

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	12438228		
		Catalog # :	00109ET3E182T-W22		
Frame	: 182/4T	Cooling method	: IC411 - TEFC		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 84.9 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]	4.60/2.30	2.52	2.56	2.61	
L. R. Amperes [A]	27.6/13.8	15.1	15.4	15.7	
LRC [A]	6.0x(Code M)	6.0x(Code L)	6.0x(Code M)	6.0x(Code N)	
No load current [A]	3.40/1.70	1.67	1.82	1.94	
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	1.25	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 ²	50.0 dB(A)	46.0 dB(A)	46.0 dB(A)	46.0 dB(A)	
Efficiency (%)	25%				
	50%	74.0	74.7	72.0	70.0
	75%	77.0	75.5	75.5	74.0
	100%	78.5	75.5	75.5	75.5
Power Factor	25%				
	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	: <u>Drive end</u> 6207 ZZ	<u>Non drive end</u> 6206 ZZ	Foundation loads		
Sealing	: V'Ring	V'Ring	Max. traction	: 102 lb	
Lubrication interval	: -	-	Max. compression	: 187 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



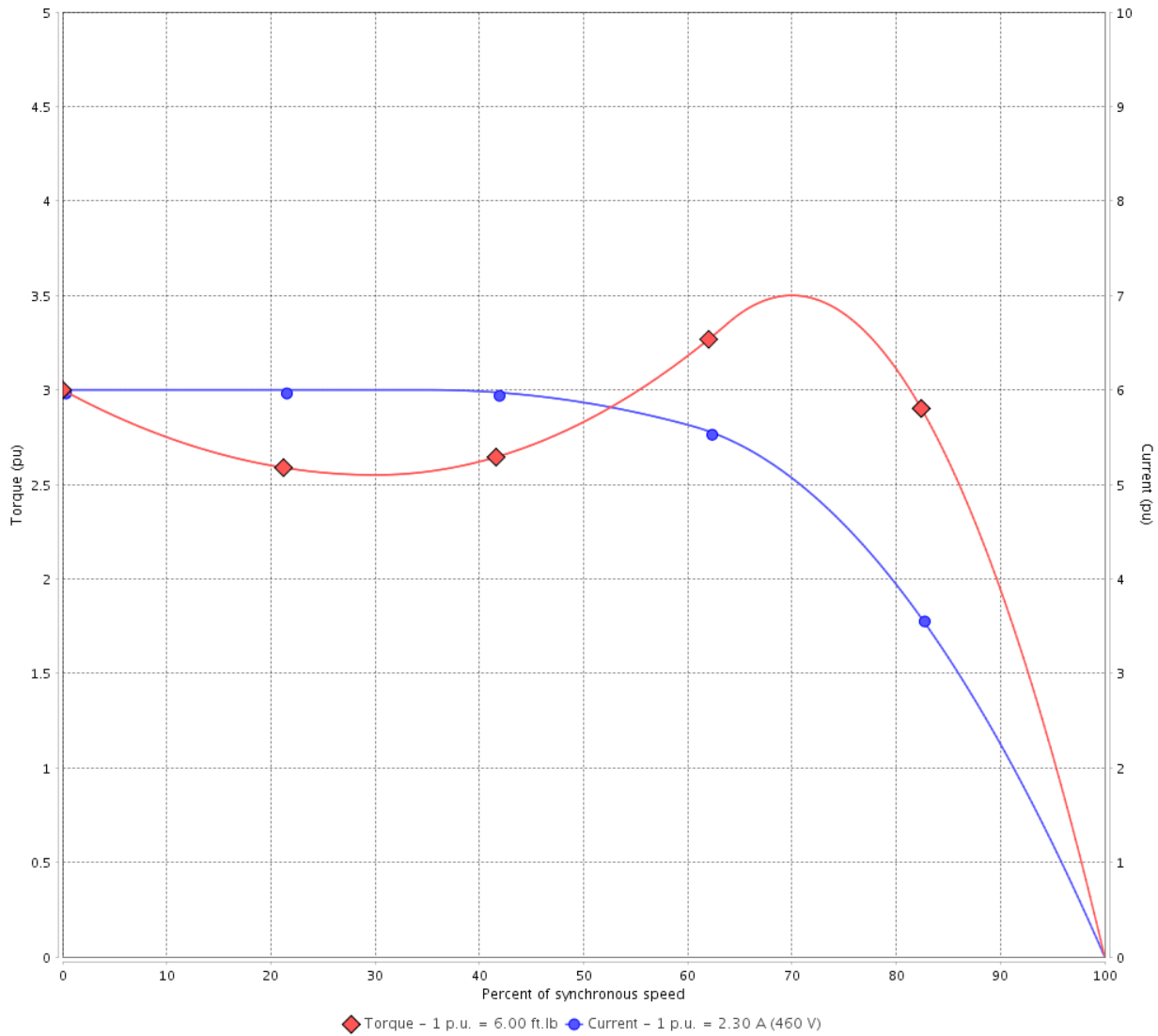
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12438228

Catalog # : 00109ET3E182T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 8P

Rated current	: 4.60/2.30 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	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



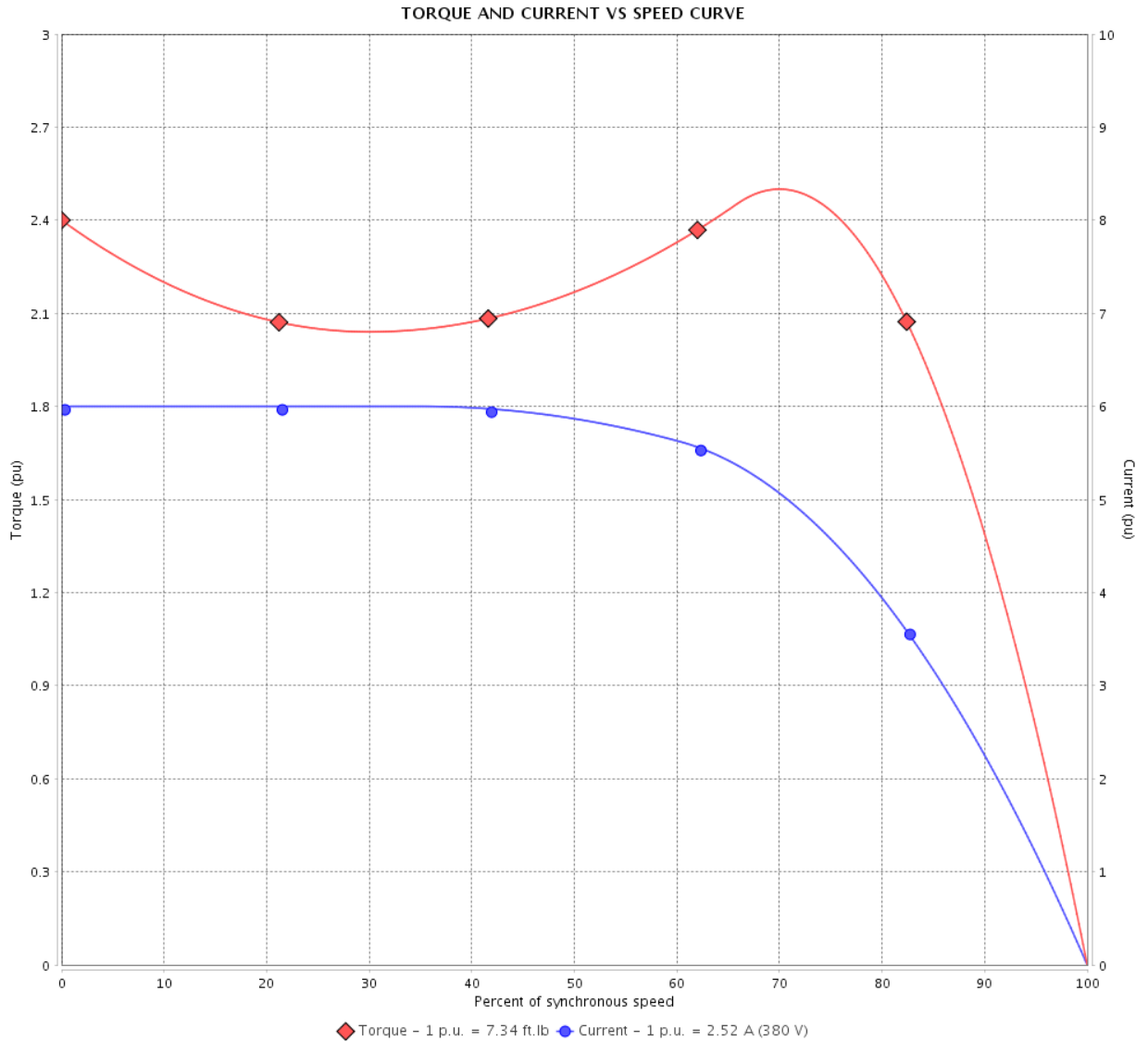
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12438228

Catalog # : 00109ET3E182T-W22



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



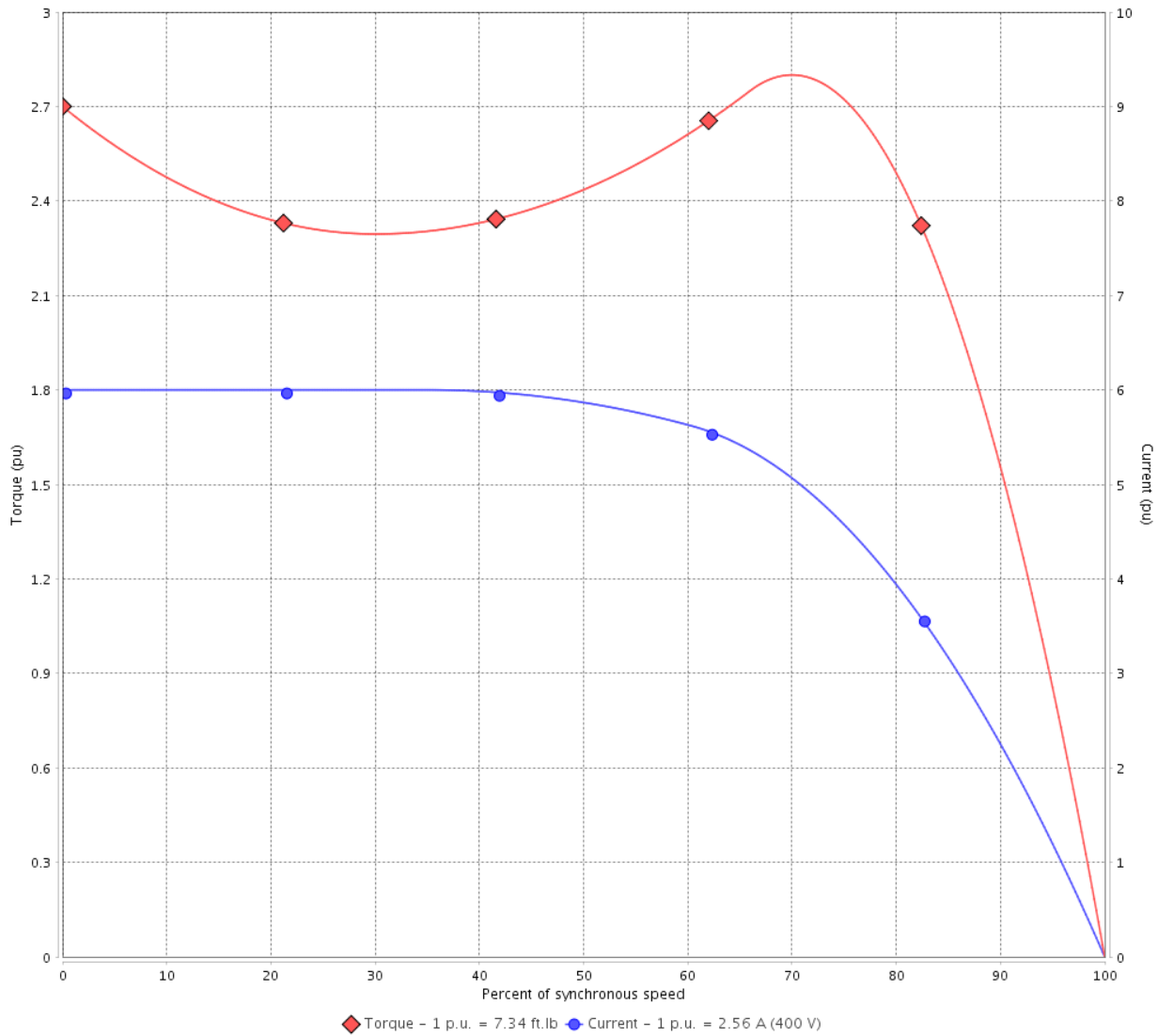
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12438228

Catalog # : 00109ET3E182T-W22

TORQUE AND CURRENT VS SPEED CURVE



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



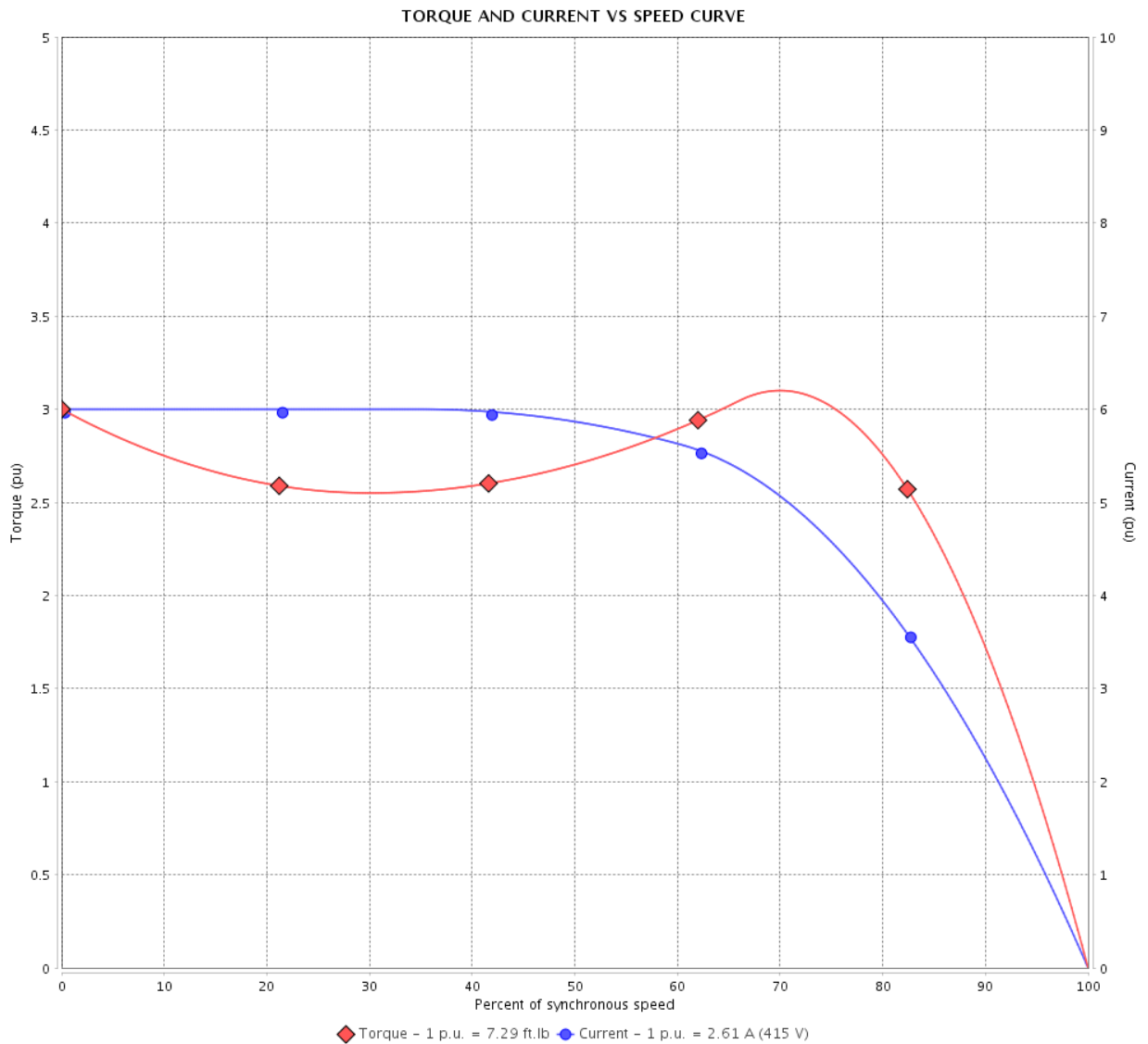
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12438228

Catalog # : 00109ET3E182T-W22



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



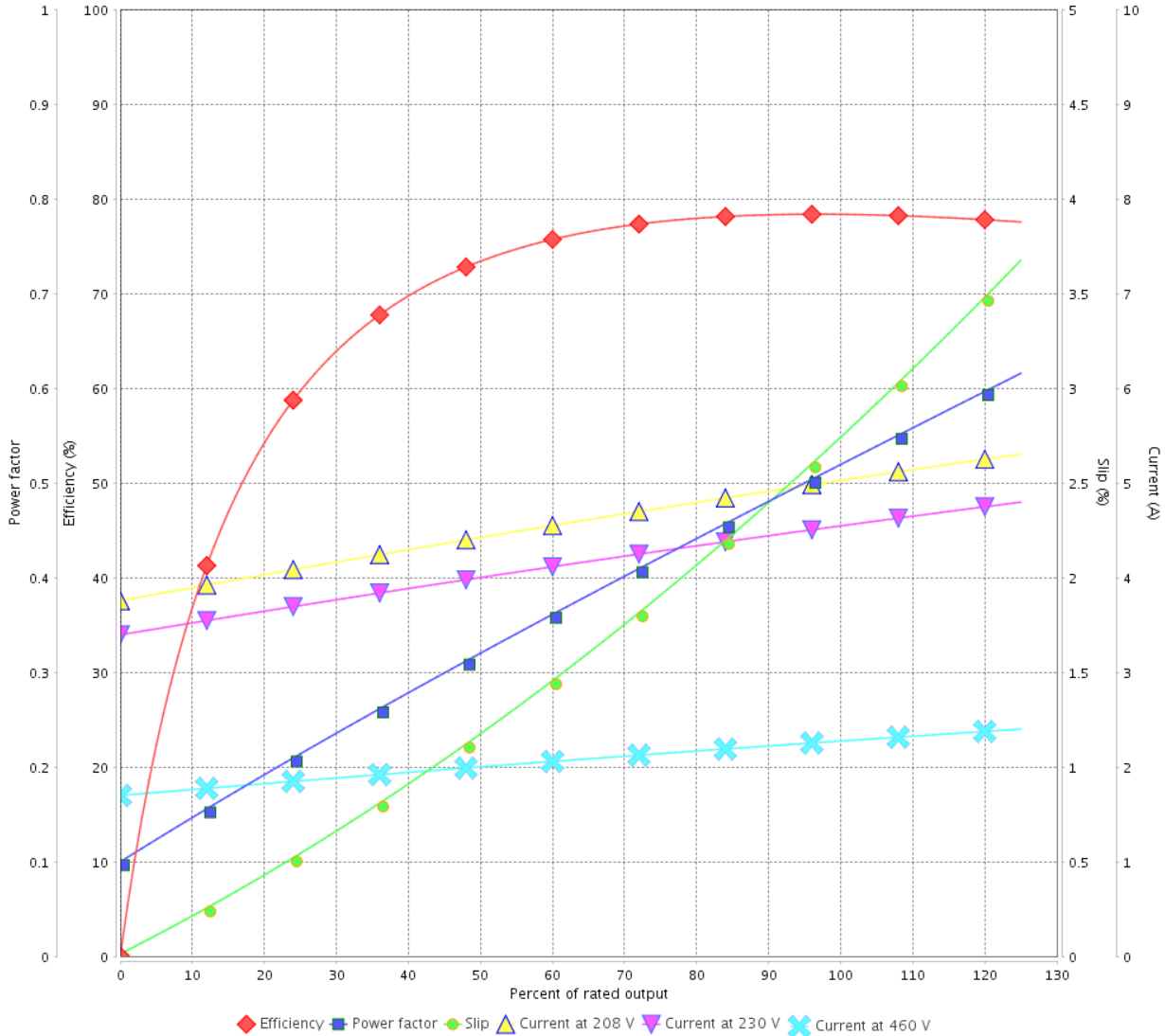
Customer :

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Product code : 12438228

Catalog # : 00109ET3E182T-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 8P

Rated current : 4.60/2.30 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 : 1.25
 Temperature rise : 80 K
 Design : B

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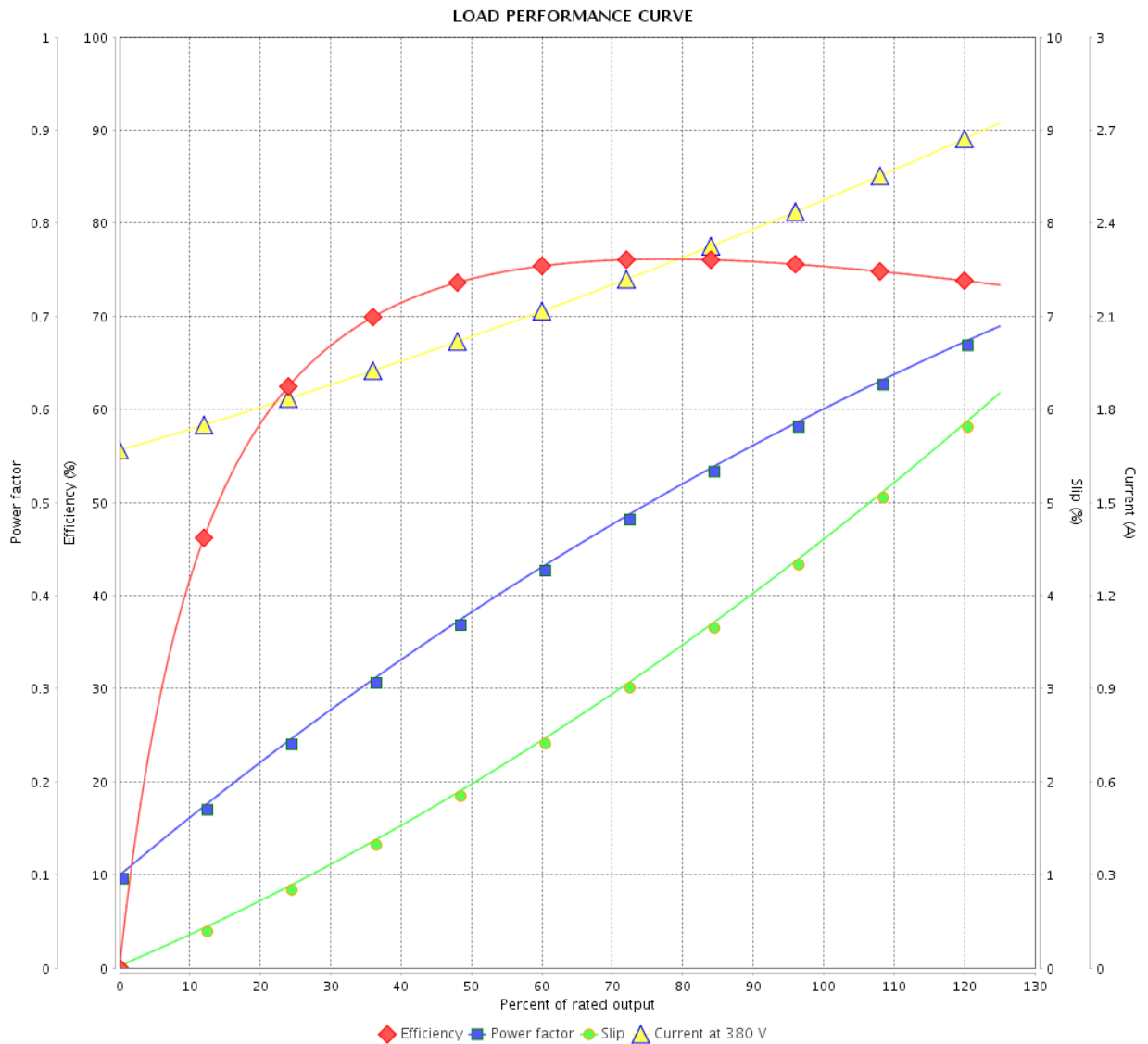


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12438228

Catalog # : 00109ET3E182T-W22



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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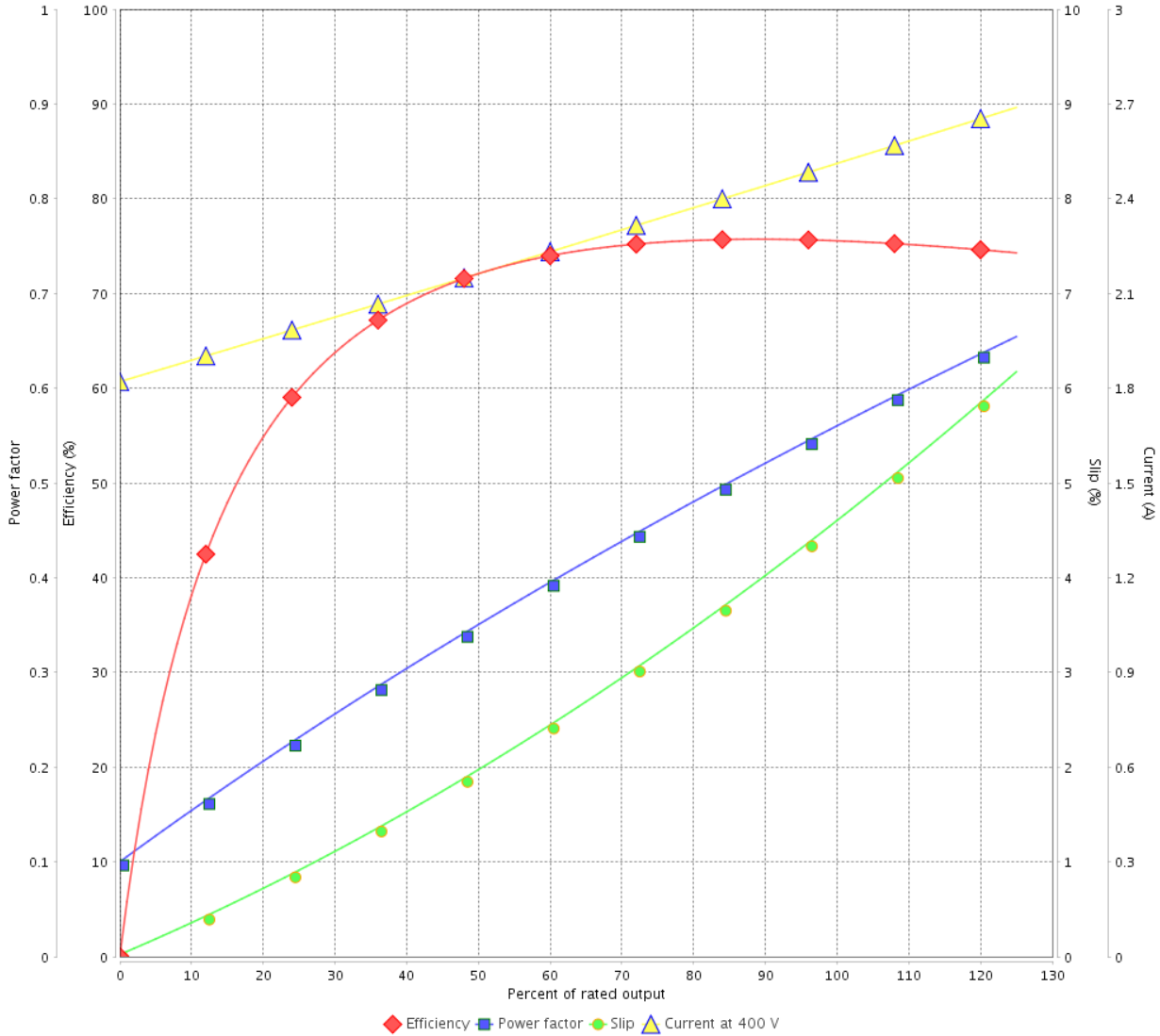
Customer :

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LOAD PERFORMANCE CURVE



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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Three Phase Induction Motor - Squirrel Cage

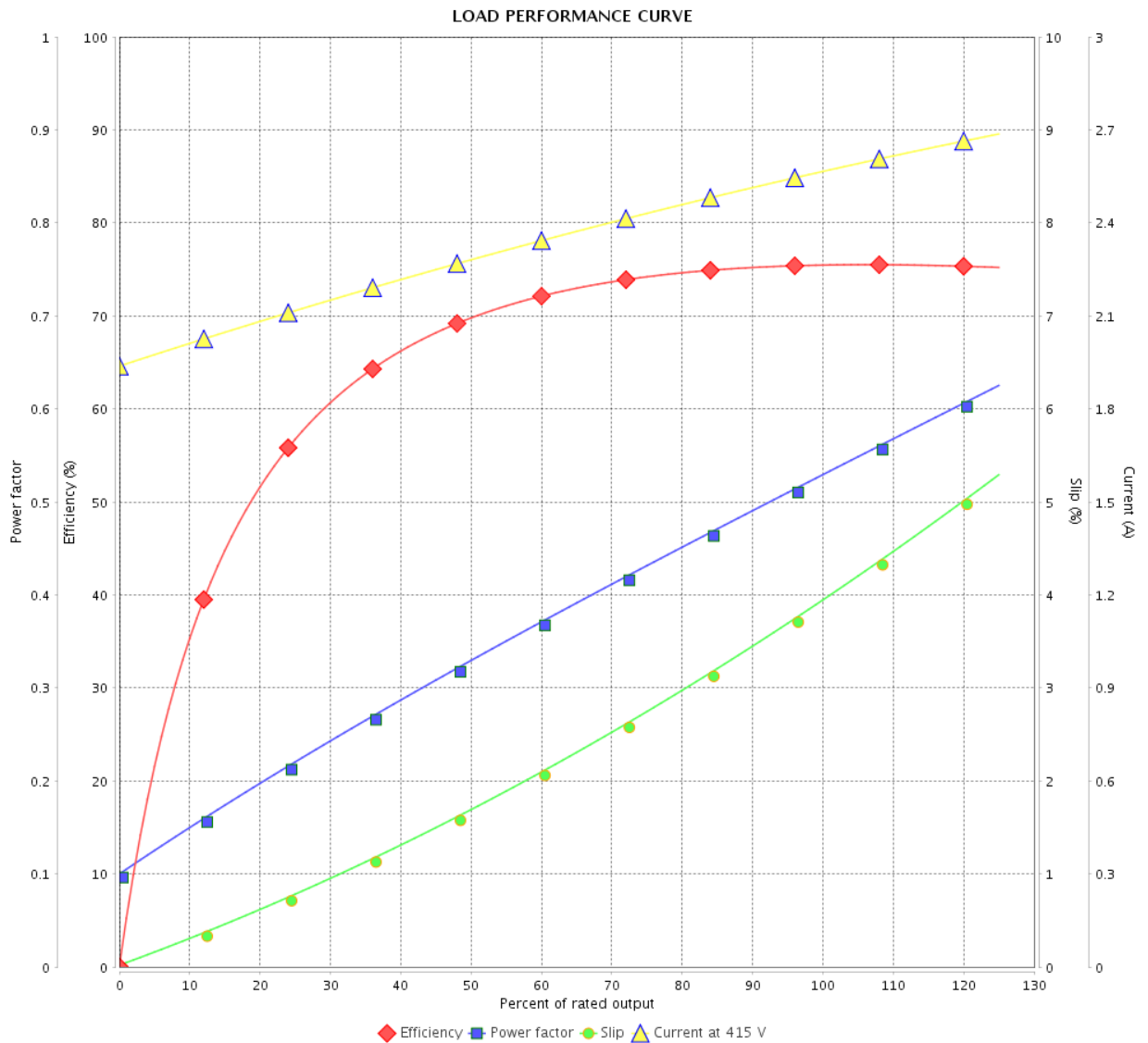


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 Locked rotor torque : 300 %
 Breakdown torque : 310 %
 Rated speed : 720 rpm

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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Locked rotor torque	: 300 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

Heating constant

Cooling constant

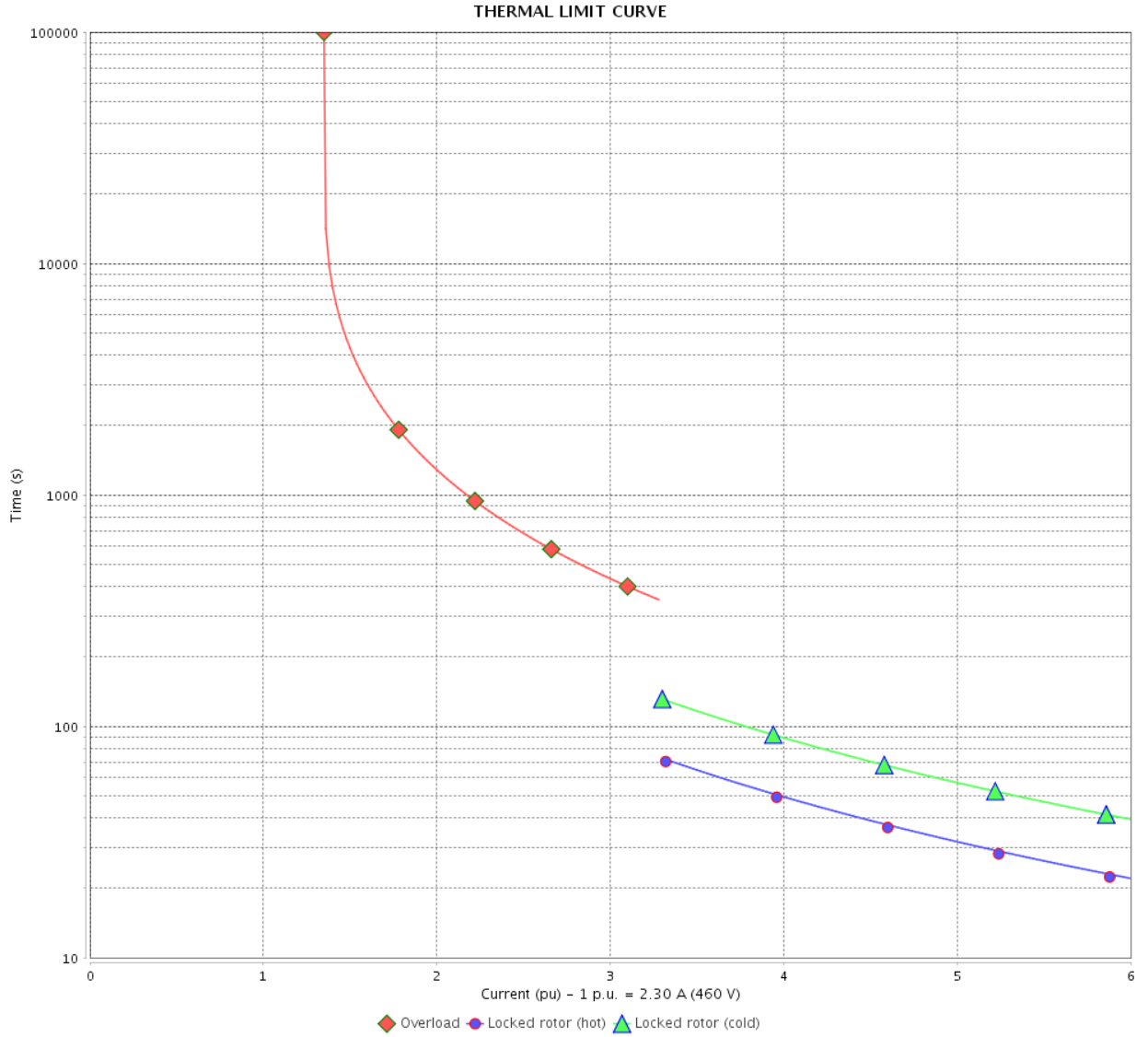
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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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

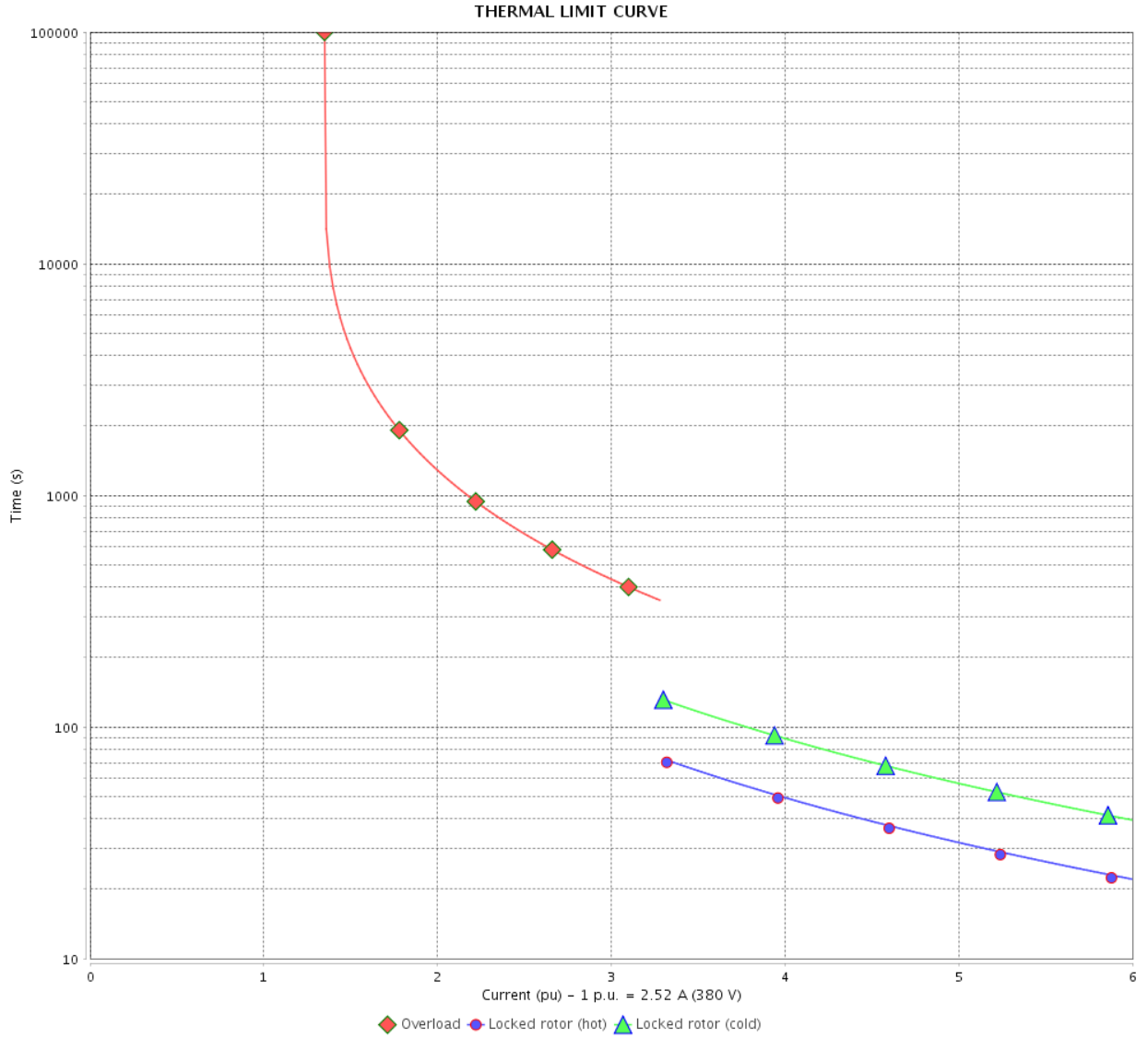
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LRC : 6.0	Duty cycle : Cont.(S1)
Rated torque : 7.34 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

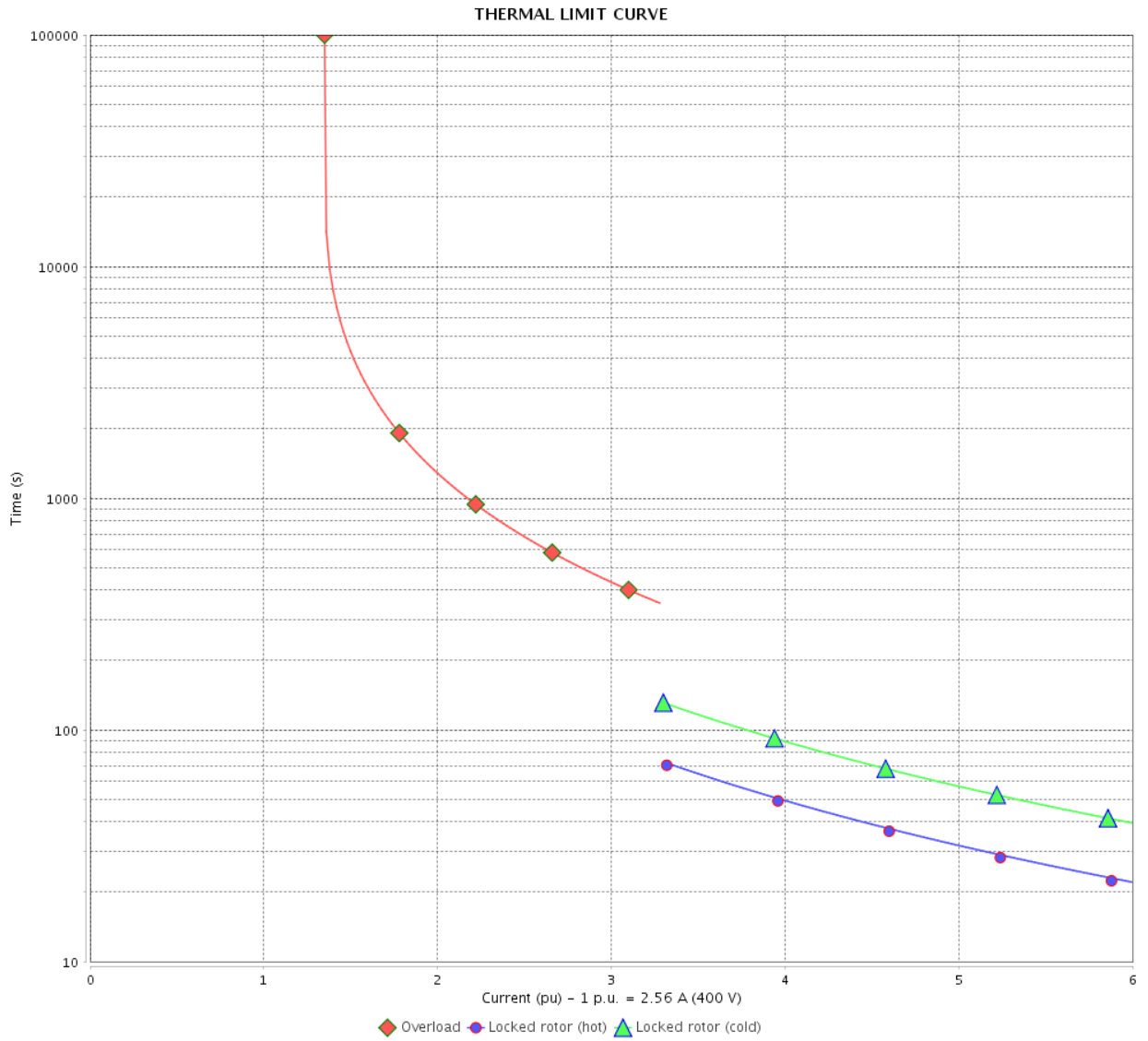
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Customer : _____



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THERMAL LIMIT CURVE

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Catalog # : 00109ET3E182T-W22

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

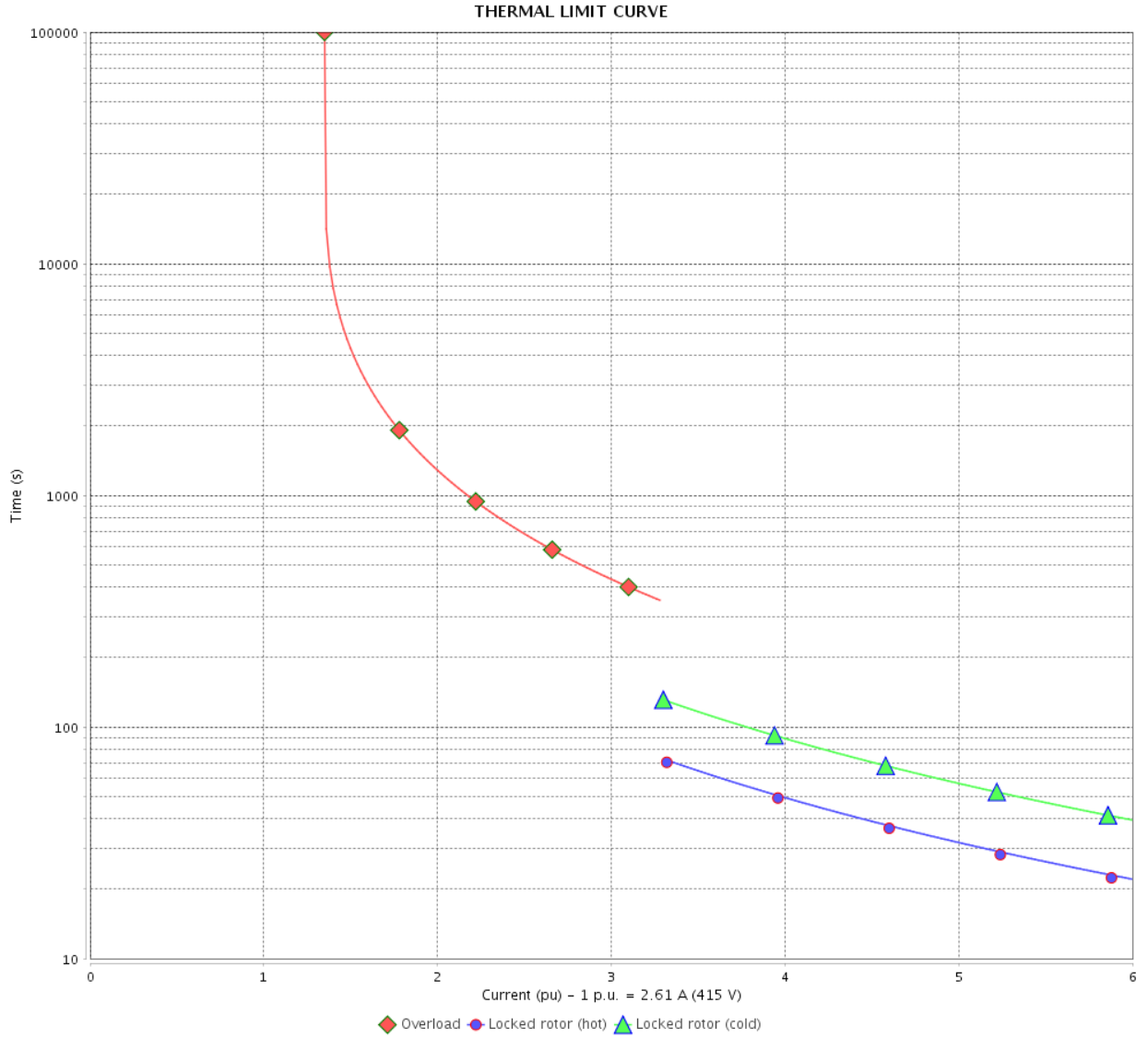
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

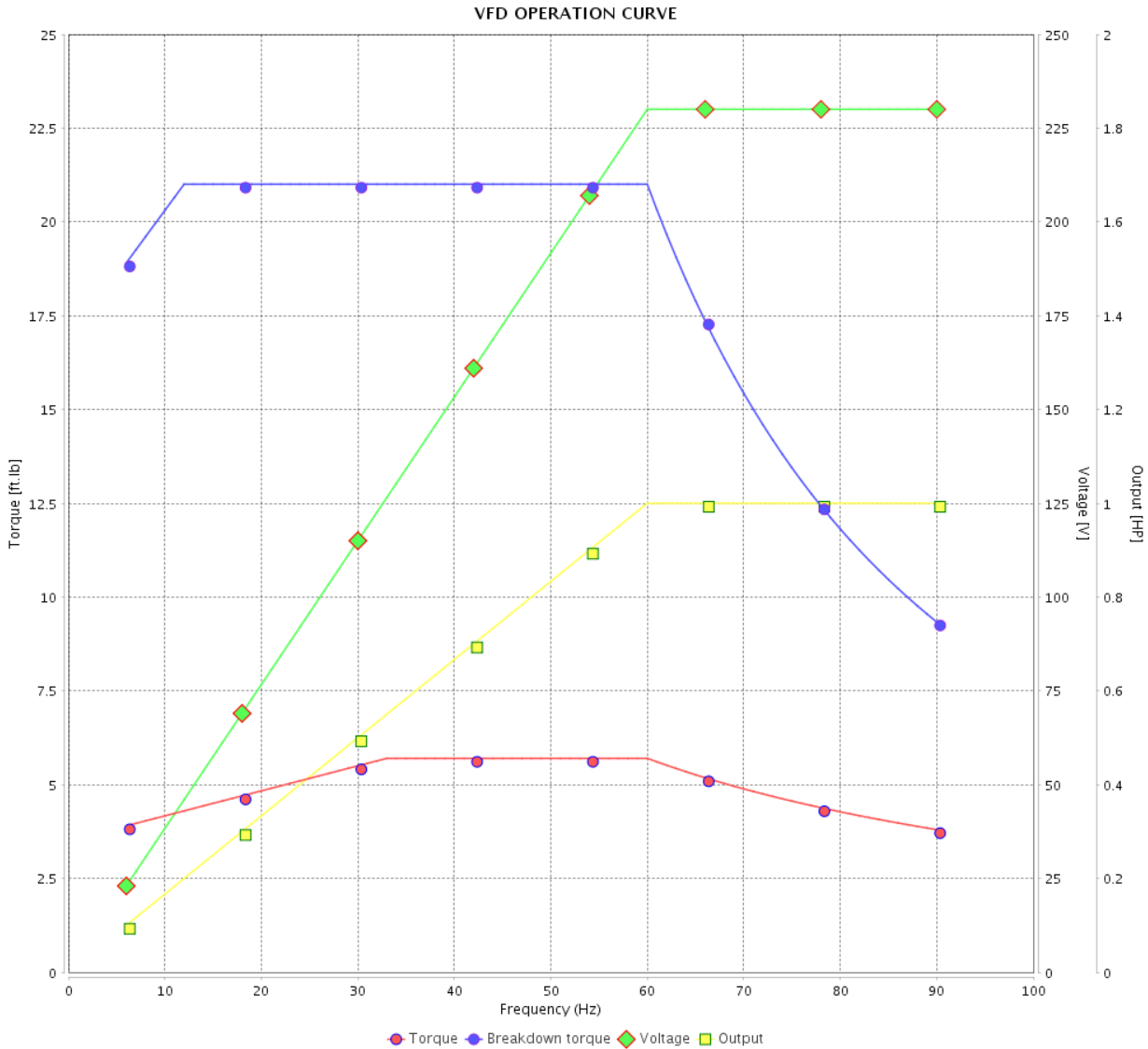


Customer :

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Catalog # : 00109ET3E182T-W22



Performance : 230/460 V 60 Hz 8P

Rated current : 4.60/2.30 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 : 1.25
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

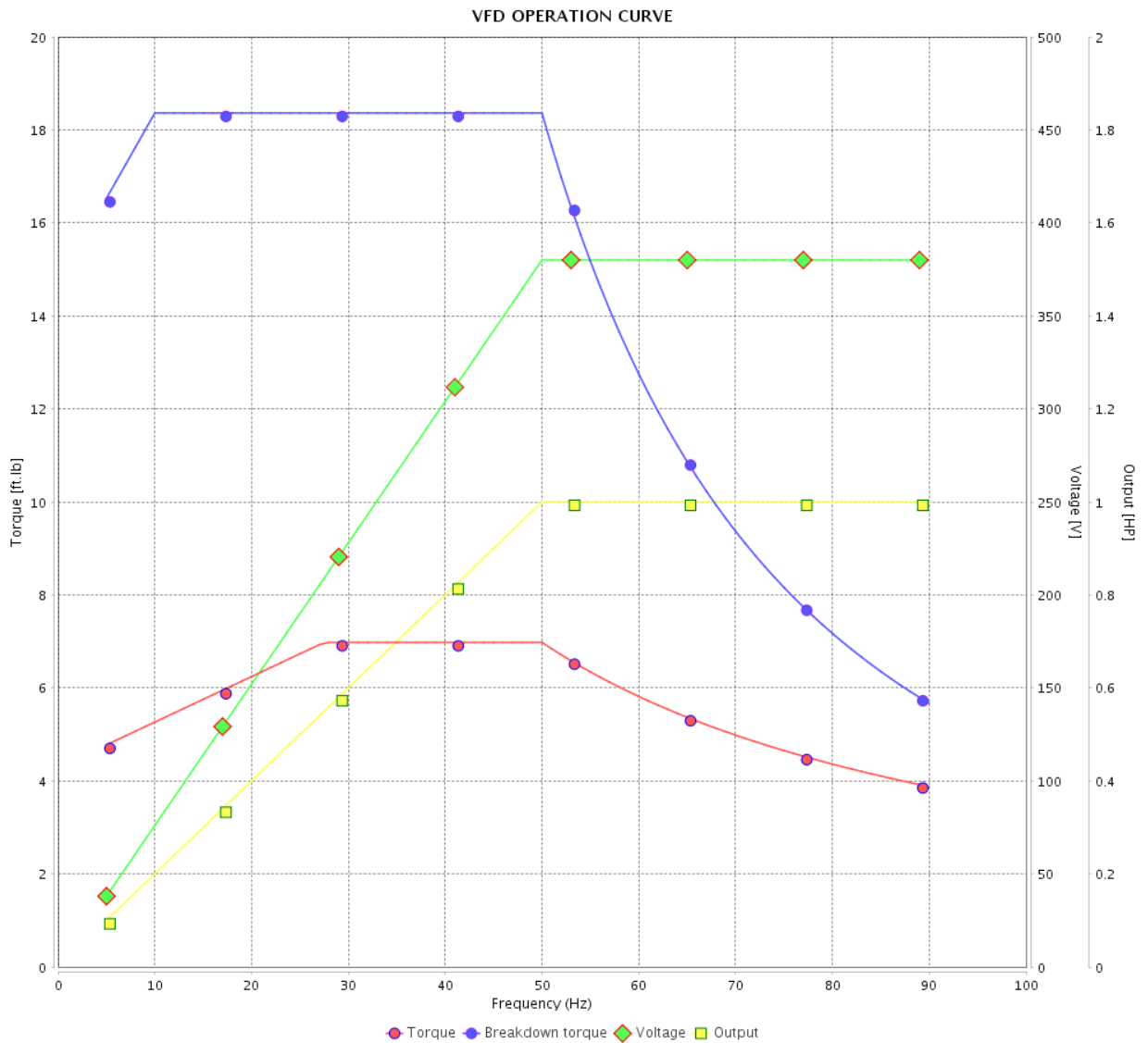


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Performance : 380 V 50 Hz 8P IE3

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



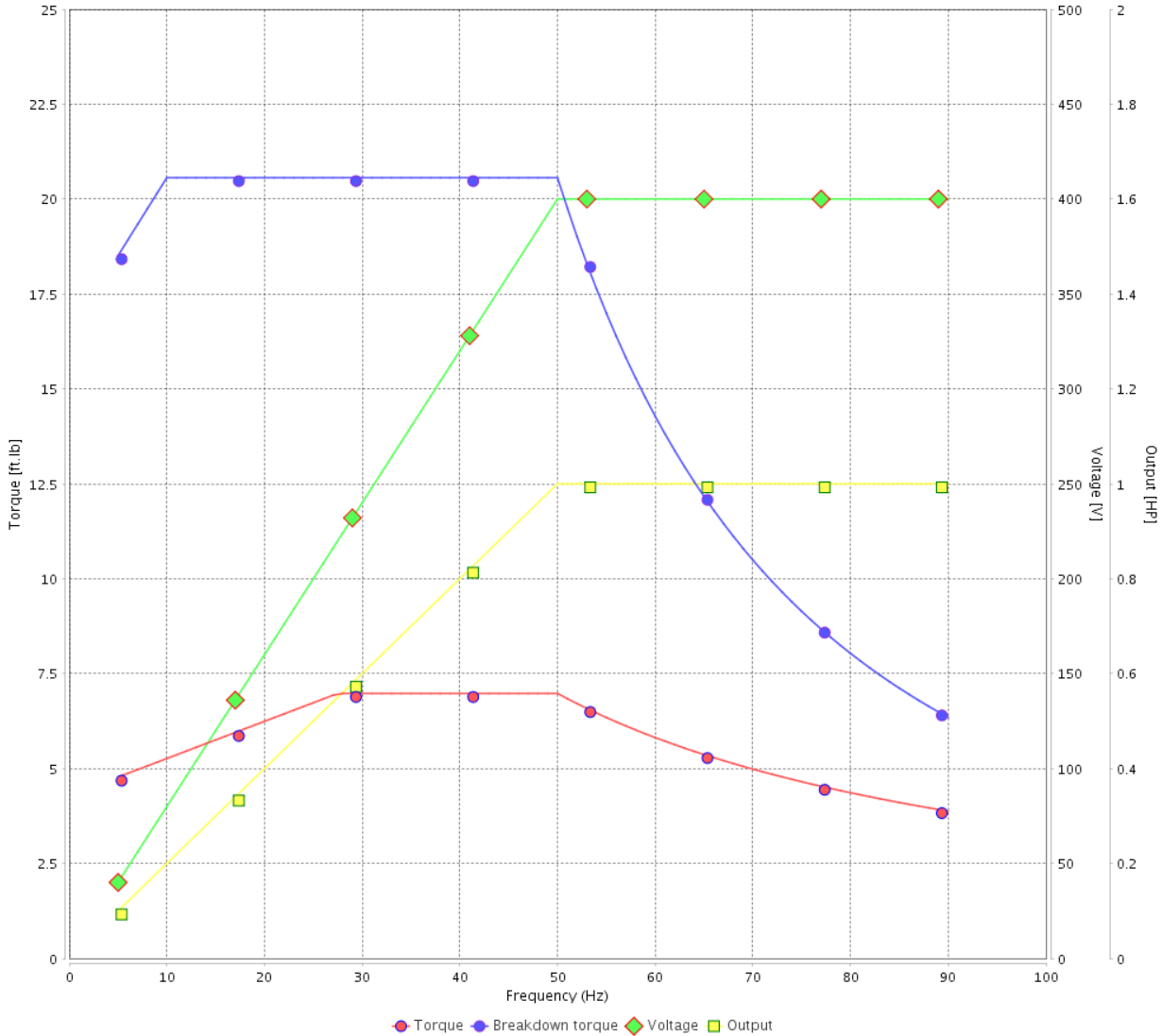
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VFD OPERATION CURVE



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

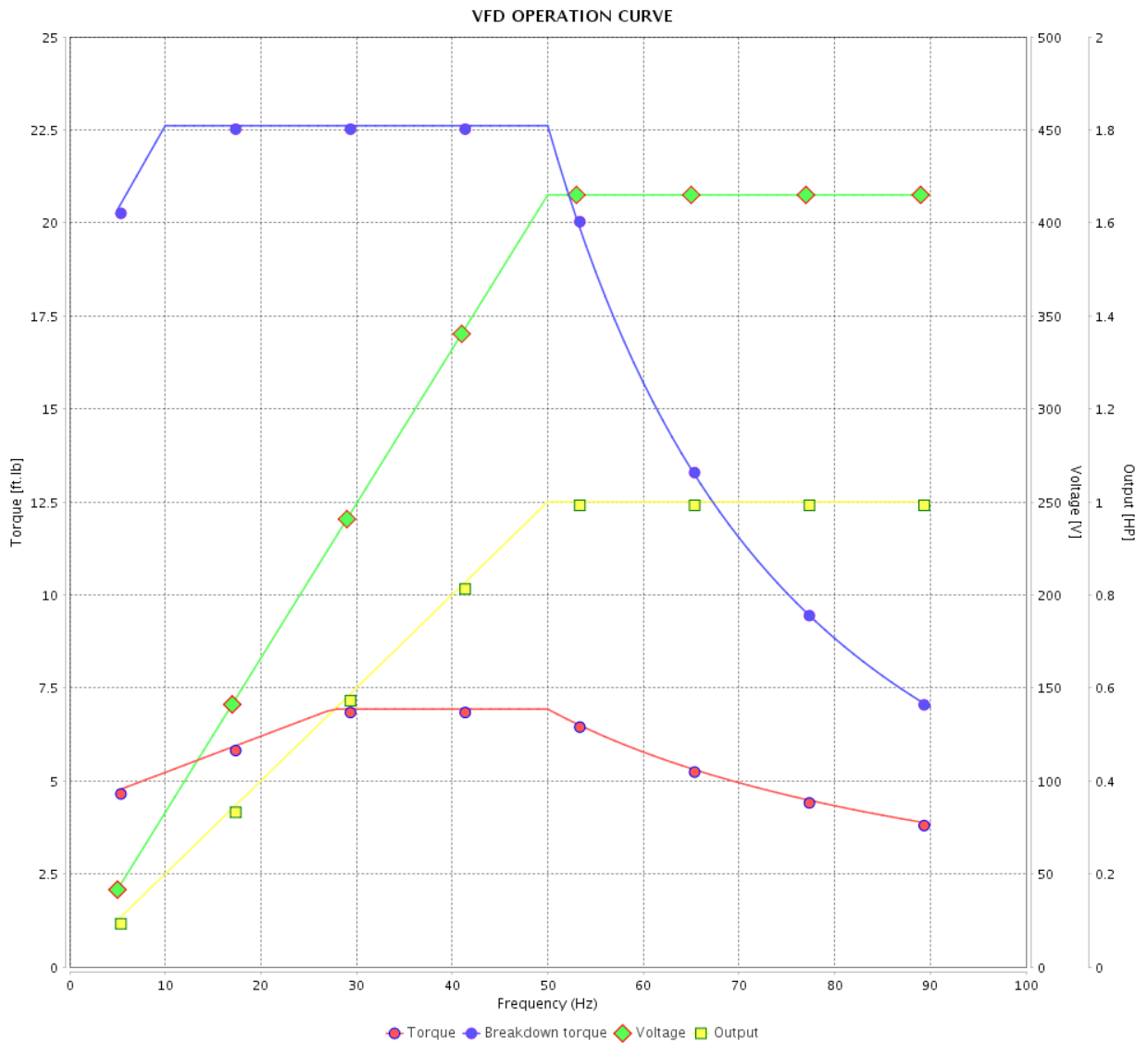


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 Locked rotor torque : 300 %
 Breakdown torque : 310 %
 Rated speed : 720 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

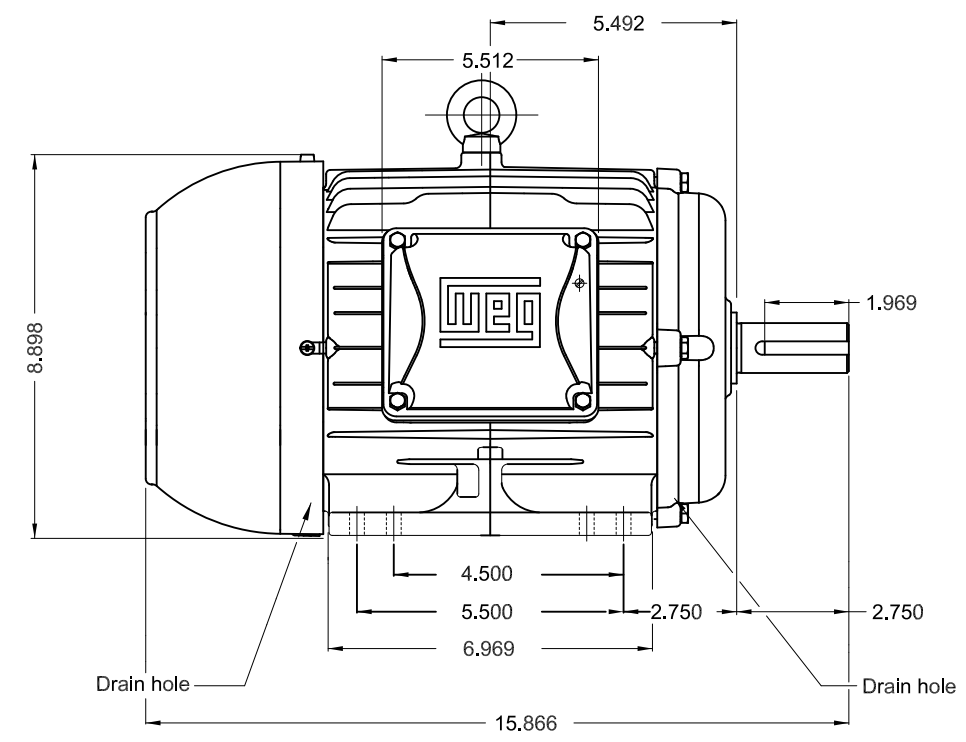
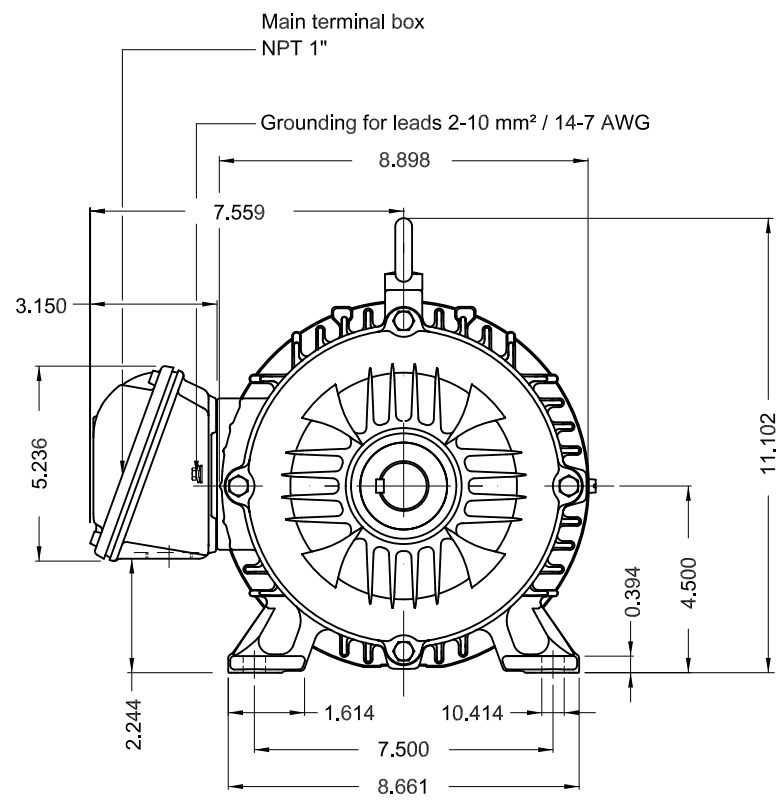
Rev.	Changes Summary	Performed	Checked	Date
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A

B

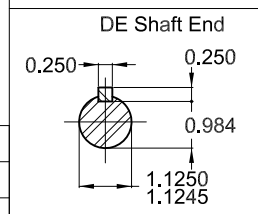
C



D

E

Color RAL 5009
 Painting plan 207A
 Mounting B3R(D)



1 HP 08 Poles 60 Hz A

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

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches XME A3

MADE IN BRAZIL
12438228



MODEL 00109ET3E182T-W22

Inverter Duty Motor
Severe Duty



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 - T5
For use on PWM: Gr. A, B, C, D, F and G,
VT 1000:1, CT 20:1, 1.00SF - T4A



FOR SAFE AREA
Mod. TE1BFOXON
CC029A

PH3 60Hz Fr. 182/4T 1000m.a.s.l. IP55 TEFC 85lb

V 230/460

A 4.60/2.30

HP 1.0

kW 0.75

SF 1.25

SFA 5.75/2.88

RPM 875

PF 0.52

AMB 40°C

INS cl. F DT80K

NEMA NOM EFF 78.5%

DUTY CONT.

DES B Code M

USABLE @208V 5.09A SF 1.15 SFA 5.85

1.0HP 0.75kW 50Hz 380V 2.52A 715RPM SF 1.00 EFF 75.5% (IE3)

