

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		12325222
			Catalog # :		00512ET3E215JP-W22
Frame		: 213/5JP	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>		: 180 lb
Protection degree		: IP55	Moment of inertia (J)		: 1.47 sq.ft.lb
Design		: B			
Output [HP]	5	5	5	5	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	13.7/6.83	8.10	7.82	7.55	
L. R. Amperes [A]	92.9/46.4	44.5	47.7	49.1	
LRC [A]	6.8x(Code J)	5.5x(Code G)	6.1x(Code H)	6.5x(Code H)	
No load current [A]	6.90/3.45	3.41	3.68	3.90	
Rated speed [RPM]	1170	960	965	970	
Slip [%]	2.50	4.00	3.50	3.00	
Rated torque [ft.lb]	22.4	27.4	27.2	27.1	
Locked rotor torque [%]	170	140	160	190	
Breakdown torque [%]	260	200	229	250	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	102s (cold) 57s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	
Noise level <sup>2</sup>	55.0 dB(A)	53.0 dB(A)	53.0 dB(A)	53.0 dB(A)	
Efficiency (%)	25%	88.2	89.8	89.1	87.2
	50%	88.5	88.5	88.5	87.5
	75%	89.5	88.5	88.5	88.5
	100%	89.5	86.8	87.5	88.5
Power Factor	25%	0.34	0.40	0.37	0.34
	50%	0.58	0.65	0.61	0.58
	75%	0.70	0.76	0.73	0.71
	100%	0.76	0.80	0.78	0.77
Bearing type		Drive end : 6309 Z C3	Non drive end : 6207 ZZ	Foundation loads	
Sealing		: V'Ring	: V'Ring	Max. traction : 292 lb	
Lubrication interval		: 20000 h	: 40000 h	Max. compression : 471 lb	
Lubricant amount		: 13 g	: 0 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 15.1A SF 1.15 SFA 17.4A					
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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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



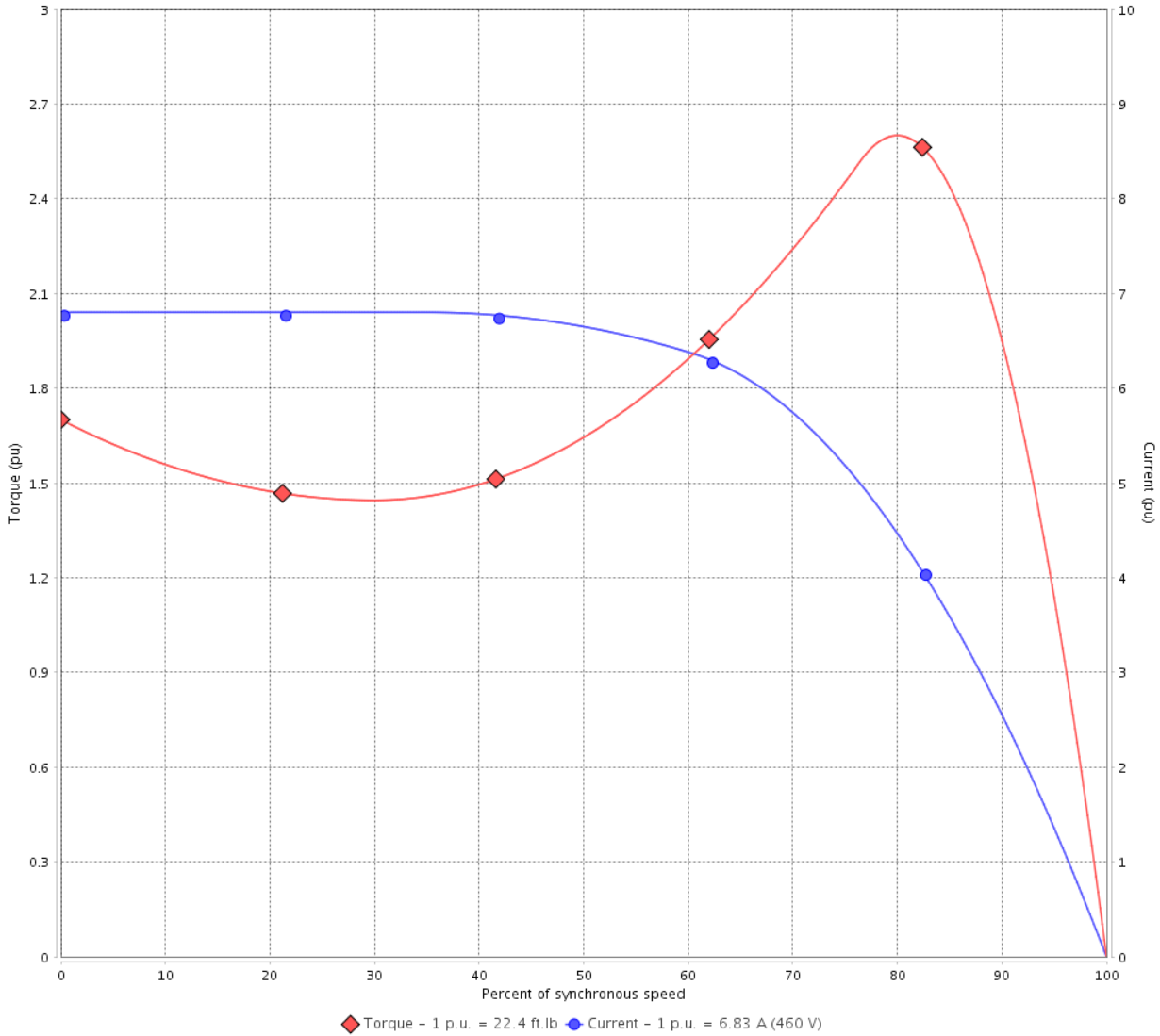
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 13.7/6.83 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Locked rotor time : 102s (cold) 57s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



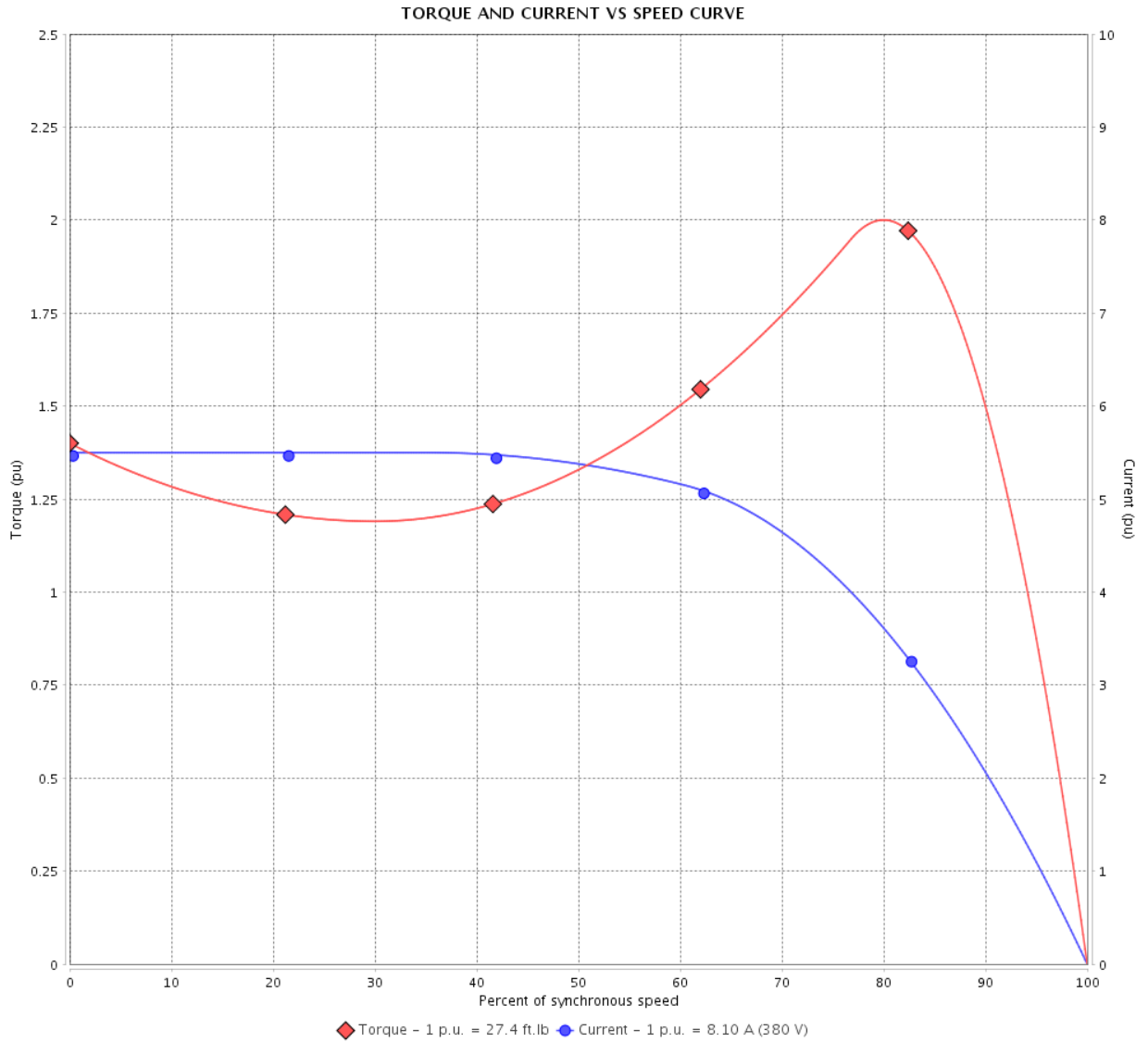
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 380 V 50 Hz 6P IE3

Rated current	: 8.10 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.4 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



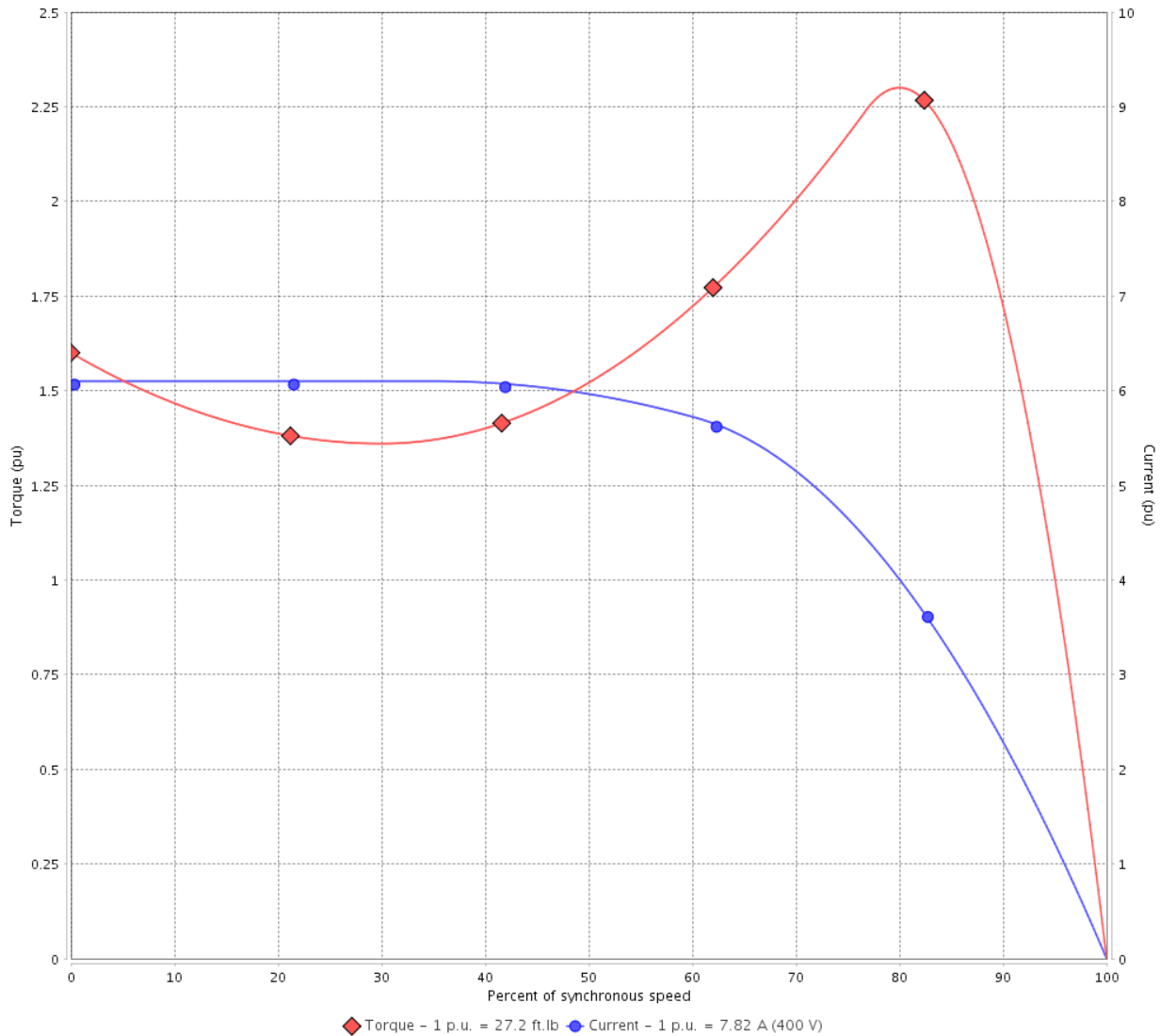
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



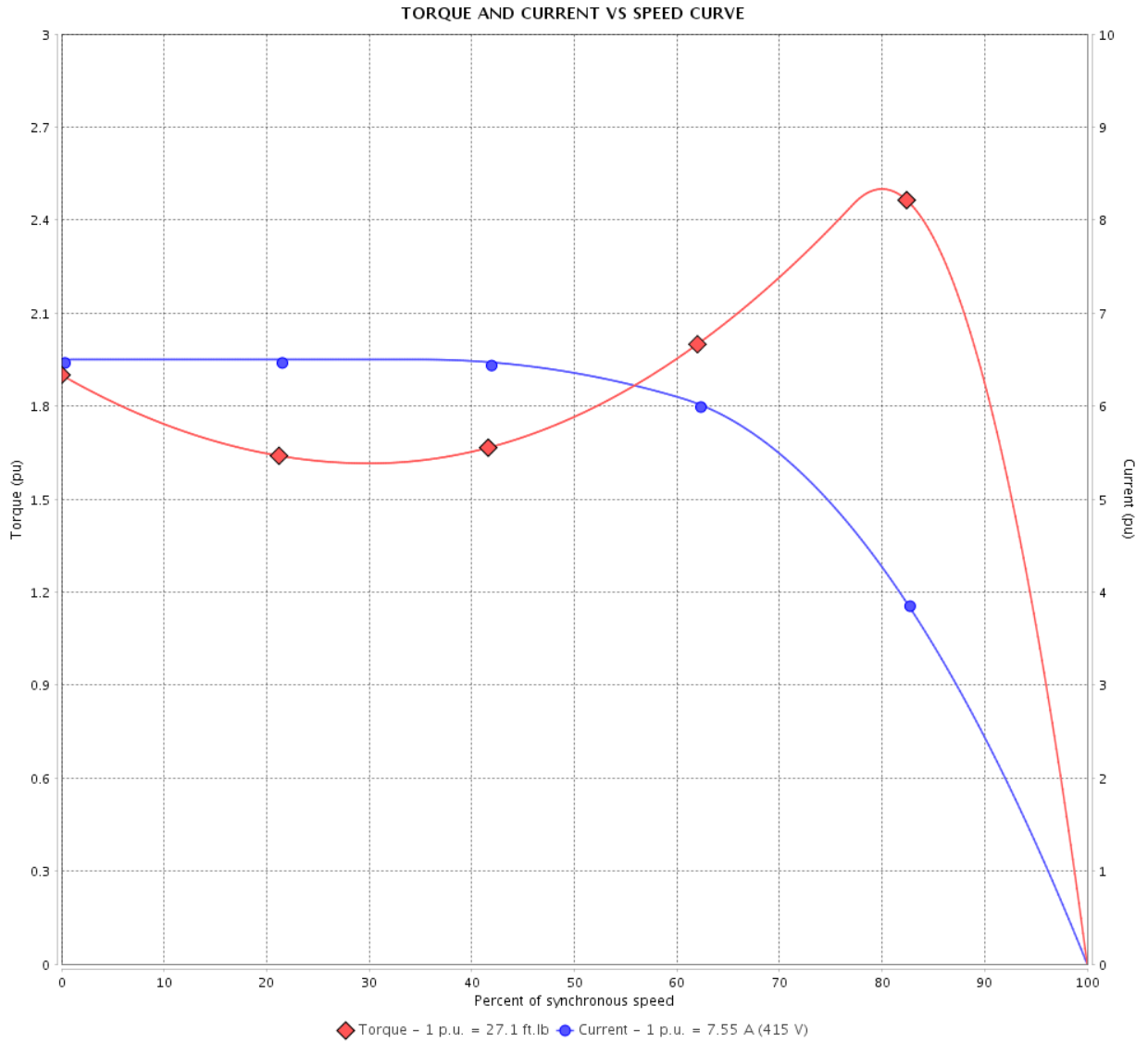
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 415 V 50 Hz 6P IE3

Rated current	: 7.55 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



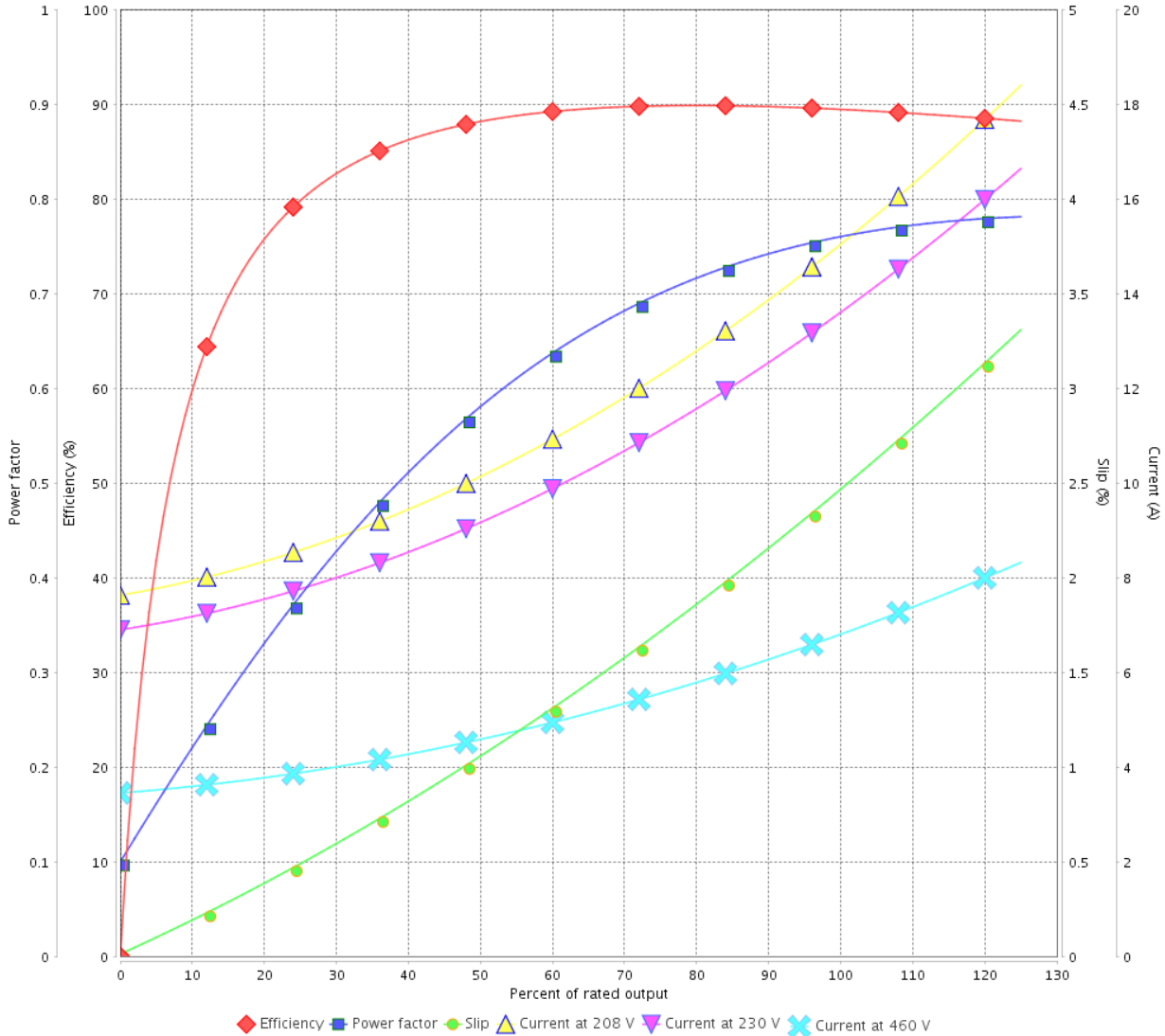
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.7/6.83 A  
 LRC : 6.8  
 Rated torque : 22.4 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 260 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 1.47 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

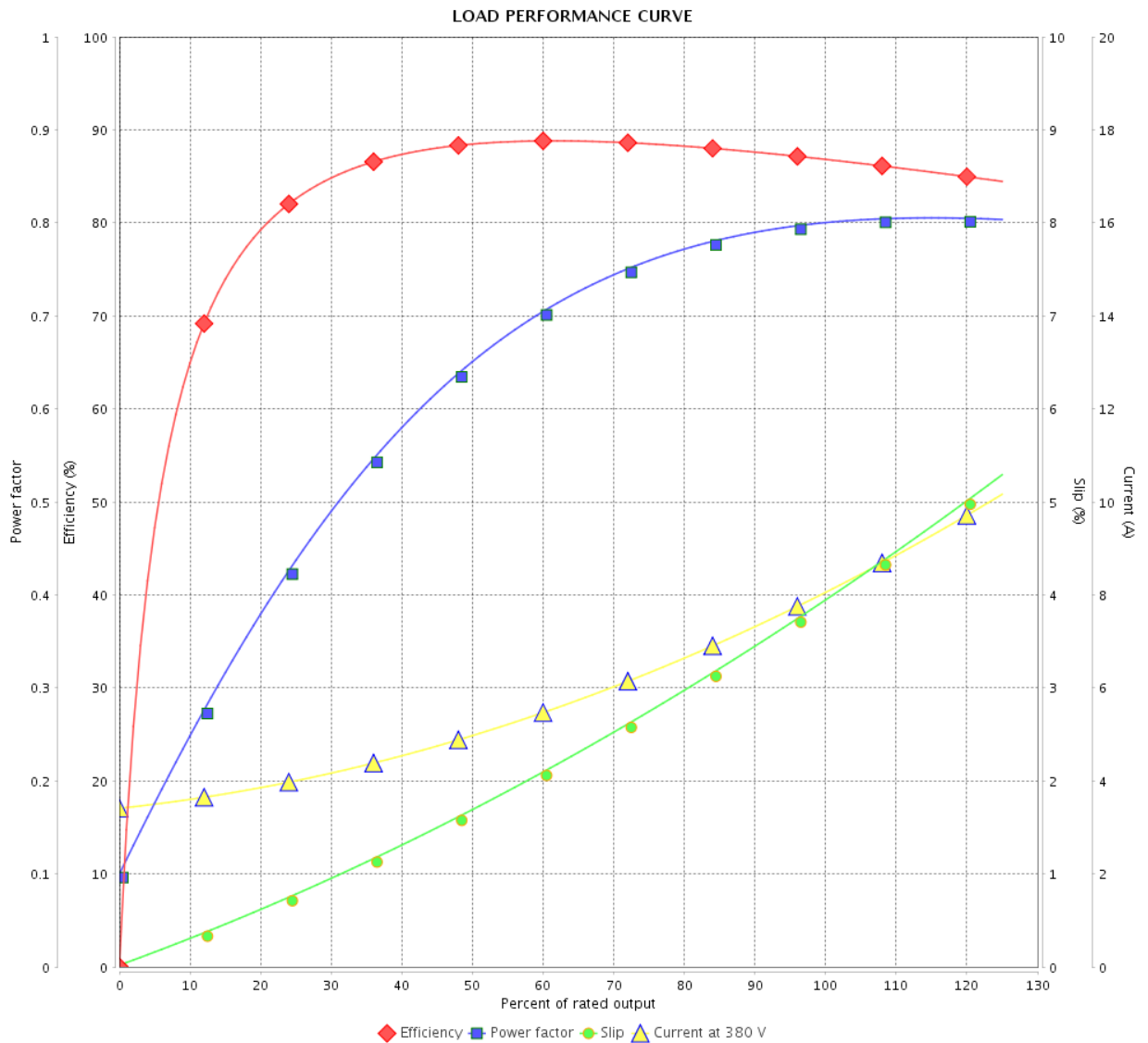


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A  
 LRC : 5.5  
 Rated torque : 27.4 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 200 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 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



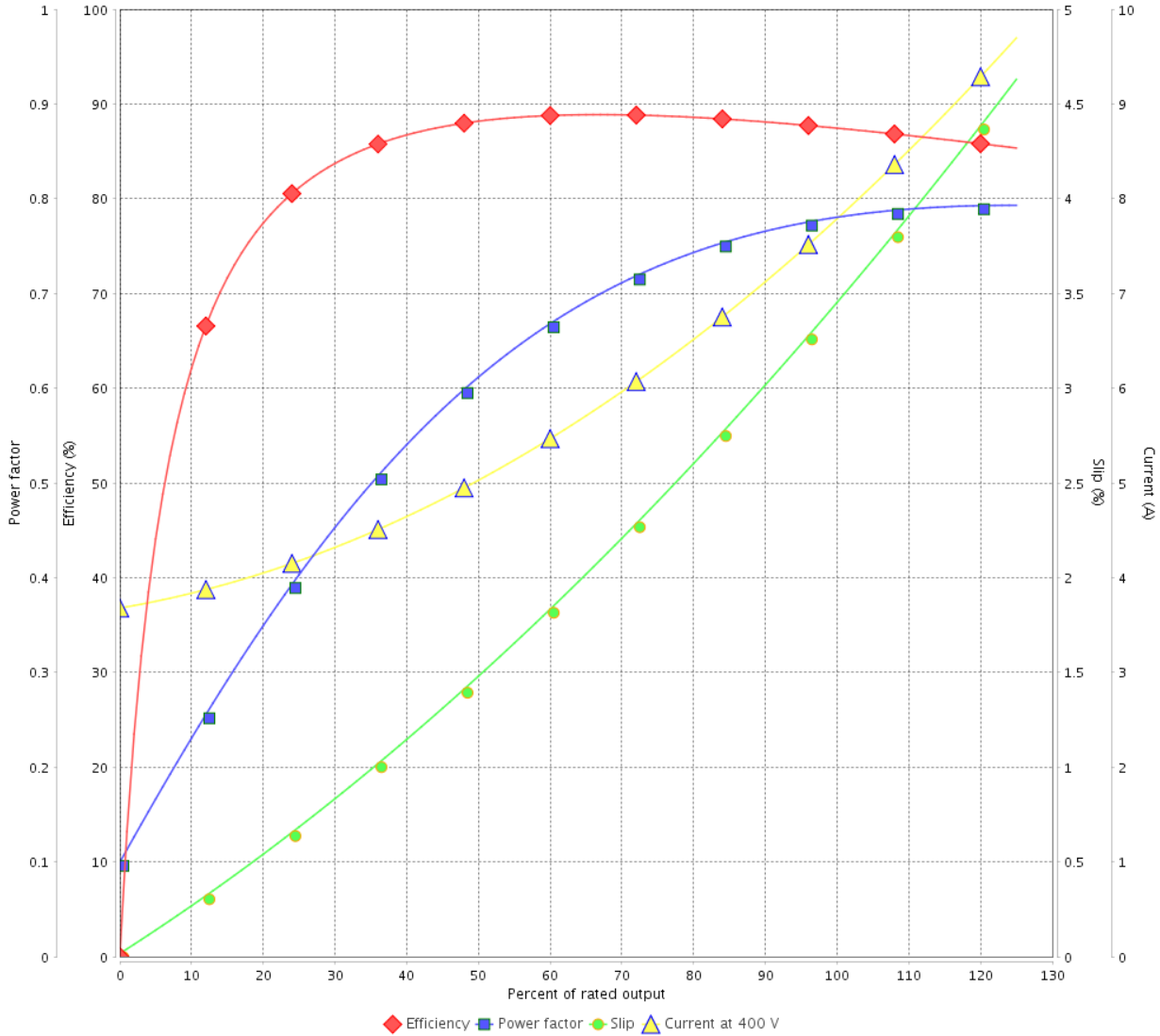
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 7.82 A  
 LRC : 6.1  
 Rated torque : 27.2 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 229 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 1.47 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

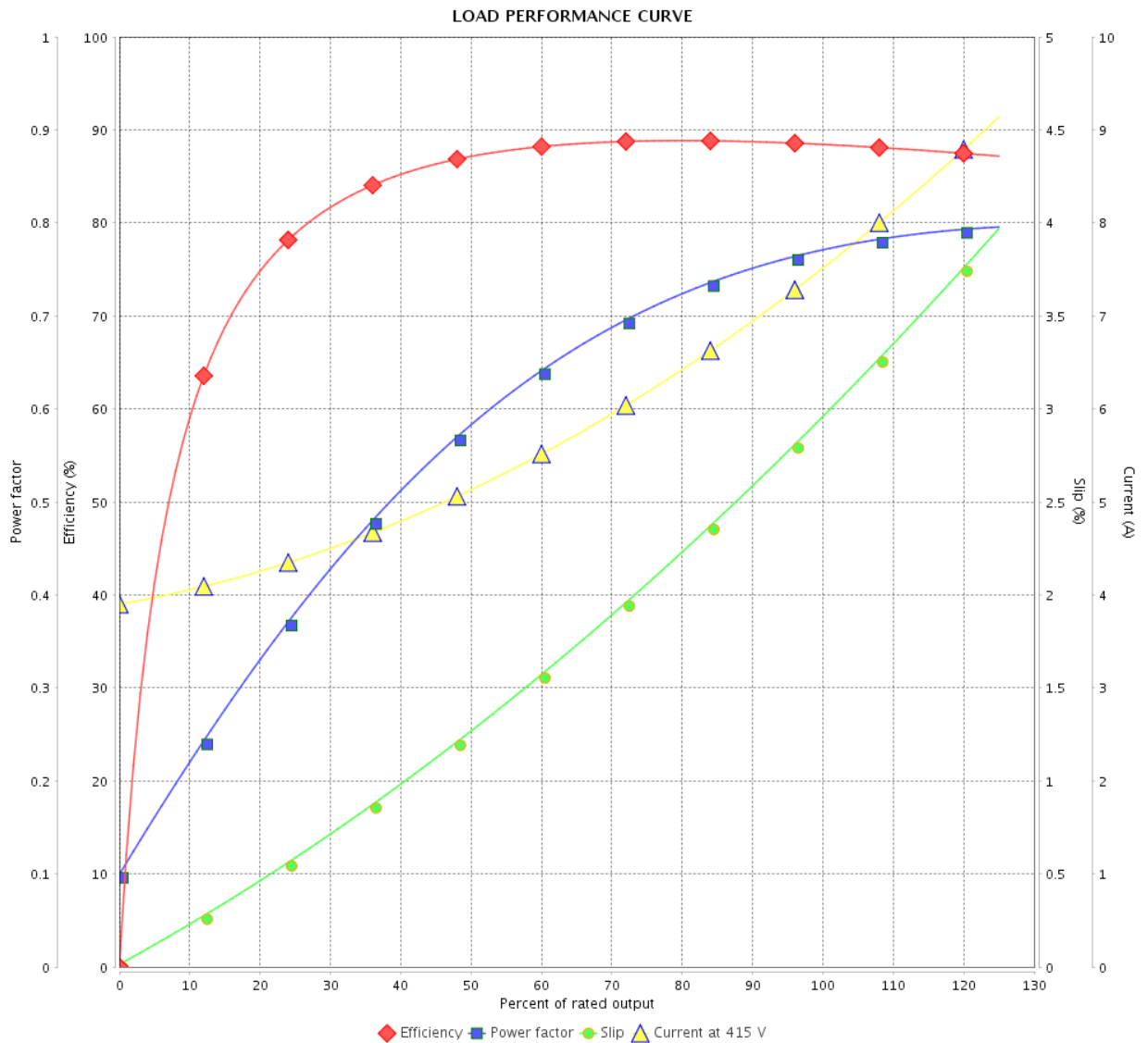


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 415 V 50 Hz 6P IE3

Rated current : 7.55 A  
 LRC : 6.5  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 1.47 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 : 12325222  
Catalog # : 00512ET3E215JP-W22

Performance : 230/460 V 60 Hz 6P

Rated current	: 13.7/6.83 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 22.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1170 rpm	Design	: B

Heating constant

Cooling constant

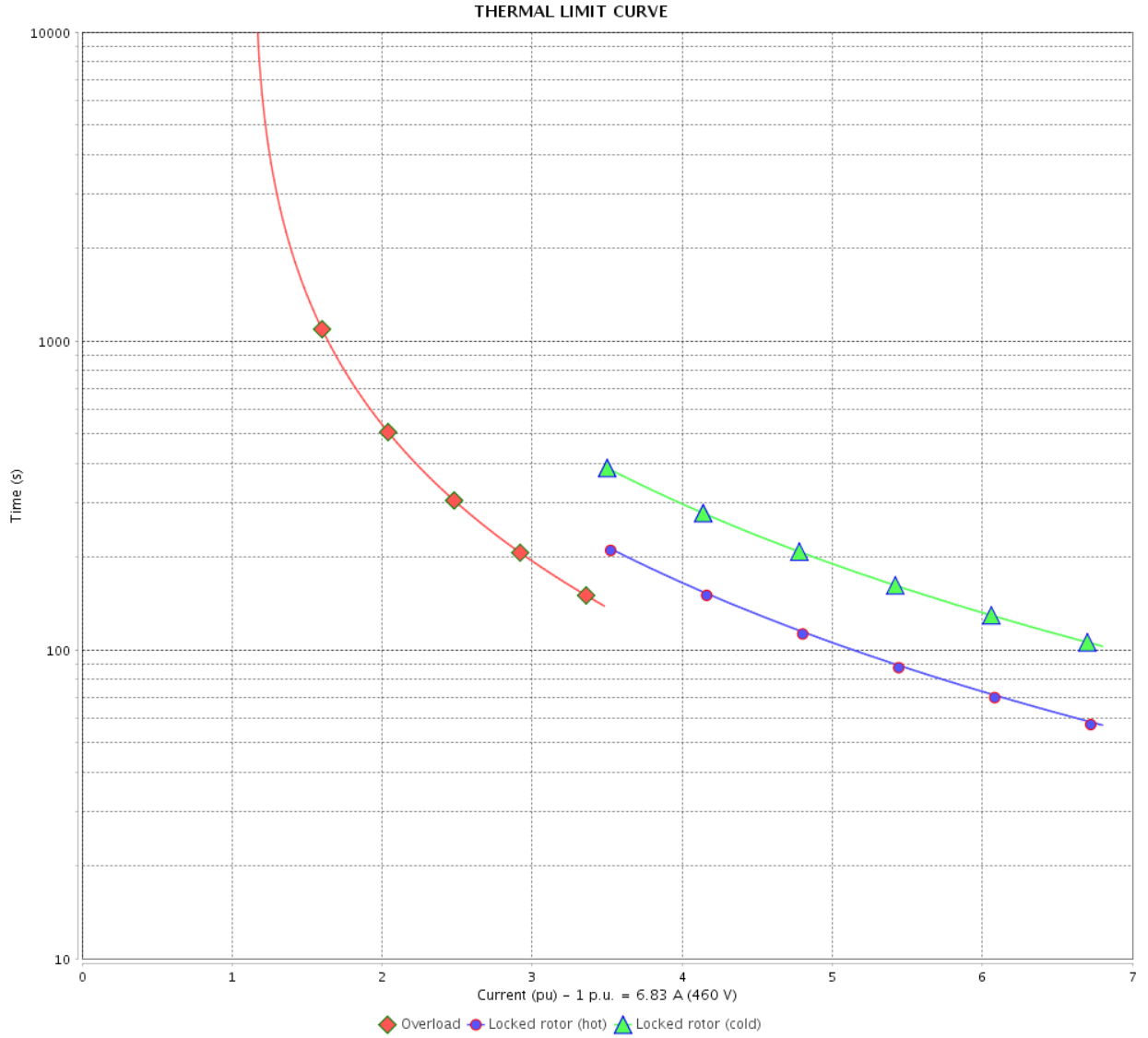
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# THERMAL LIMIT CURVE

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 : 12325222  
Catalog # : 00512ET3E215JP-W22

Performance : 380 V 50 Hz 6P IE3

Rated current	: 8.10 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.4 ft.lb	Insulation class	: F
Locked rotor torque	: 140 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Heating constant

Cooling constant

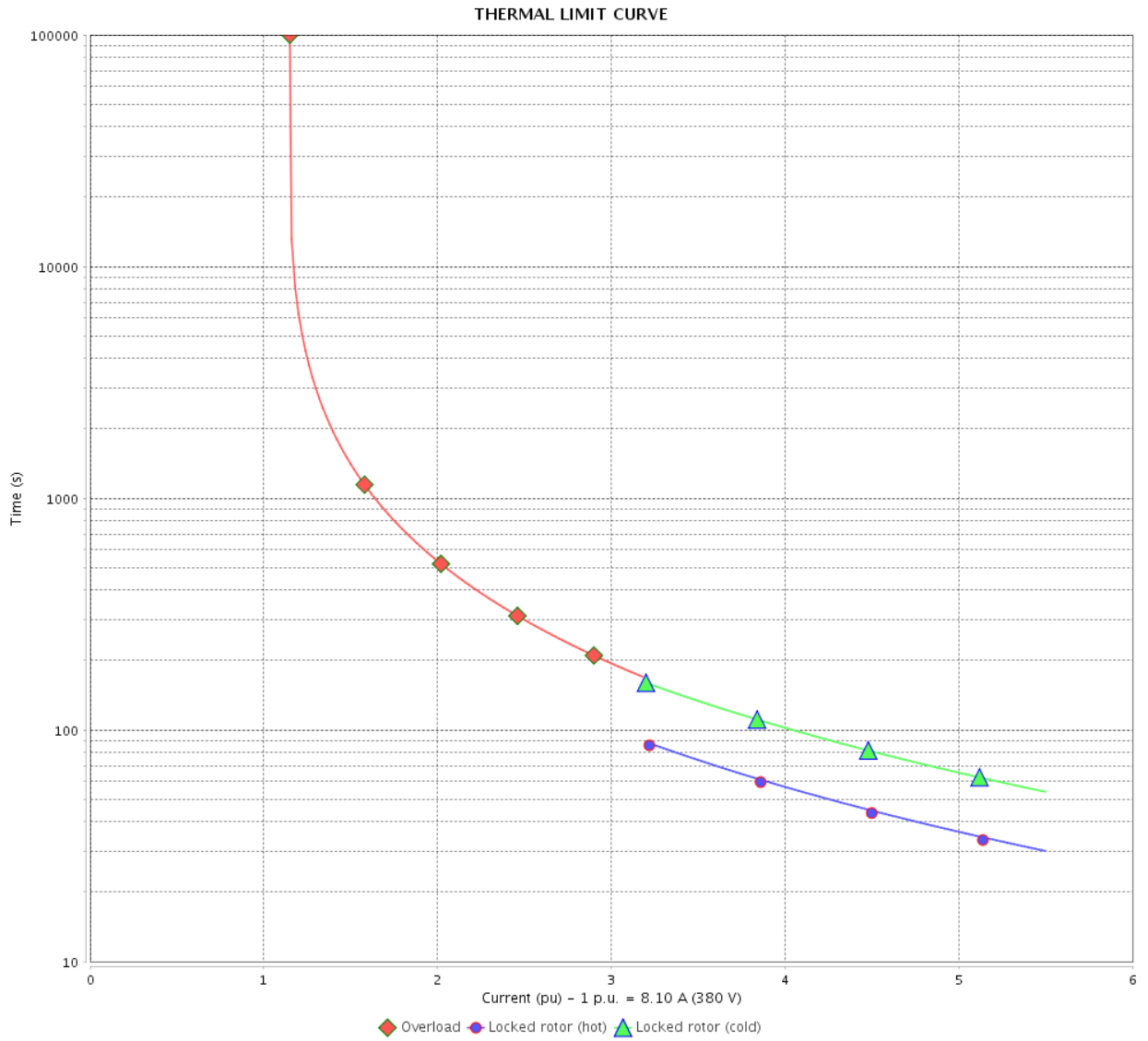
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# THERMAL LIMIT CURVE

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 : 12325222  
Catalog # : 00512ET3E215JP-W22

Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

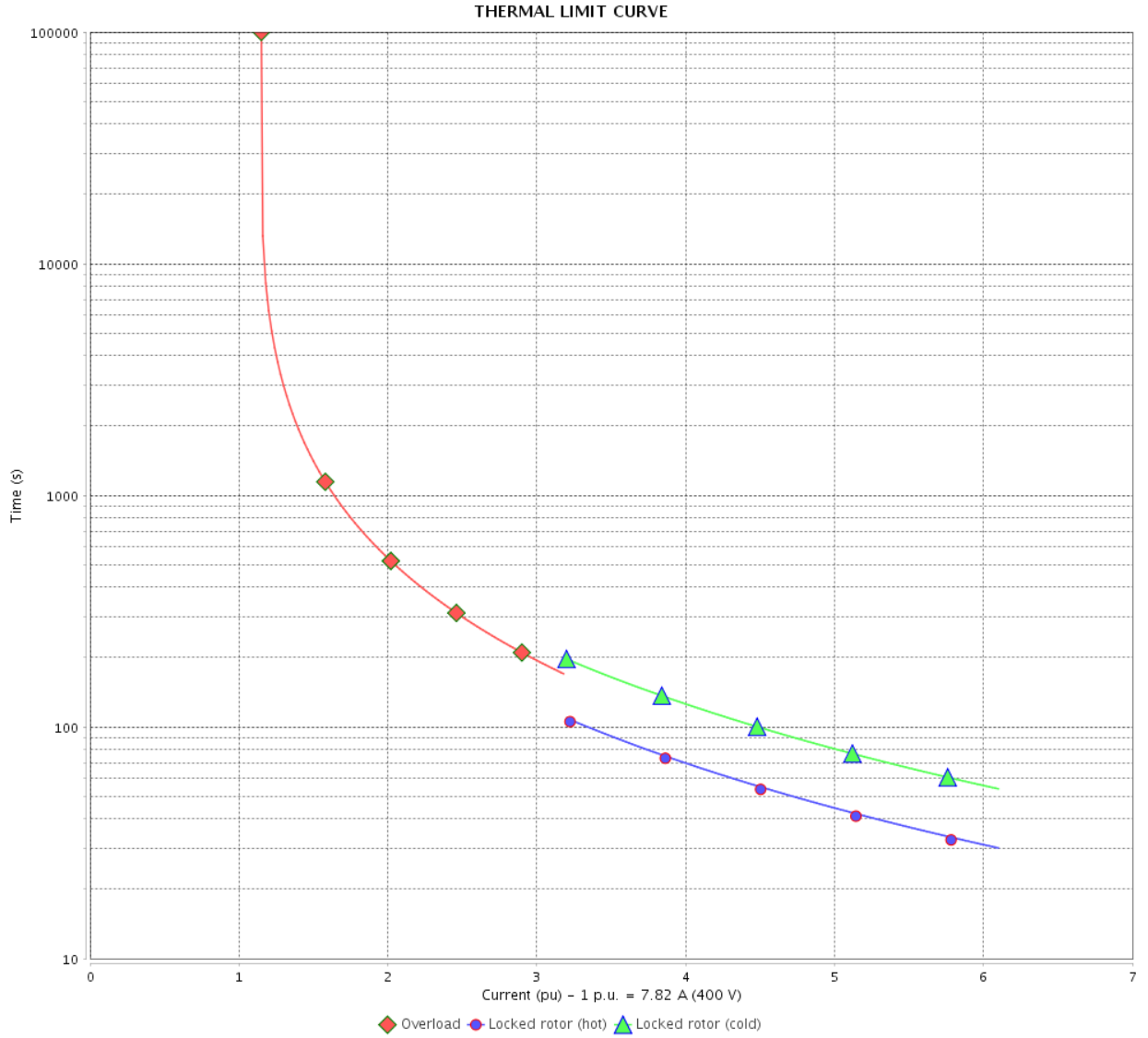
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# THERMAL LIMIT CURVE

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 : 12325222  
Catalog # : 00512ET3E215JP-W22

Performance : 415 V 50 Hz 6P IE3

Rated current	: 7.55 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 27.1 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 970 rpm	Design	: B

Heating constant

Cooling constant

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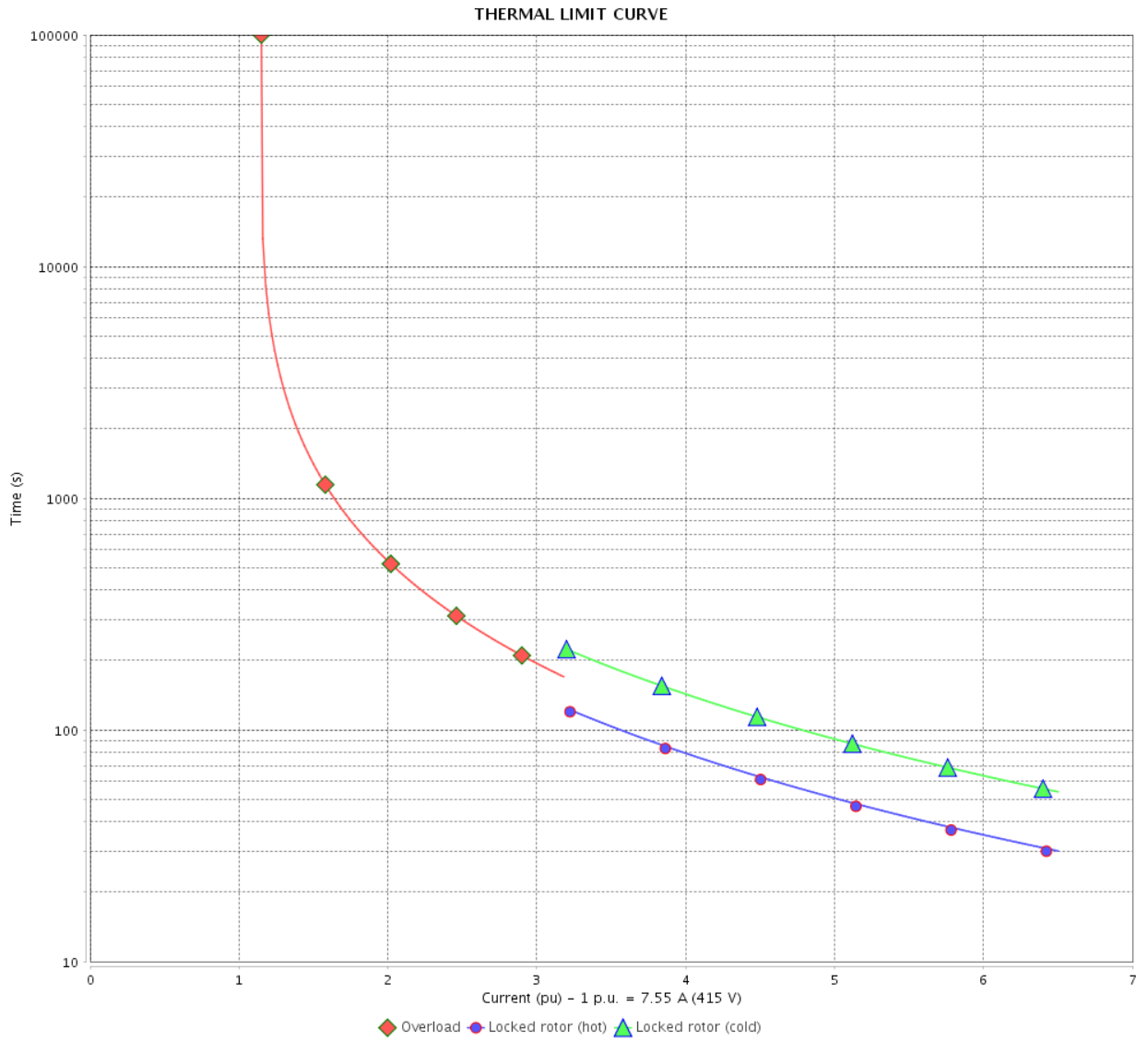


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



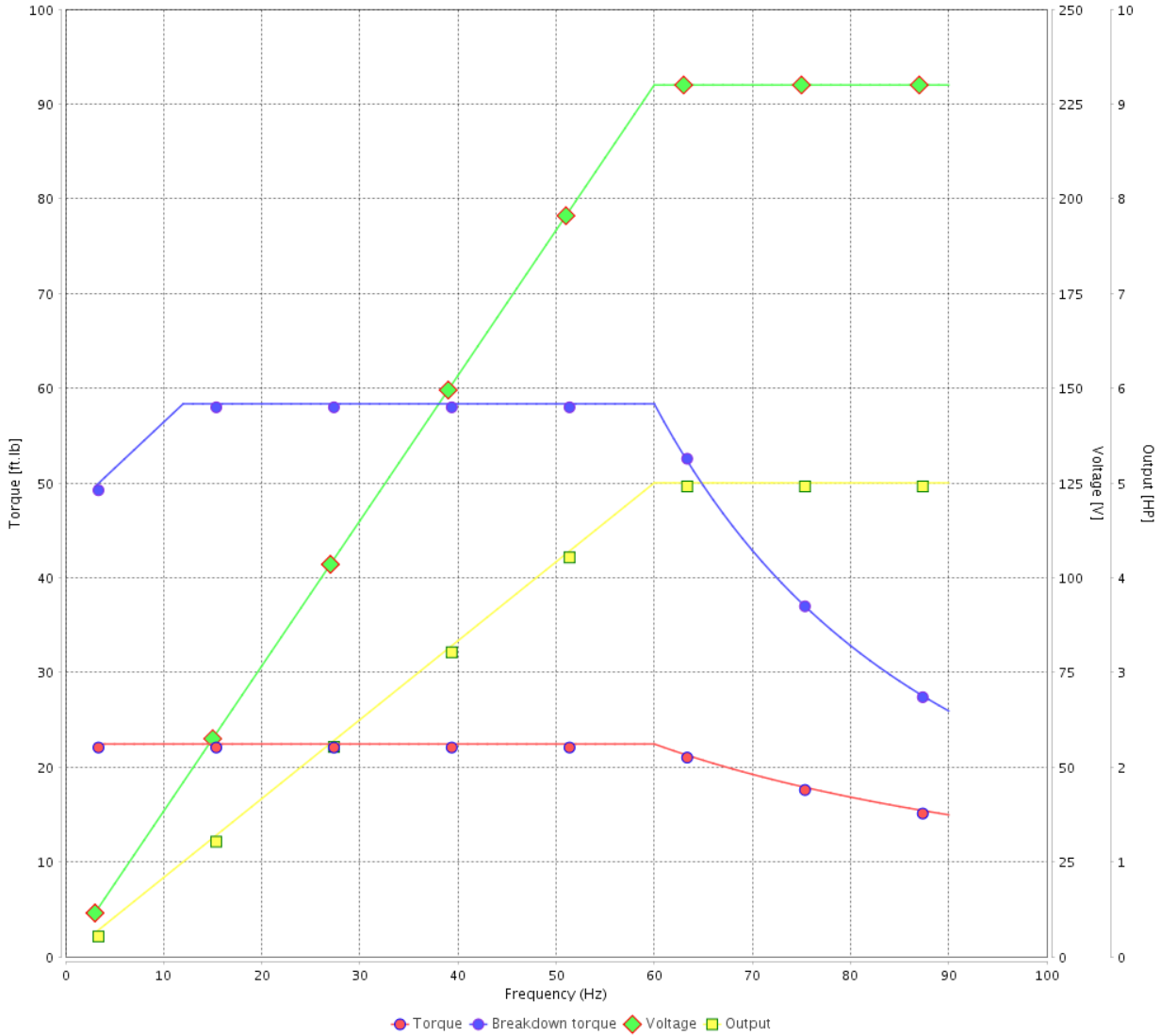
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 13.7/6.83 A  
 LRC : 6.8  
 Rated torque : 22.4 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 260 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 1.47 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
Performed by			Page	Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

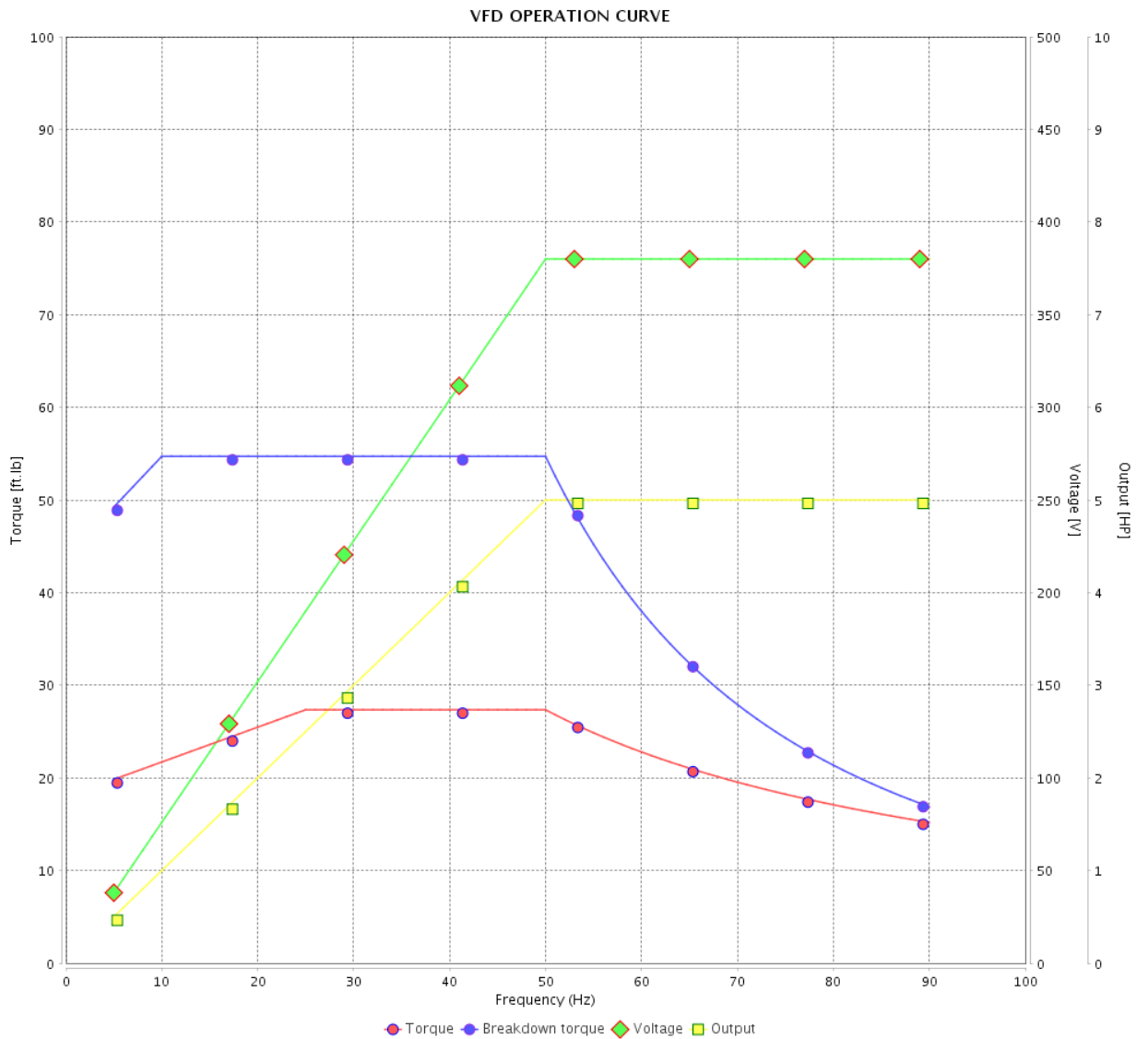


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 380 V 50 Hz 6P IE3

Rated current : 8.10 A  
 LRC : 5.5  
 Rated torque : 27.4 ft.lb  
 Locked rotor torque : 140 %  
 Breakdown torque : 200 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 1.47 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



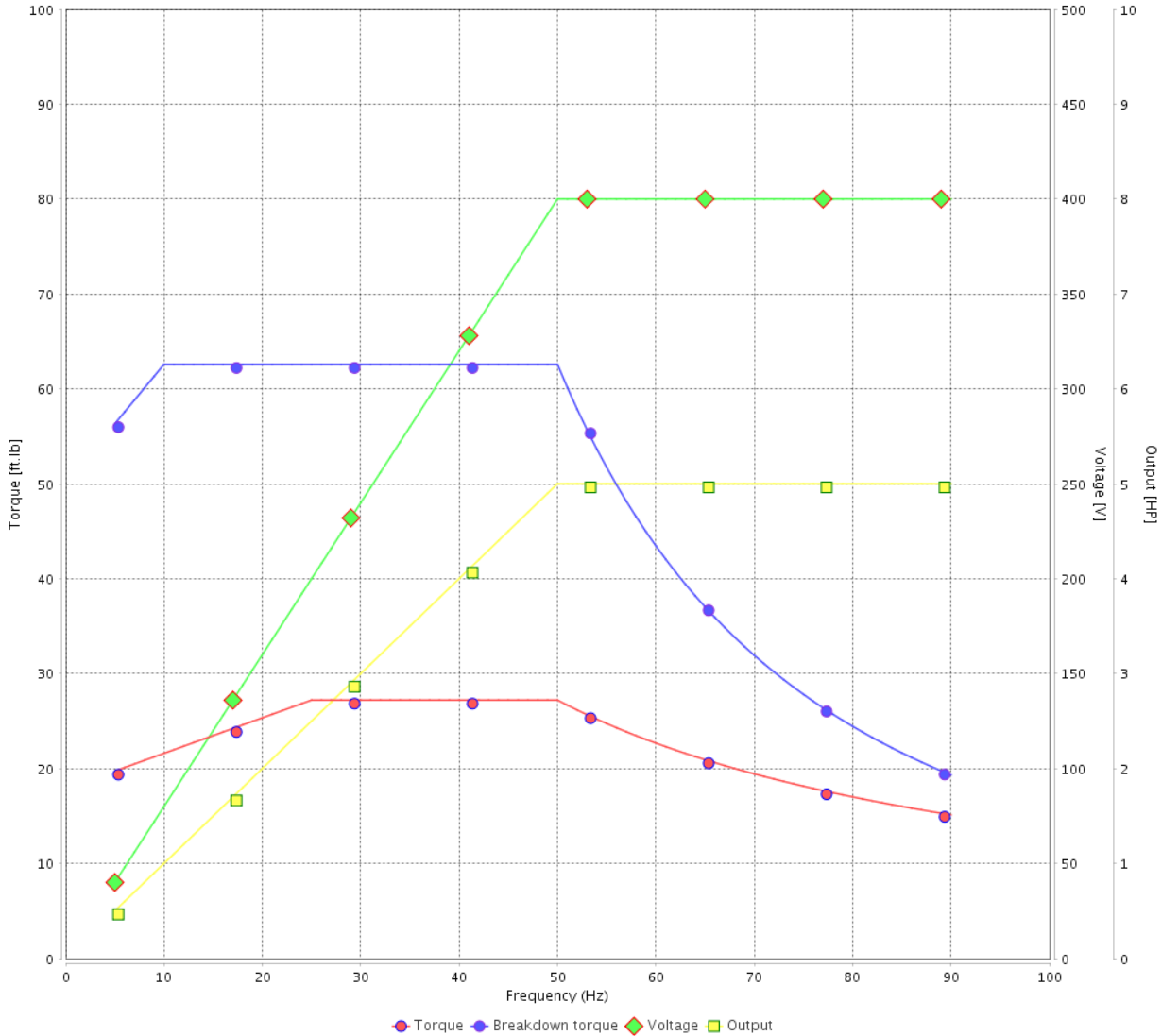
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 7.82 A	Moment of inertia (J)	: 1.47 sq.ft.lb
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 27.2 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

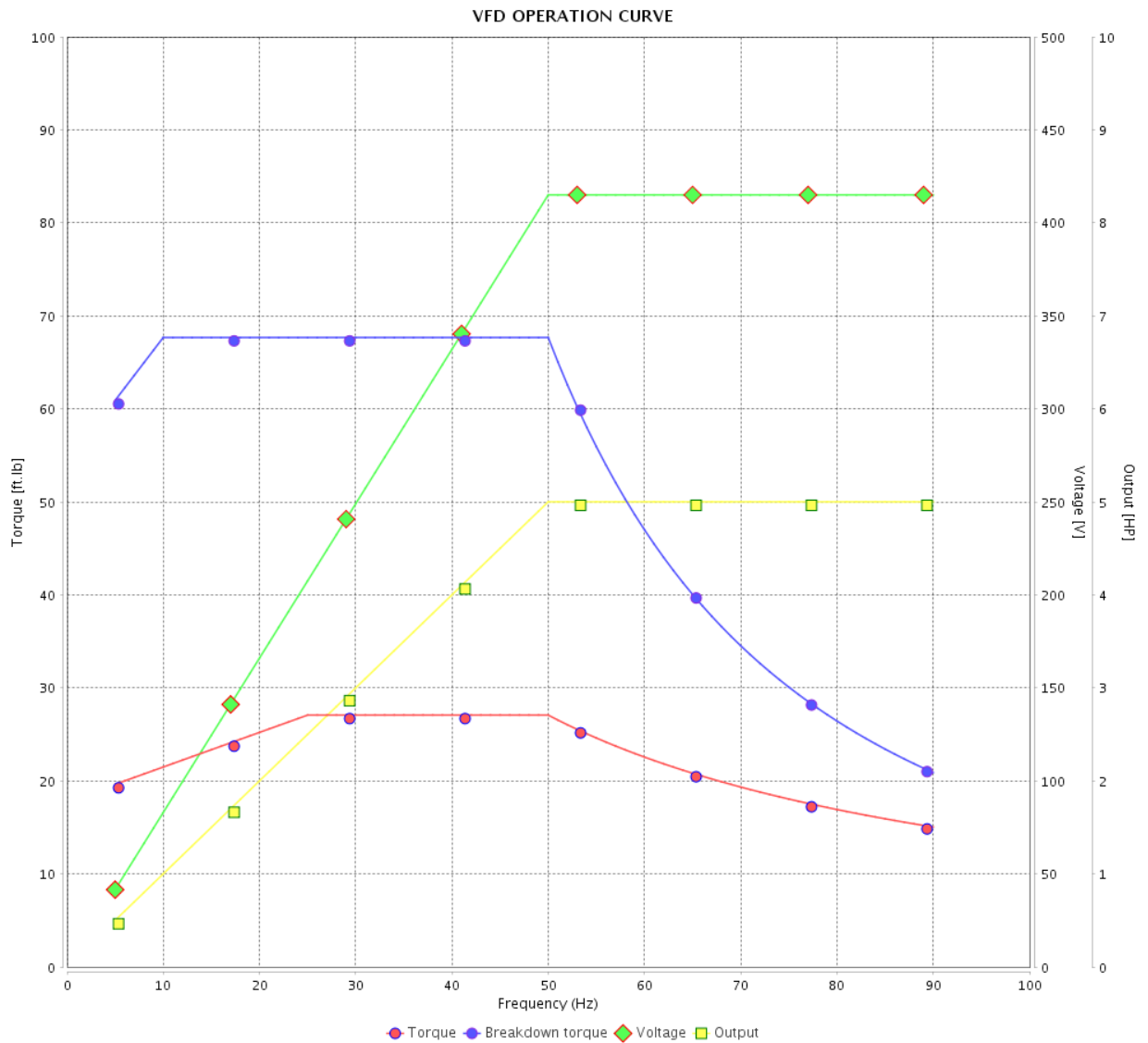


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12325222

Catalog # : 00512ET3E215JP-W22



Performance : 415 V 50 Hz 6P IE3

Rated current : 7.55 A  
 LRC : 6.5  
 Rated torque : 27.1 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 250 %  
 Rated speed : 970 rpm

Moment of inertia (J) : 1.47 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

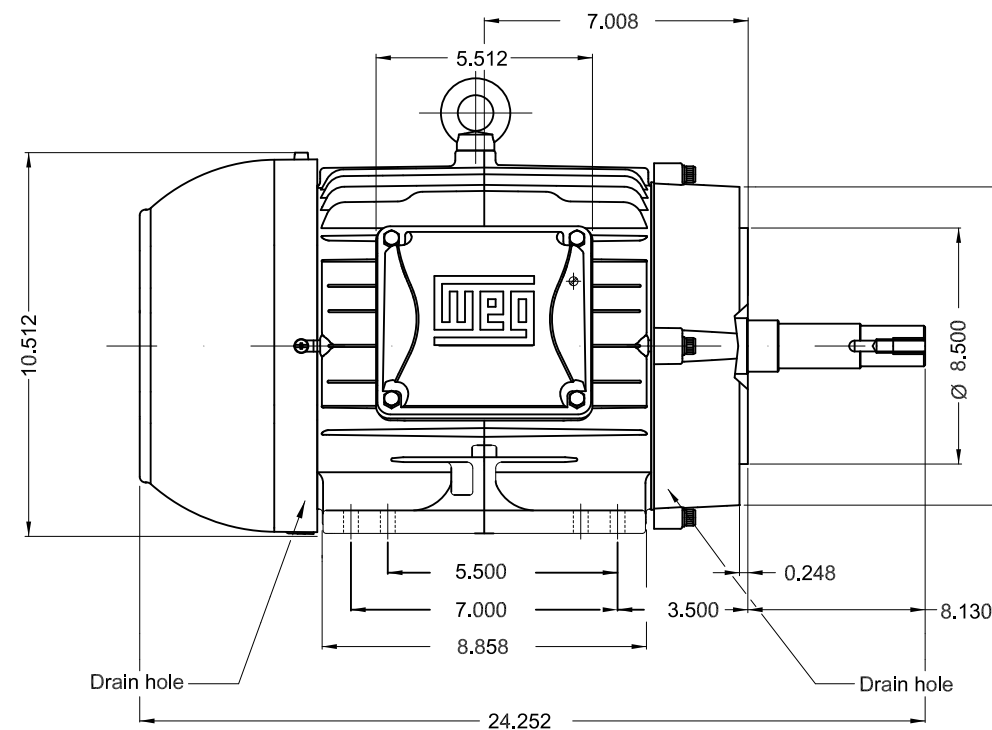
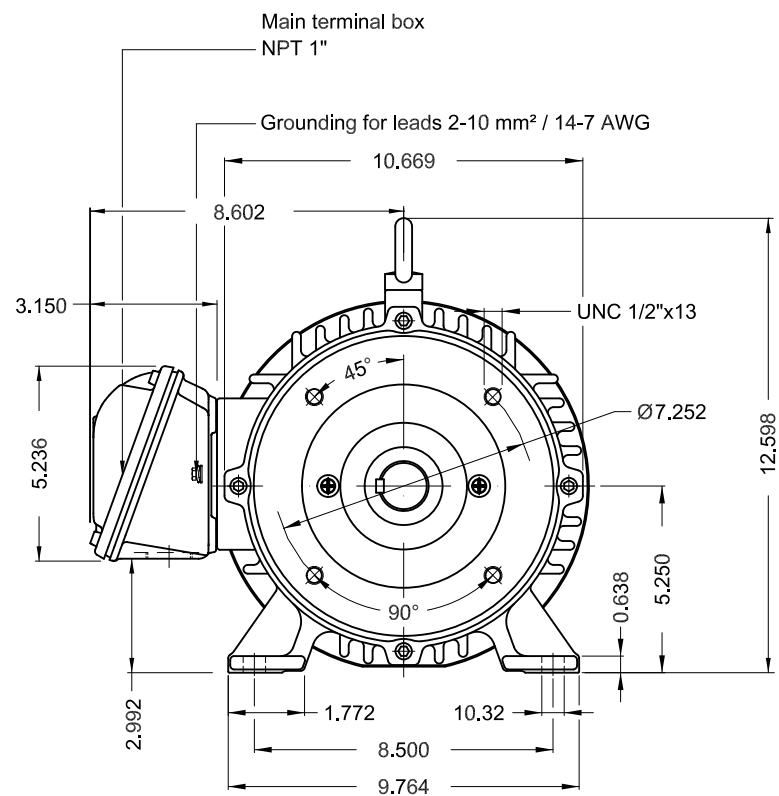
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Date	12/04/2022			

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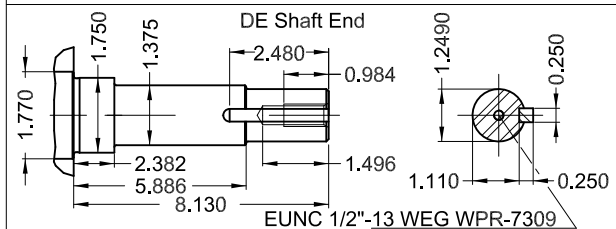
A

B

C



D



E

Color RAL 5009  
 Painting plan 207A  
 Mounting B34R(D)

5 HP 06 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. FRAME 213/5JP IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

**PREVIEW**  
 WDD



Dimensions in inches

XME A3

**W22**

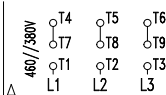
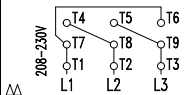
CC029A

® Inverter Duty Motor  
Severe Duty

12325222

MADE IN BRAZIL MODEL 00512ET3E215JP-W22

PH 3	FR 213/5JP	HP(kW) 5.0(3.7)	Hz 60	SF 1.25	PF 0.76
V 230/460	A 13.7/6.83	RPM 1170	INS. CL. F	ΔT 80 K	IP55
NEMA NOM EFF 89.5 %			DES B DUTY CONT.		AMB 40°C
ENCL TEFC	SFA 17.1/8.54	USABLE @208V 15.1 A	SF 1.15	SFA 17.4	
5.0HP 3.7kW 50Hz 380V 8.10A 960RPM SF1.00 EFF 86.8% (IE3)					CODE J



→ 6309-Z-C3  
→ 6207-ZZ

MOBIL POLYREX EM  
13 g 20000 h

ALT 1000 m.a.s.l. | 181 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 - T4  
 For use on PWM, Gr. A, B, C, D and F  
 VT 1000:1, CT 20:1, 1.0SF, T3A

FOR SAFE AREA  
MOD.TE1BFOXON