

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12598486		
		Catalog # :	00318ET3E182JP-W22		
Frame	: 182/4JP	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>	: 94.3 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.3401 sq.ft.lb		
Design	: B				
Output [HP]	3	3	3	3	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	7.82/3.91	4.60	4.48	4.43	
L. R. Amperes [A]	63.3/31.7	29.0	31.4	33.2	
LRC [A]	8.1x(Code K)	6.3x(Code H)	7.0x(Code J)	7.5x(Code J)	
No load current [A]	4.00/2.00	2.00	2.15	2.25	
Rated speed [RPM]	1760	1445	1450	1455	
Slip [%]	2.22	3.67	3.33	3.00	
Rated torque [ft.lb]	8.95	10.9	10.9	10.8	
Locked rotor torque [%]	229	180	210	240	
Breakdown torque [%]	340	260	290	320	
Service factor	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	41s (cold) 23s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level <sup>2</sup>	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	
Efficiency (%)	25%	86.4	87.2	87.3	87.3
	50%	87.5	87.5	87.5	87.5
	75%	88.5	87.5	87.5	87.5
	100%	89.5	87.5	87.5	87.5
Power Factor	25%	0.36	0.42	0.39	0.36
	50%	0.61	0.68	0.64	0.61
	75%	0.73	0.79	0.76	0.73
	100%	0.79	0.83	0.81	0.79
Bearing type	: Drive end : 6307 ZZ Non drive end : 6206 ZZ	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction	: 174 lb		
Lubrication interval	: - -	Max. compression	: 268 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 8.65A SF 1.15 SFA 9.95A					
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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Checked by				Page	Revision
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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



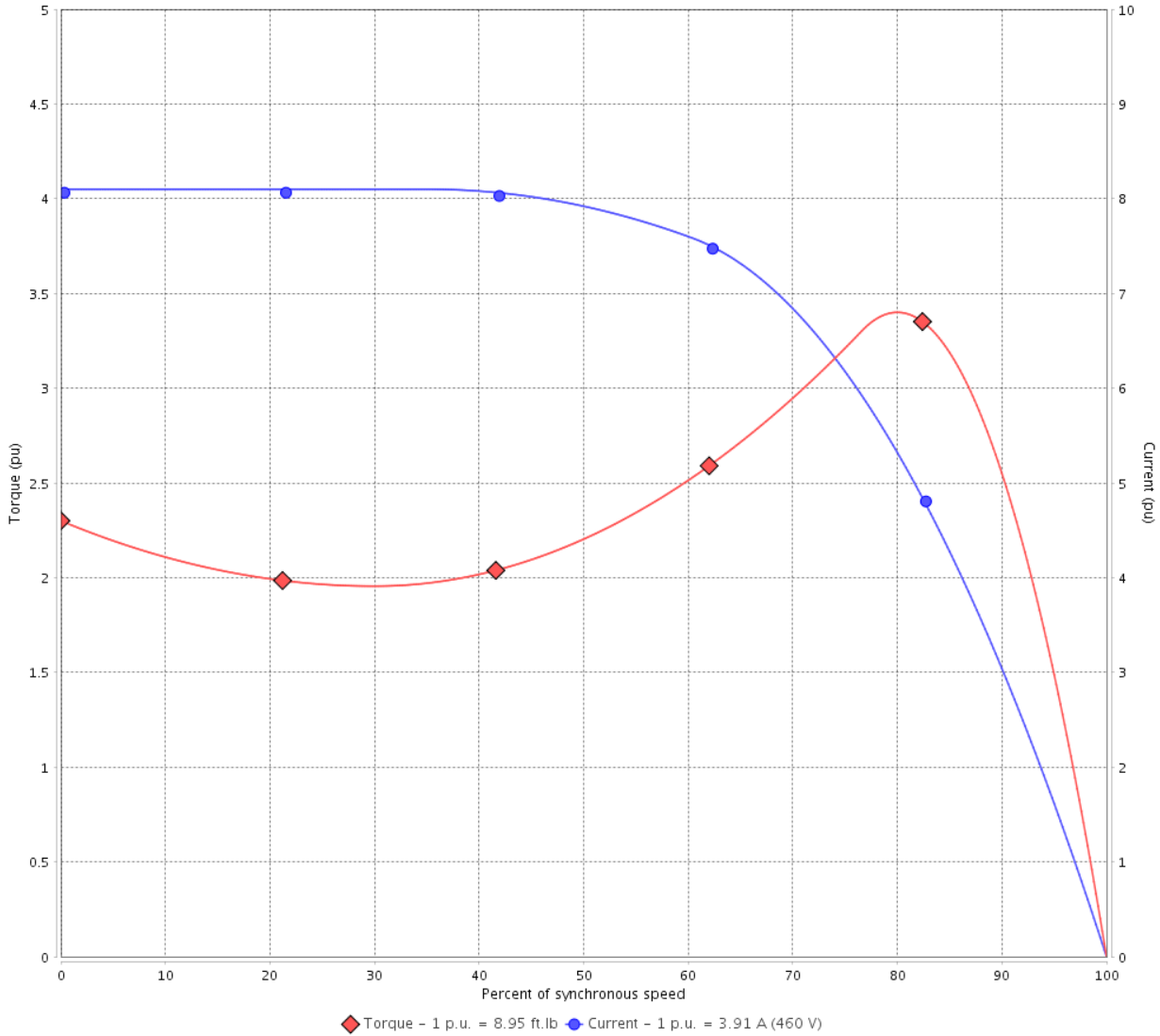
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 7.82/3.91 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 8.1	Duty cycle	: Cont.(S1)
Rated torque	: 8.95 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1760 rpm	Design	: B

Locked rotor time : 41s (cold) 23s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



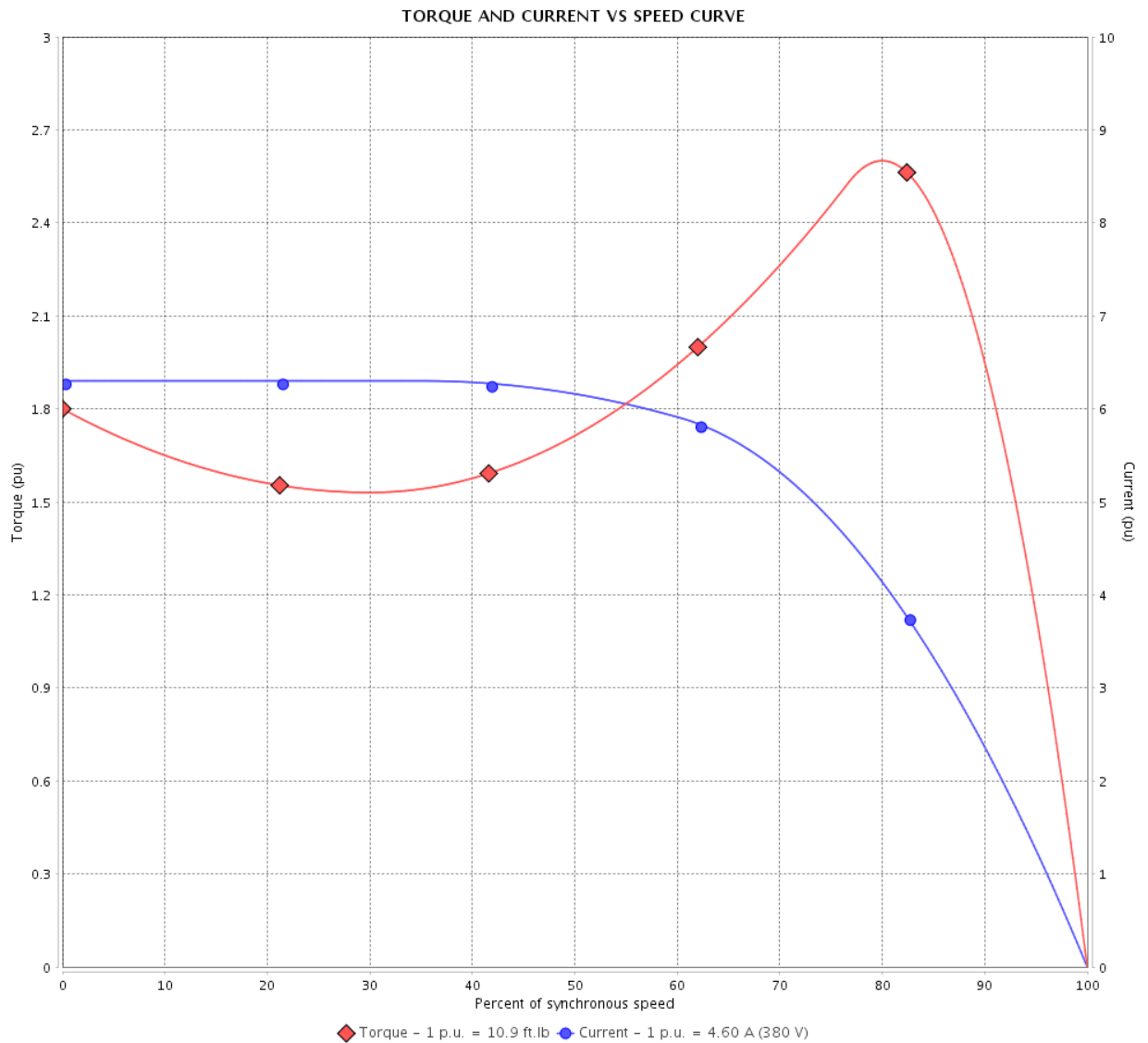
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 4.60 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



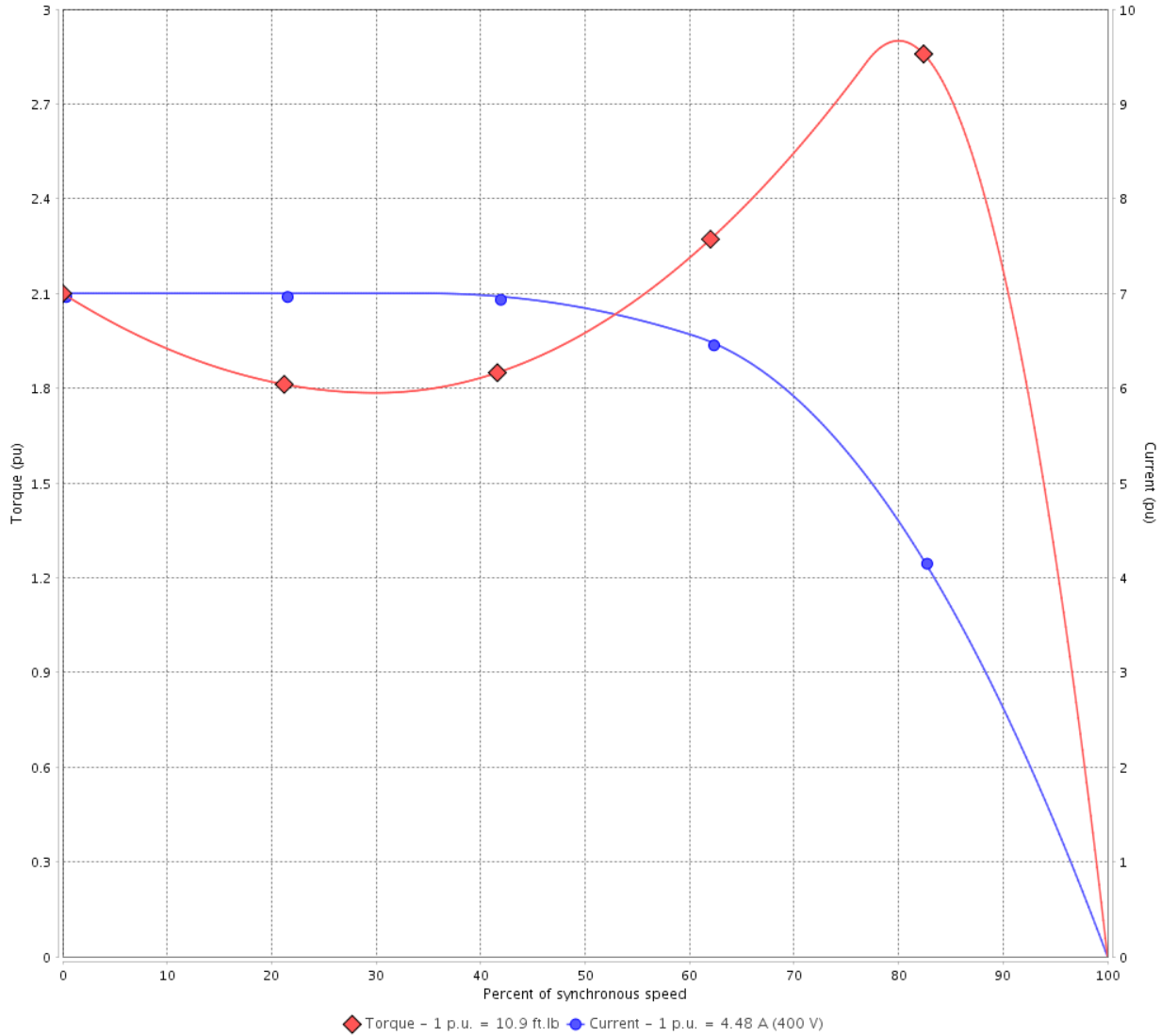
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 4.48 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



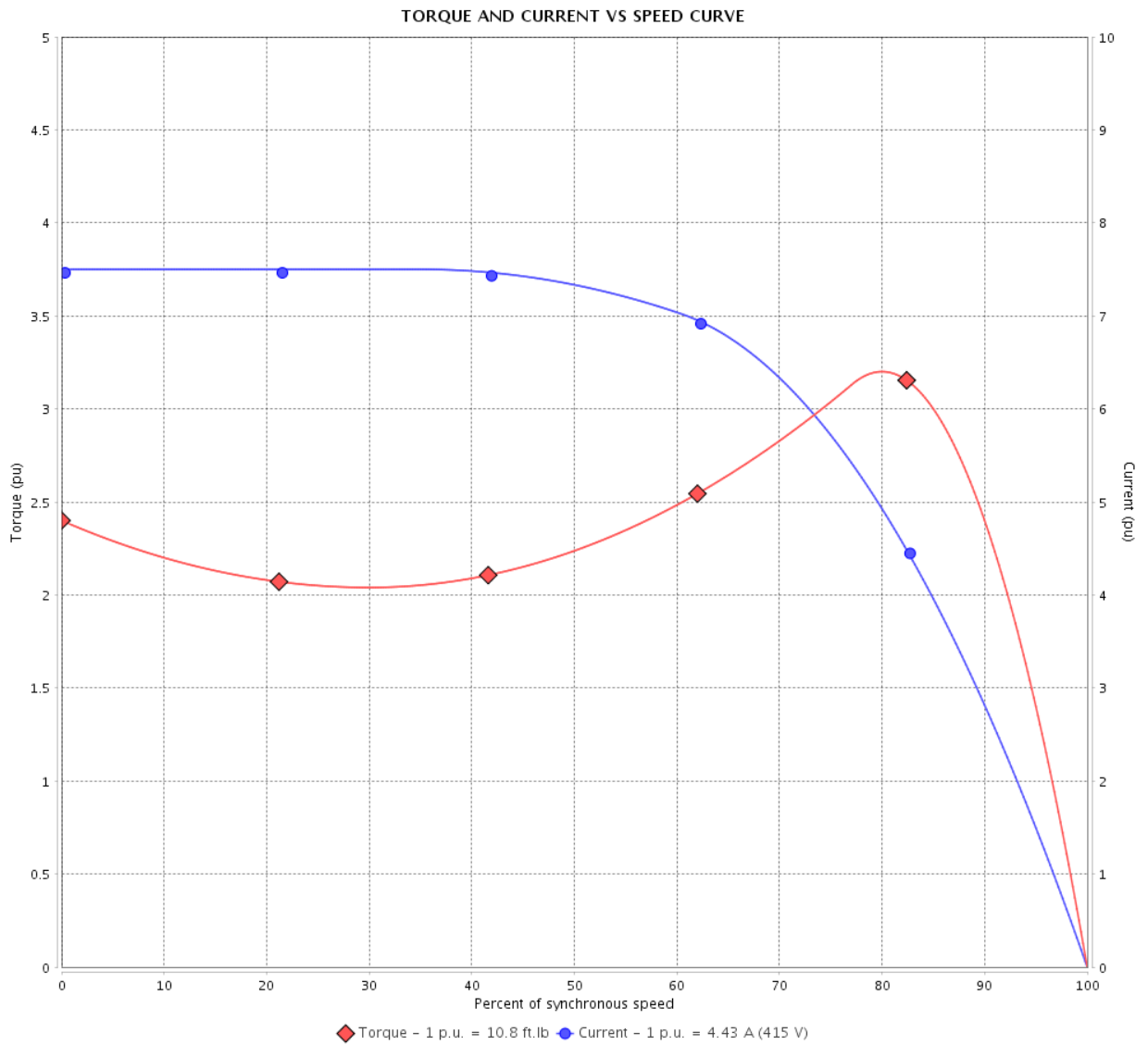
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 4.43 A  
 LRC : 7.5  
 Rated torque : 10.8 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 320 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 32s (cold) 18s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



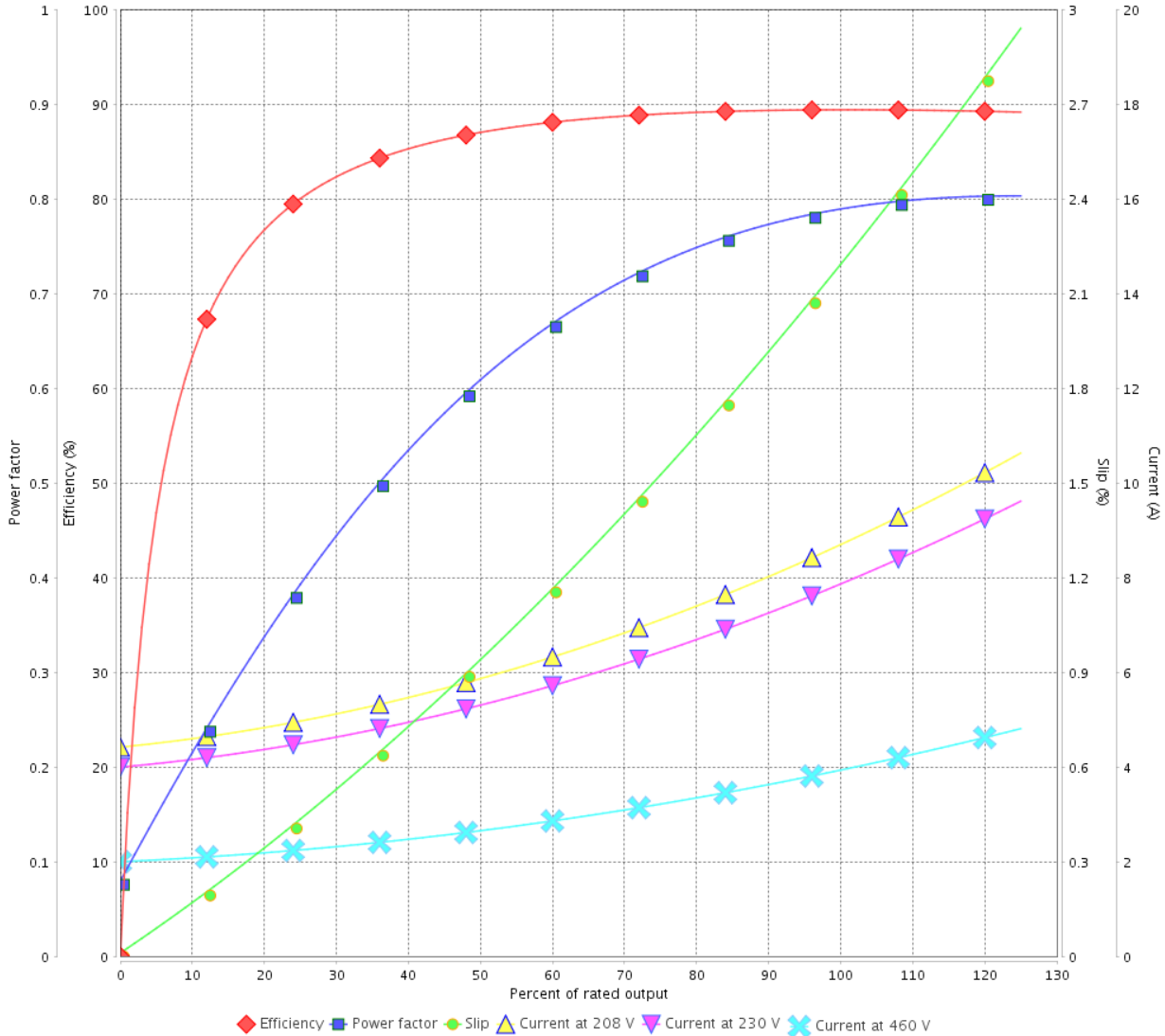
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A  
 LRC : 8.1  
 Rated torque : 8.95 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 340 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

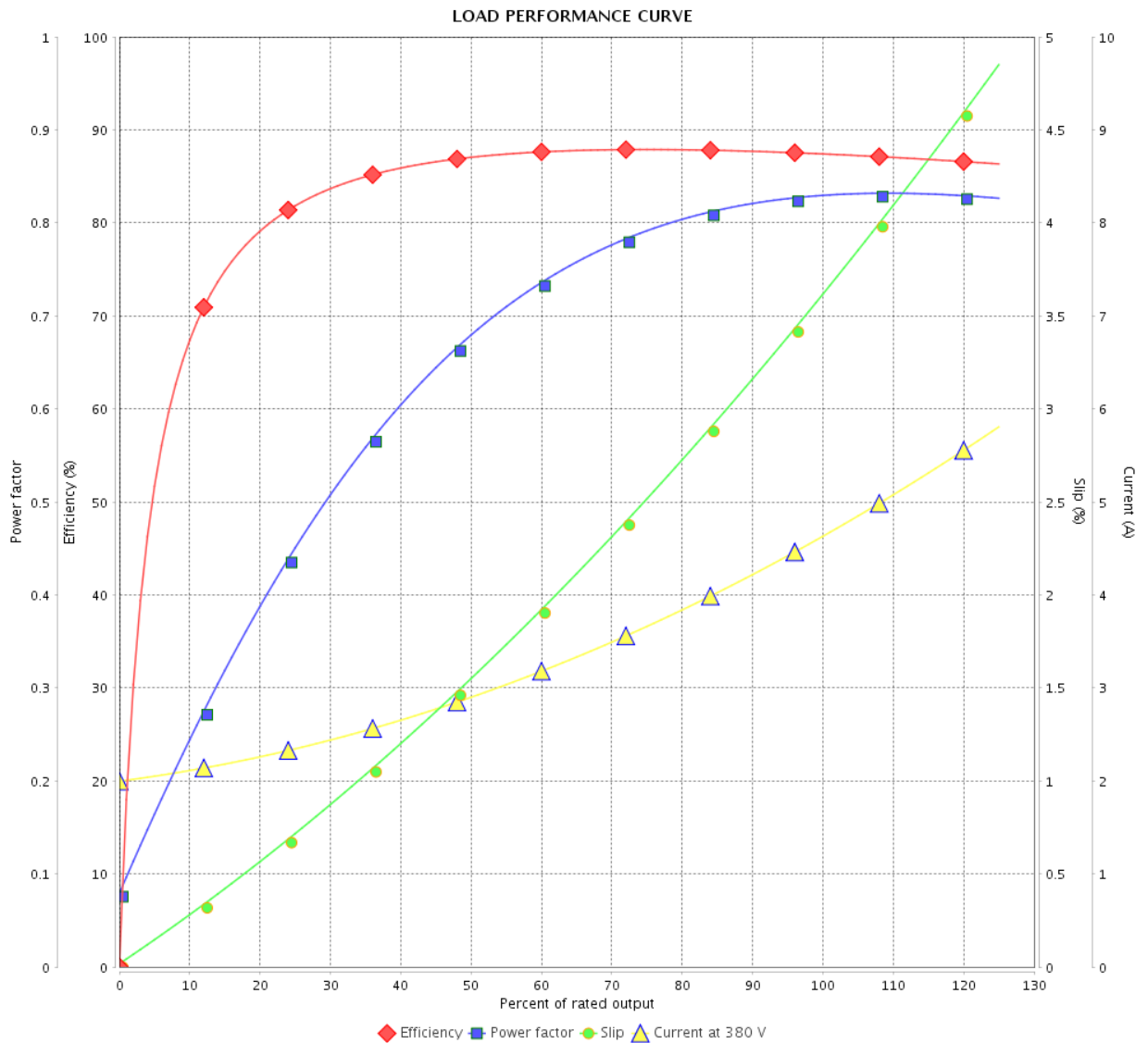


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 4.60 A  
 LRC : 6.3  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 260 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



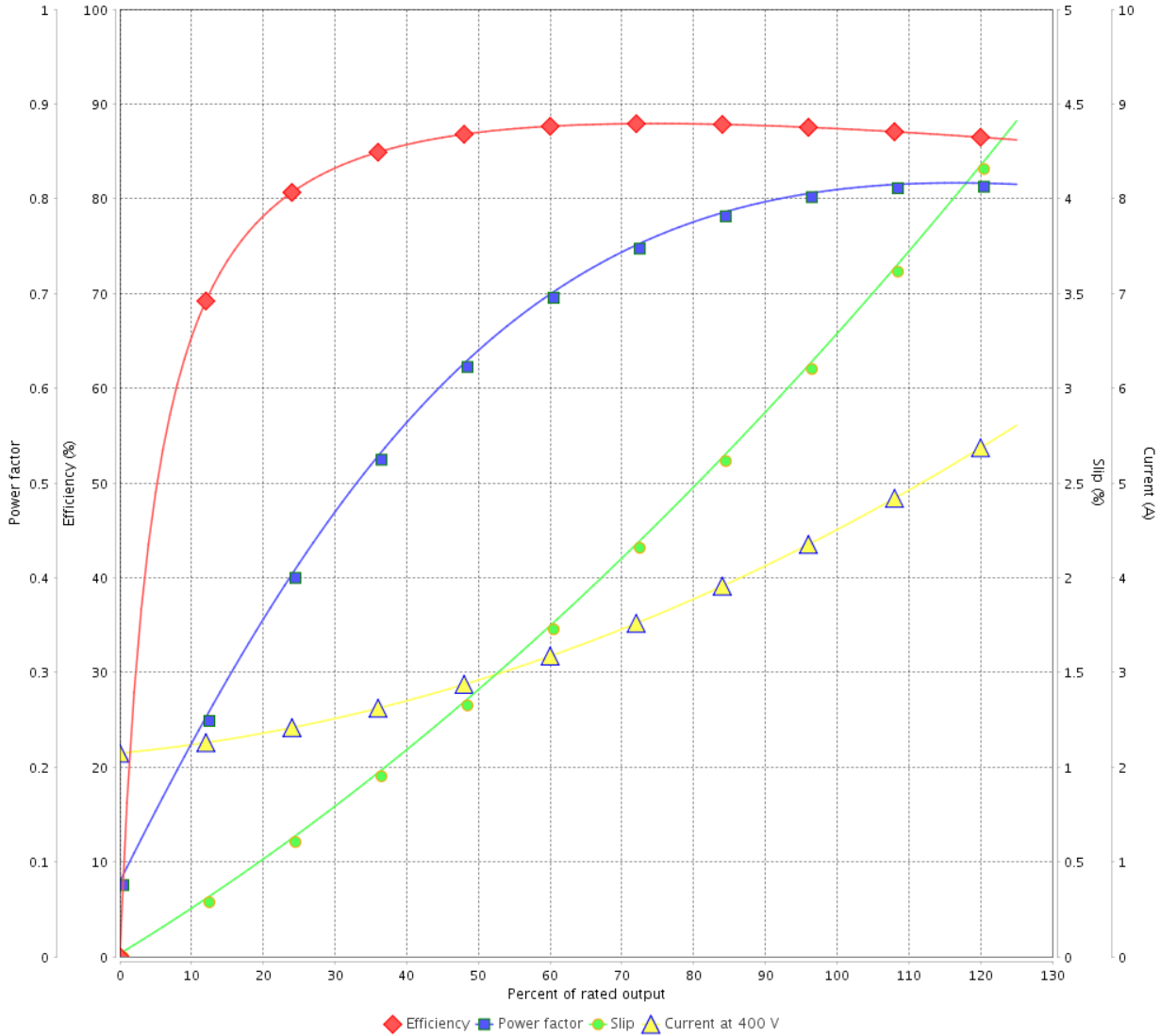
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A  
 LRC : 7.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

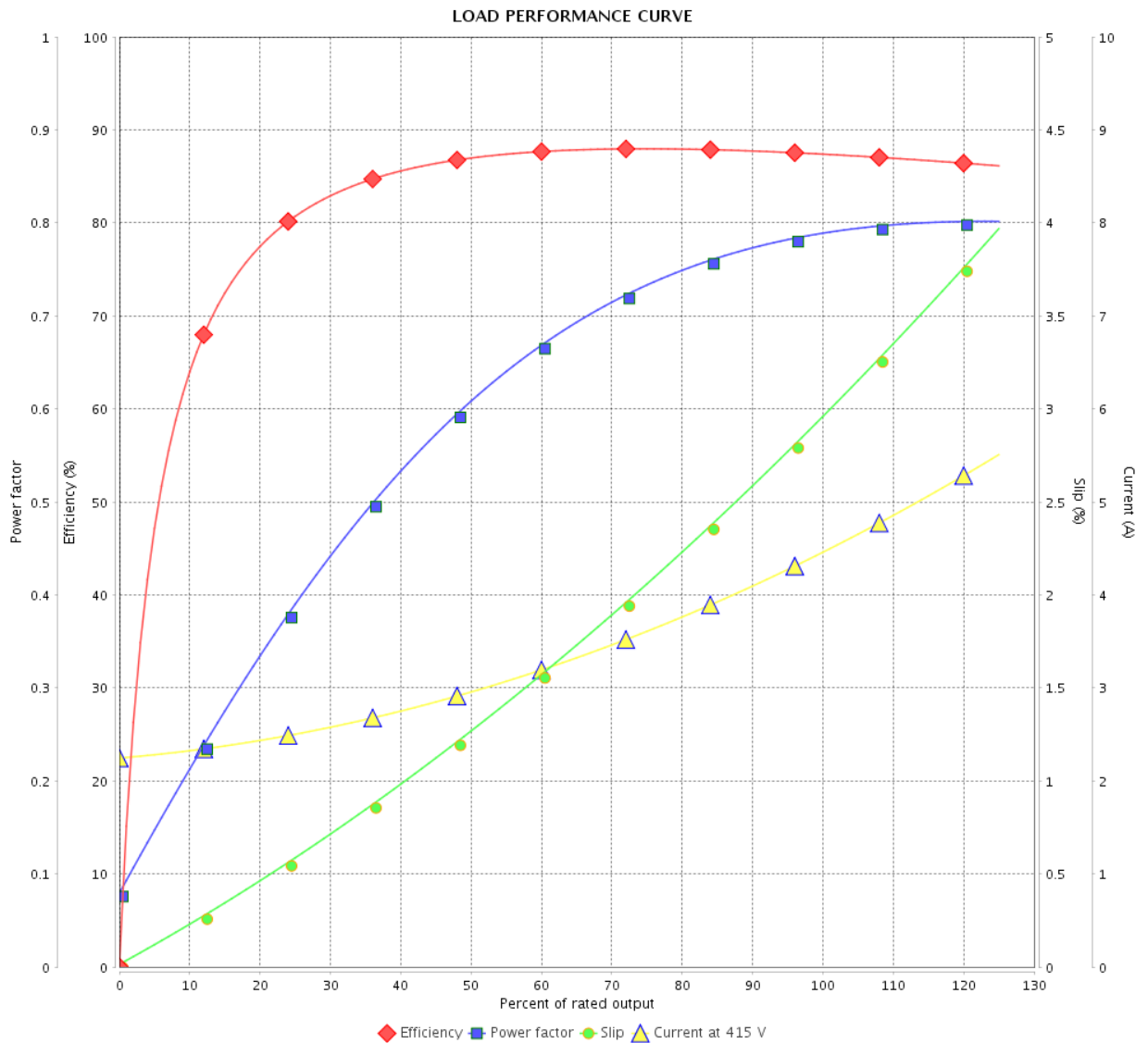


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 4.43 A  
 LRC : 7.5  
 Rated torque : 10.8 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 320 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 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 : 12598486  
Catalog # : 00318ET3E182JP-W22

Performance : 230/460 V 60 Hz 4P

Rated current	: 7.82/3.91 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 8.1	Duty cycle	: Cont.(S1)
Rated torque	: 8.95 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.25
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 1760 rpm	Design	: B

Heating constant

Cooling constant

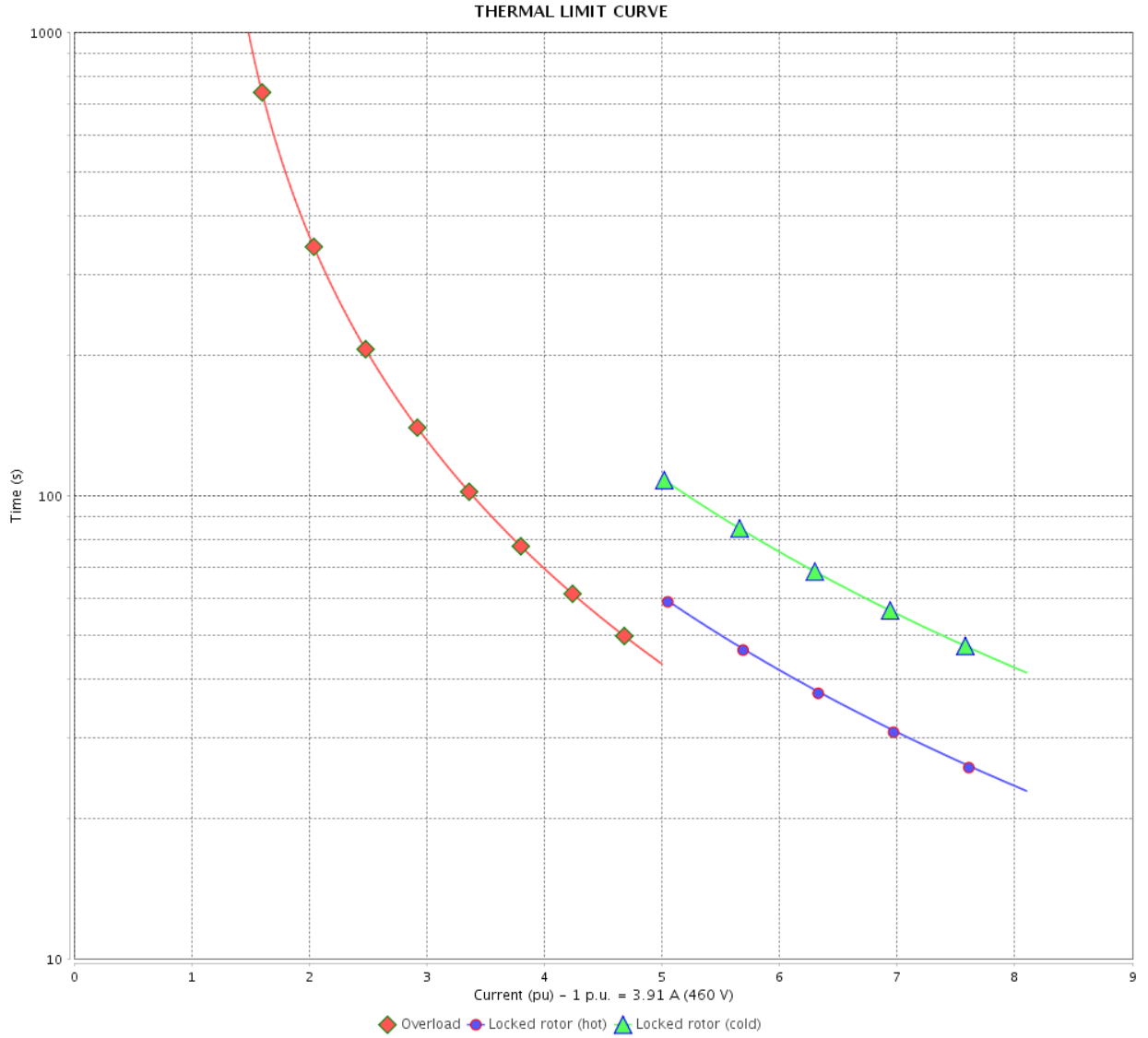
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date		13/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12598486  
Catalog # : 00318ET3E182JP-W22

Performance : 380 V 50 Hz 4P IE3

Rated current	: 4.60 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1445 rpm	Design	: B

Heating constant

Cooling constant

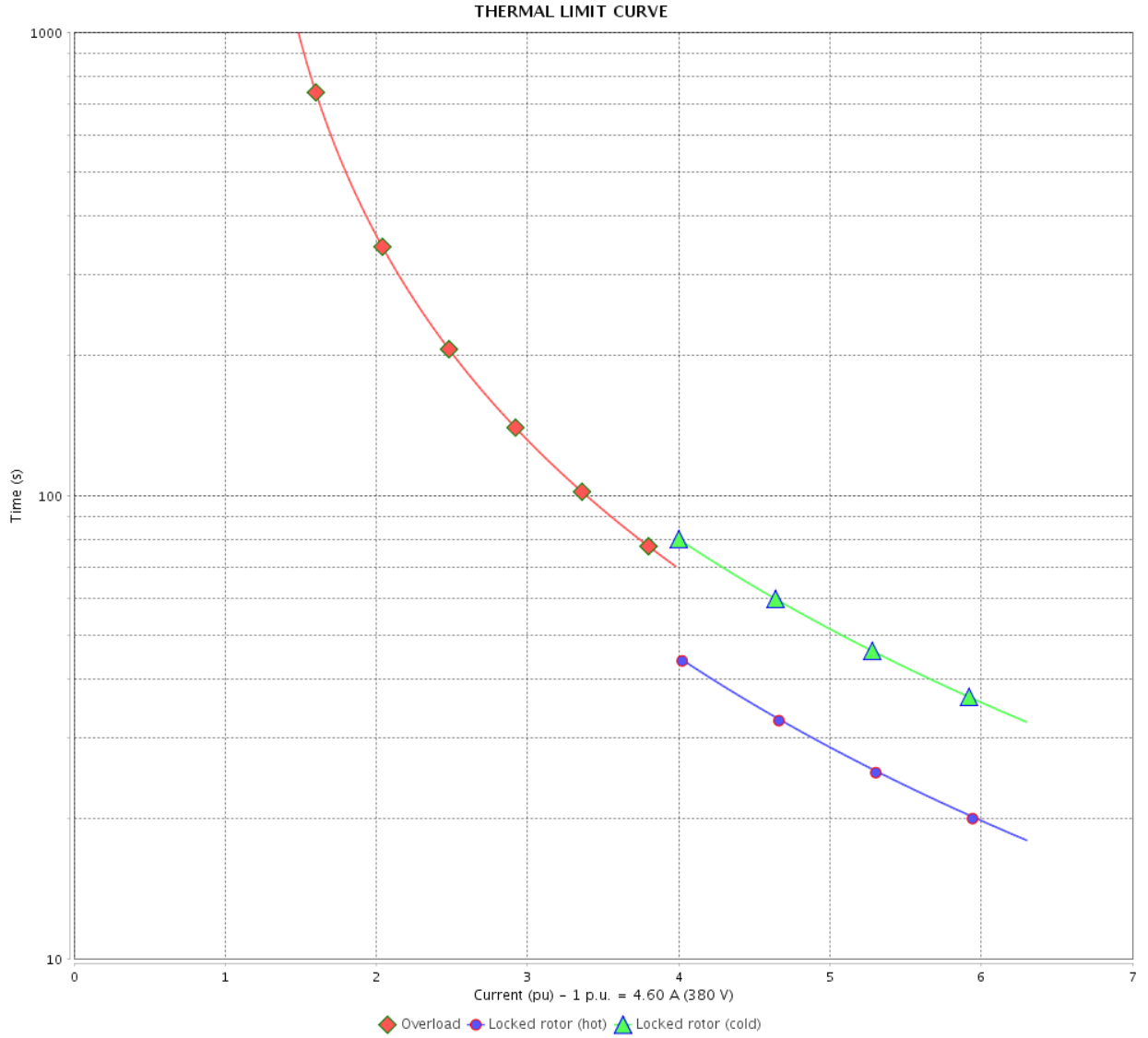
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date		13/04/2022		

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12598486  
Catalog # : 00318ET3E182JP-W22

Performance : 400 V 50 Hz 4P IE3

Rated current	: 4.48 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 10.9 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

Heating constant

Cooling constant

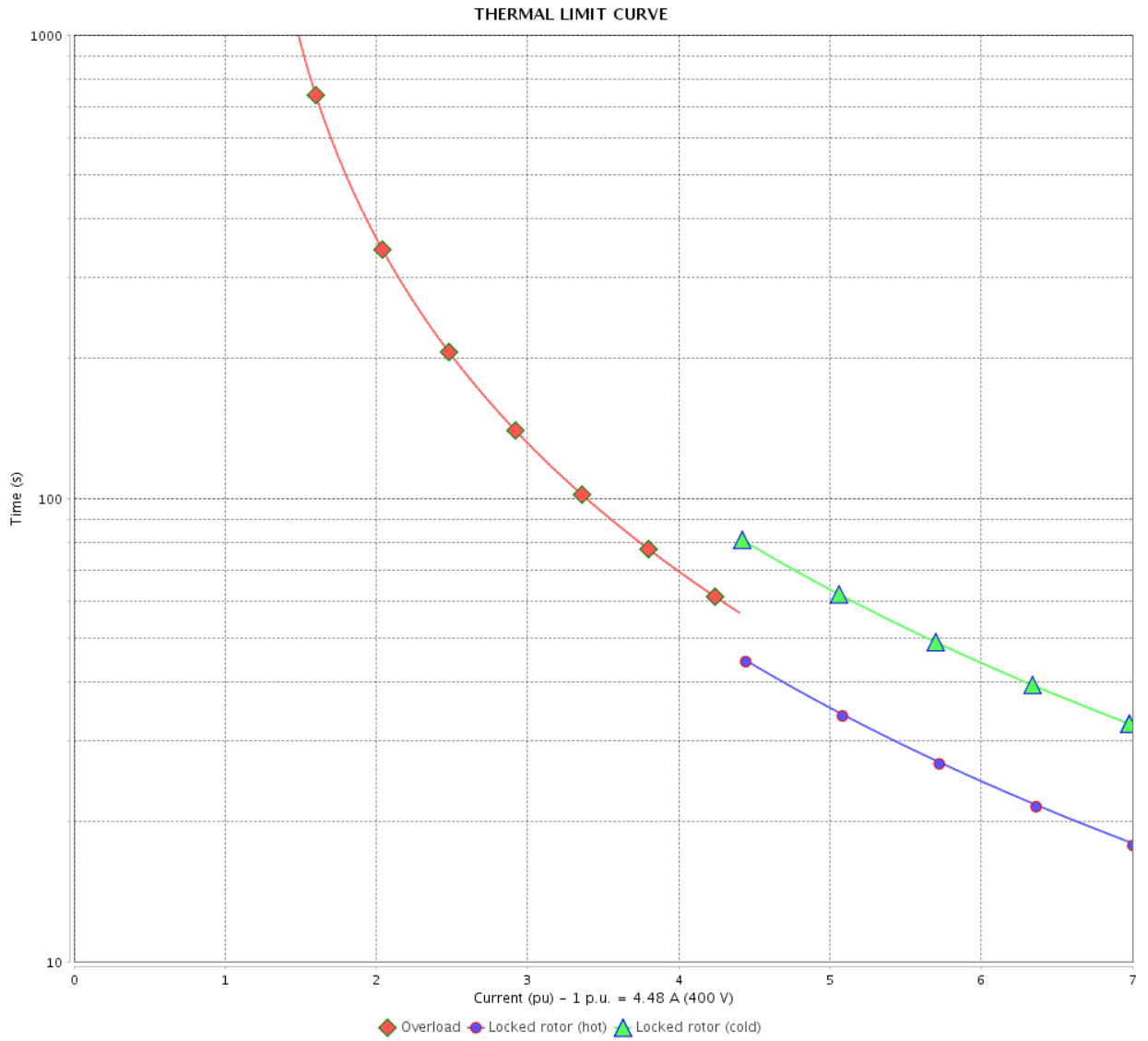
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Checked by				
Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12598486  
Catalog # : 00318ET3E182JP-W22

Performance : 415 V 50 Hz 4P IE3

Rated current	: 4.43 A	Moment of inertia (J)	: 0.3401 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 10.8 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

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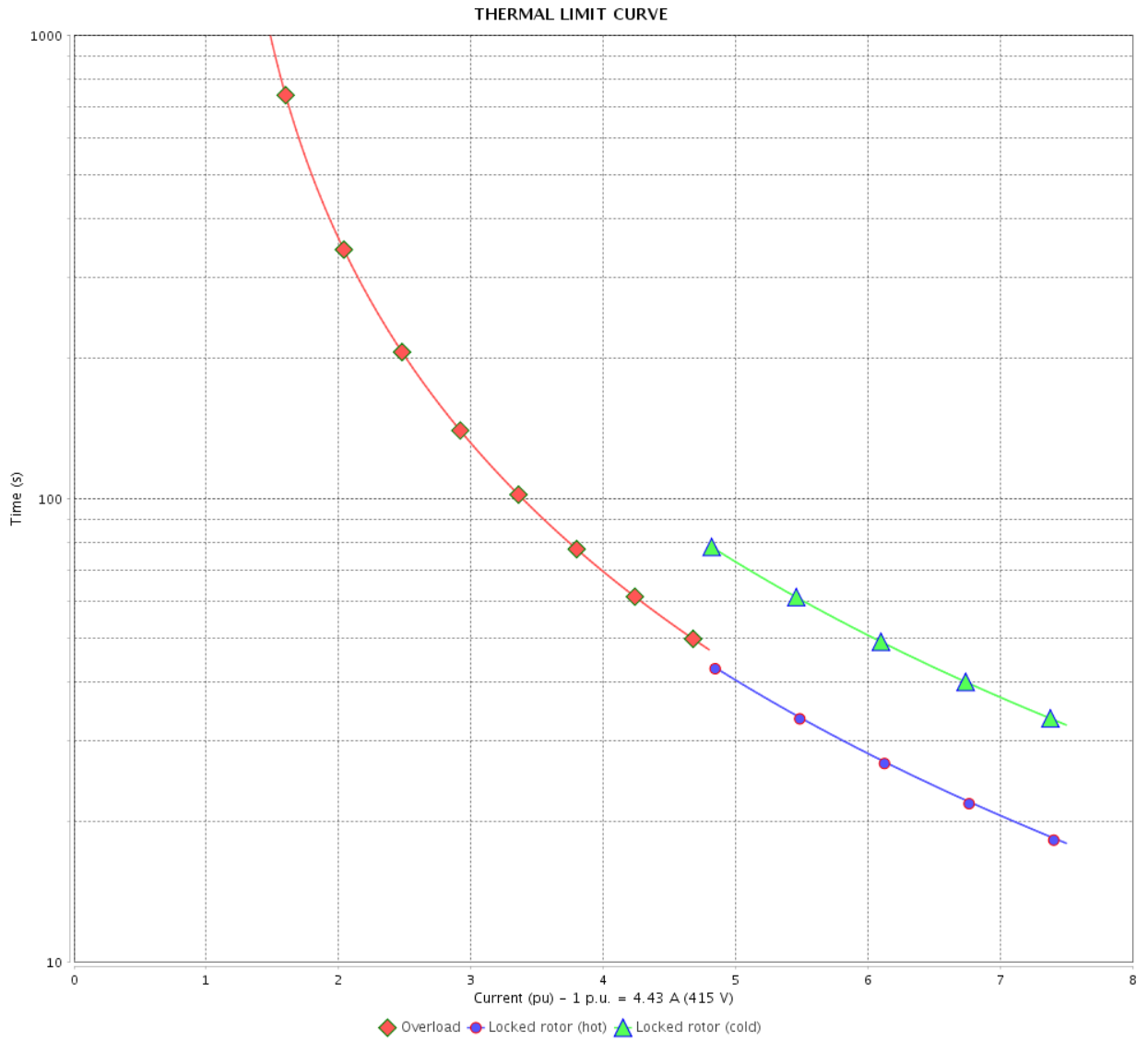


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

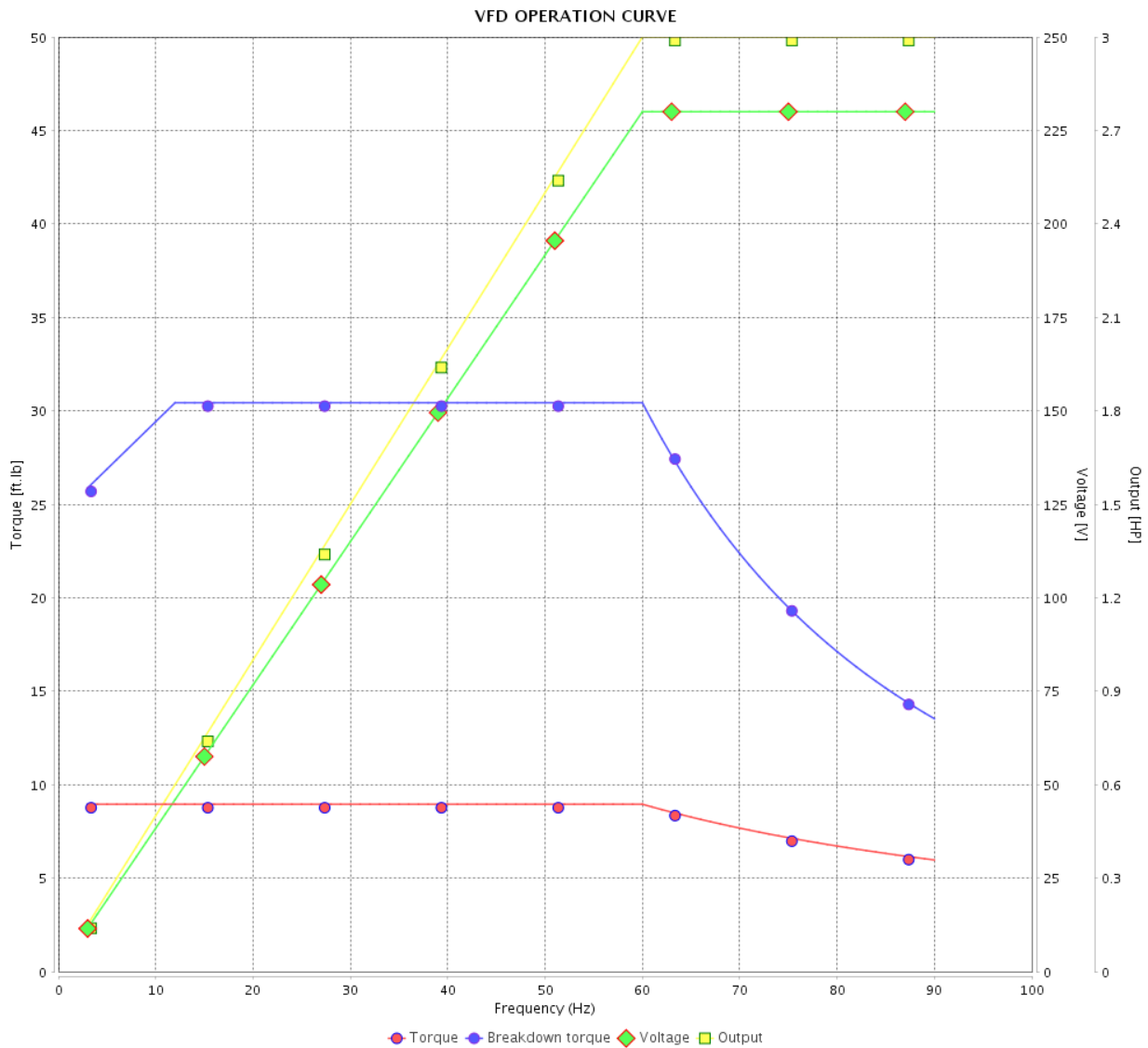


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 230/460 V 60 Hz 4P

Rated current : 7.82/3.91 A  
 LRC : 8.1  
 Rated torque : 8.95 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 340 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

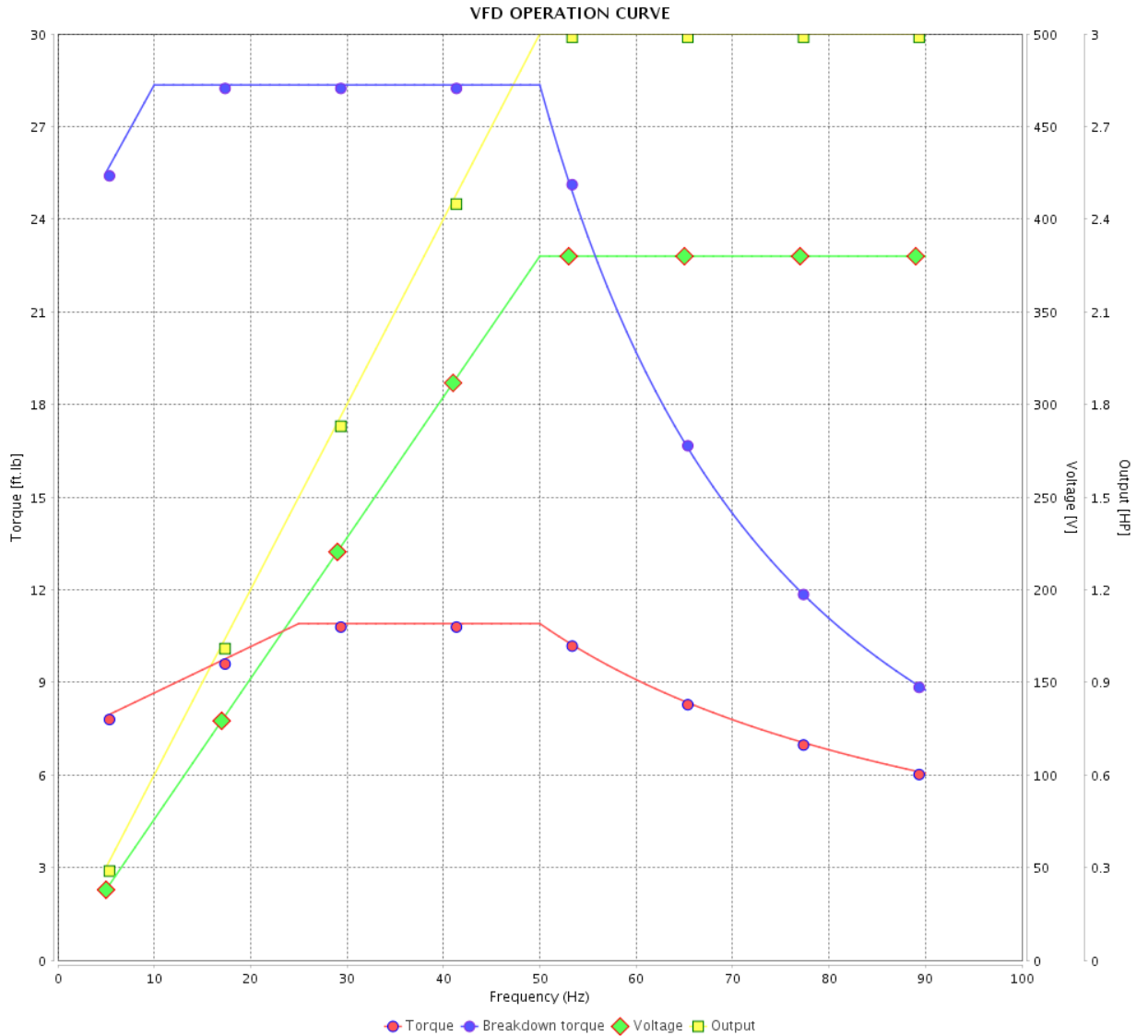


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 4.60 A  
 LRC : 6.3  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 260 %  
 Rated speed : 1445 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

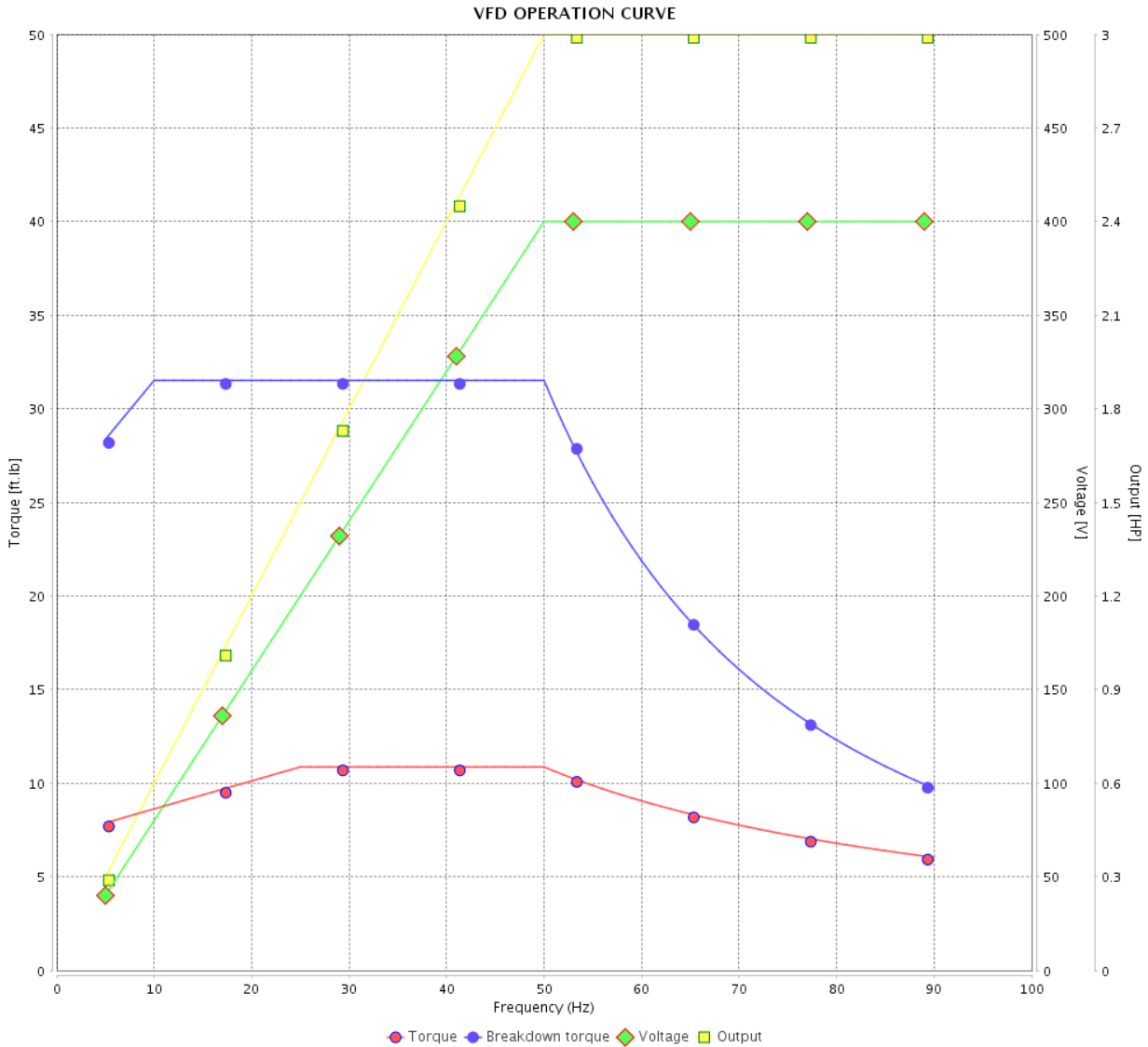


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 400 V 50 Hz 4P IE3

Rated current : 4.48 A  
 LRC : 7.0  
 Rated torque : 10.9 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

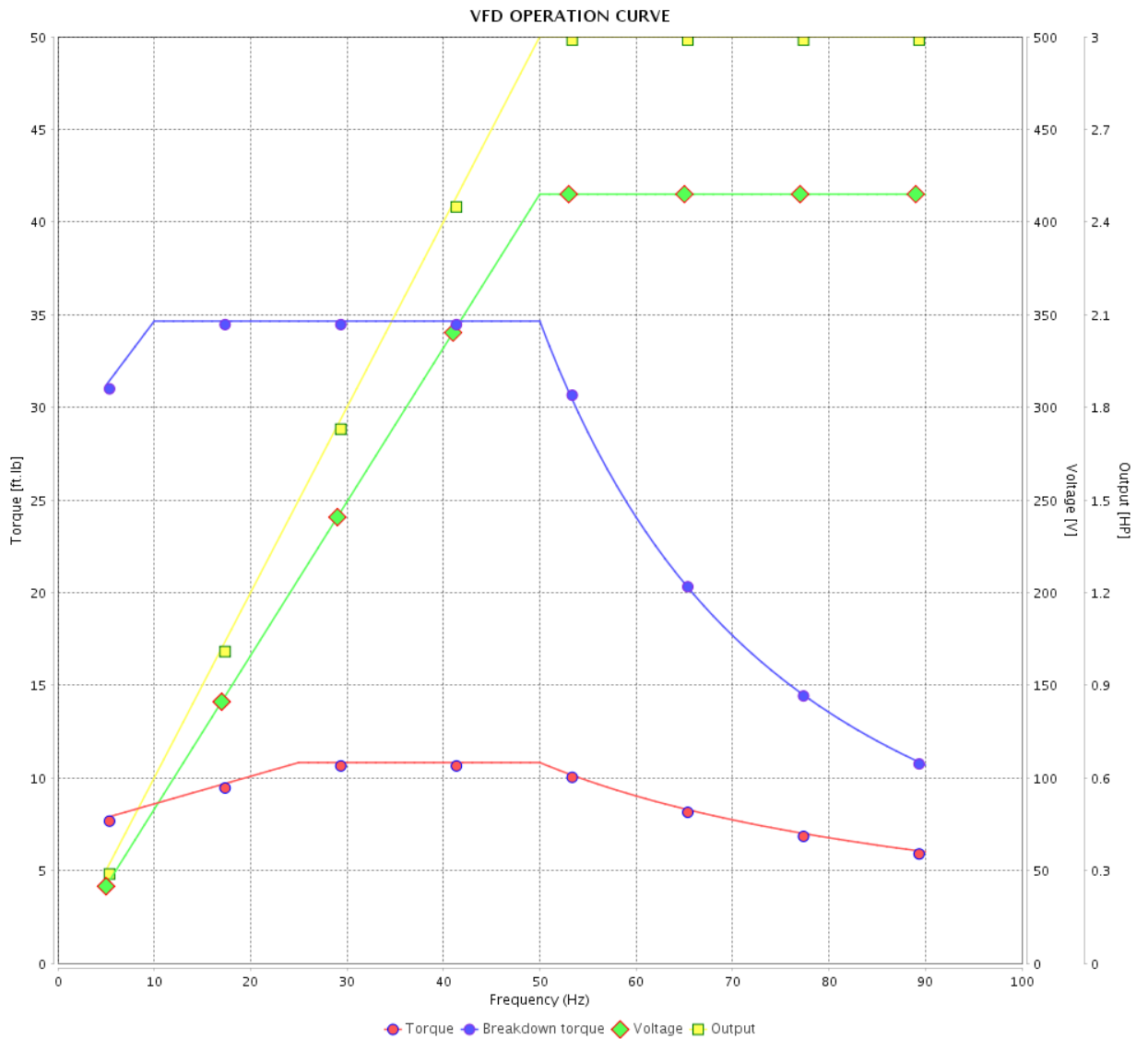


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12598486

Catalog # : 00318ET3E182JP-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 4.43 A  
 LRC : 7.5  
 Rated torque : 10.8 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 320 %  
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.3401 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

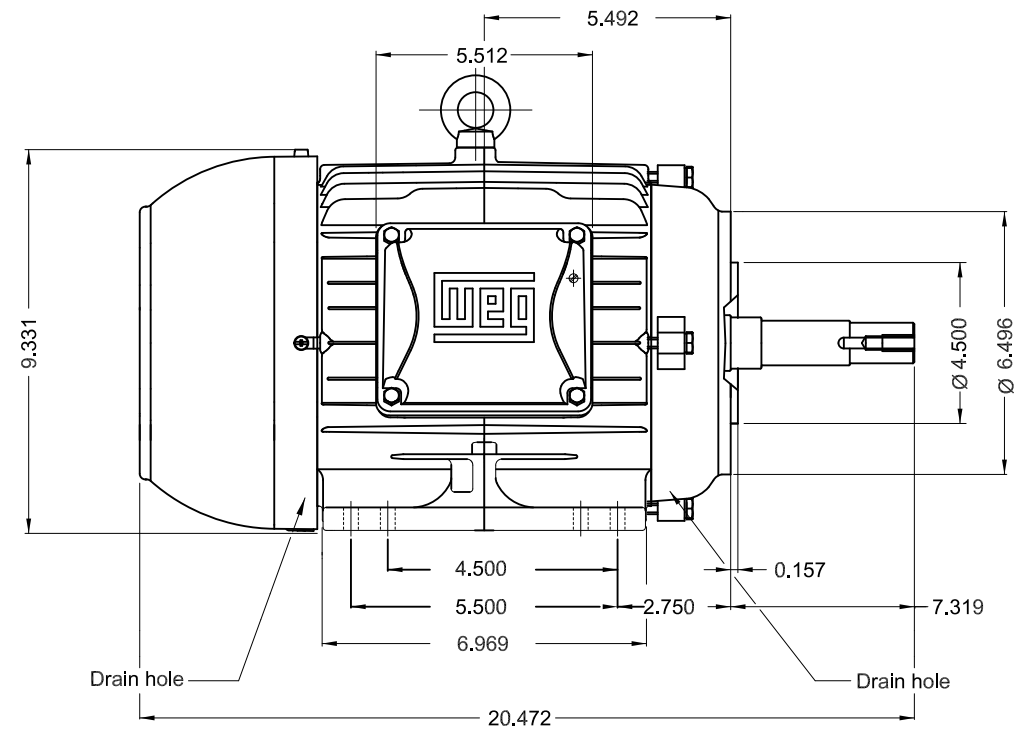
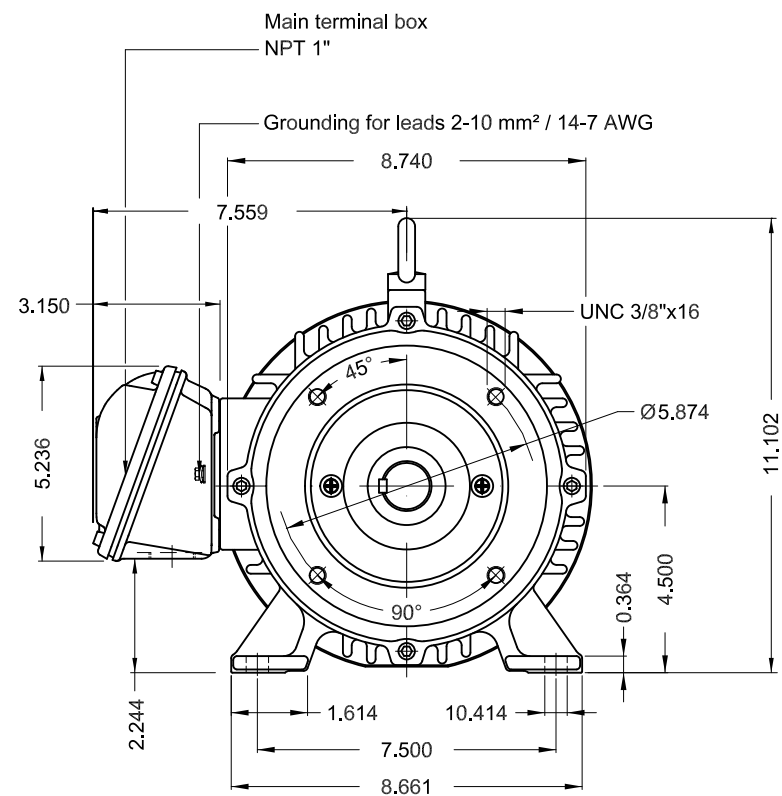
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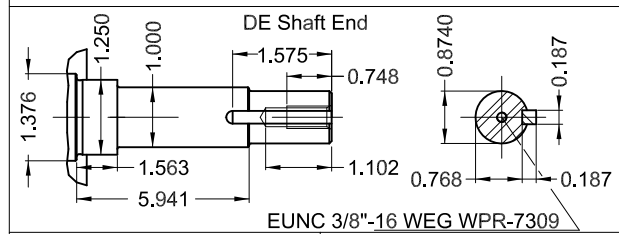
A

B

C



D



E

Color RAL 5009  
 Painting plan 207A  
 Mounting NEMA F-1  
 Mounting B34R(D)

3 HP 04 Poles 60 Hz

A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF.					
CHECKED		FRAME 182/4JP IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
 WDD



Dimensions in inches

XME A3

**W22**

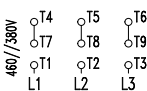
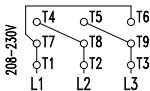
CC029A

® Inverter Duty Motor  
Severe Duty

12598486

MADE IN BRAZIL JP003404NPW22

PH 3	FR 182/4JP	HP(kw) 3.0(2.2)	Hz 60	SF 1.25	PF 0.79
V 230/460	A 7.82/3.91	RPM 1760	INS. CL. F	ΔT 80 K	IP55
NEMA NOM EFF 89.5 %			DES B DUTY CONT.		AMB 40°C
ENCL TEFC	SFA 9.78/4.89	USABLE @208V 8.65 A	SF 1.15	SFA 9.95	
3.0HP 2.2kW 50Hz 380V 4.60A 1445RPM SF1.25 EFF 87.5% (IE3)					CODE K



→6307-ZZ

→6206-ZZ

MOBIL POLYREX EM

ALT 1000 m.a.s.l. | 95 Lbs

For 60Hz: Class I, Div 2, Gr. A, B, C and D - T3  
 Class I, Zone 2, IIC - T3  
 Class II, Div 2, Gr. F and G - T5  
 For use on PWM, Gr. A, B, C, D, F and G  
 VT1000:1, CT20:1, 1.0SF, T4A

FOR SAFE AREA  
MOD.TE1BFOXON