

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase		Product code :	14281143
				Catalog # :	00318XT3ER182TC
Frame	: 182/4TC	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: W-6		
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>	: 122 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.2781 sq.ft.lb		
Design	: B				
Output [HP]	3	3	3	3	3
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	7.82/3.91	4.60	4.48	4.38	4.38
L. R. Amperes [A]	62.6/31.3	29.4	31.4	32.4	32.4
LRC [A]	8.0x(Code K)	6.4x(Code H)	7.0x(Code J)	7.4x(Code J)	7.4x(Code J)
No load current [A]	4.20/2.10	2.02	2.20	2.34	2.34
Rated speed [RPM]	1760	1440	1445	1450	1450
Slip [%]	2.22	4.00	3.67	3.33	3.33
Rated torque [ft.lb]	8.95	10.9	10.9	10.9	10.9
Locked rotor torque [%]	250	200	229	260	260
Breakdown torque [%]	320	229	260	290	290
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	50s (cold) 28s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level <sup>2</sup>	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%	86.4	89.1	88.0	87.2
	50%	87.5	88.5	87.5	87.5
	75%	88.5	88.5	88.5	88.5
	100%	89.5	87.5	87.5	88.5
Power Factor	25%	0.35	0.41	0.38	0.35
	50%	0.59	0.67	0.63	0.59
	75%	0.71	0.78	0.75	0.72
	100%	0.79	0.83	0.81	0.79
Bearing type	: Drive end : 6307 2RS	Non drive end : 6206 2RS	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 140 lb	
Lubrication interval	: -	-	Max. compression	: 262 lb	
Lubricant amount	: -	-			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 8.65A SF 1.15 SFA 9.94A					
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



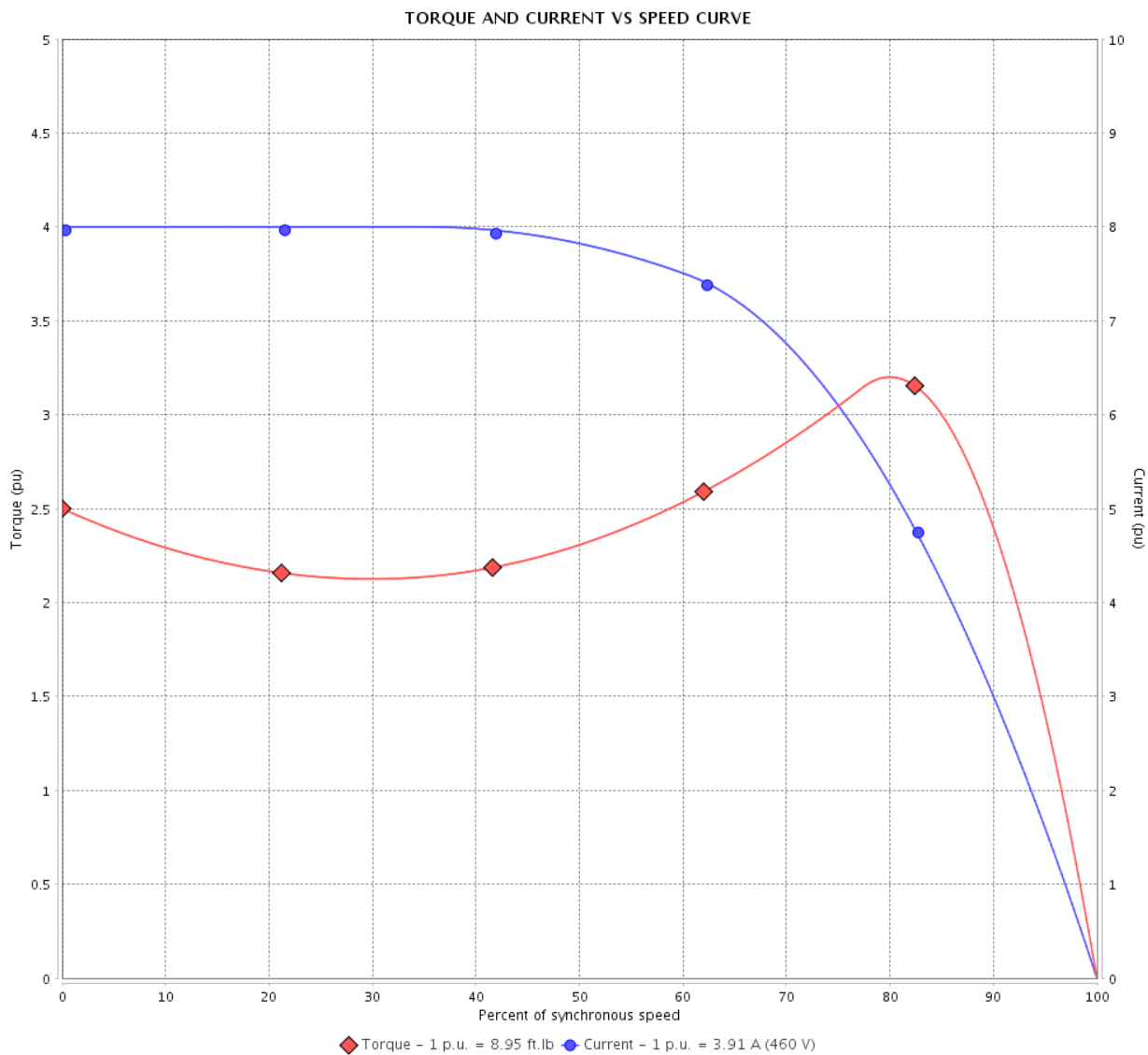
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A  
 LRC : 8.0  
 Rated torque : 8.95 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.2781 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 50s (cold) 28s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



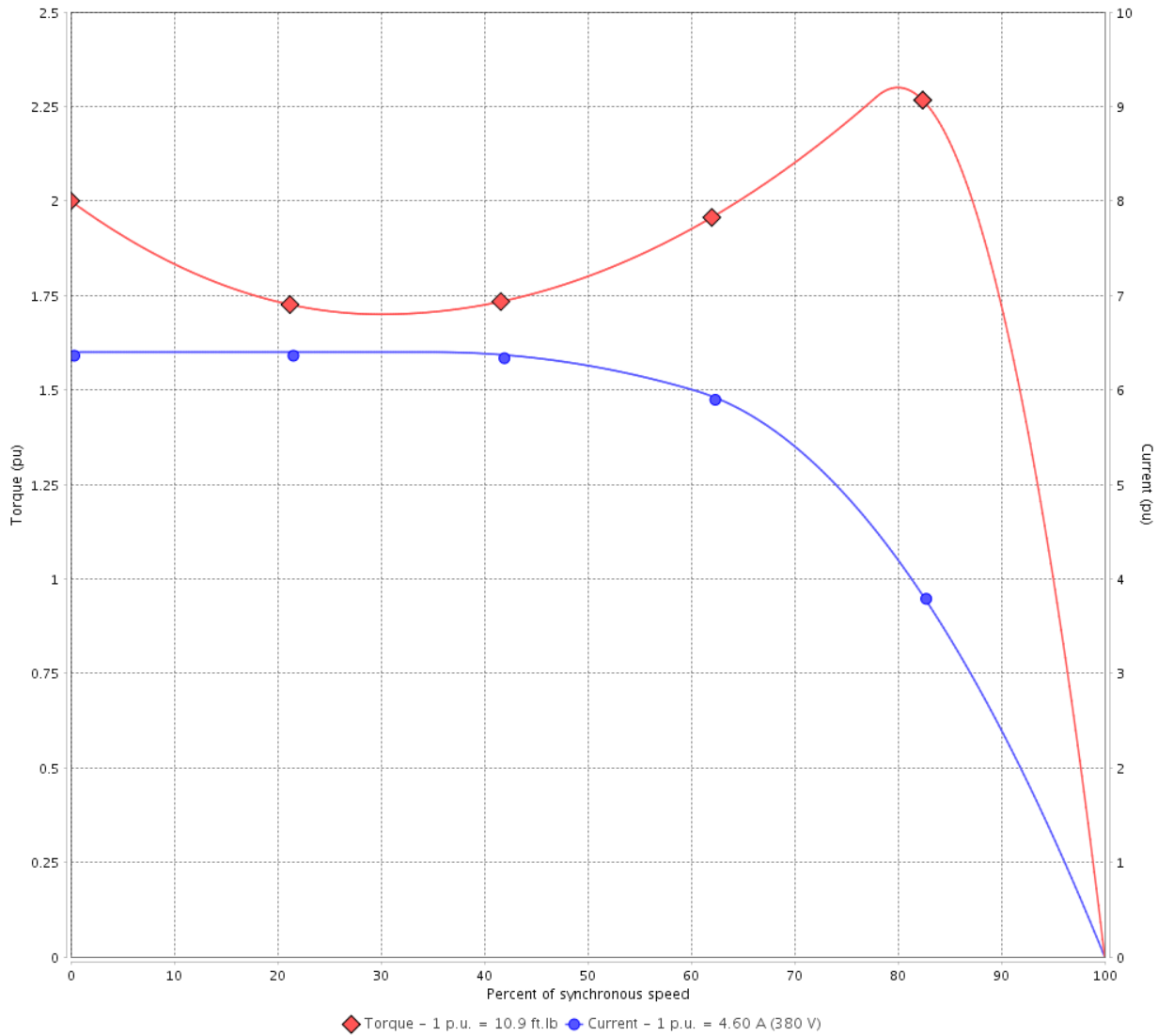
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 4.60 A	Moment of inertia (J)	: 0.2781 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



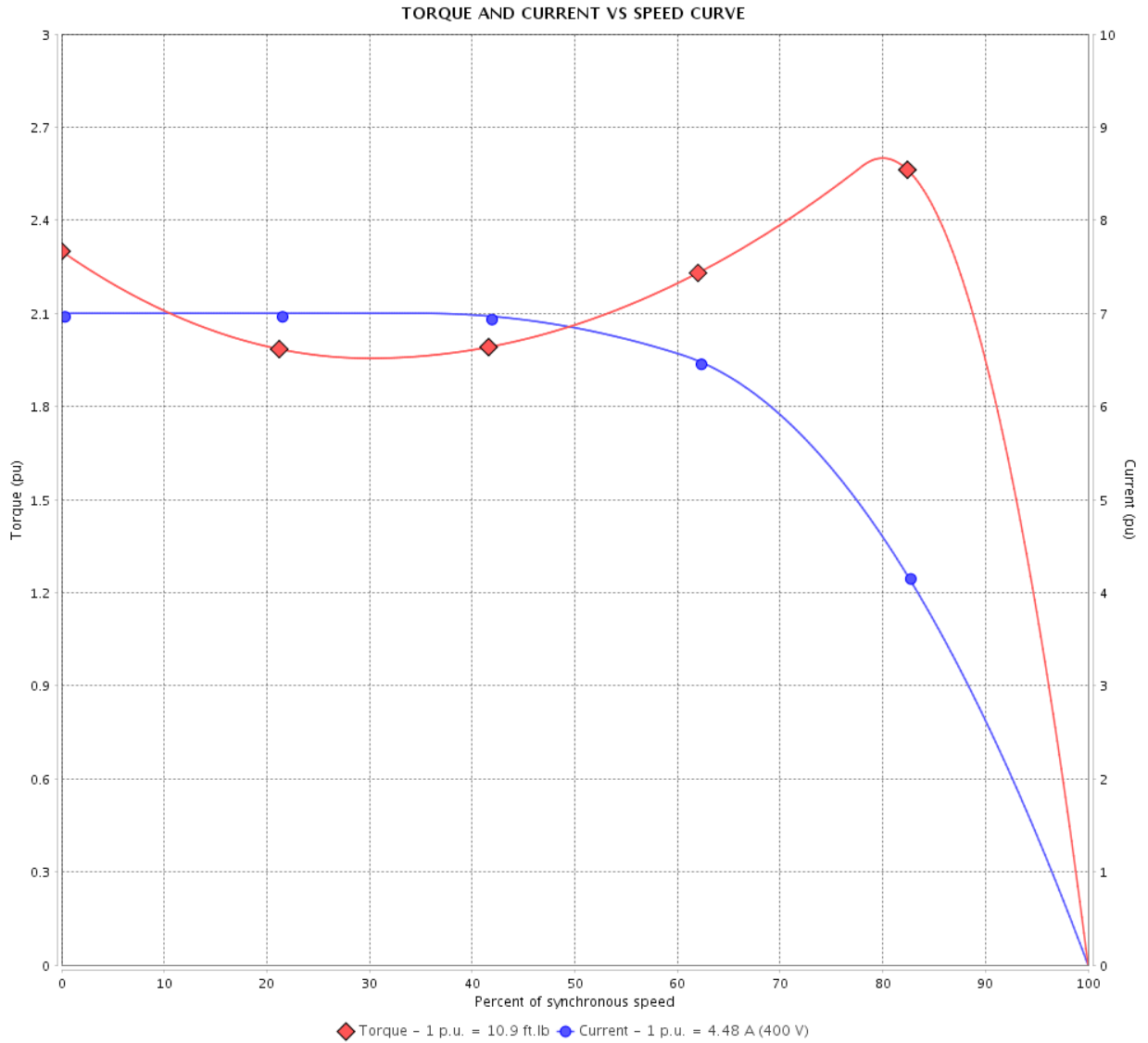
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A  
 LRC : 7.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.2781 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)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



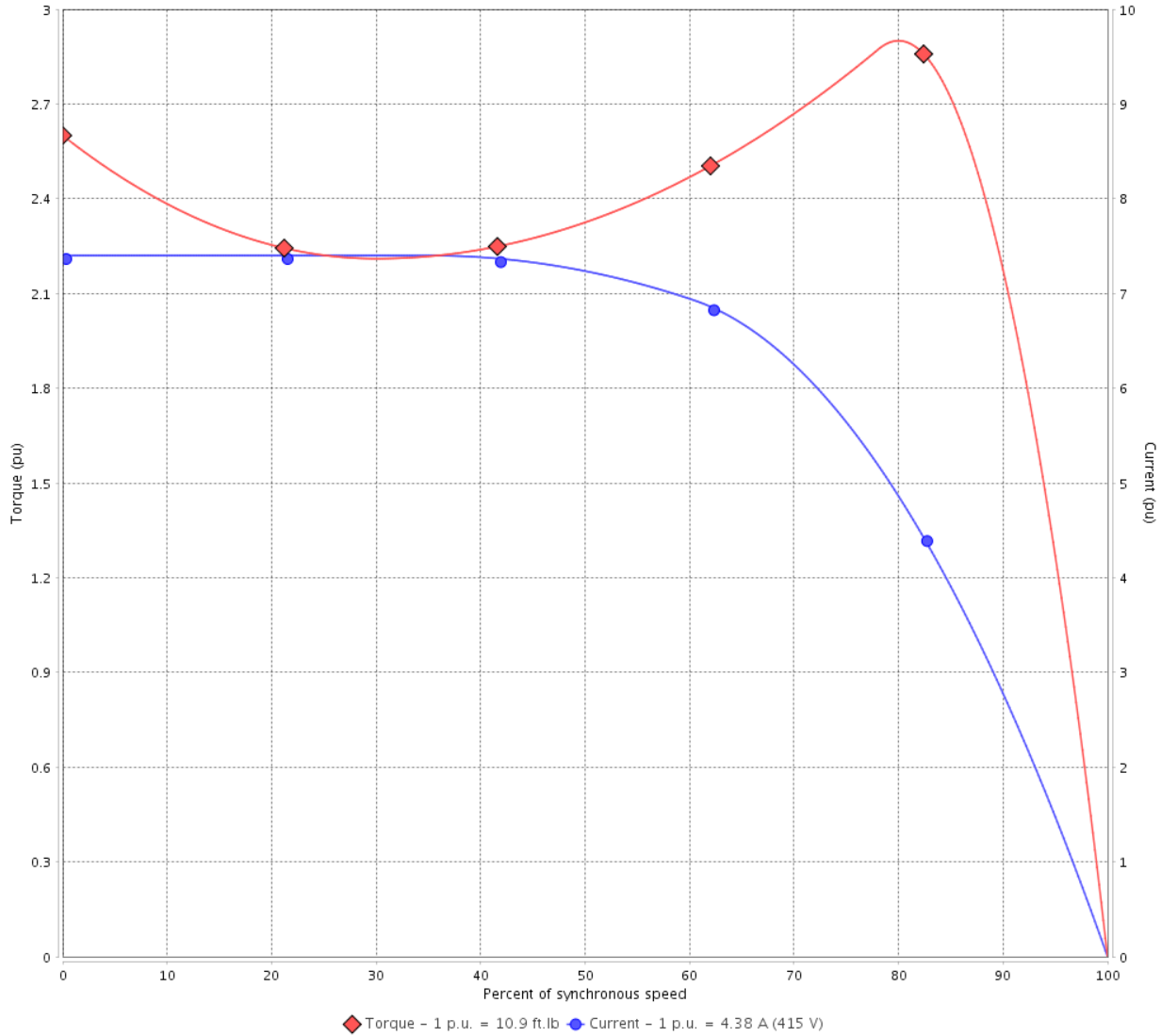
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 4.38 A	Moment of inertia (J)	: 0.2781 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

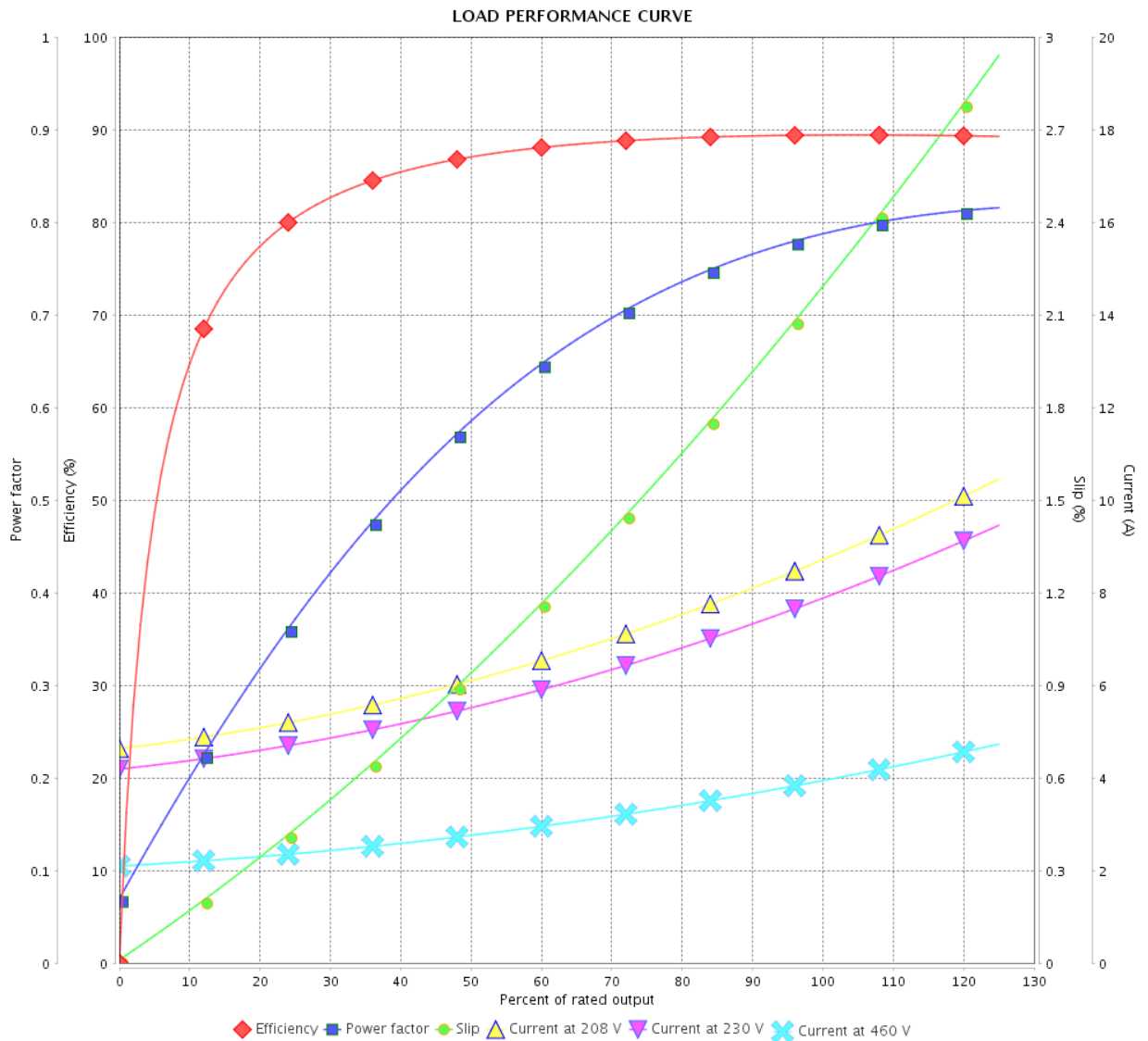


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A  
 LRC : 8.0  
 Rated torque : 8.95 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.2781 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Date				

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



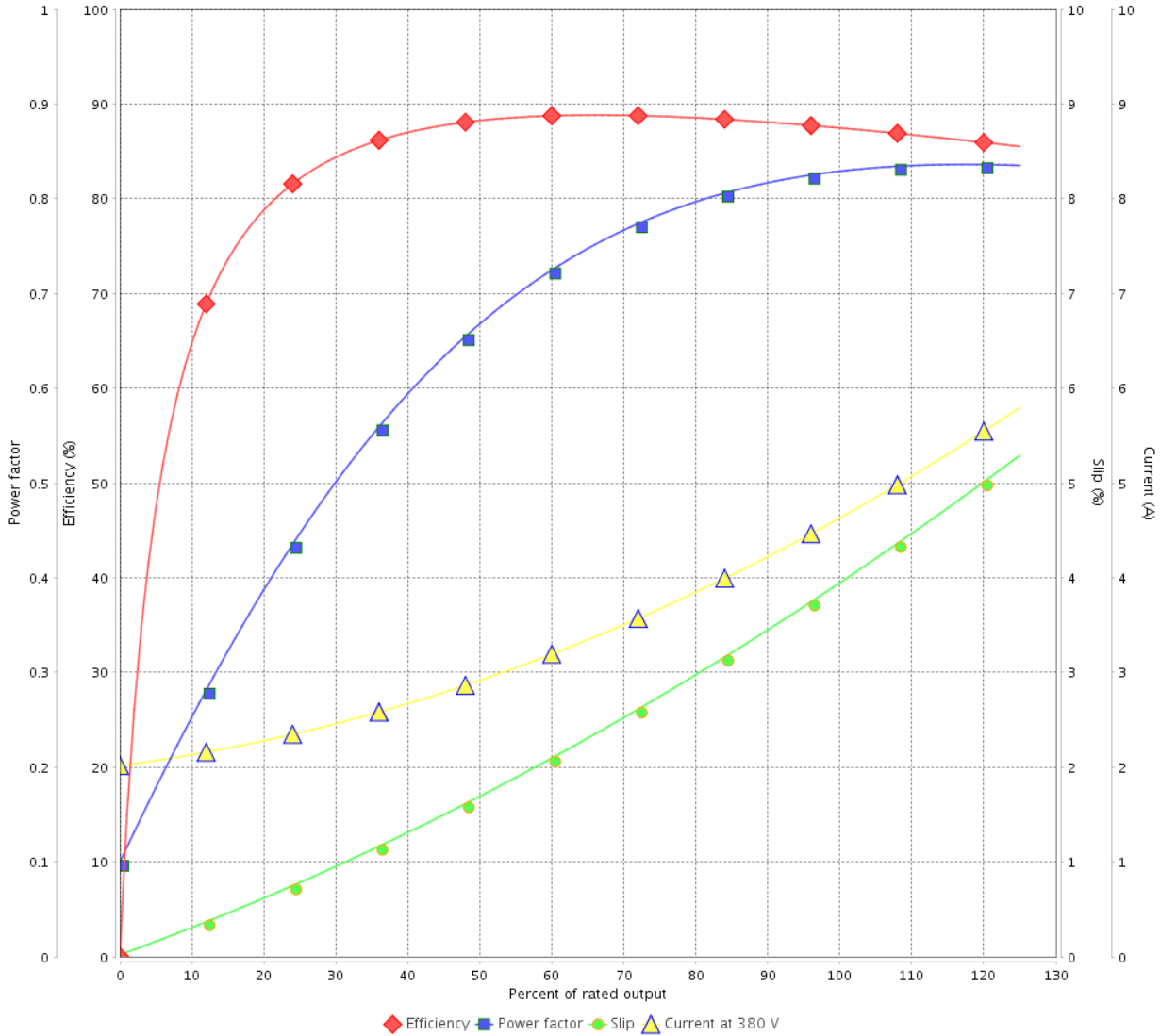
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current : 4.60 A  
 LRC : 6.4  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.2781 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

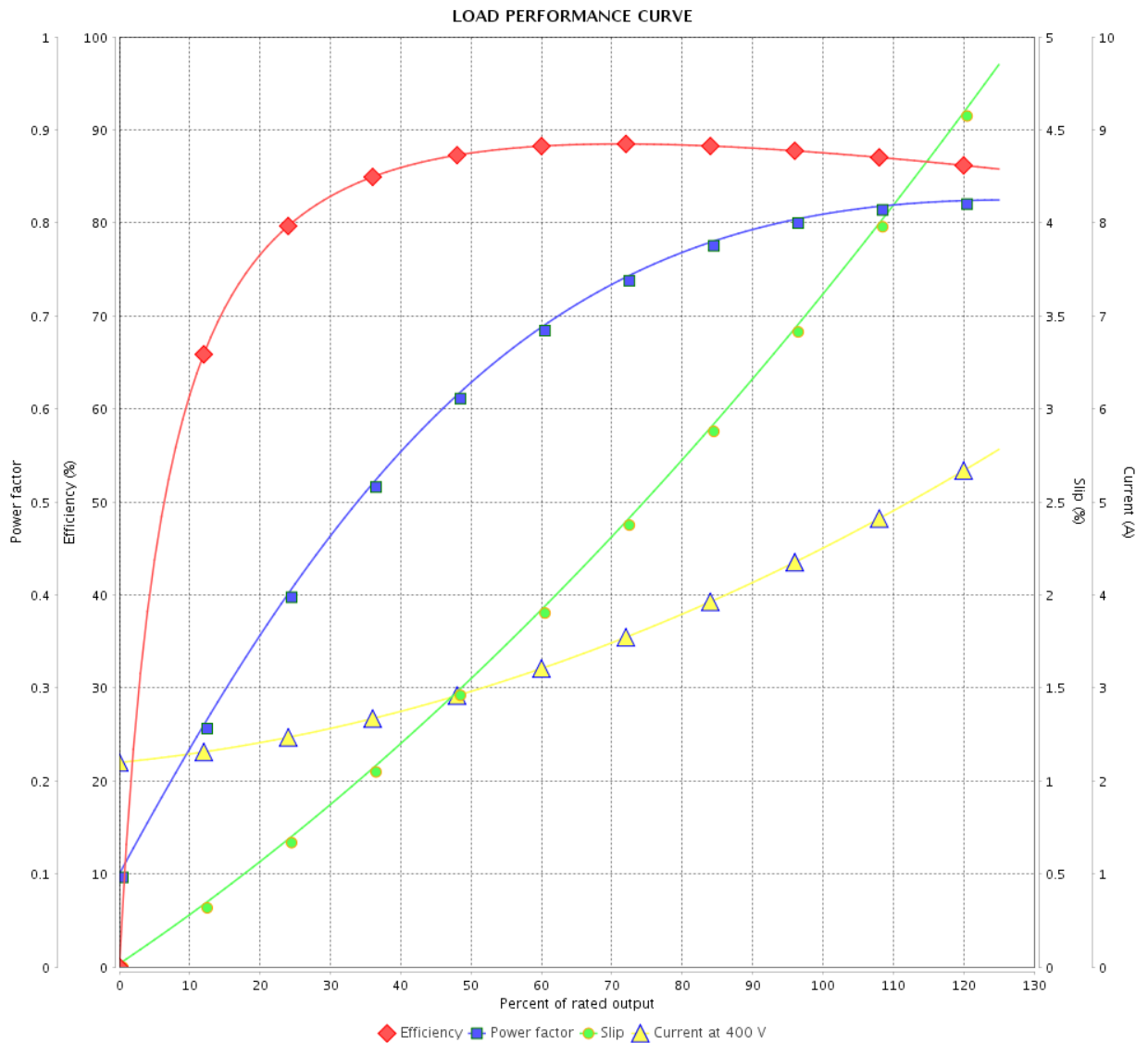


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A  
 LRC : 7.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.2781 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



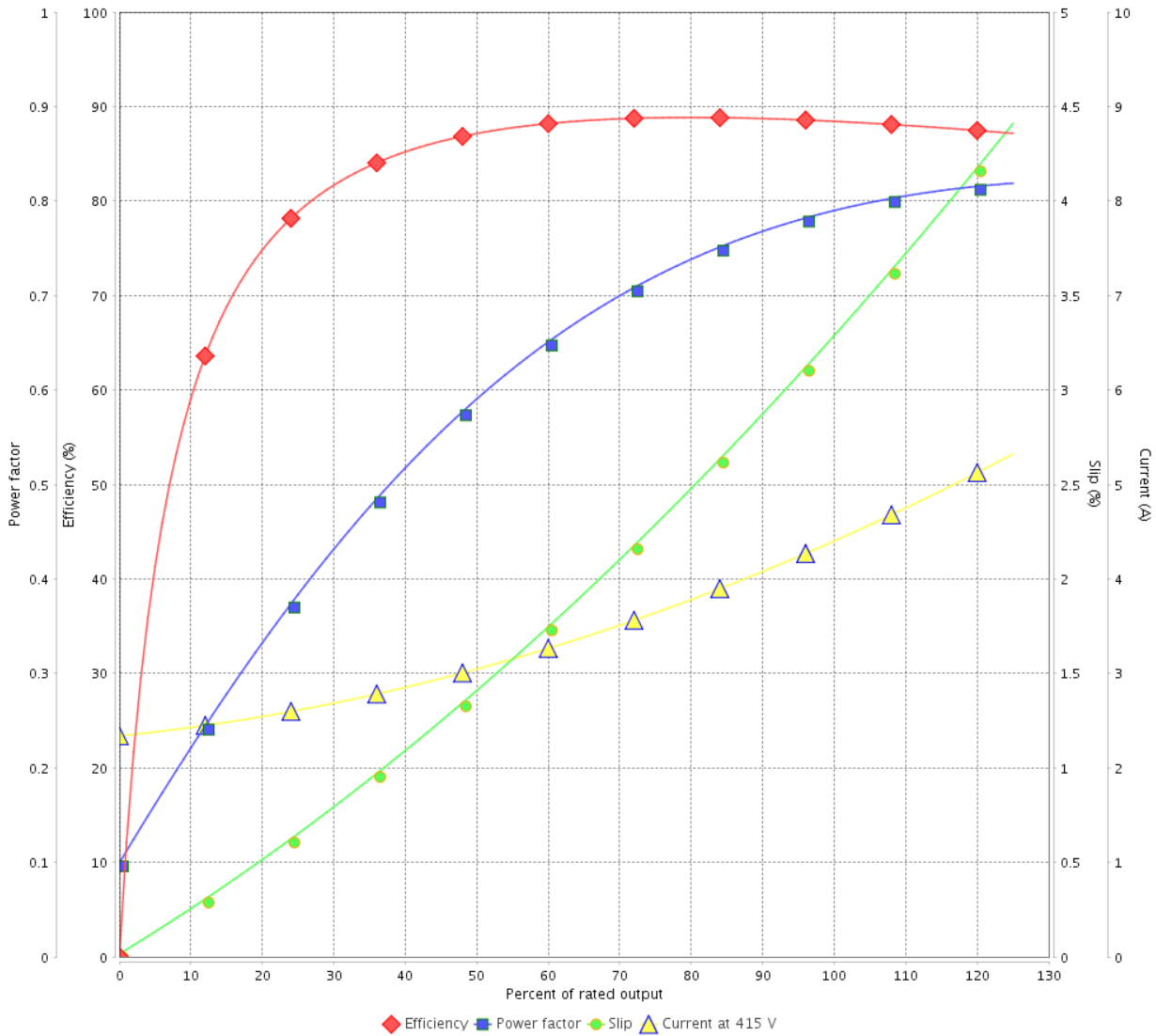
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current : 4.38 A  
 LRC : 7.4  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.2781 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 : 14281143  
 Catalog # : 00318XT3ER182TC

Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A	Moment of inertia (J) : 0.2781 sq.ft.lb
LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 8.95 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.15
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1760 rpm	Design : B

Heating constant

Cooling constant

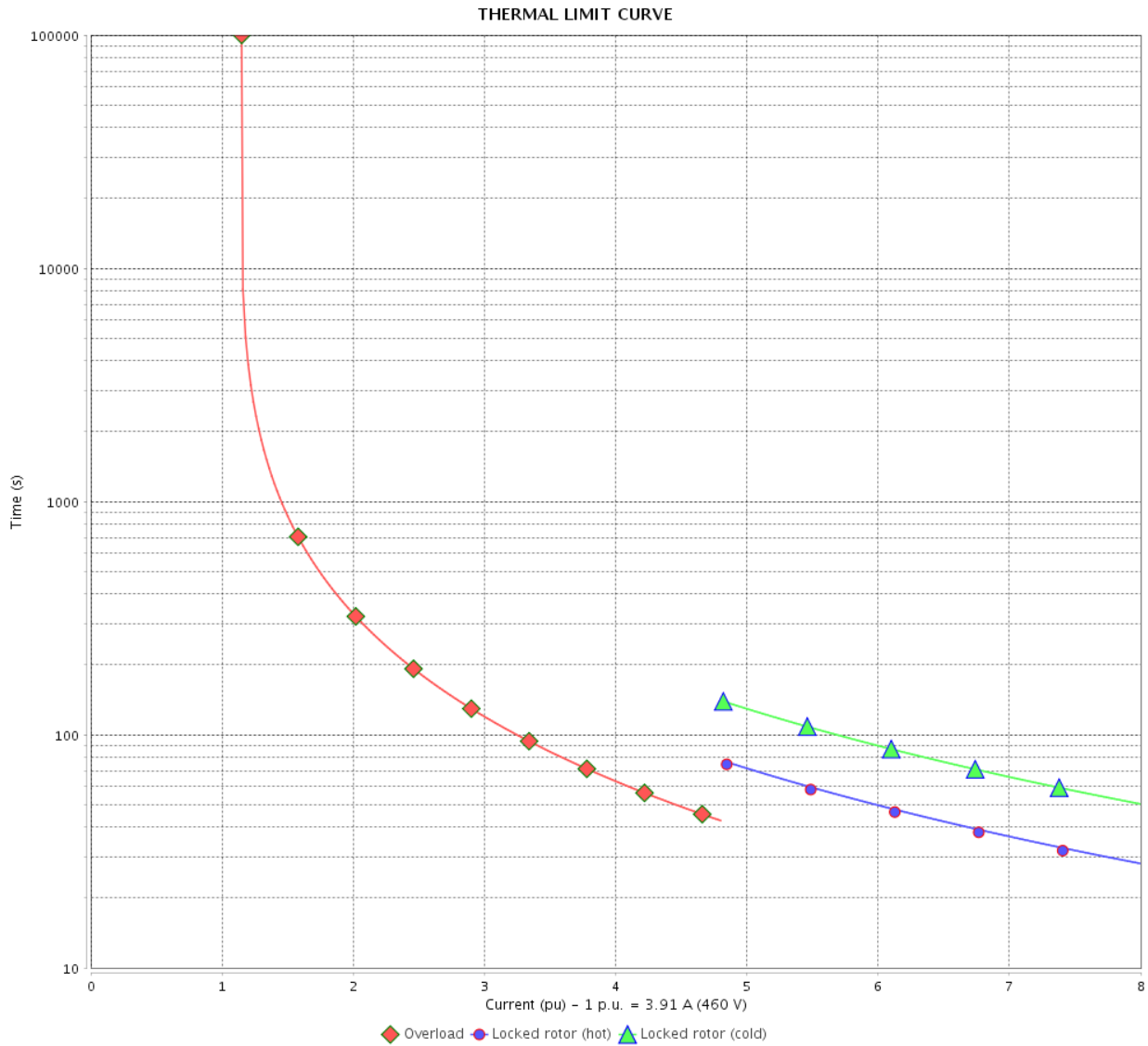
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# THERMAL LIMIT CURVE

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 : 14281143  
 Catalog # : 00318XT3ER182TC

Performance : 380 V 50 Hz 4P IE3

Rated current : 4.60 A	Moment of inertia (J) : 0.2781 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 10.9 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1440 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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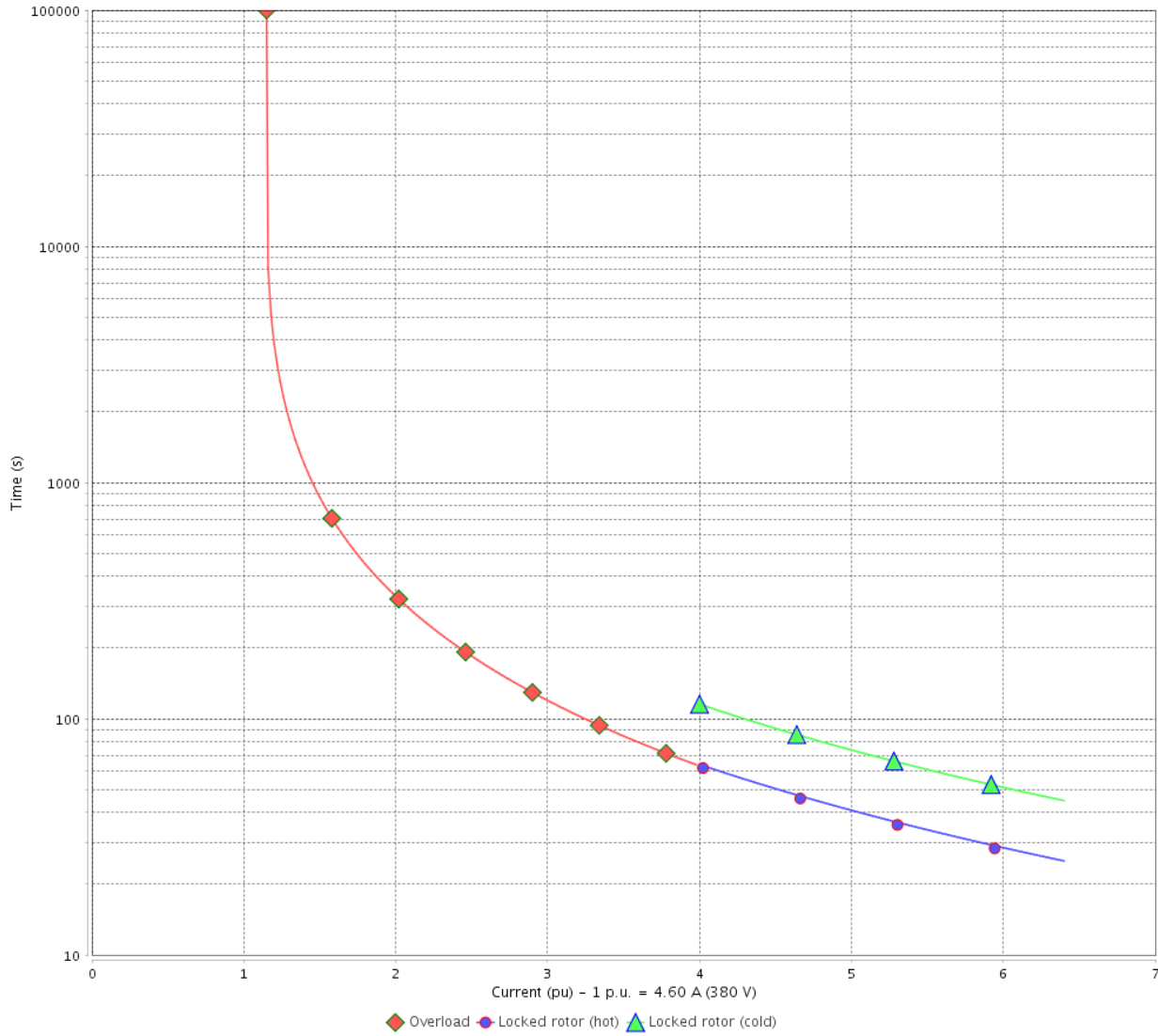
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Three Phase Induction Motor - Squirrel Cage



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 : 14281143  
 Catalog # : 00318XT3ER182TC

Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A	Moment of inertia (J) : 0.2781 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 10.9 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1445 rpm	Design : B

Heating constant

Cooling constant

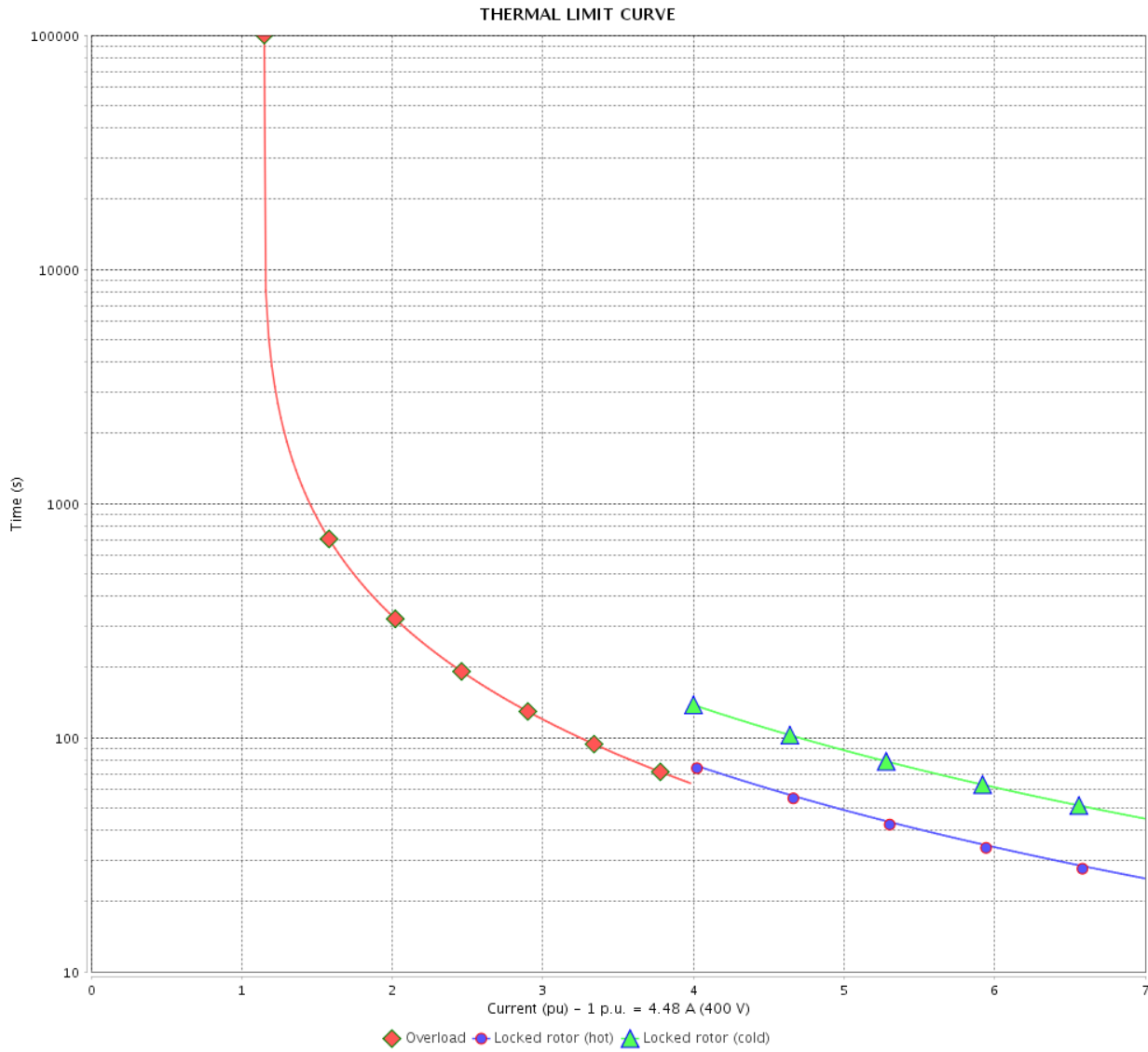
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14281143  
 Catalog # : 00318XT3ER182TC

Performance : 415 V 50 Hz 4P IE3

Rated current : 4.38 A	Moment of inertia (J) : 0.2781 sq.ft.lb
LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 10.9 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 1450 rpm	Design : B

Heating constant

Cooling constant

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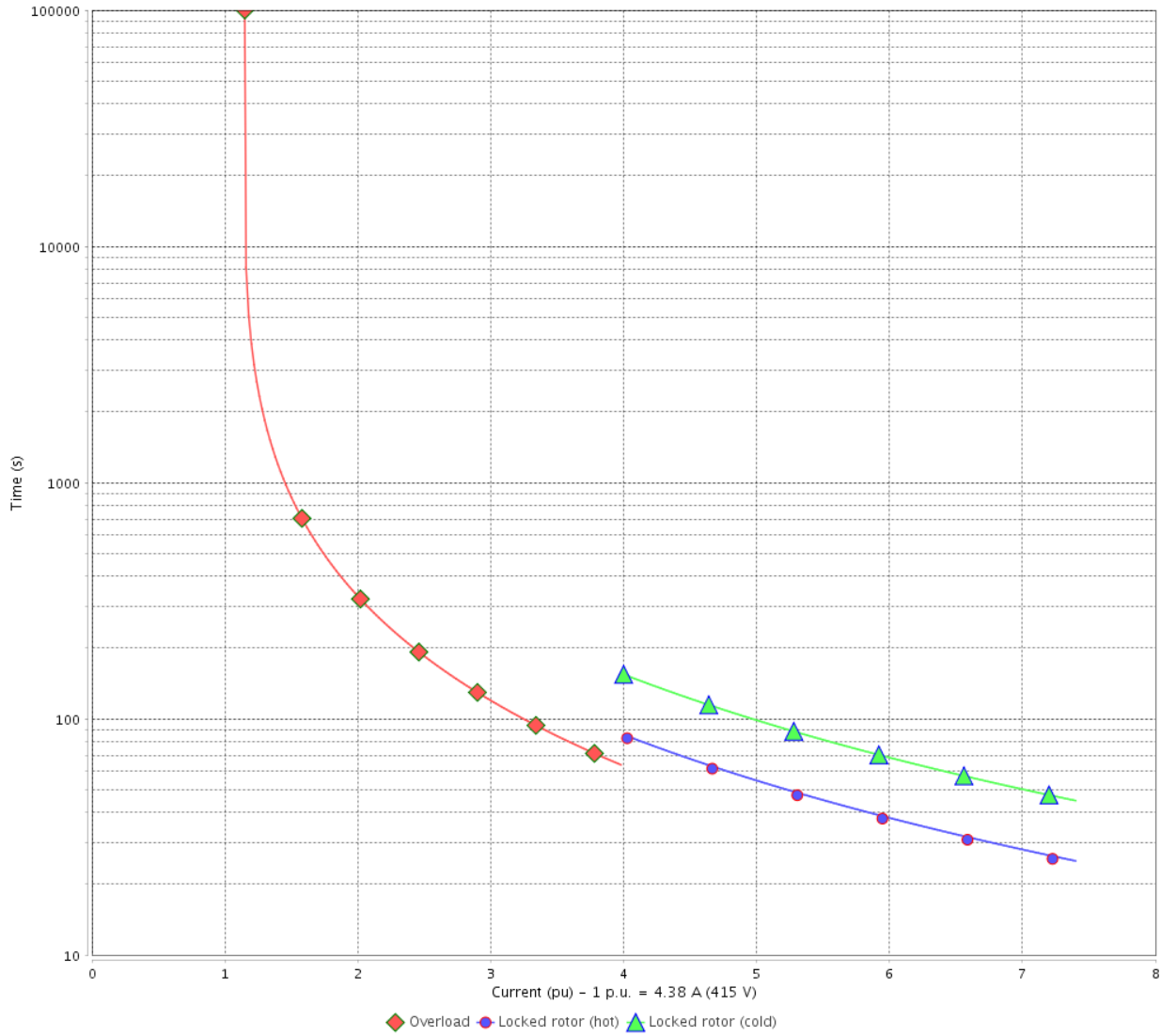
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Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

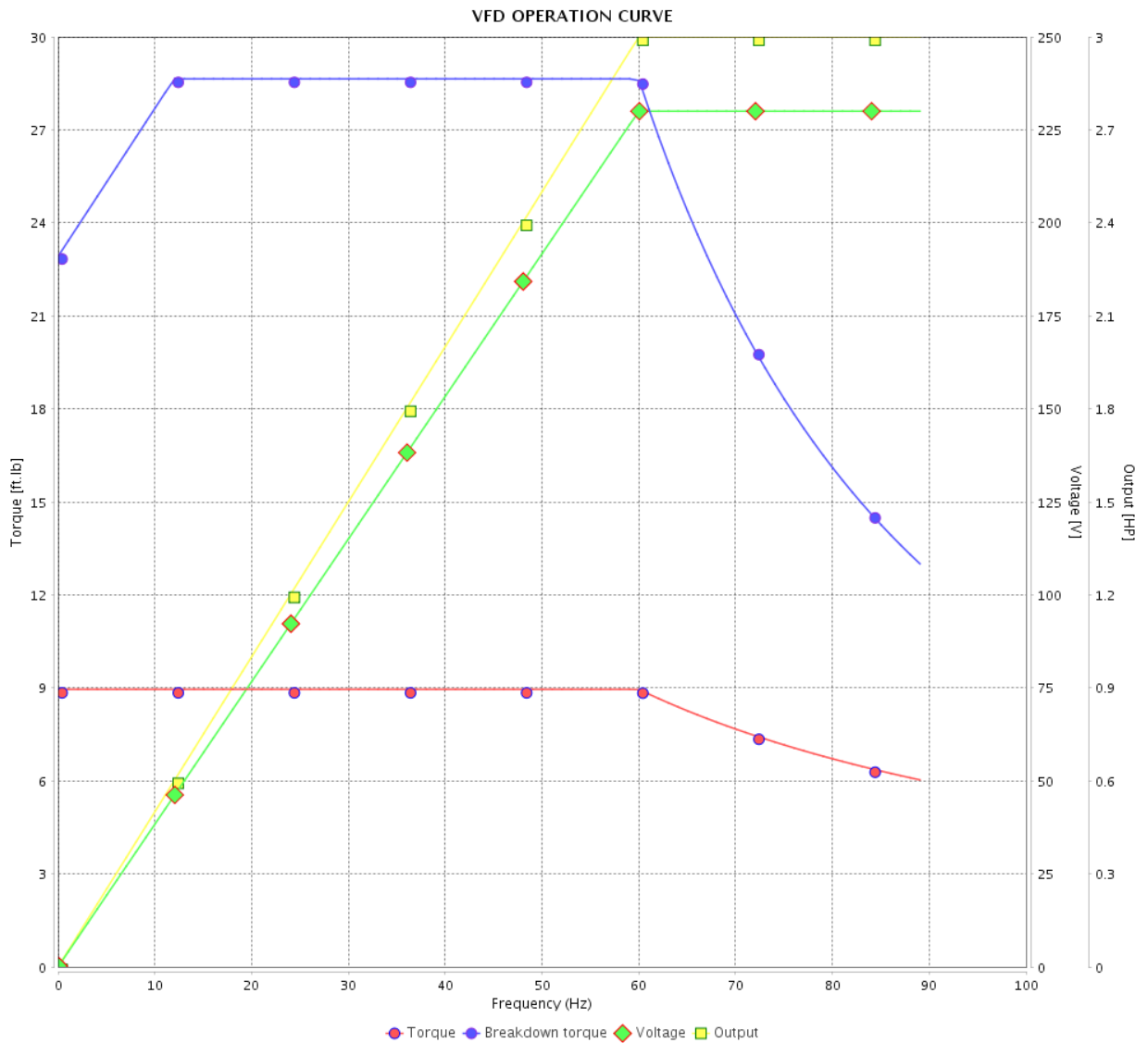


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A  
 LRC : 8.0  
 Rated torque : 8.95 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 320 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.2781 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

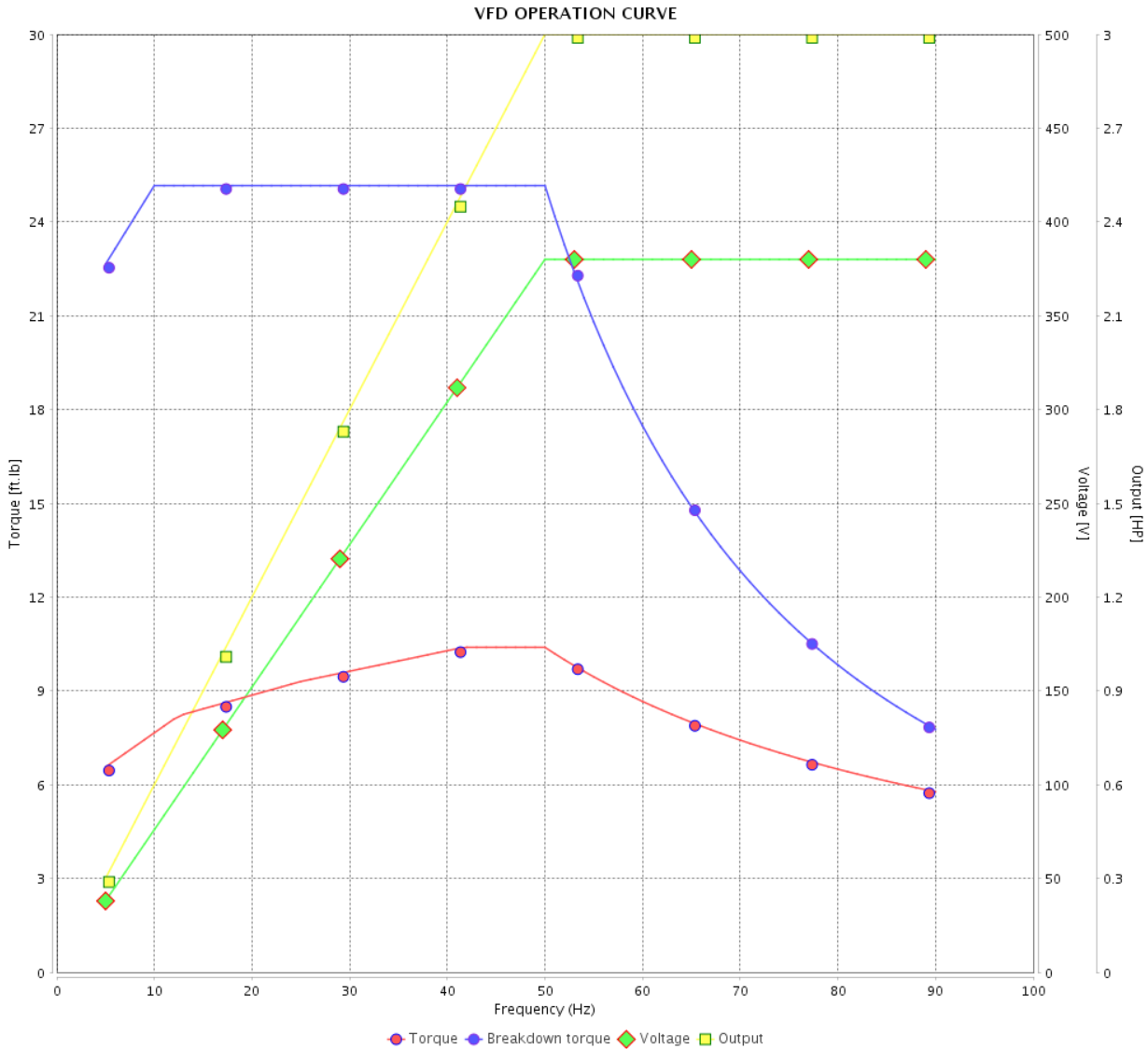


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 380 V 50 Hz 4P IE3

Rated current : 4.60 A  
 LRC : 6.4  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.2781 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

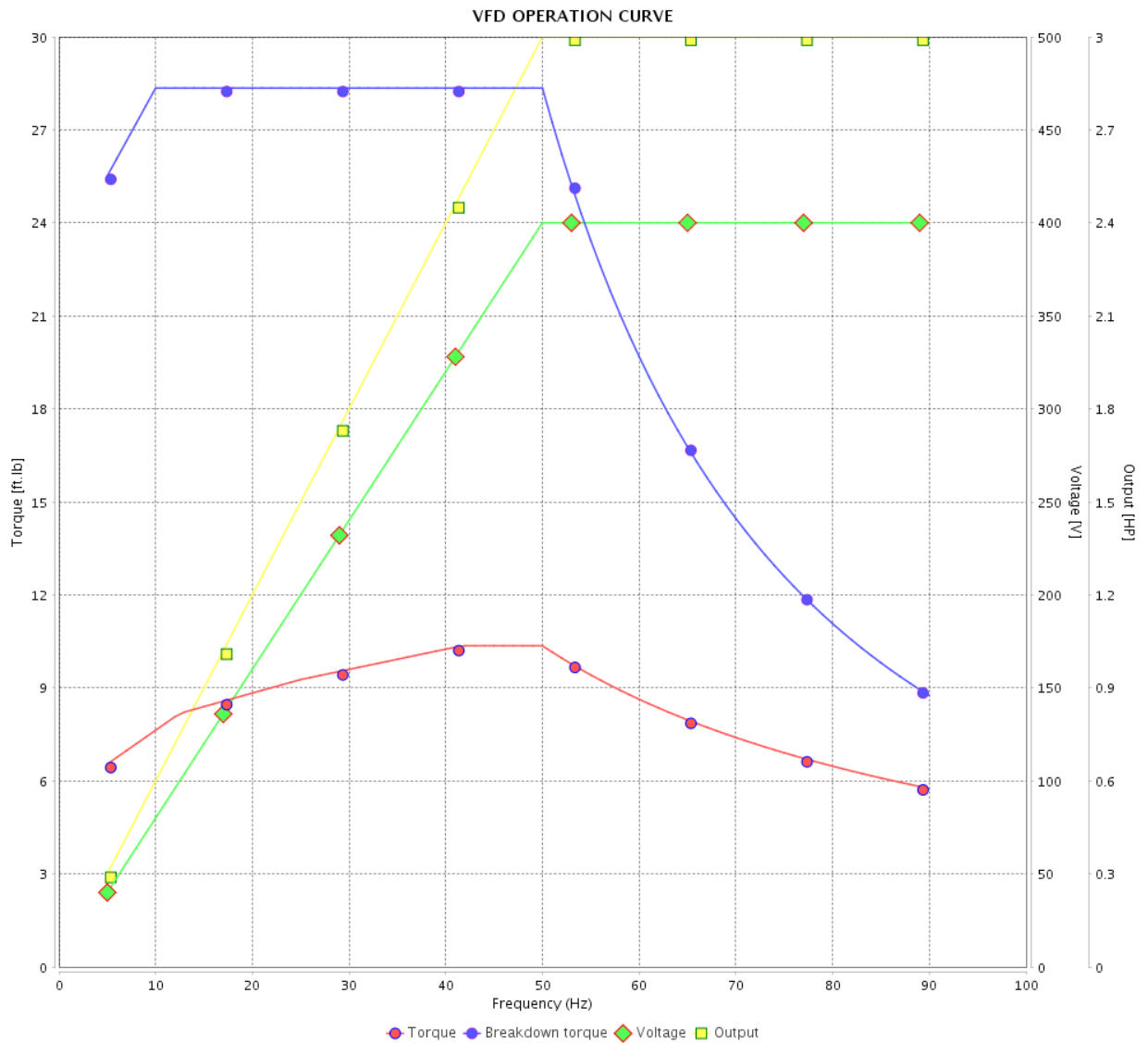


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14281143

Catalog # : 00318XT3ER182TC



Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A  
 LRC : 7.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.2781 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

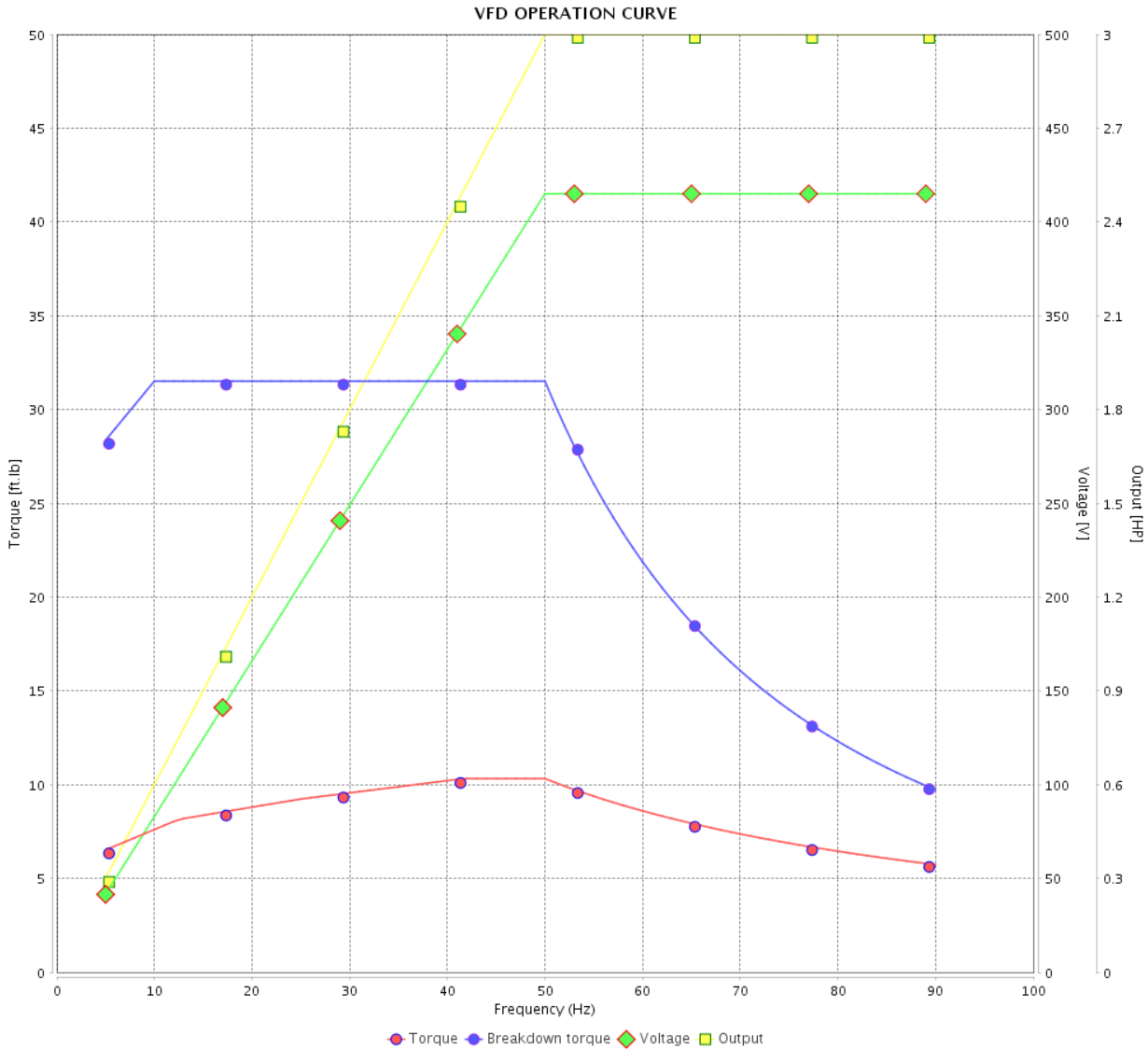


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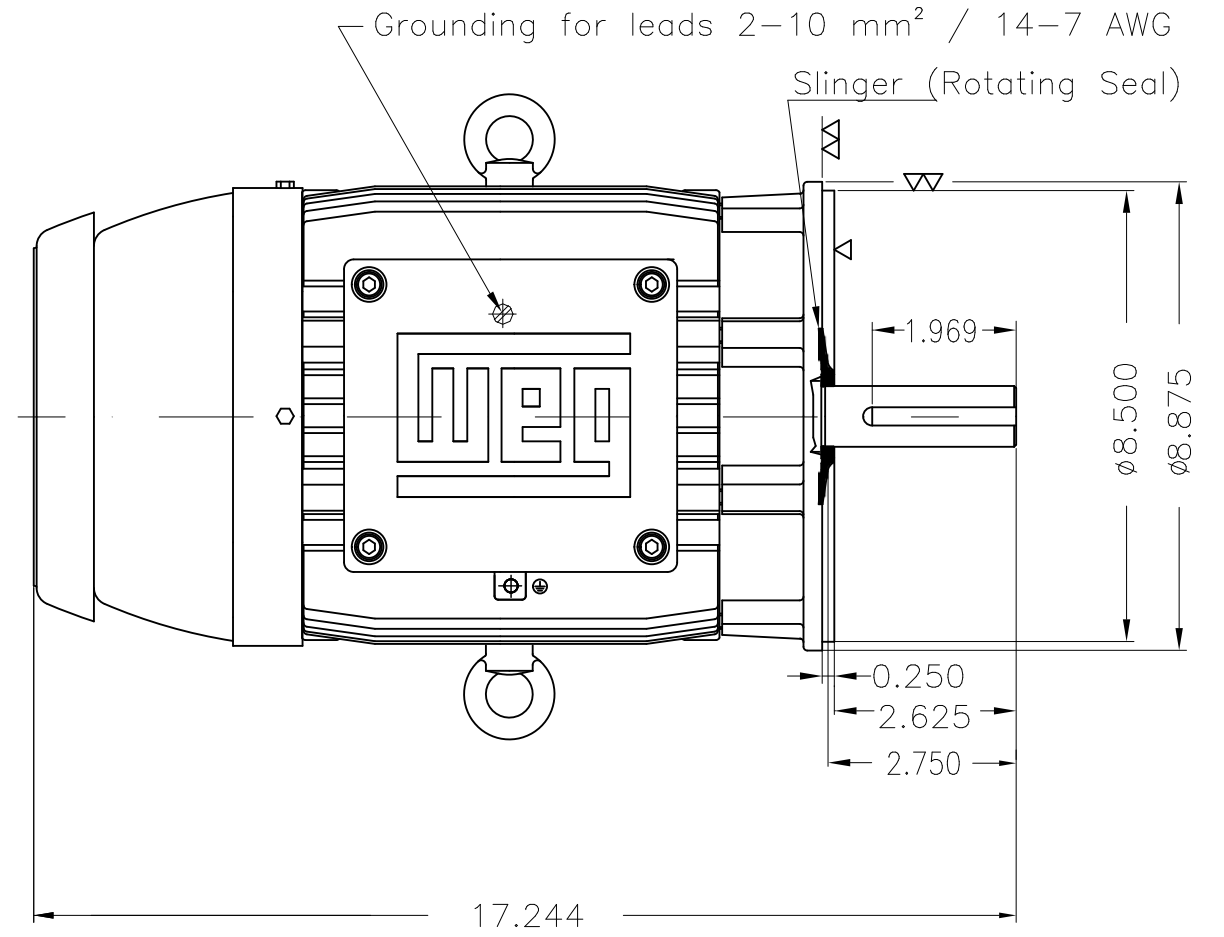
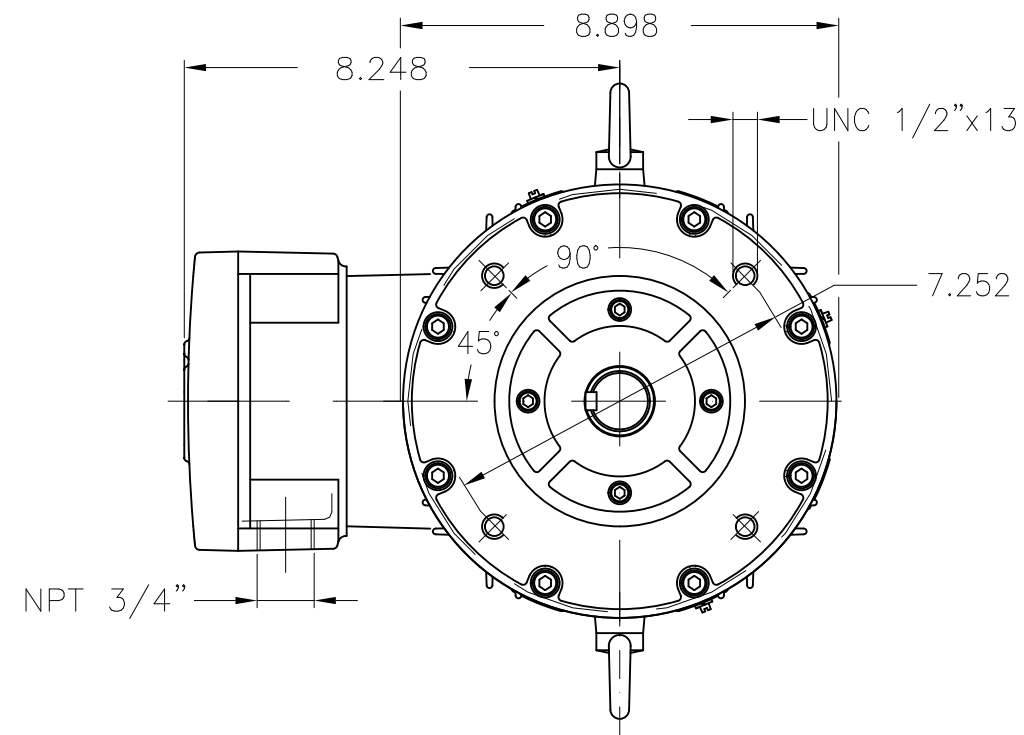


Performance : 415 V 50 Hz 4P IE3

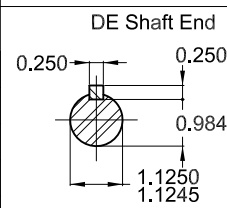
Rated current : 4.38 A  
 LRC : 7.4  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.2781 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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Packing - crate  
 Color RAL 5009  
 Painting plan 202P  
 Mounting NEMA W-6  
 Mounting V18



3 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 182/4TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14281143

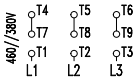
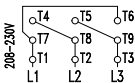
CC029A

*Inverter Duty Motor*  
*Severe Duty*

LISTED

MODEL 00318XT3ER182TC

PH 3	FR 182/4TC		
HP(kW) 3.0(2.2)		HZ 60	IP55
V 230/460		A 7.82/3.91	
RPM 1760		NEMA NOM EFF 89.5%	
PF 0.79		SFA 8.99/4.50	DES B
INS CL F $\Delta$ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE K	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	8.65 A	SF 1.15 SFA 9.95
AMB 55°C SF1.0			
3.0HP 2.2kW 50Hz 380V 4.60A 1440RPM SF1.00 EFF 87.5% (IE3)			



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

126 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.