

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	13163406	
		Catalog # :	00736OT3E184TC-SG	
Frame	: 182/4TC	Cooling method	: IC01 - ODP	
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>	: 69.9 lb	
Design	: B	Moment of inertia (J)	: 0.1818 sq.ft.lb	
Output [HP]	7.5	7.5	7.5	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	17.3/8.67	21.4/10.7	19.2/10.2	
L. R. Amperes [A]	128/64.2	120/59.9	121/64.3	
LRC [A]	7.4x(Code H)	5.6x(Code F)	6.3x(Code G)	
No load current [A]	6.43/3.22	6.33/3.17	6.59/3.49	
Rated speed [RPM]	3500	2865	2880	
Slip [%]	2.78	4.50	4.00	
Rated torque [ft.lb]	11.3	13.7	13.7	
Locked rotor torque [%]	180	150	170	
Breakdown torque [%]	290	210	240	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	105 K	
Locked rotor time	18s (cold) 10s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	65.0 dB(A)	63.0 dB(A)	63.0 dB(A)	
Efficiency (%)	25%	88.3	90.6	
	50%	88.5	88.8	
	75%	88.5	87.9	
	100%	88.5	85.7	
Power Factor	25%	0.49	0.51	
	50%	0.76	0.79	
	75%	0.85	0.87	
	100%	0.90	0.91	
Bearing type	: <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6205 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 175 lb	
		Max. compression	: 244 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 19.2A SF 1.00 SFA 19.2A				
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



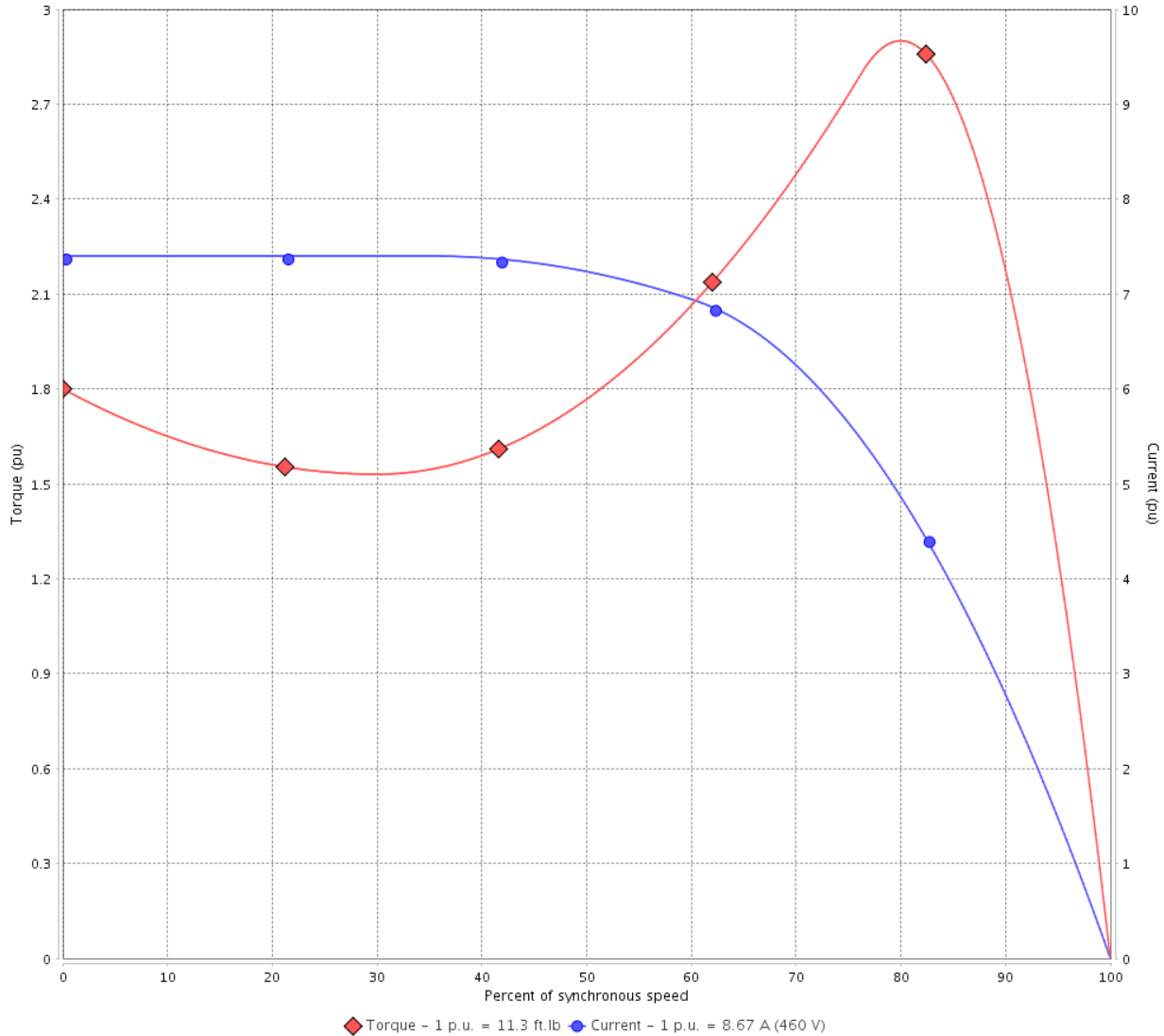
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A  
 LRC : 7.4  
 Rated torque : 11.3 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 290 %  
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 18s (cold) 10s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



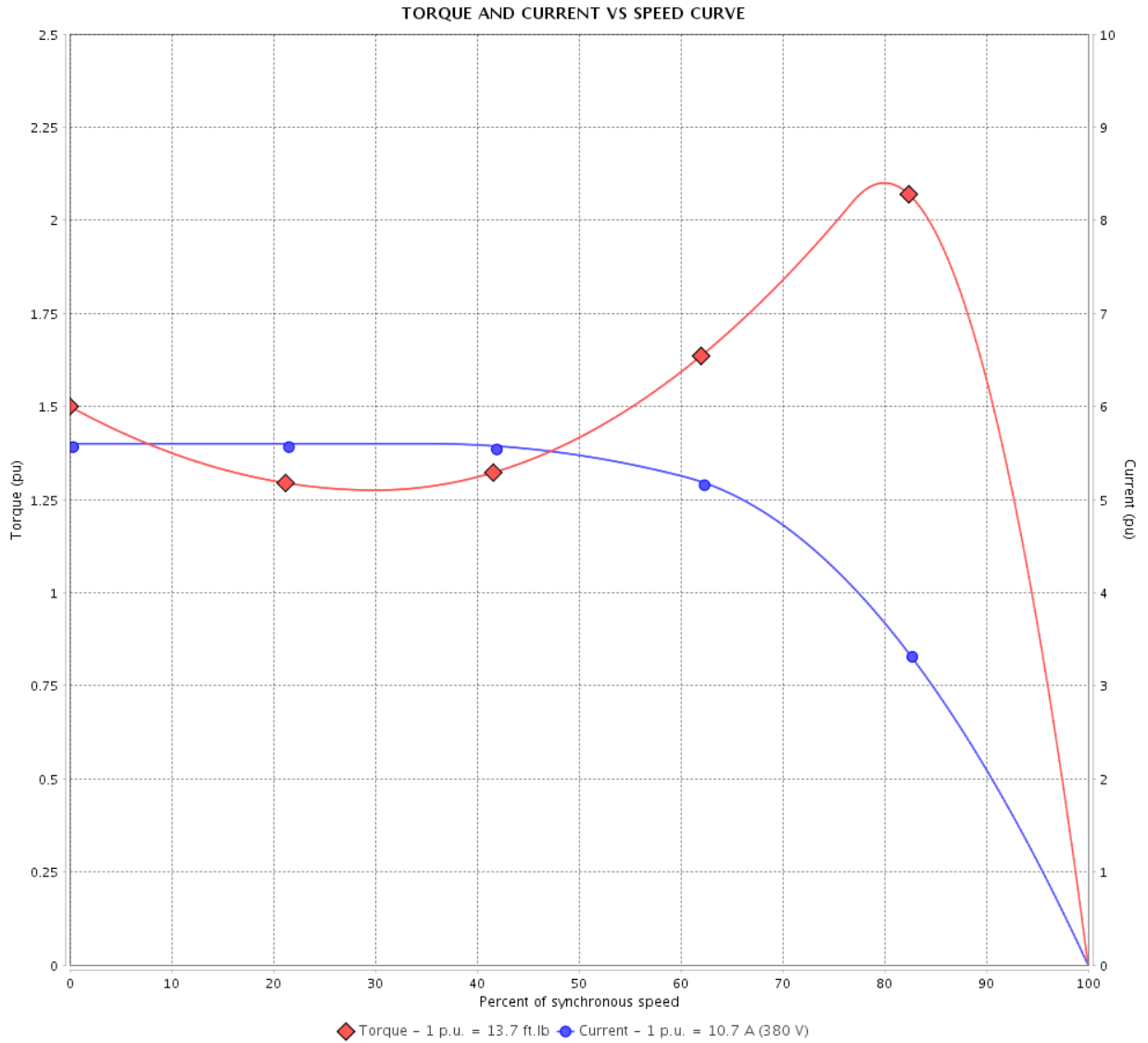
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG



Performance : 190/380 V 50 Hz 2P

Rated current : 21.4/10.7 A  
 LRC : 5.6  
 Rated torque : 13.7 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 210 %  
 Rated speed : 2865 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



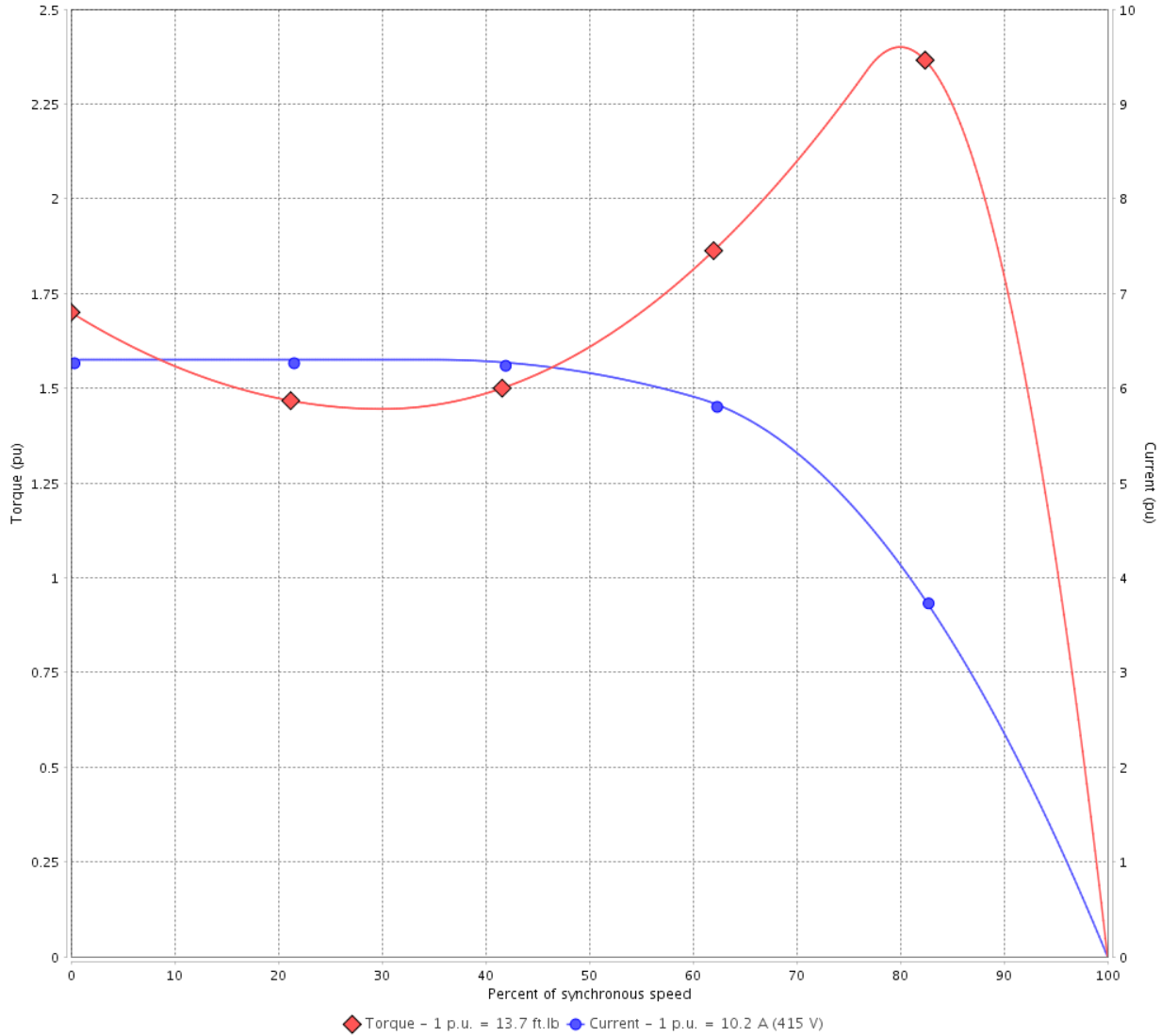
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current : 19.2/10.2 A  
 LRC : 6.3  
 Rated torque : 13.7 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

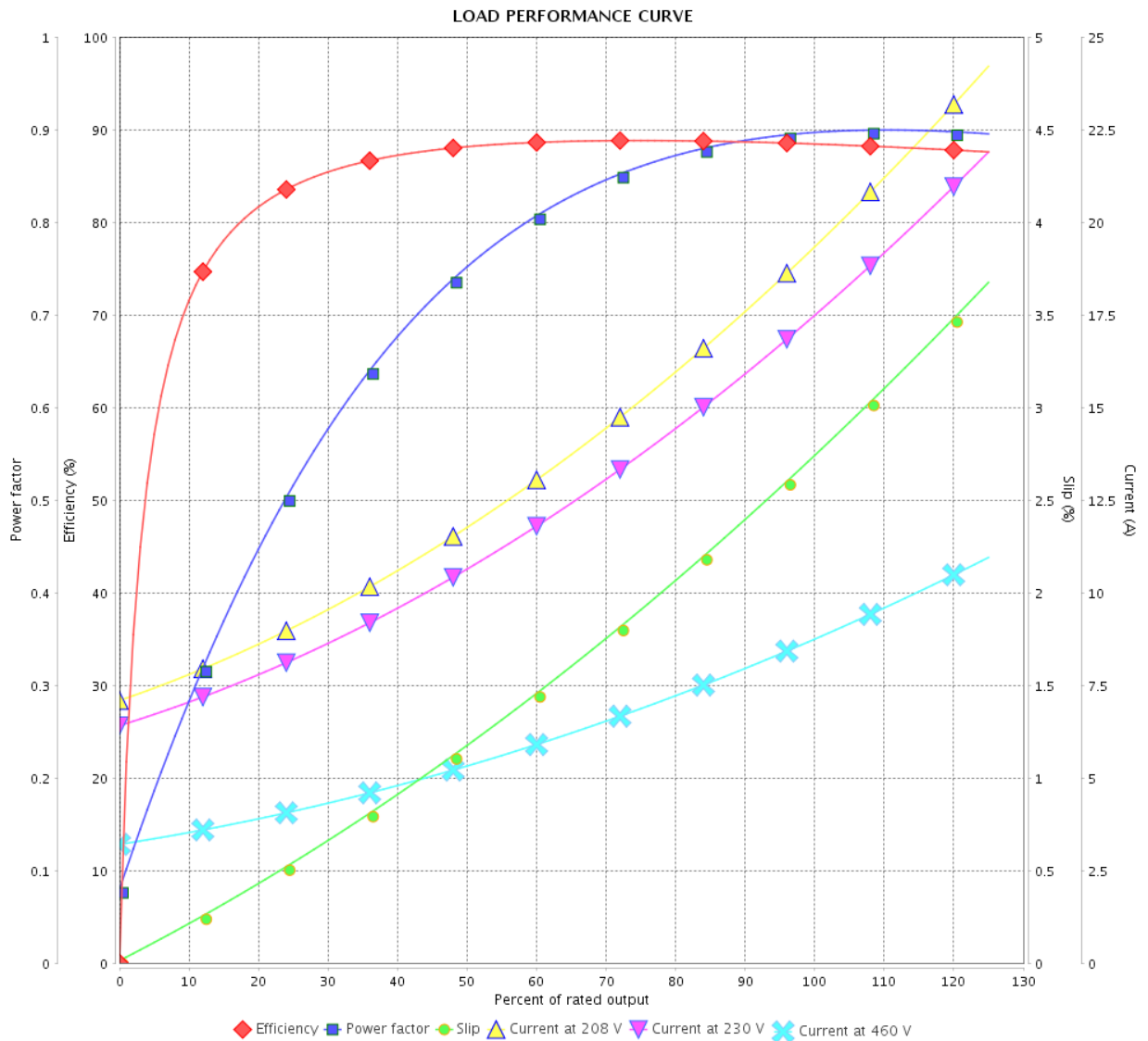


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 00736OT3E184TC-SG



Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A  
 LRC : 7.4  
 Rated torque : 11.3 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 290 %  
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



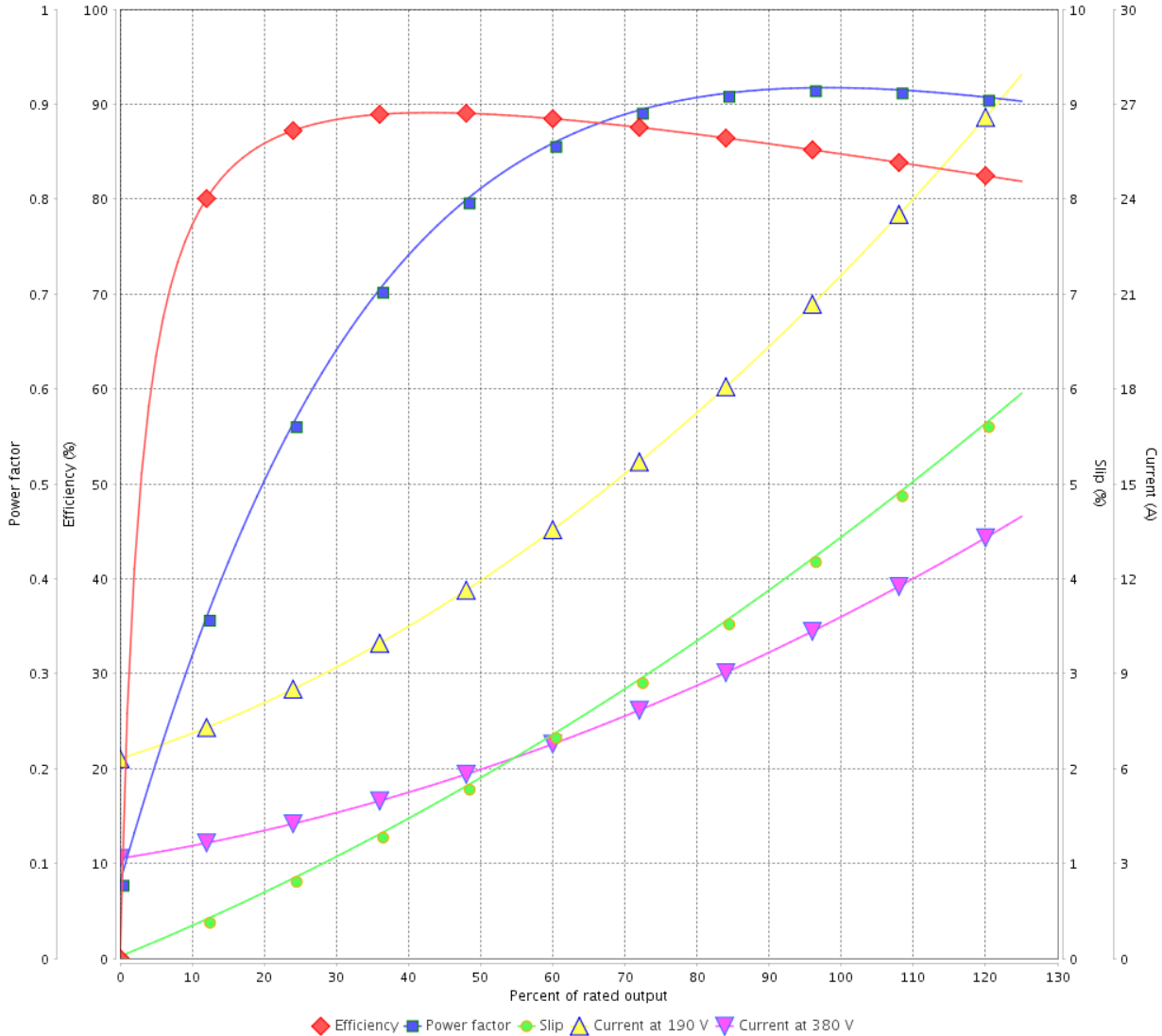
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 21.4/10.7 A  
 LRC : 5.6  
 Rated torque : 13.7 ft.lb  
 Locked rotor torque : 150 %  
 Breakdown torque : 210 %  
 Rated speed : 2865 rpm

Moment of inertia (J) : 0.1818 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

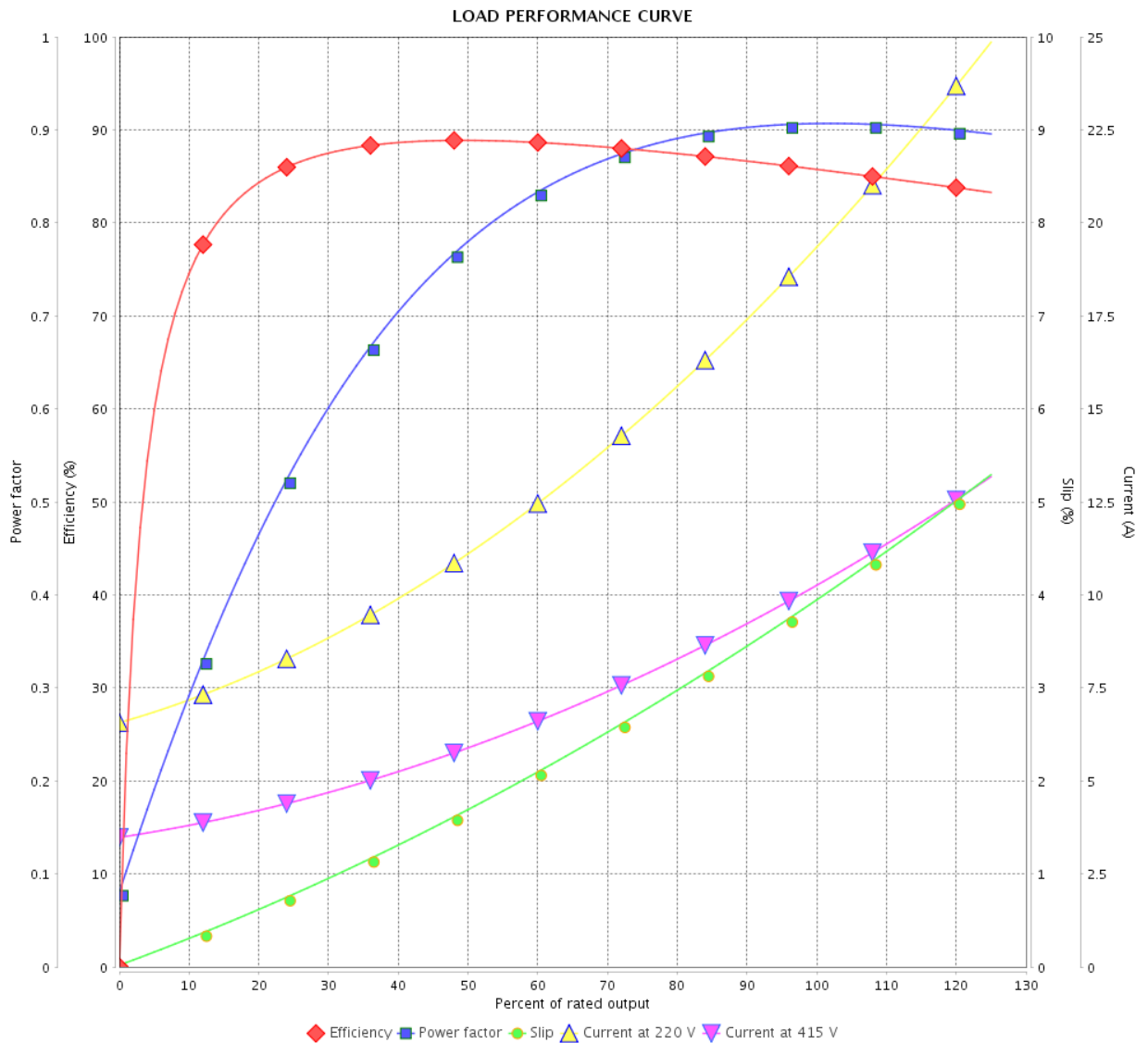


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG



Performance : 220/415 V 50 Hz 2P

Rated current : 19.2/10.2 A  
 LRC : 6.3  
 Rated torque : 13.7 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 240 %  
 Rated speed : 2880 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 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 : 13163406  
 Catalog # : 00736OT3E184TC-SG

Performance : 230/460 V 60 Hz 2P

Rated current : 17.3/8.67 A	Moment of inertia (J) : 0.1818 sq.ft.lb
LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 11.3 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.15
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 3500 rpm	Design : B

Heating constant

Cooling constant

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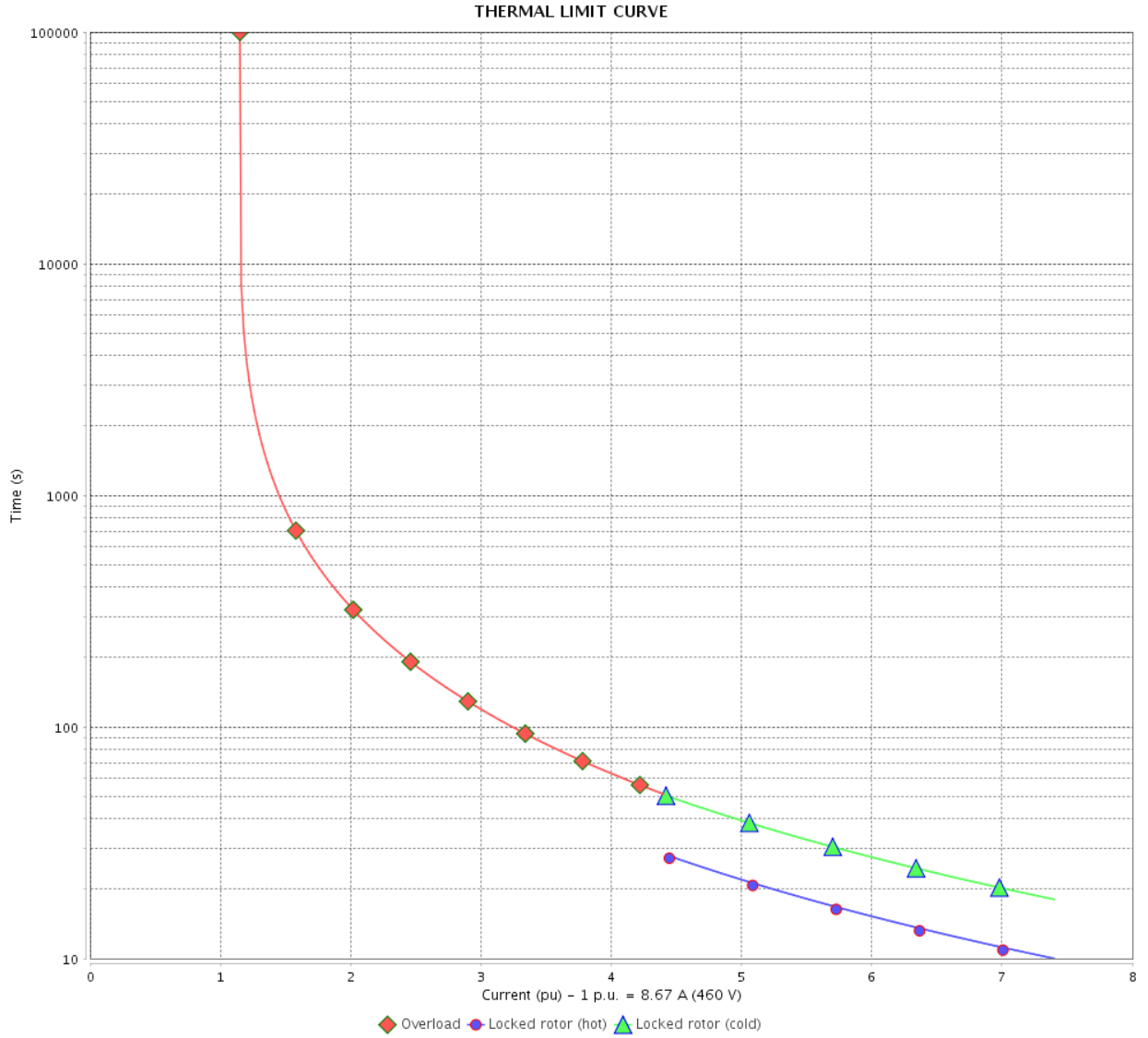


# THERMAL LIMIT CURVE

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 : 13163406  
Catalog # : 00736OT3E184TC-SG

Performance : 190/380 V 50 Hz 2P

Rated current	: 21.4/10.7 A	Moment of inertia (J)	: 0.1818 sq.ft.lb
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 13.7 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 2865 rpm	Design	: B

Heating constant

Cooling constant

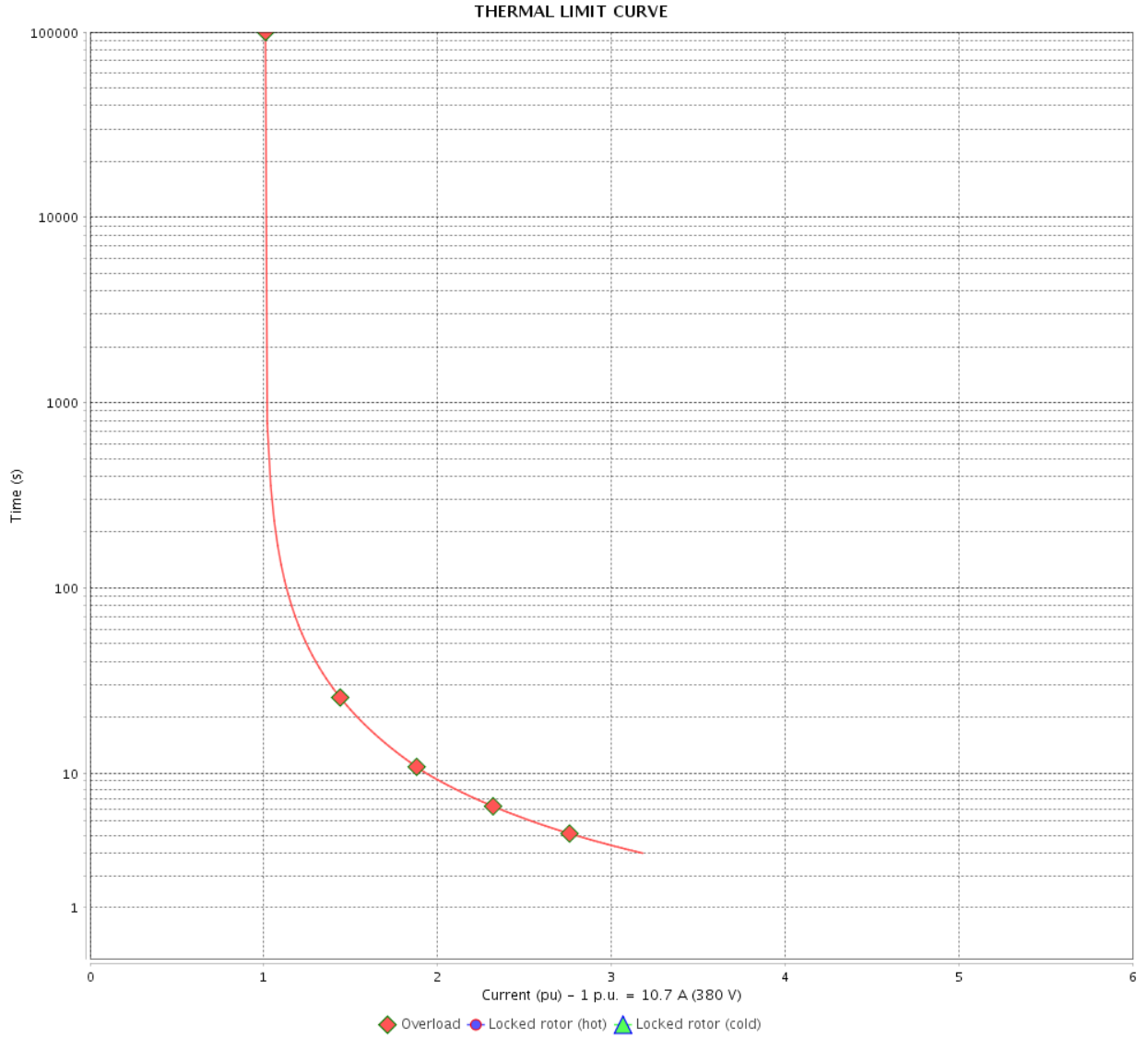
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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# THERMAL LIMIT CURVE



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Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 13163406  
Catalog # : 00736OT3E184TC-SG

Performance : 220/415 V 50 Hz 2P

Rated current	: 19.2/10.2 A	Moment of inertia (J)	: 0.1818 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 13.7 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 105 K
Rated speed	: 2880 rpm	Design	: B

Heating constant

Cooling constant

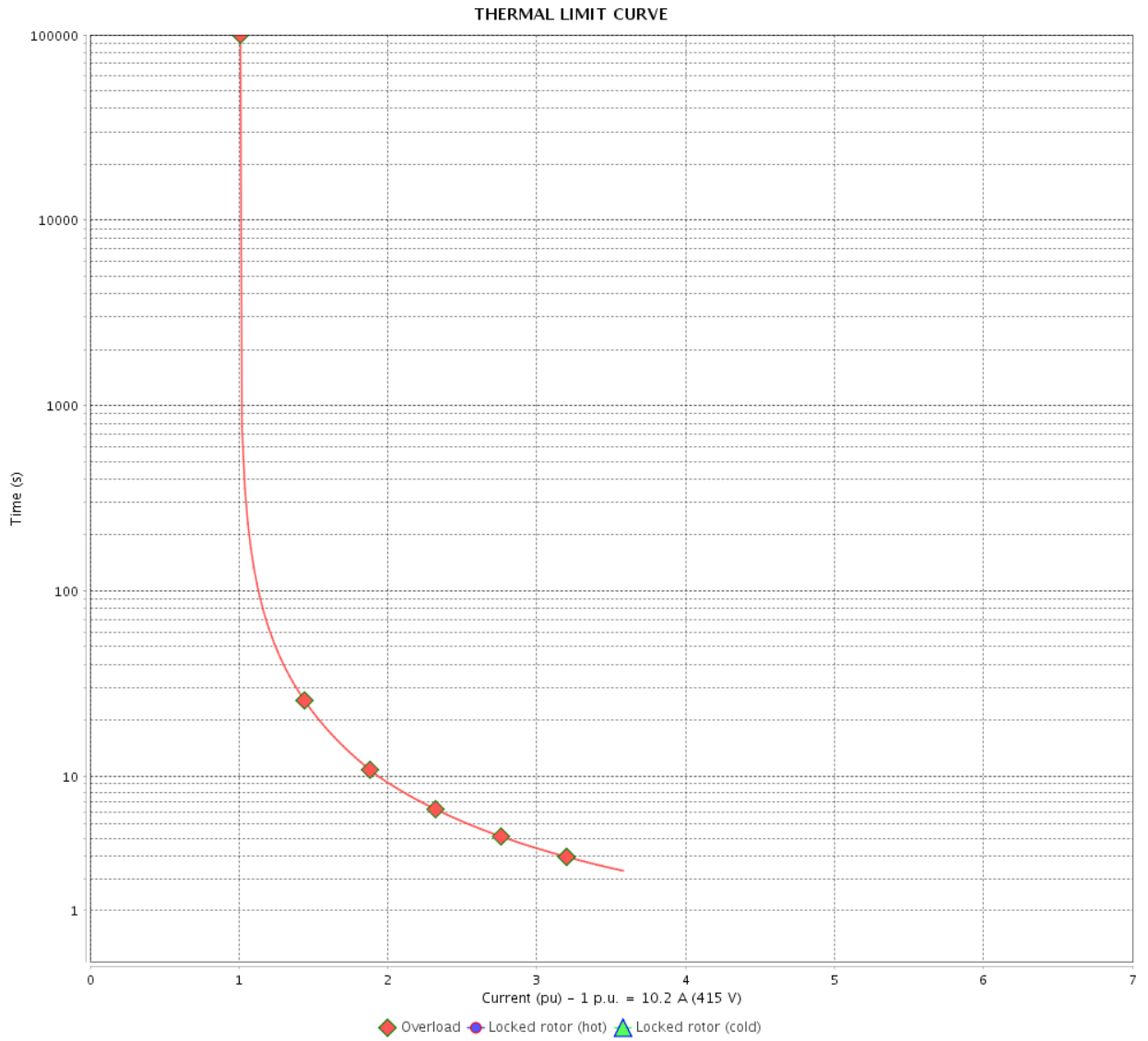
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



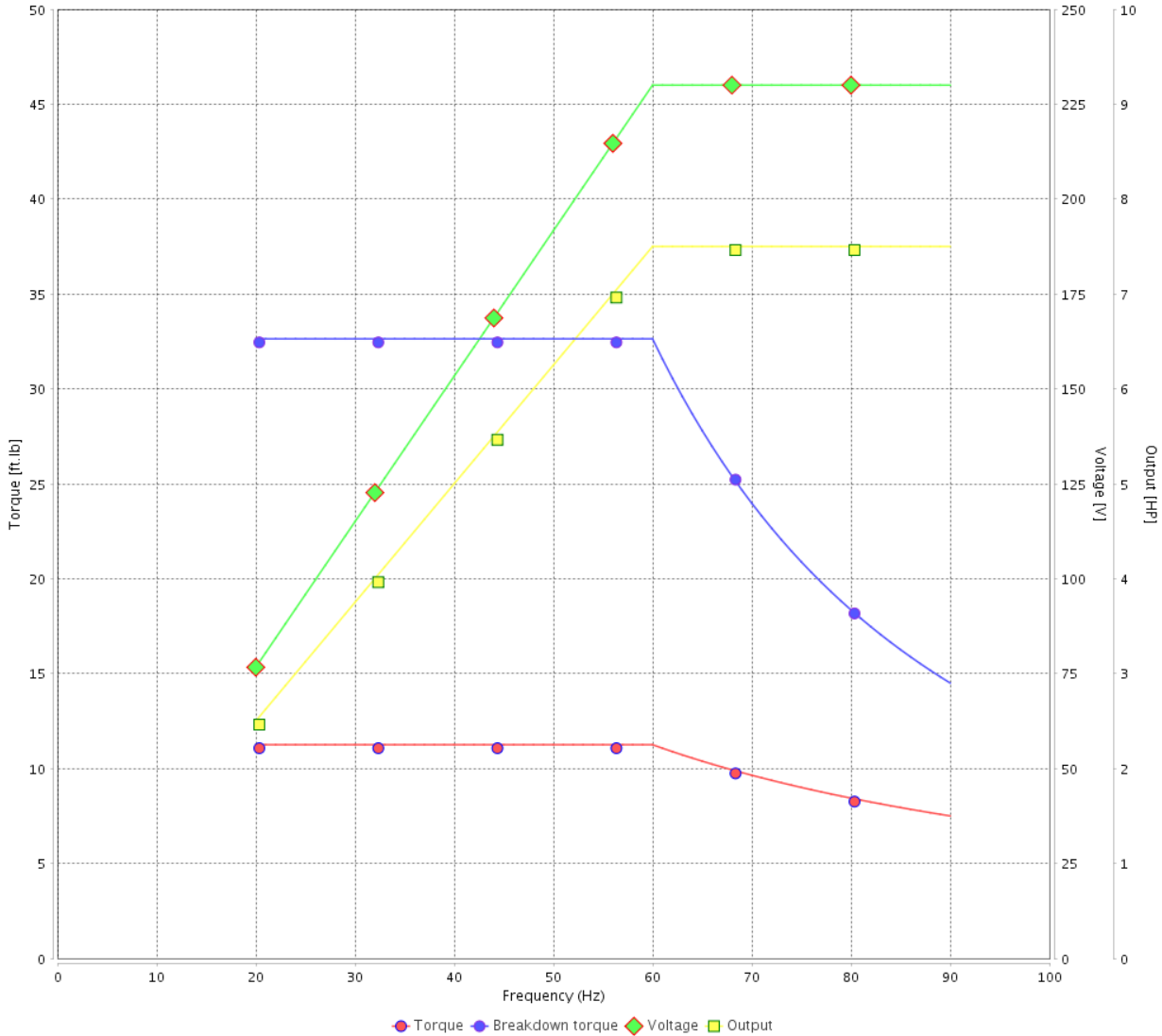
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13163406

Catalog # : 007360T3E184TC-SG

VFD OPERATION CURVE

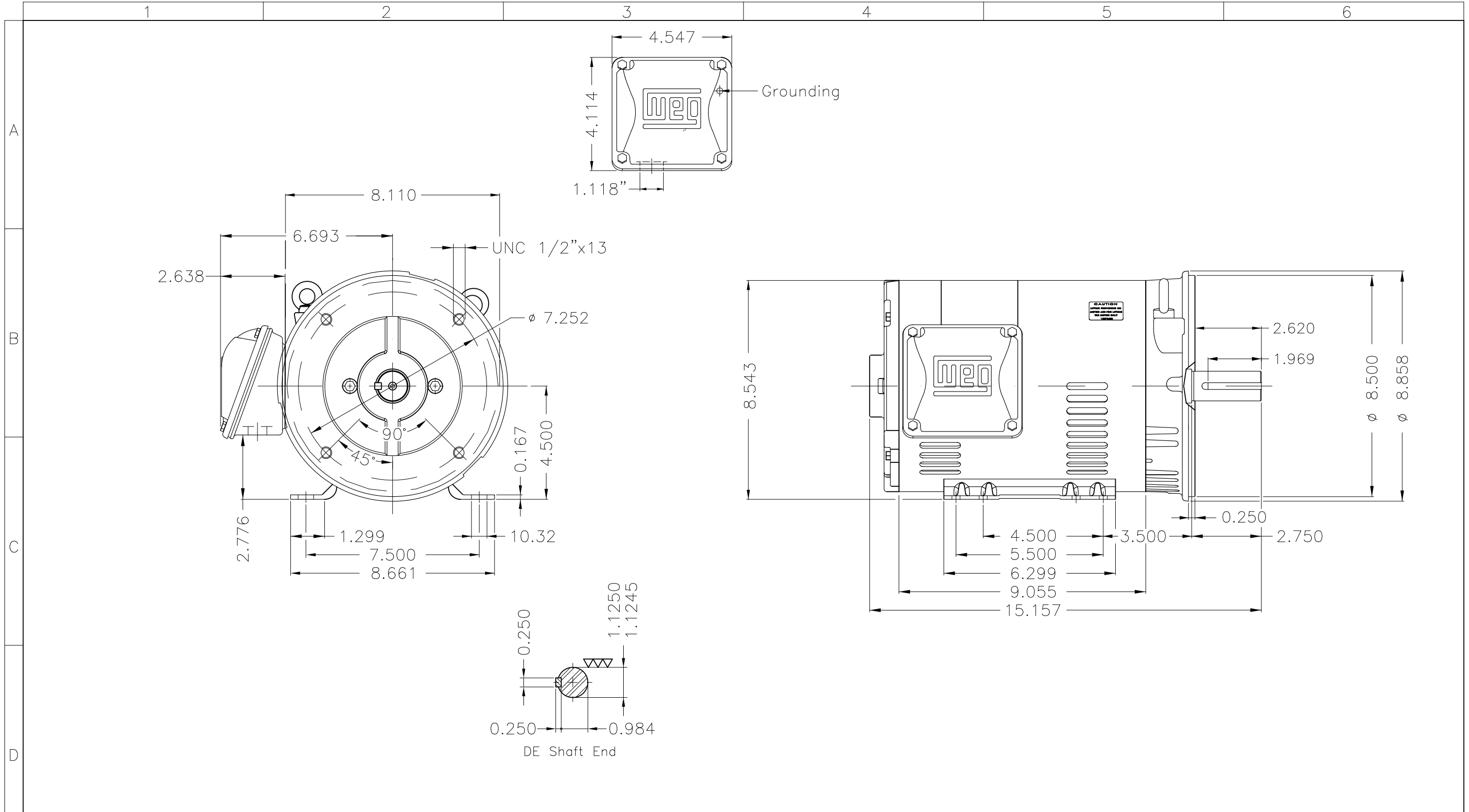


Performance : 230/460 V 60 Hz 2P

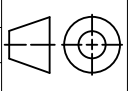
Rated current : 17.3/8.67 A  
 LRC : 7.4  
 Rated torque : 11.3 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 290 %  
 Rated speed : 3500 rpm

Moment of inertia (J) : 0.1818 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Internal AEGIS ground ring on the DE  
 Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting F-1/B34R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	 THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 182/4TC IP21 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET		1 / 1	

7.5 HP 02 Poles 60 Hz

Dimensions in inches XME A3

