

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12446748		
		Catalog # :	01009ET3E284T-W22		
Frame	: 284/6T	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>	: 363 lb		
Protection degree	: IP55	Moment of inertia (J)	: 7.20 sq.ft.lb		
Design	: B				
Output [HP]	10	10	10	10	10
Poles	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	26.8/13.4	16.1	15.3	15.1	15.1
L. R. Amperes [A]	150/75.0	70.8	75.0	78.5	78.5
LRC [A]	5.6x(Code G)	4.4x(Code E)	4.9x(Code F)	5.2x(Code G)	5.2x(Code G)
No load current [A]	13.0/6.50	6.40	6.90	7.35	7.35
Rated speed [RPM]	880	725	725	730	730
Slip [%]	2.22	3.33	3.33	2.67	2.67
Rated torque [ft.lb]	59.7	72.4	72.4	71.9	71.9
Locked rotor torque [%]	200	150	170	190	190
Breakdown torque [%]	240	190	210	229	229
Service factor	1.25	1.00	1.15	1.15	1.15
Temperature rise	80 K	105 K	105 K	105 K	105 K
Locked rotor time	57s (cold) 32s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level <sup>2</sup>	54.0 dB(A)	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)	52.0 dB(A)
Efficiency (%)	25%				
	50%	89.5	89.5	88.5	88.5
	75%	90.2	88.5	88.5	89.5
	100%	90.2	87.5	88.5	88.5
Power Factor	25%				
	50%	0.61	0.68	0.64	0.61
	75%	0.72	0.77	0.74	0.72
	100%	0.78	0.81	0.80	0.78
Bearing type	: Drive end : 6311 C3	Non drive end : 6211 C3	Foundation loads		
Sealing	: V'Ring	V'Ring	Max. traction	: 540 lb	
Lubrication interval	: 20000 h	20000 h	Max. compression	: 903 lb	
Lubricant amount	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 29.6A SF 1.15 SFA 34.1A					
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



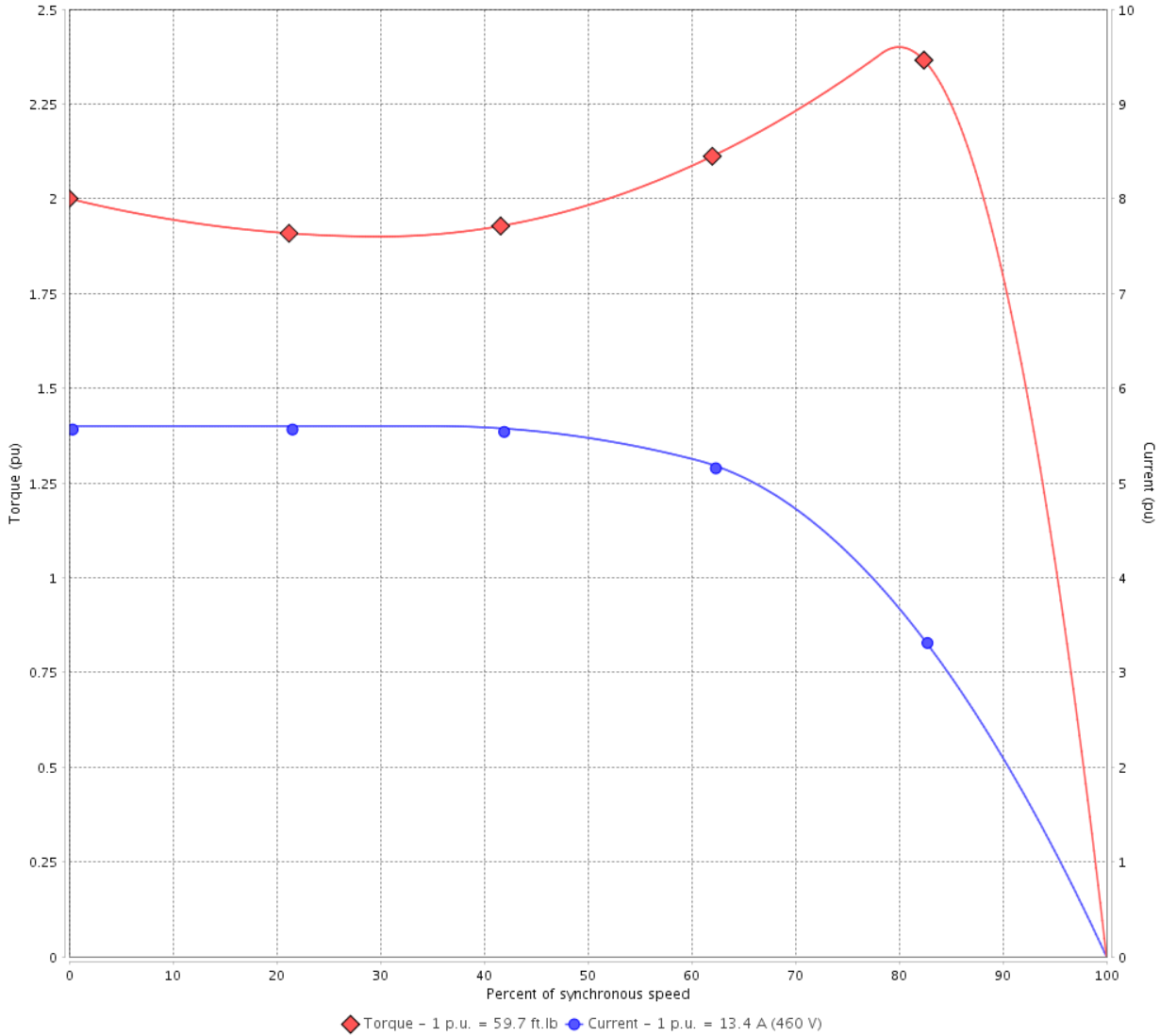
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 8P

Rated current	: 26.8/13.4 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 59.7 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Locked rotor time : 57s (cold) 32s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



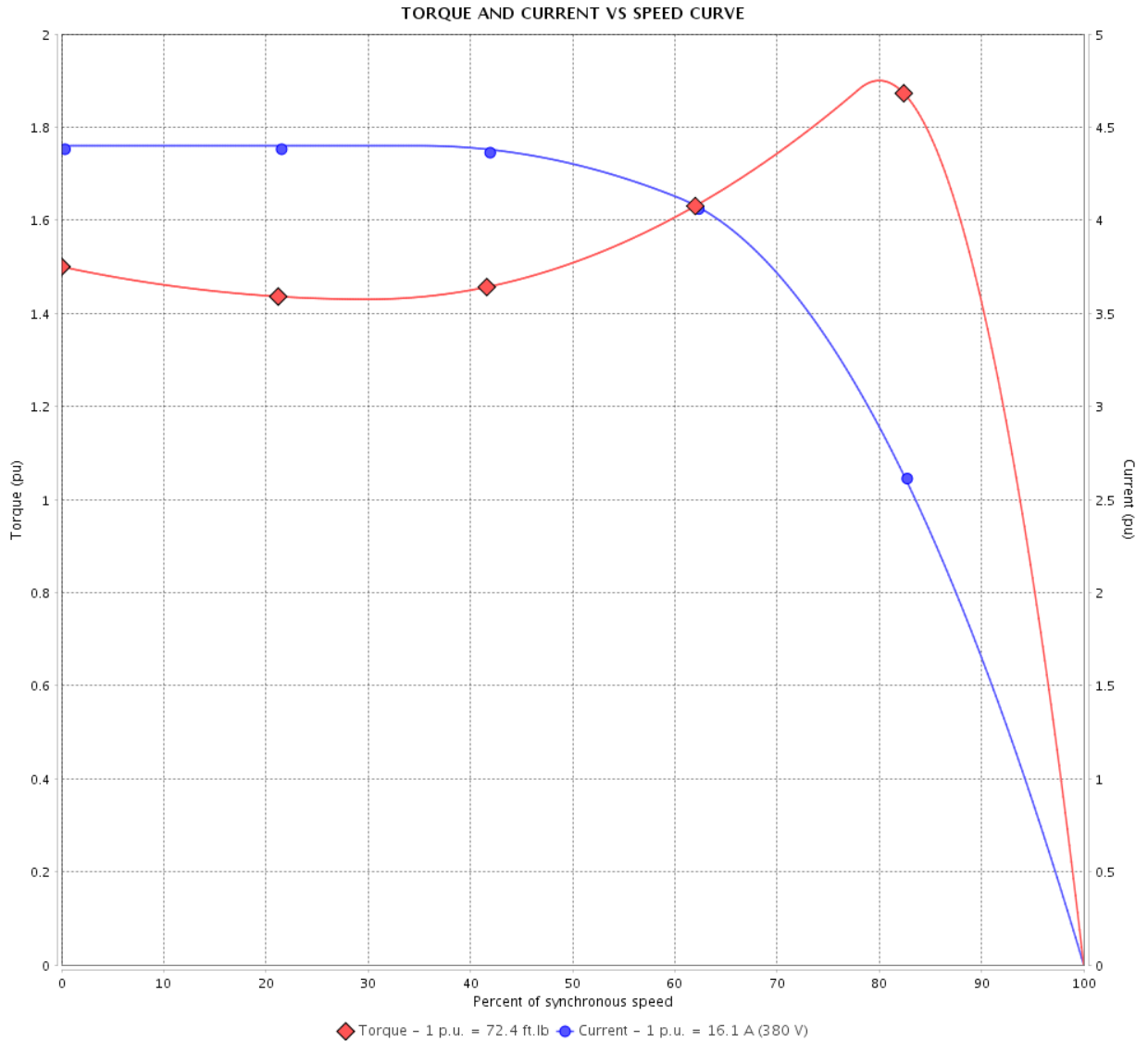
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current	: 16.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.4	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 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

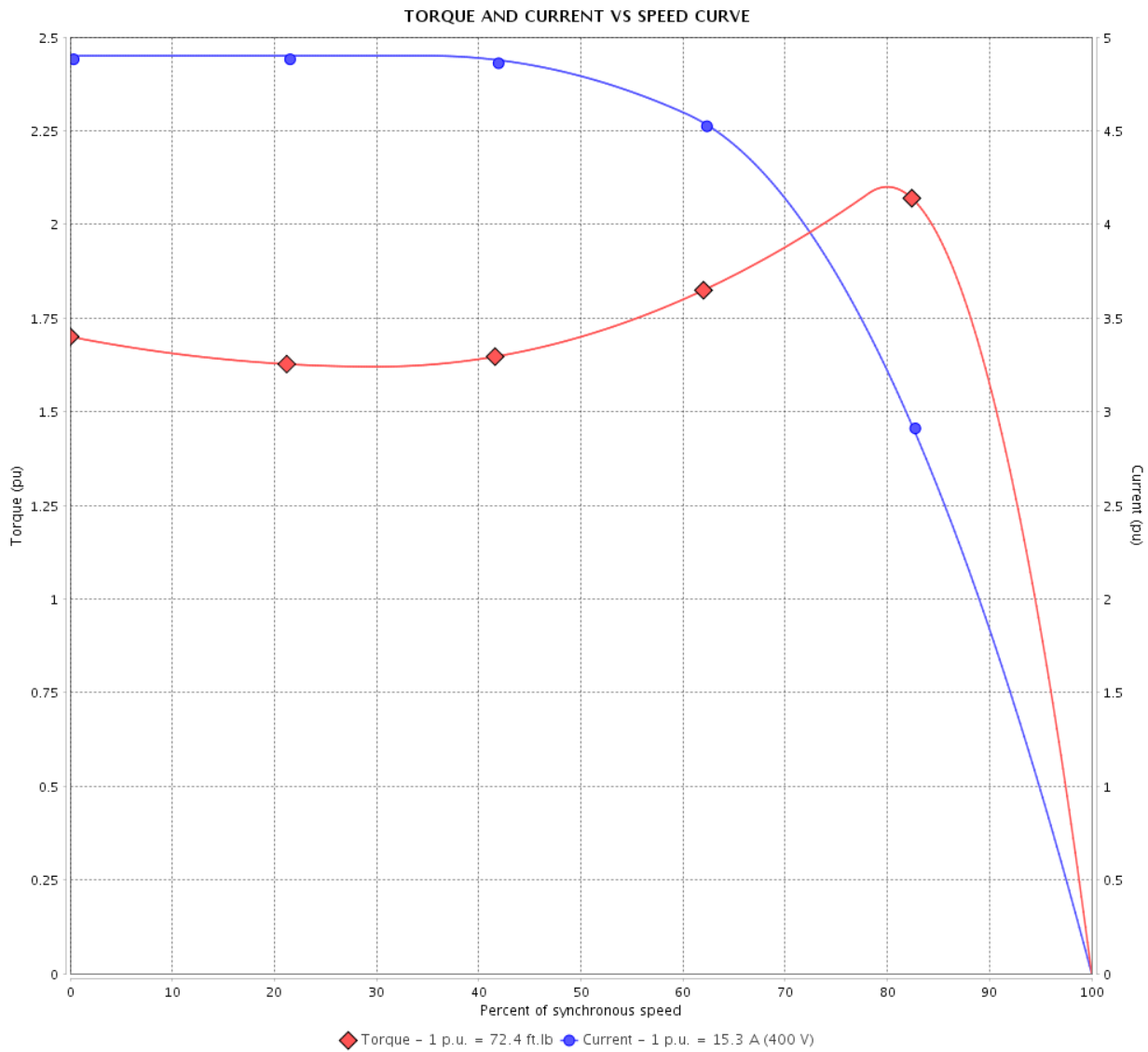


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 400 V 50 Hz 8P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

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

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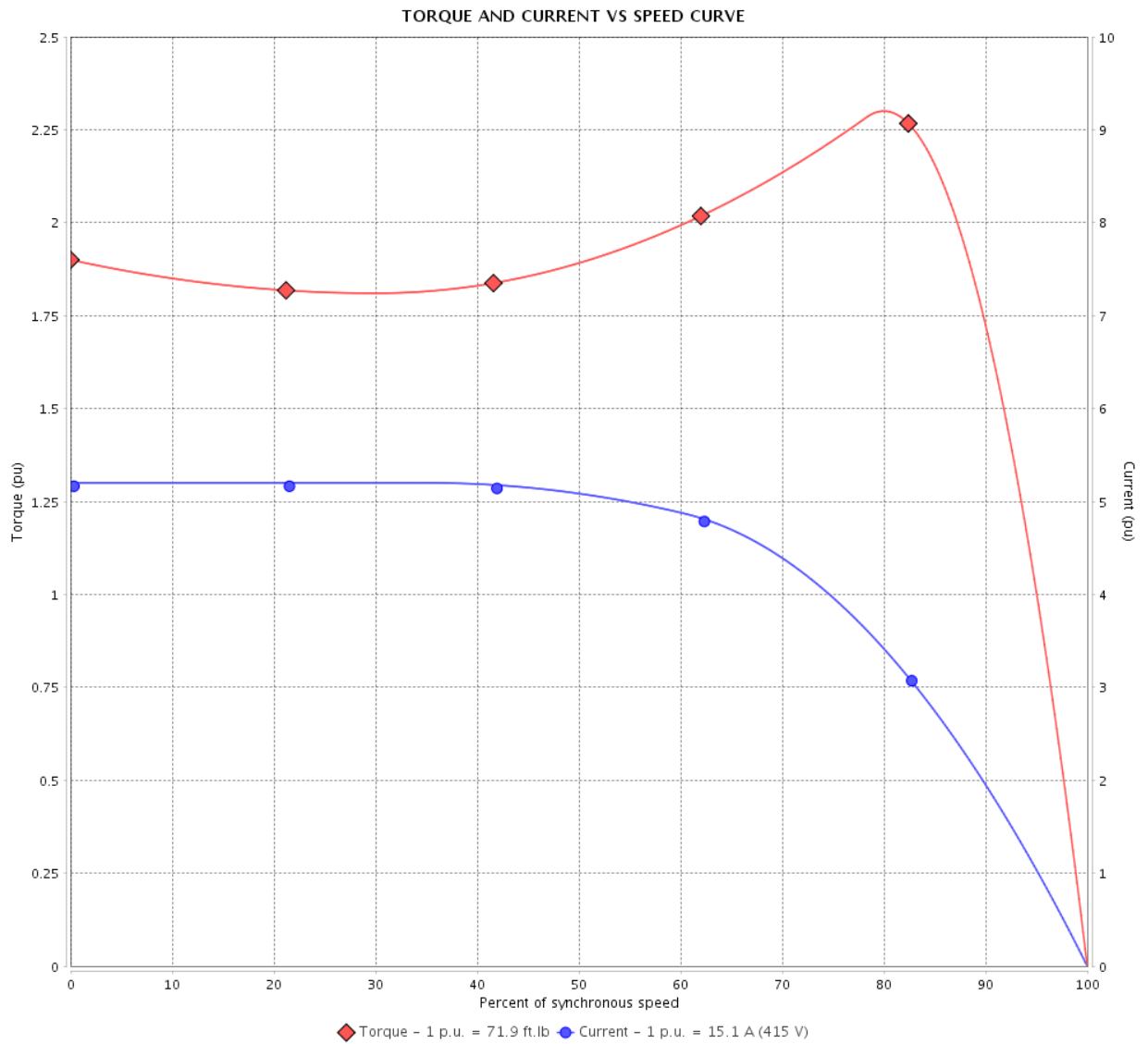
# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 12446748  
 Catalog # : 01009ET3E284T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current	: 15.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.9 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 730 rpm	Design	: B

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

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



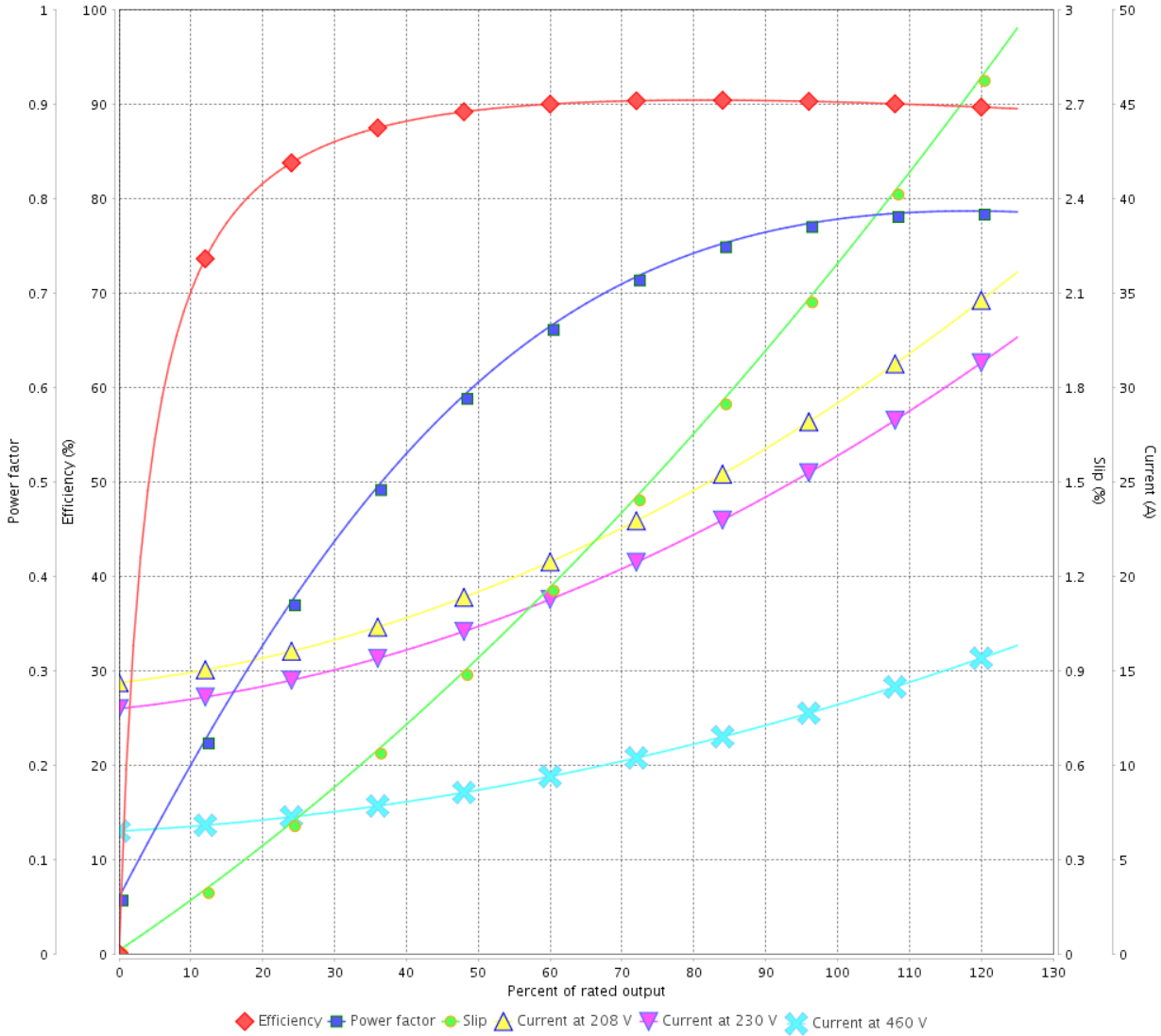
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 8P

Rated current : 26.8/13.4 A  
 LRC : 5.6  
 Rated torque : 59.7 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 880 rpm

Moment of inertia (J) : 7.20 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

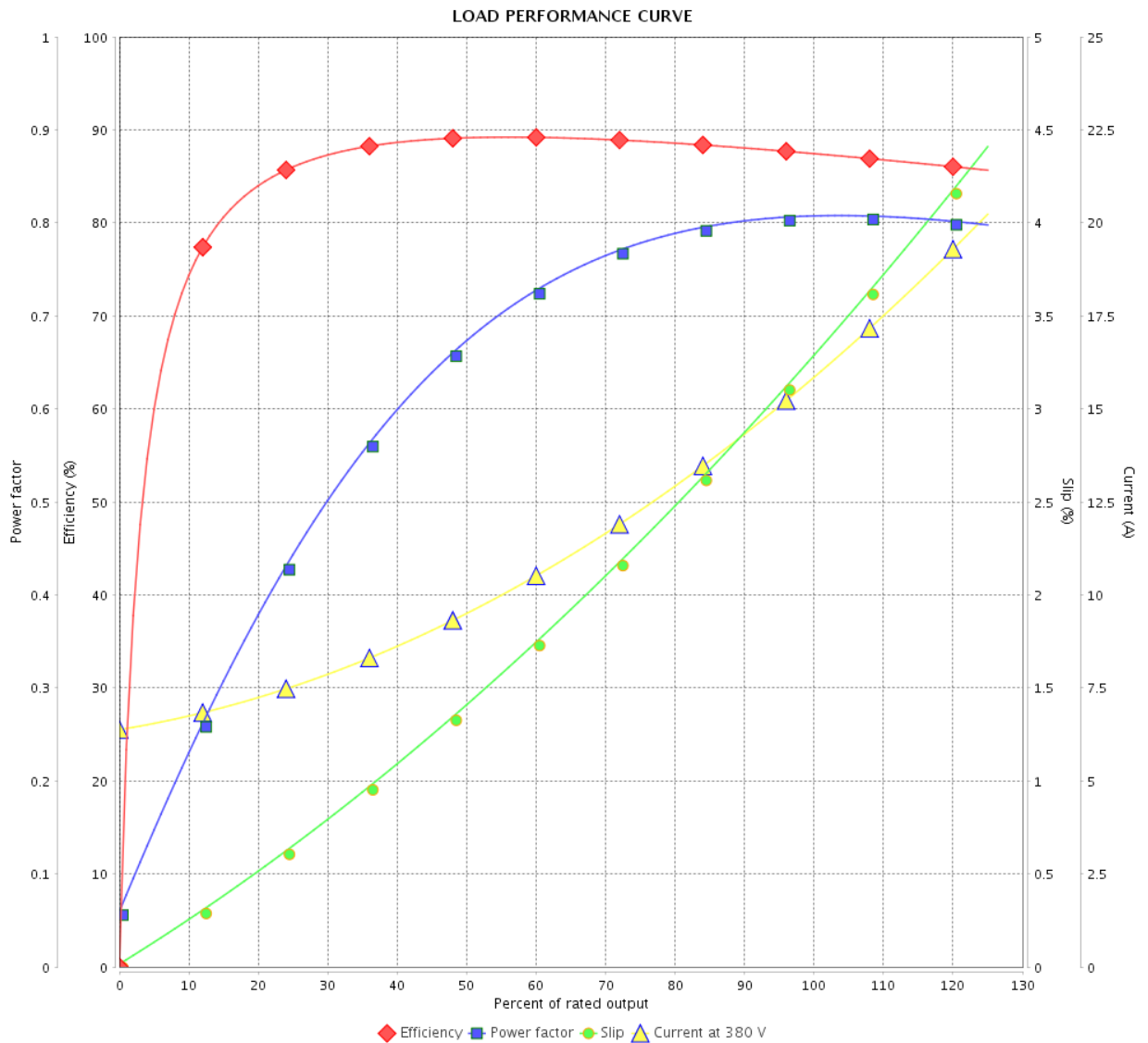


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current : 16.1 A  
 LRC : 4.4  
 Rated torque : 72.4 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 190 %  
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



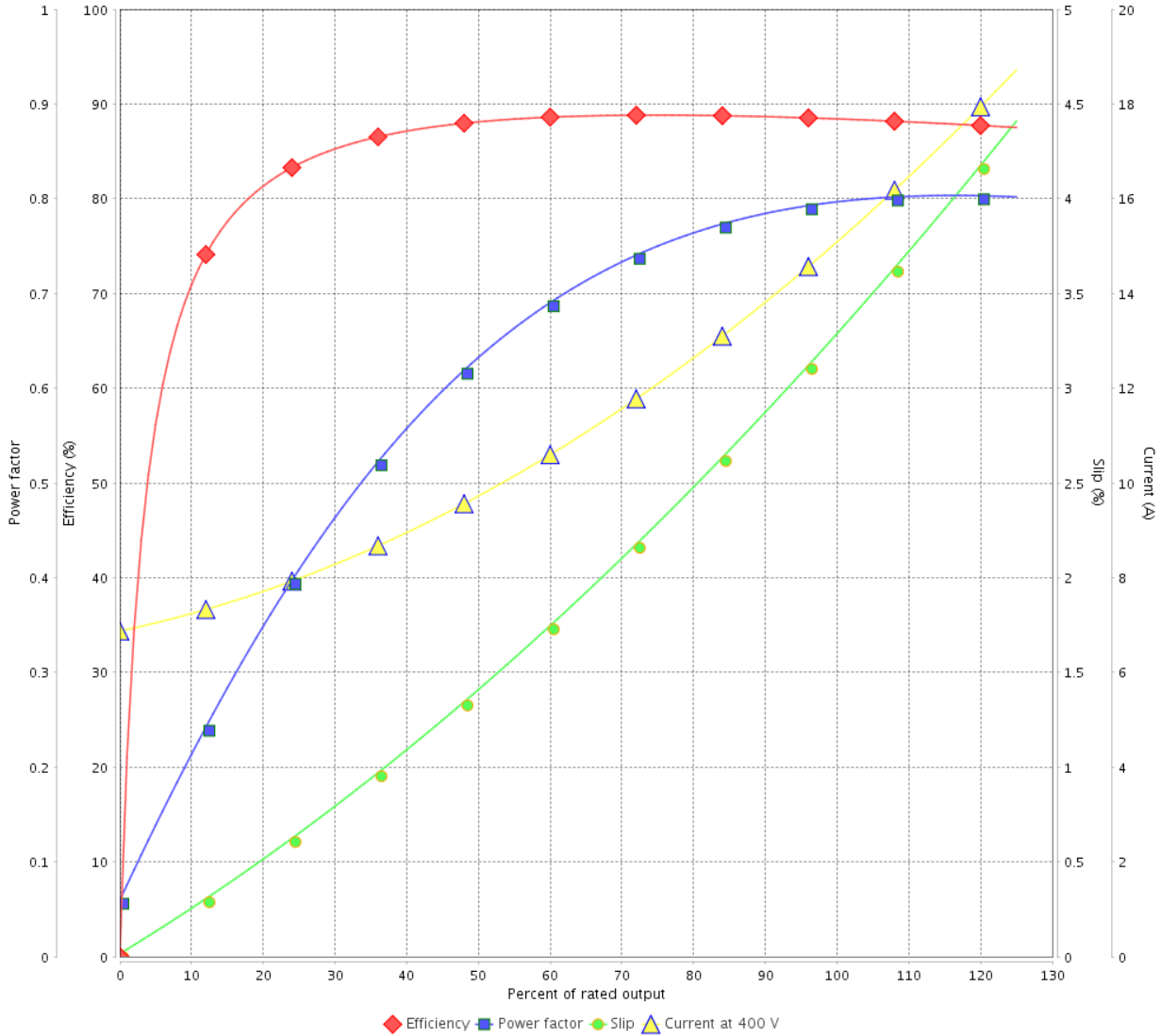
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current : 15.3 A  
 LRC : 4.9  
 Rated torque : 72.4 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

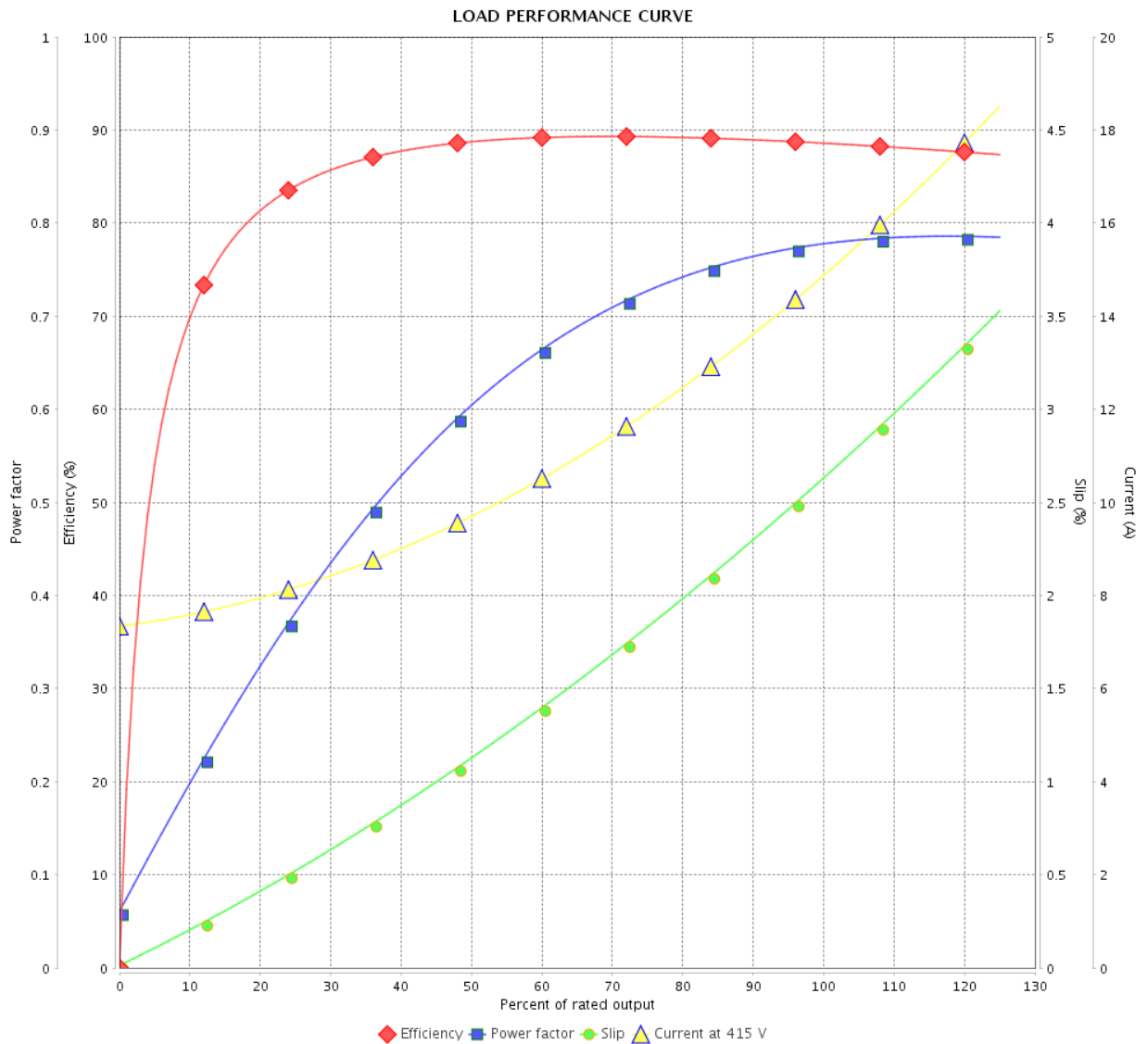


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current : 15.1 A  
 LRC : 5.2  
 Rated torque : 71.9 ft.lb  
 Locked rotor torque : 190 %  
 Breakdown torque : 229 %  
 Rated speed : 730 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 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 : 12446748  
Catalog # : 01009ET3E284T-W22

Performance : 230/460 V 60 Hz 8P

Rated current	: 26.8/13.4 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 59.7 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 880 rpm	Design	: B

Heating constant

Cooling constant

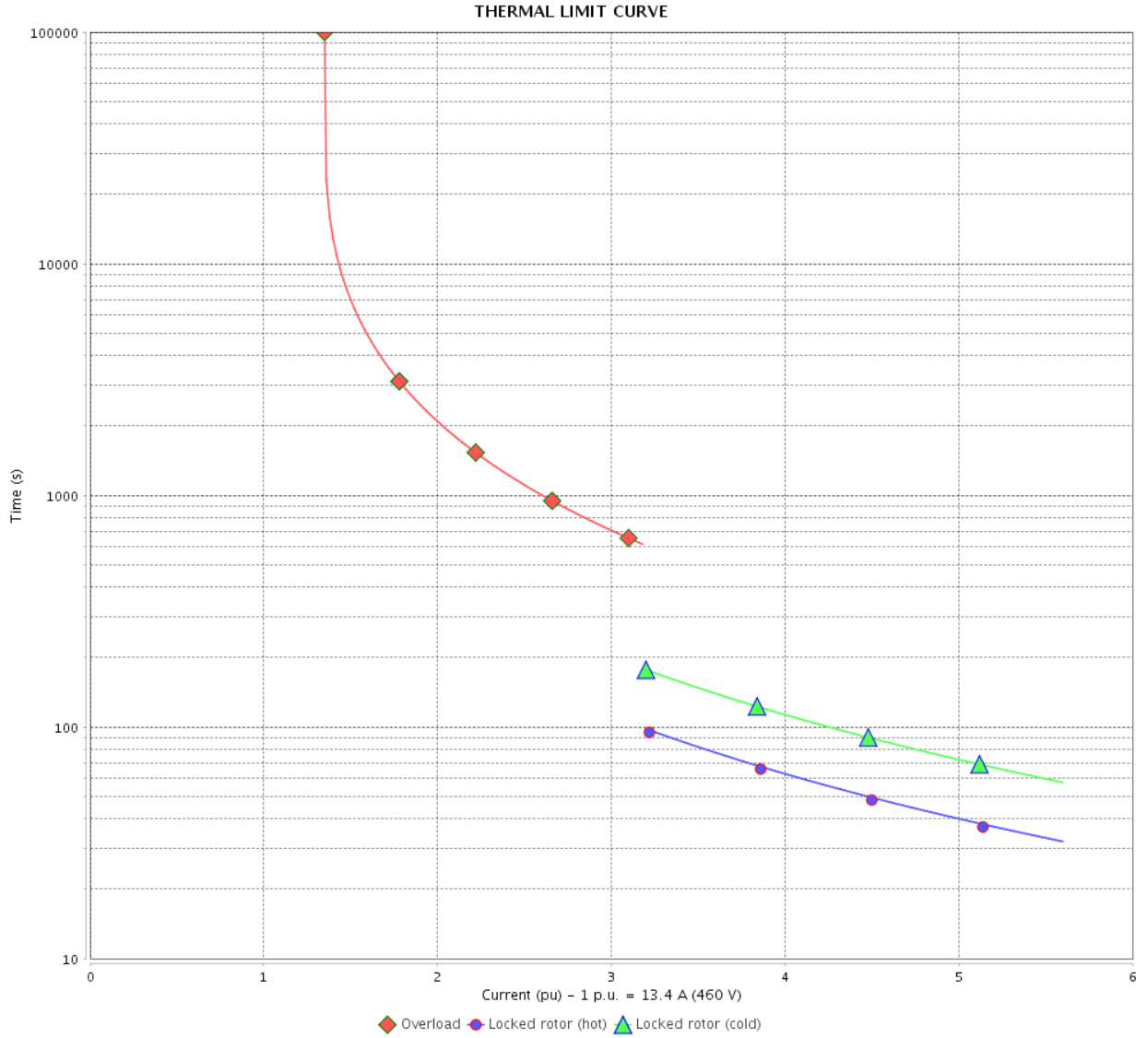
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# THERMAL LIMIT CURVE

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 : 12446748  
Catalog # : 01009ET3E284T-W22

Performance : 380 V 50 Hz 8P IE3

Rated current	: 16.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.4	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Heating constant

Cooling constant

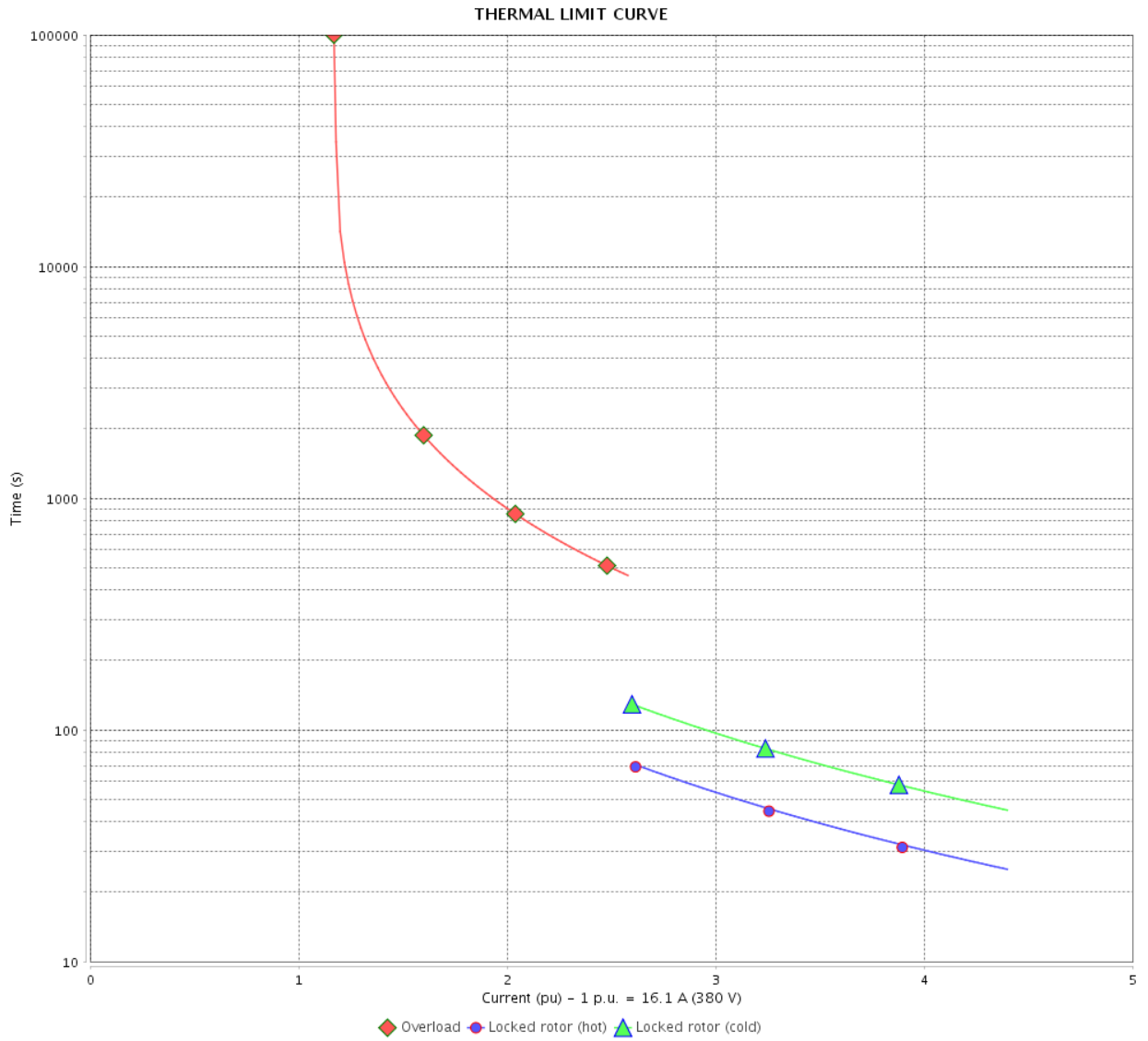
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12446748  
Catalog # : 01009ET3E284T-W22

Performance : 400 V 50 Hz 8P IE3

Rated current	: 15.3 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 72.4 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 725 rpm	Design	: B

Heating constant

Cooling constant

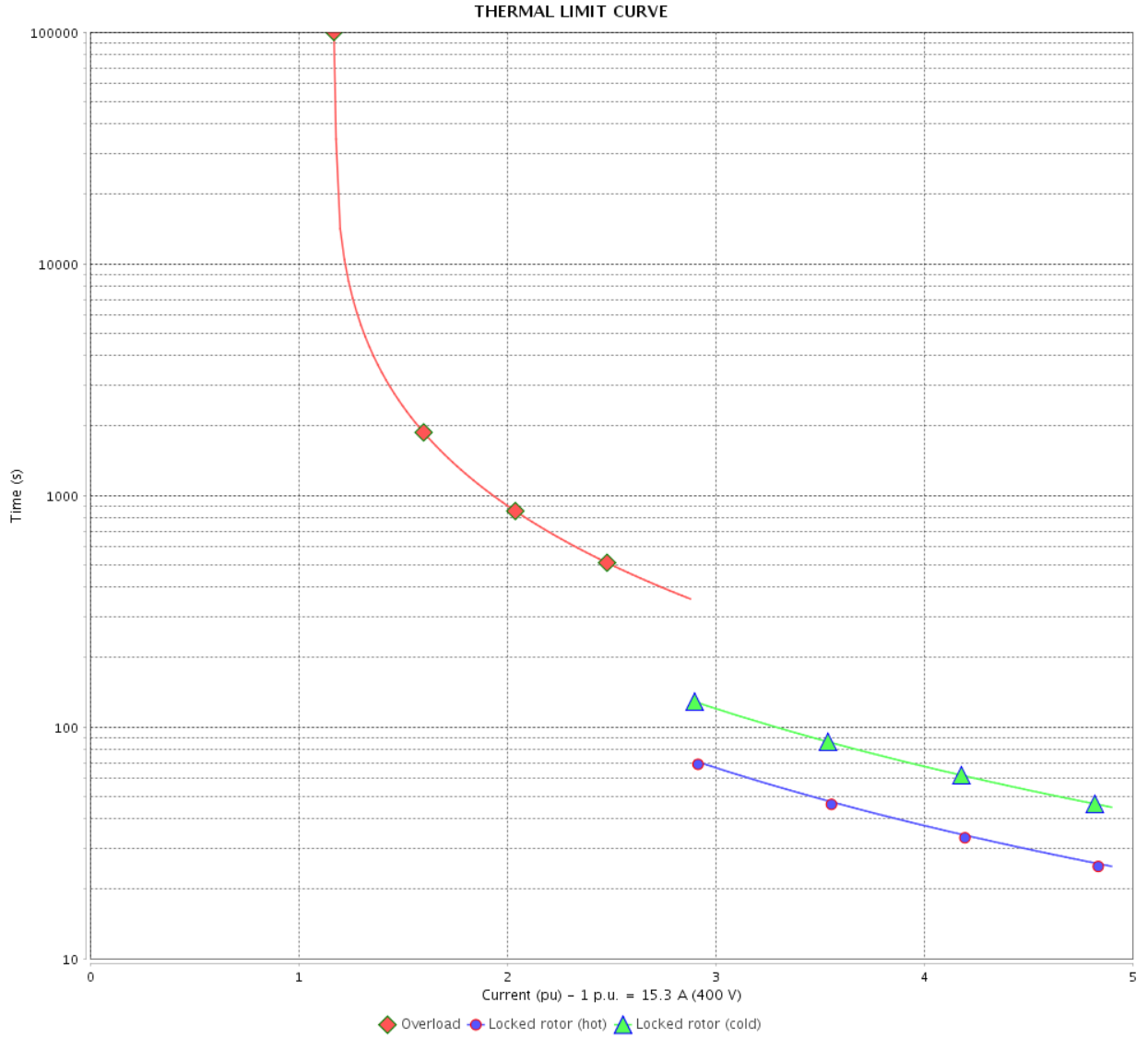
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# THERMAL LIMIT CURVE

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 : 12446748  
Catalog # : 01009ET3E284T-W22

Performance : 415 V 50 Hz 8P IE3

Rated current	: 15.1 A	Moment of inertia (J)	: 7.20 sq.ft.lb
LRC	: 5.2	Duty cycle	: Cont.(S1)
Rated torque	: 71.9 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 730 rpm	Design	: B

Heating constant

Cooling constant

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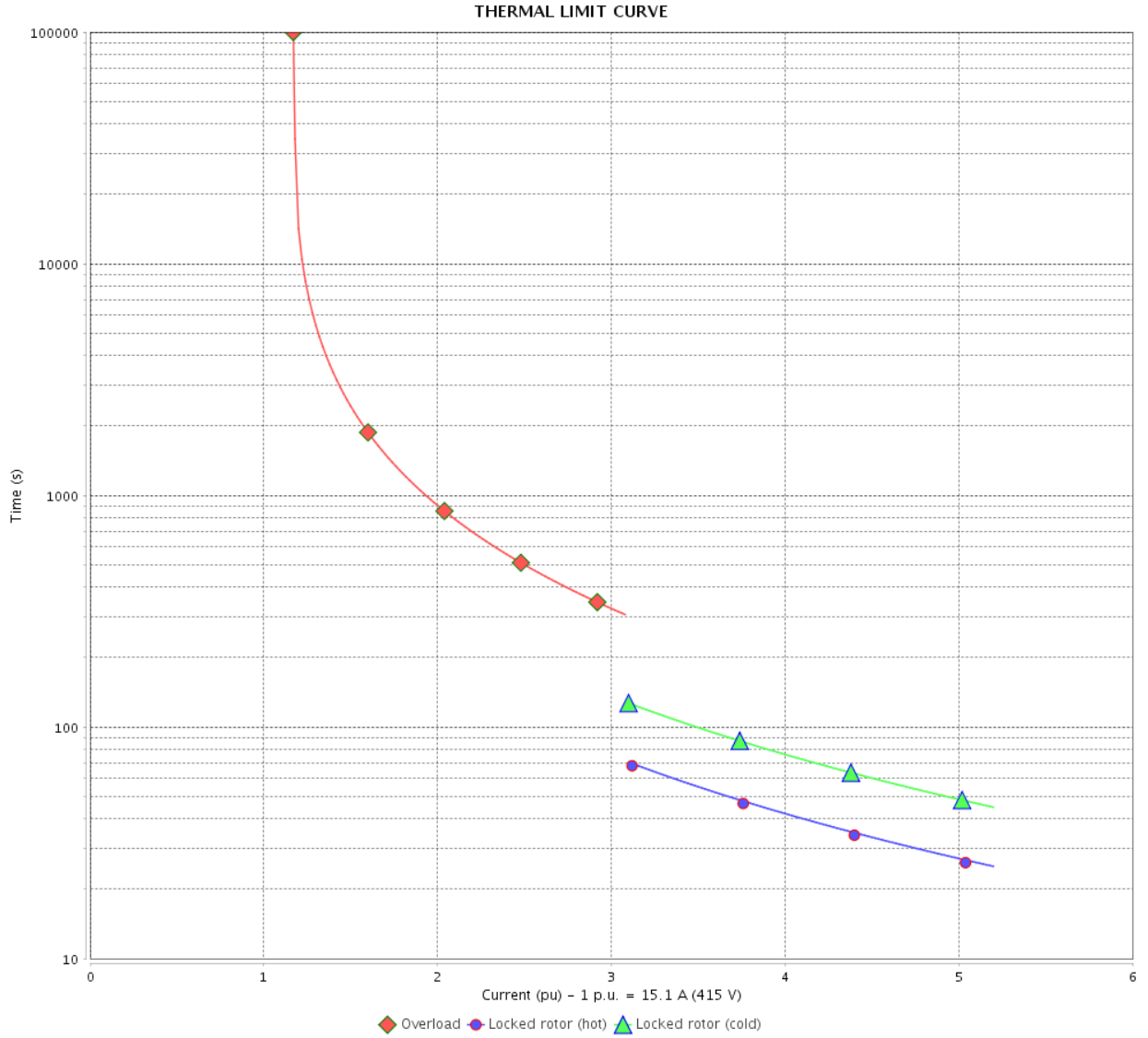


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

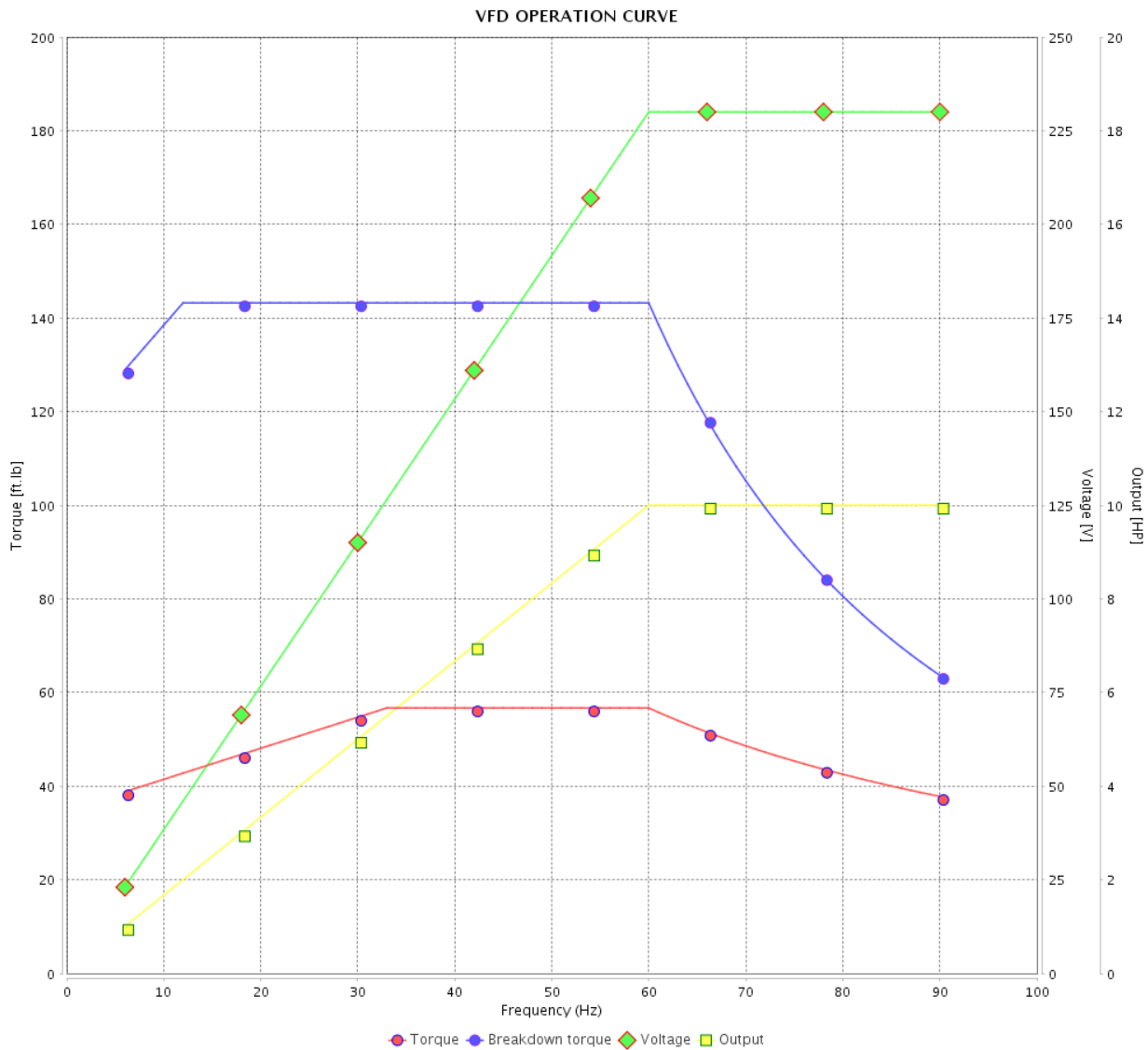


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 230/460 V 60 Hz 8P

Rated current : 26.8/13.4 A  
 LRC : 5.6  
 Rated torque : 59.7 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 880 rpm

Moment of inertia (J) : 7.20 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

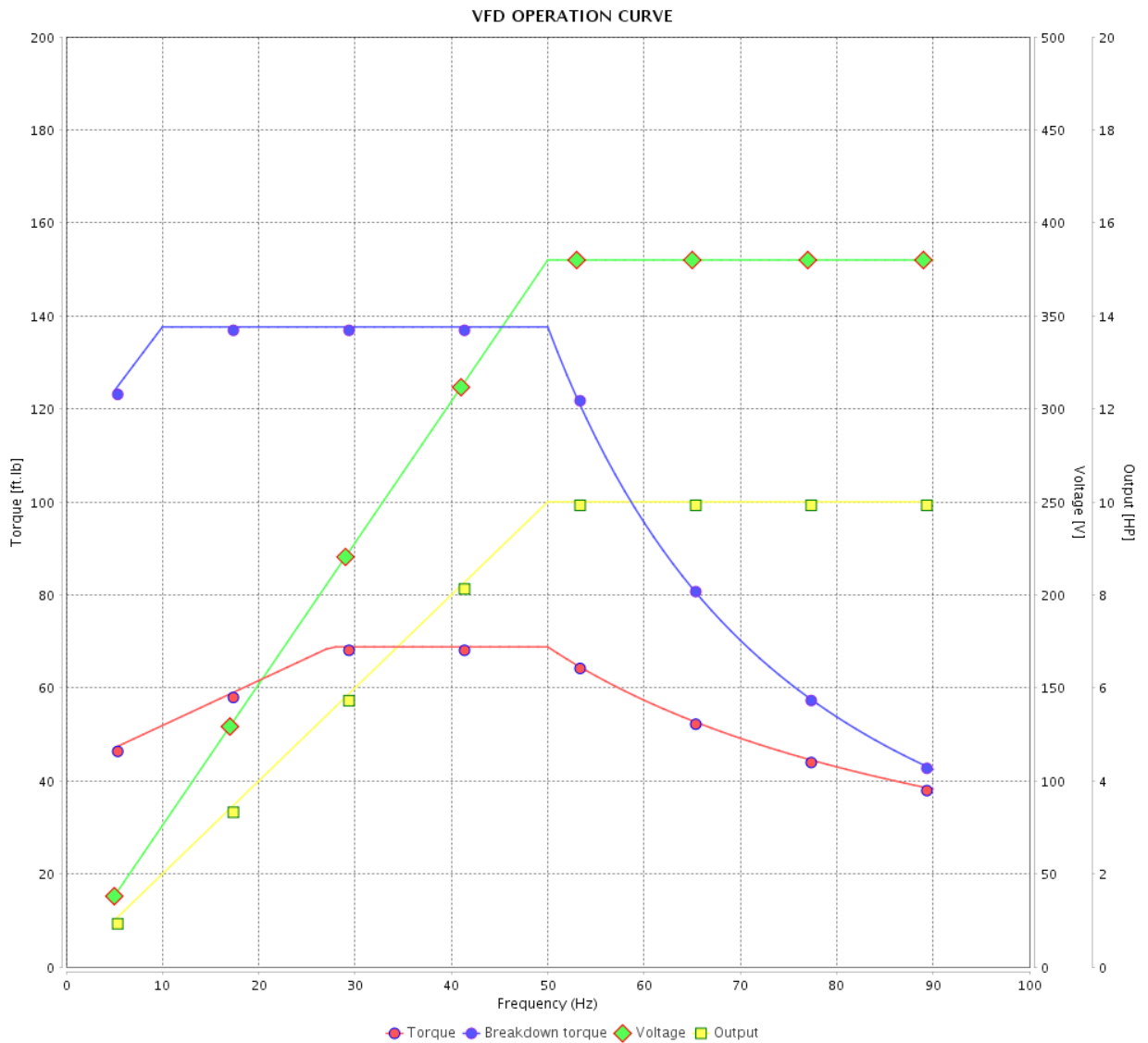


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22



Performance : 380 V 50 Hz 8P IE3

Rated current : 16.1 A  
 LRC : 4.4  
 Rated torque : 72.4 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 190 %  
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



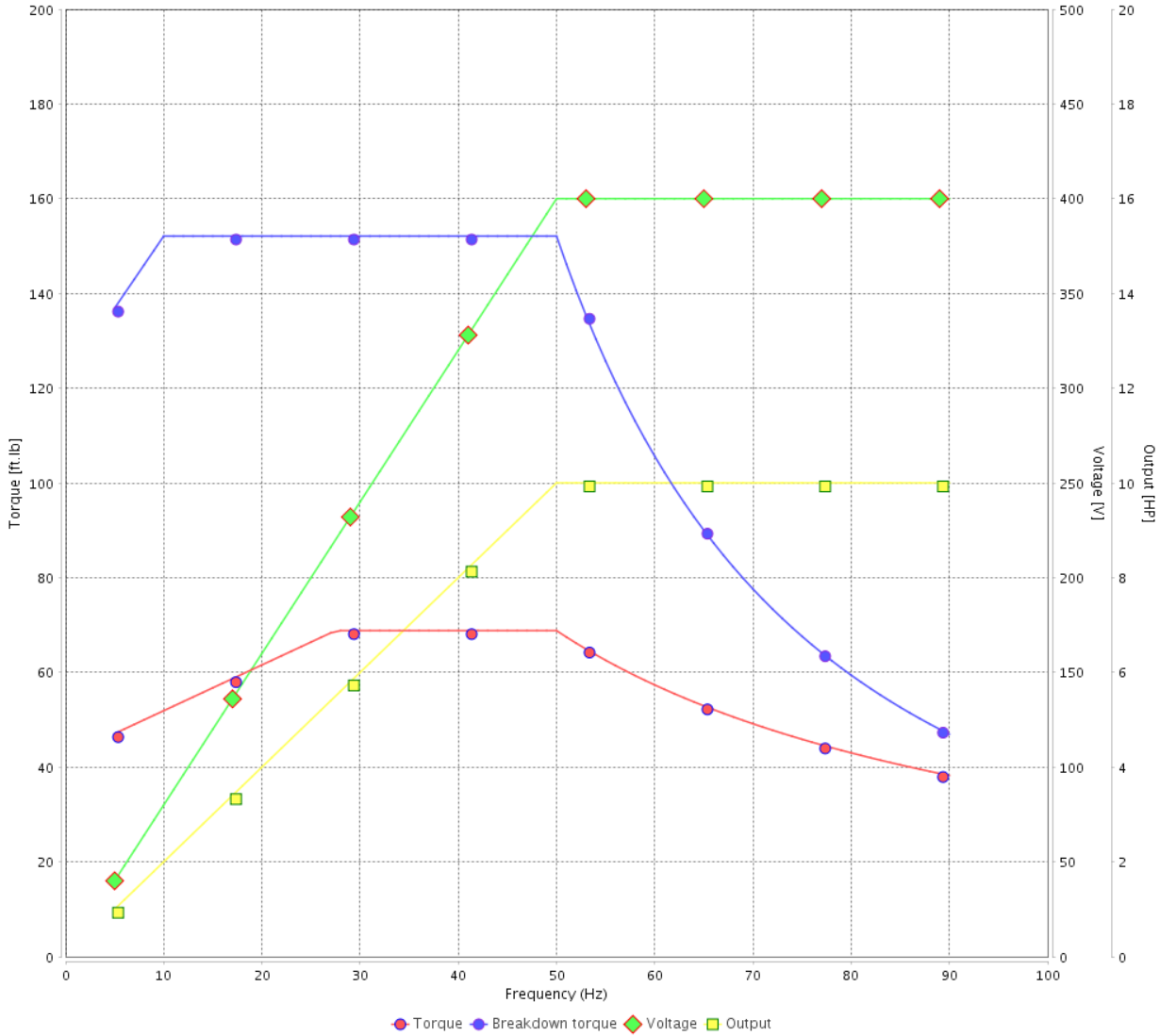
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12446748

Catalog # : 01009ET3E284T-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current : 15.3 A  
 LRC : 4.9  
 Rated torque : 72.4 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 Rated speed : 725 rpm

Moment of inertia (J) : 7.20 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 105 K  
 Design : B

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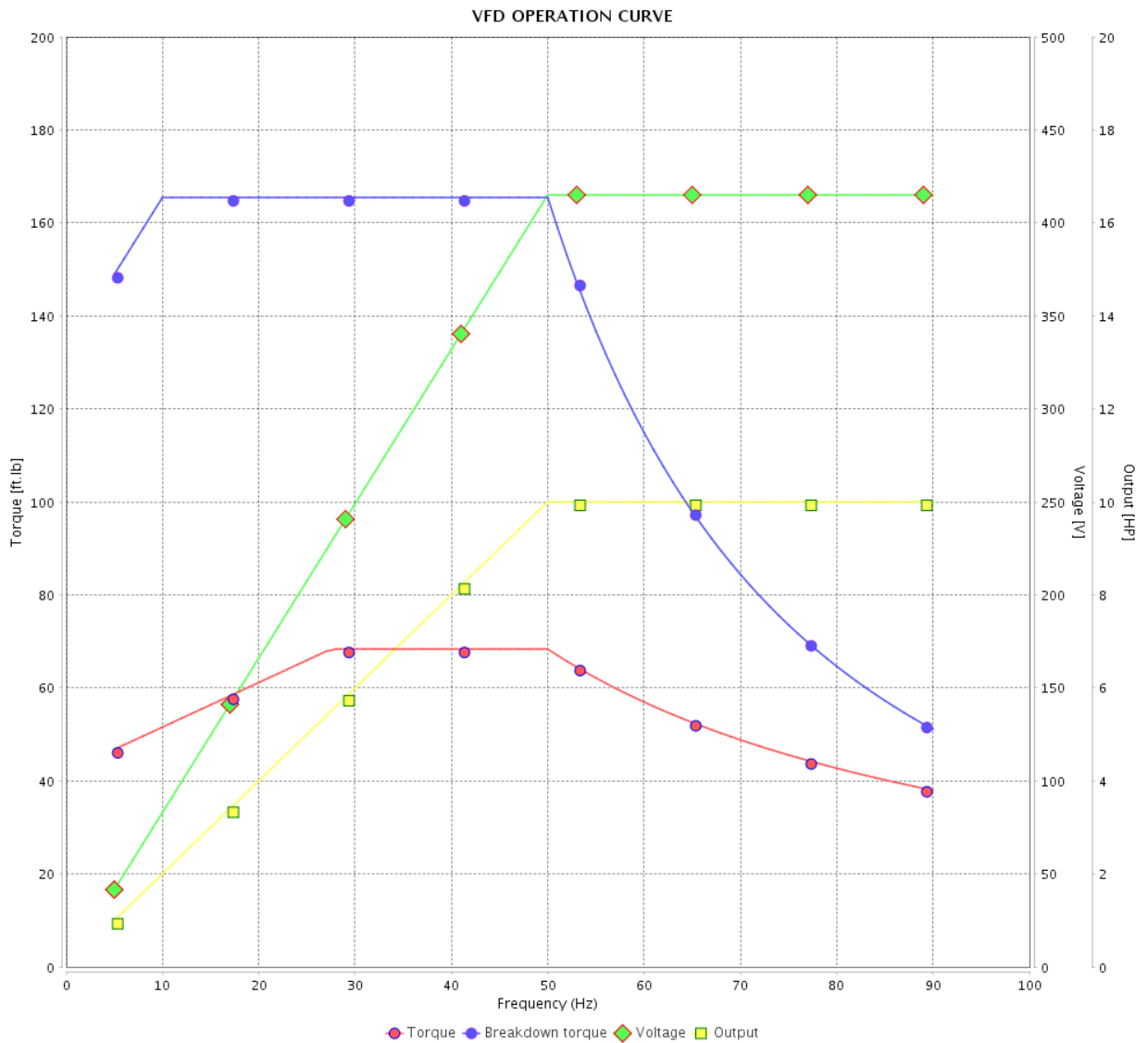
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 12446748  
 Catalog # : 01009ET3E284T-W22



Performance : 415 V 50 Hz 8P IE3

Rated current : 15.1 A	Moment of inertia (J) : 7.20 sq.ft.lb
LRC : 5.2	Duty cycle : Cont.(S1)
Rated torque : 71.9 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.15
Breakdown torque : 229 %	Temperature rise : 105 K
Rated speed : 730 rpm	Design : B

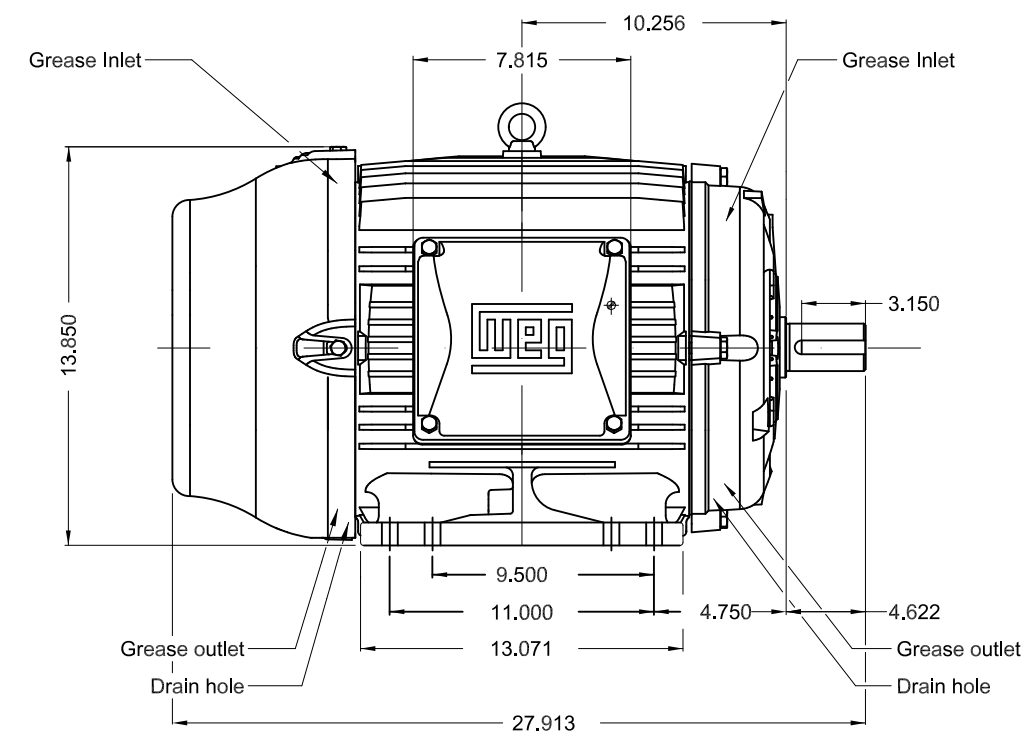
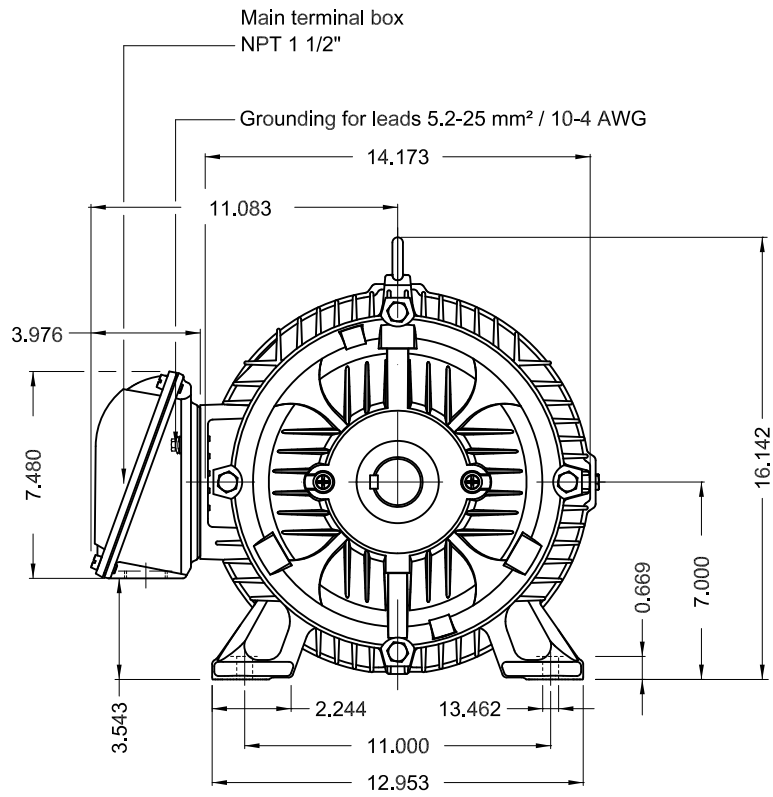
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				Revision

1 2 3 4 5 6

A

B

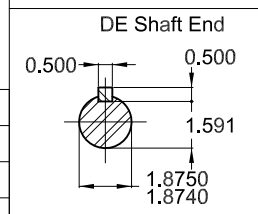
C



D

E

Without vertical jackscrews  
 Color RAL 5009  
 Painting plan 203A  
 Mounting B3R(D)



10 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF. FRAME 284/6T IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO		Jaragua do Sul	Product Engineering	SHEET	1 / 1	

**PREVIEW**  
 WDD



Dimensions in inches XME A3

MADE IN BRAZIL  
12446748



FOR SAFE AREA  
Mod.TE1BFOXON  
CC029A



For use on 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, 1.00SF - T3A

MODEL 01009ET3E284T-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 284/6T 1000m.a.s.l. IP55 TEFC 363lb

V 230/460 A 26.8/13.4

HP 10 kW 7.5

SF 1.25 SFA 33.5/16.8

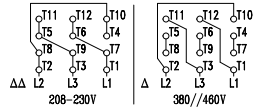
RPM 880 PF 0.78

AMB 40°C INS cl. F DT80K NEMA NOM EFF 90.2%

DUTY CONT. DES B Code G

USABLE @208V 29.6A SF 1.15 SFA 34.0

10HP 7.5kW 50Hz 380V 16.1A 725RPM SF 1.00 EFF 87.5% (IE3)



- 6311-C3 (18g)
- 6211-C3 (11g)

MOBIL POLYREX EM (20000h)

