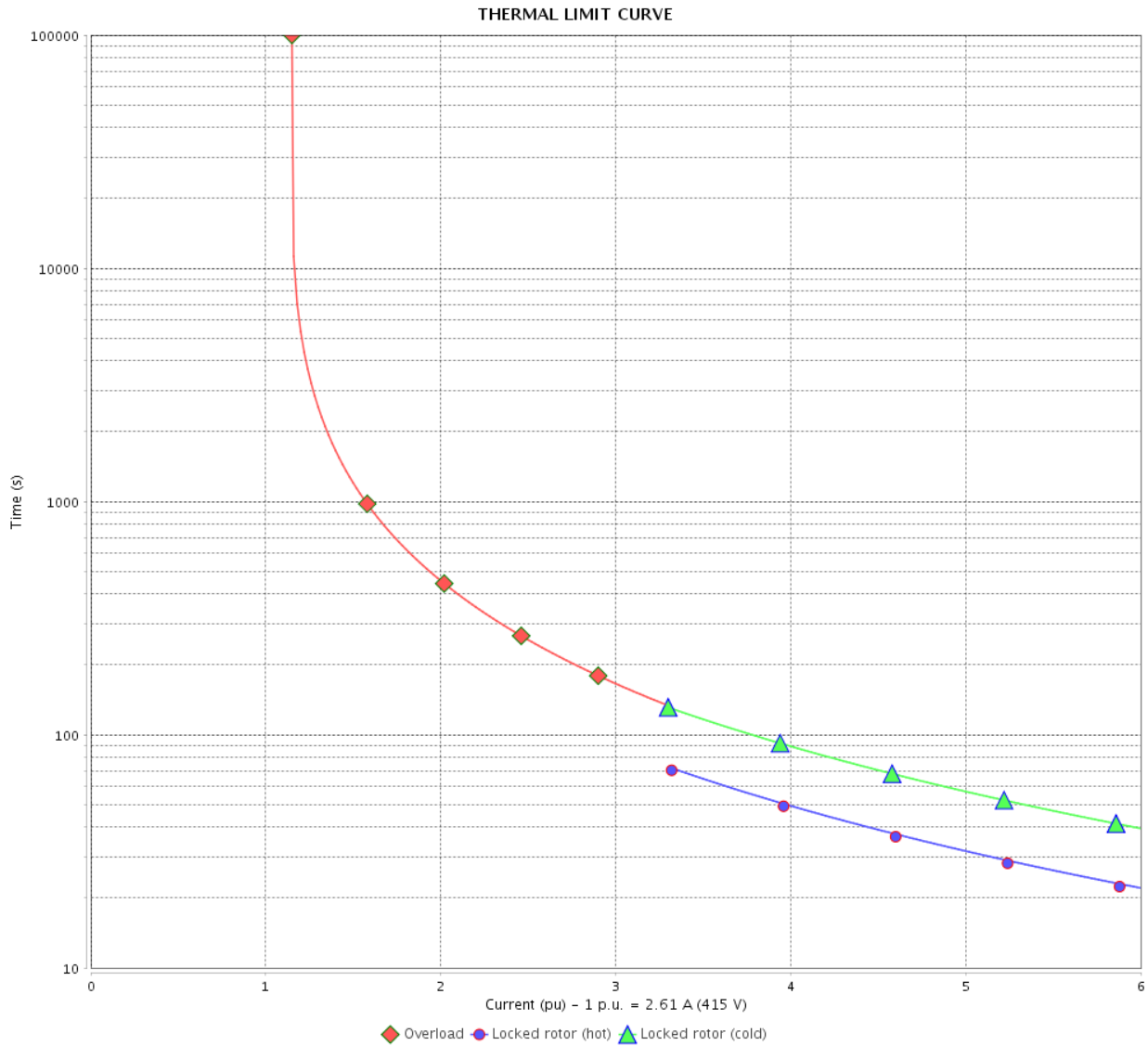
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

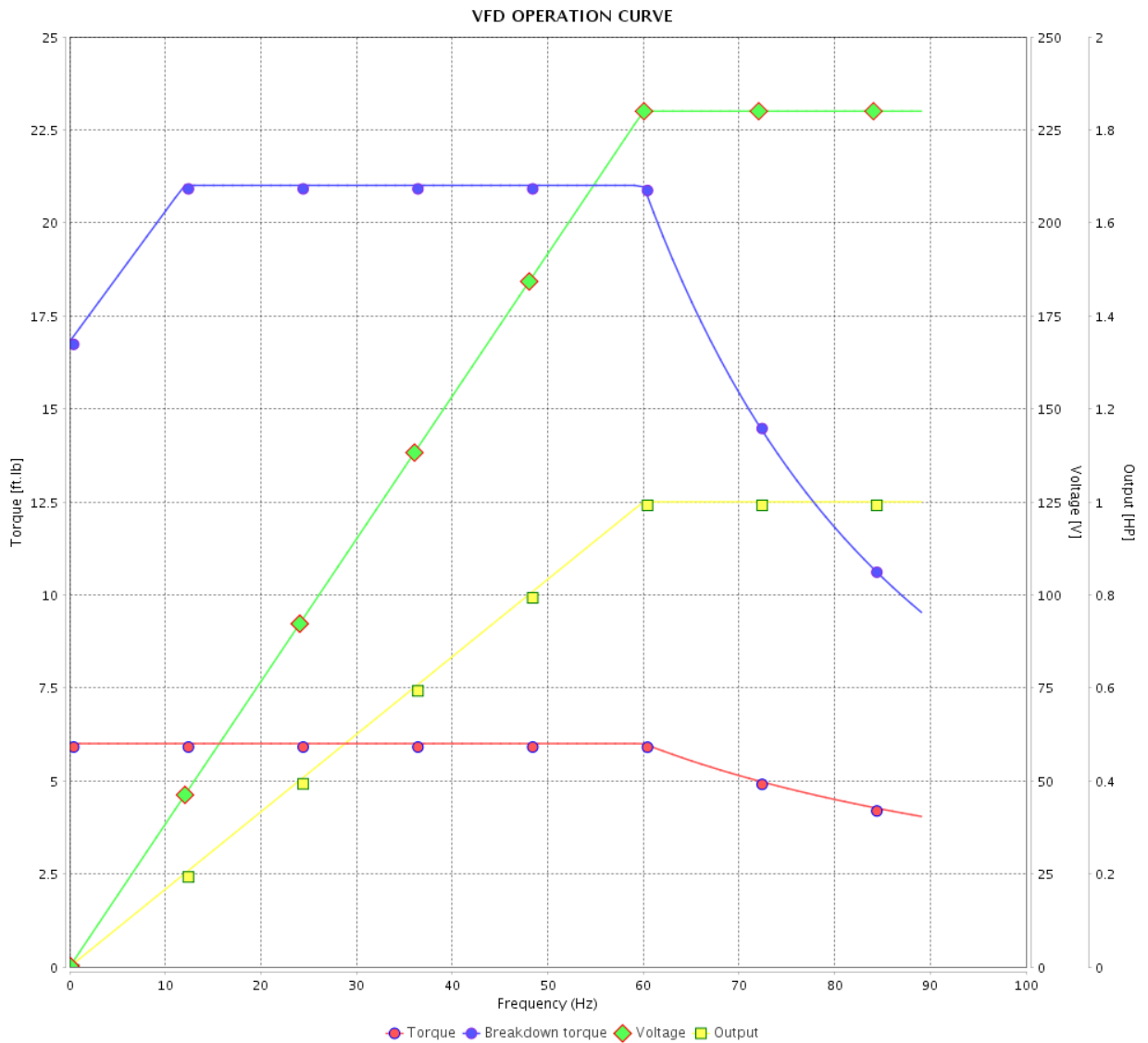


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 230/460 V 60 Hz 8P

Rated current : 4.80/2.40 A  
 LRC : 6.0  
 Rated torque : 6.00 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 350 %  
 Rated speed : 875 rpm

Moment of inertia (J) : 0.3991 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



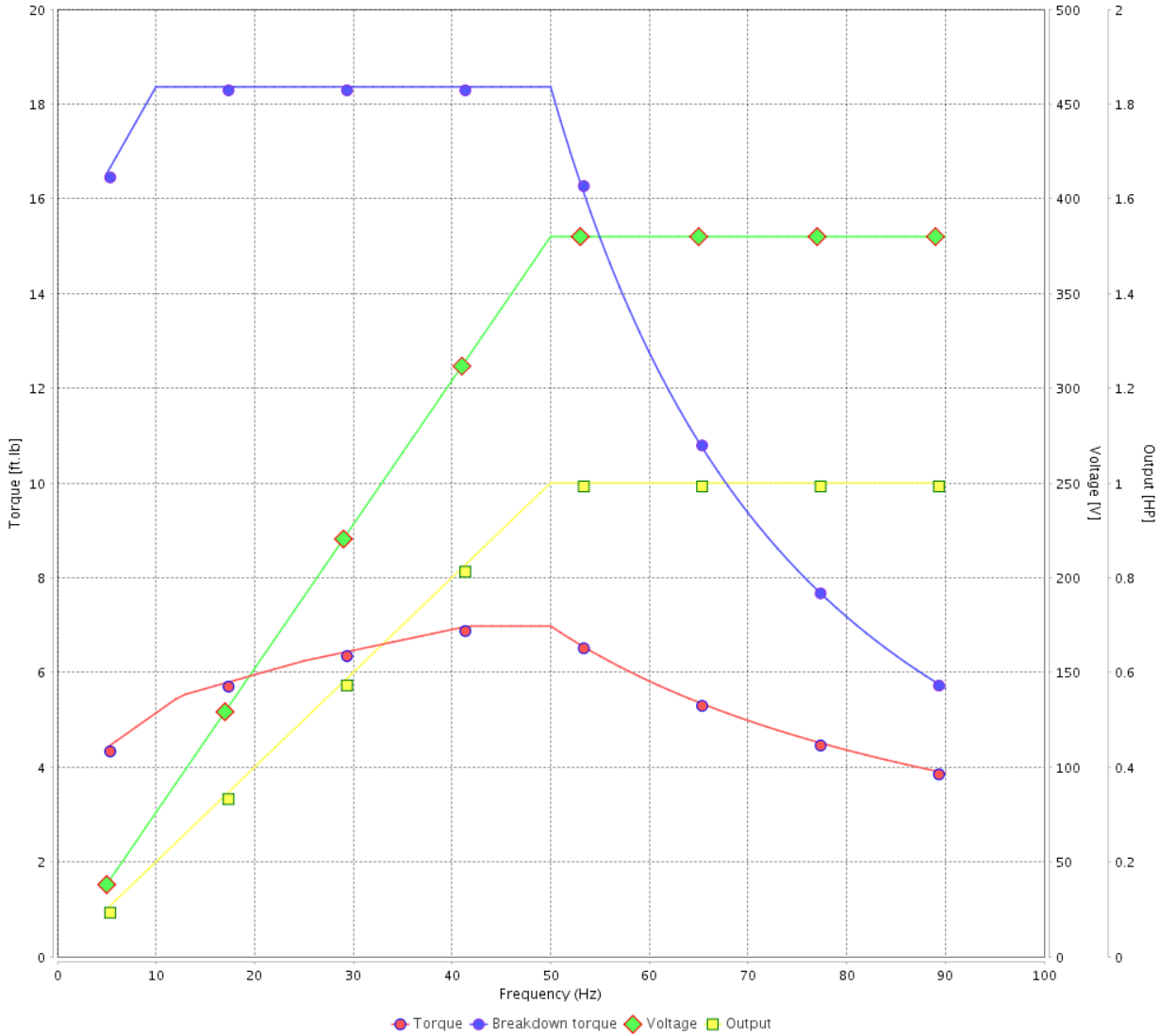
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current : 2.52 A  
 LRC : 6.0  
 Rated torque : 7.34 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.3991 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

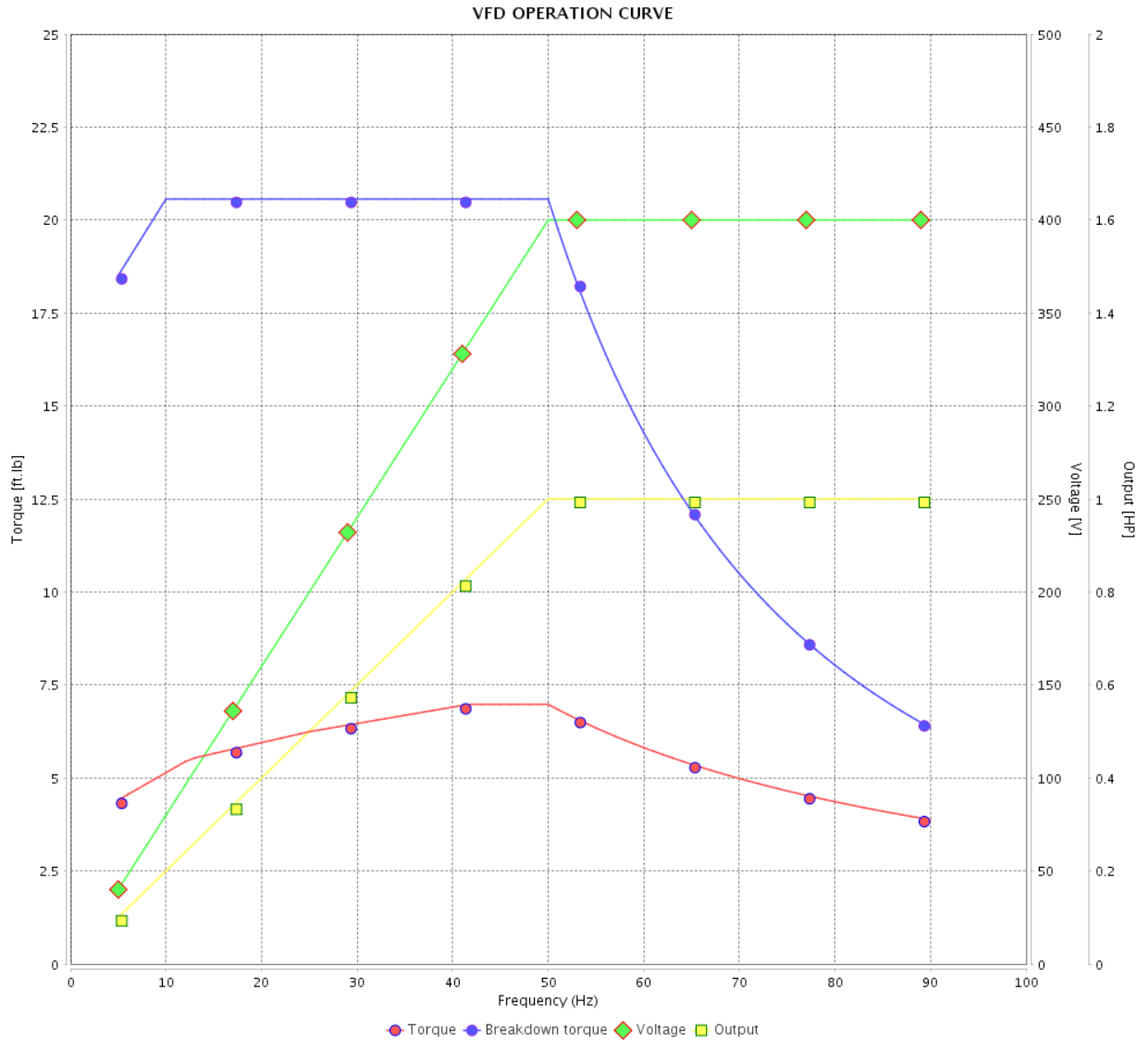


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14422358

Catalog # : 00109XT3E182T



Performance : 400 V 50 Hz 8P IE3

Rated current : 2.56 A  
 LRC : 6.0  
 Rated torque : 7.34 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 280 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.3991 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

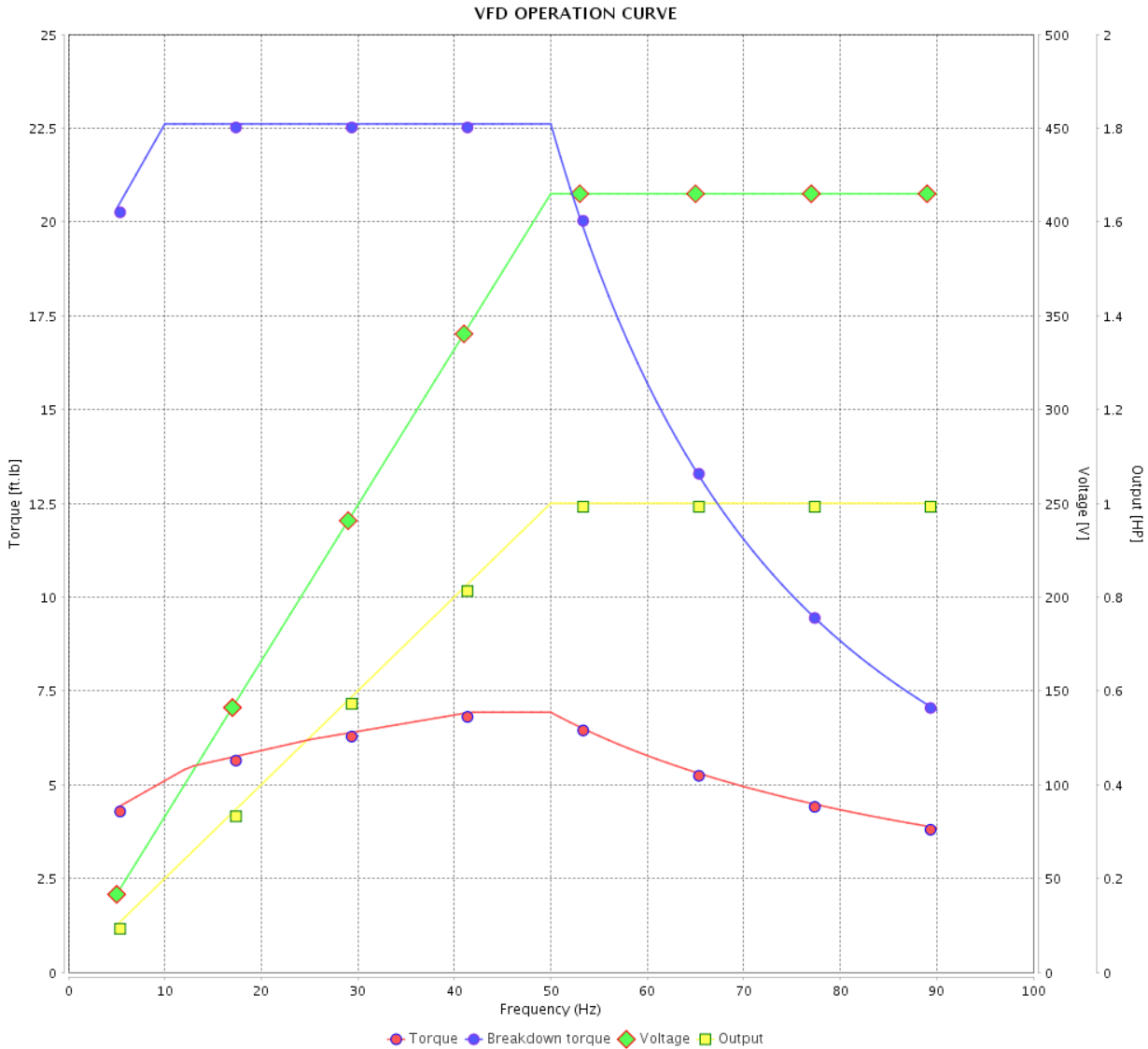


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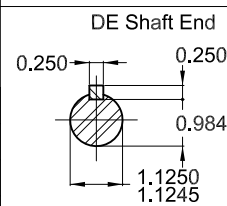
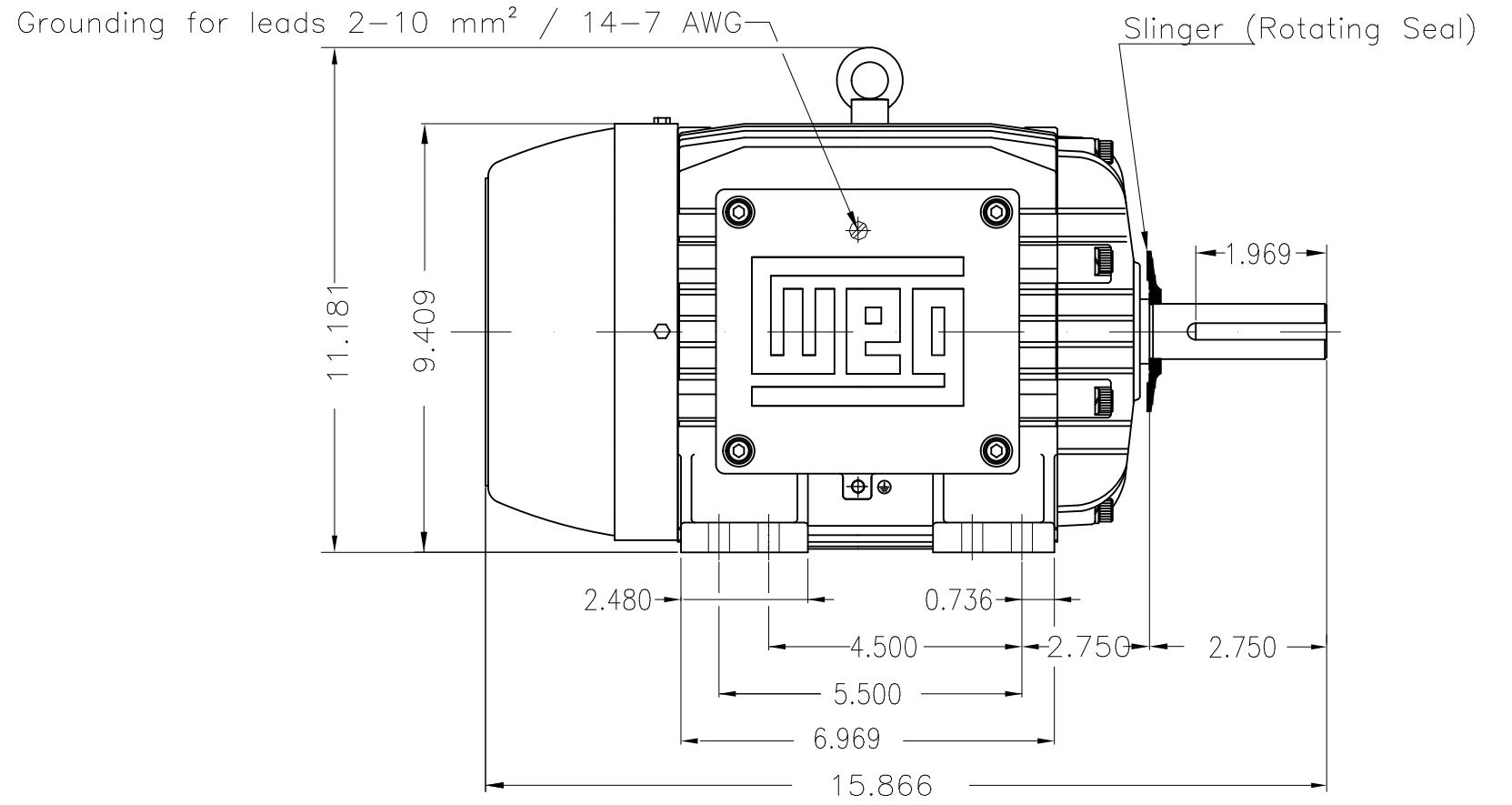
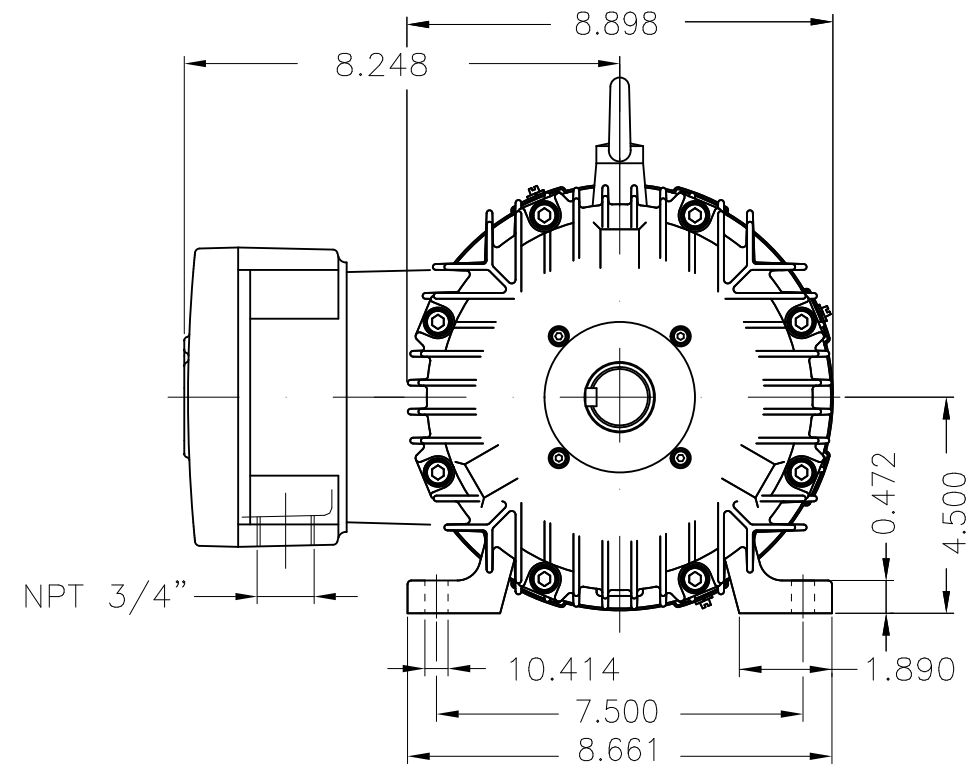


Performance : 415 V 50 Hz 8P IE3

Rated current : 2.61 A  
 LRC : 6.0  
 Rated torque : 7.29 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 310 %  
 Rated speed : 720 rpm

Moment of inertia (J) : 0.3991 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 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 182/4T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14422358

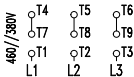
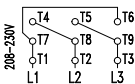
CC029A

*Inverter Duty Motor*  
*Severe Duty*

LISTED

MODEL 00109XT3E182T

PH 3	FR 182/4T		
HP(kW) 1.0(0.75)		HZ 60	IP55
V 230/460		A 4.80/2.40	
RPM 875		NEMA NOM EFF 75.5%	
PF 0.52		SFA 5.52/2.76	DES B
INS CL F $\Delta$ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE N	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	5.09 A	SF 1.15 SFA 5.85
AMB 55°C SF1.0			
1.0HP 0.75kW 50Hz 380V 2.52A 715RPM SF1.00 EFF 75.5% (IE3)			



→ 6307-2RS MOBIL POLYREX EM  
→ 6206-2RS

123 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.