

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 14284314	
				Catalog # : 00536XT3E184TC	
Frame : 182/4TC		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> : 134 lb			
Protection degree : IP55		Moment of inertia (J) : 0.1889 sq.ft.lb			
Design : B					
Output [HP]	5	5	5	5	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	12.2/6.10	7.30	6.94	6.84	
L. R. Amperes [A]	91.5/45.7	41.6	44.4	47.2	
LRC [A]	7.5x(Code J)	5.7x(Code F)	6.4x(Code G)	6.9x(Code H)	
No load current [A]	4.40/2.20	2.15	2.40	2.60	
Rated speed [RPM]	3490	2850	2865	2875	
Slip [%]	3.06	5.00	4.50	4.17	
Rated torque [ft.lb]	7.52	9.21	9.16	9.13	
Locked rotor torque [%]	250	200	229	260	
Breakdown torque [%]	380	280	310	340	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	46s (cold) 26s (hot)	46s (cold) 26s (hot)	46s (cold) 26s (hot)	46s (cold) 26s (hot)	
Noise level <sup>2</sup>	69.0 dB(A)	64.0 dB(A)	64.0 dB(A)	64.0 dB(A)	
Efficiency (%)	25%	84.3	86.9	86.1	86.1
	50%	85.5	86.5	86.5	86.5
	75%	87.5	87.5	87.5	87.5
	100%	88.5	86.5	87.5	87.5
Power Factor	25%	0.47	0.53	0.48	0.45
	50%	0.70	0.76	0.72	0.69
	75%	0.81	0.86	0.83	0.80
	100%	0.86	0.89	0.88	0.86
Bearing type		Drive end : 6307 2RS	Non drive end : 6206 2RS	Foundation loads	
Sealing		Oil Seal	Lip Seal	Max. traction : 131 lb	
Lubrication interval		-	-	Max. compression : 265 lb	
Lubricant amount		-	-		
Lubricant type		Mobil Polyrex EM			
Notes					
USABLE @208V 13.5A SF 1.15 SFA 15.5A					
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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# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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# TORQUE AND CURRENT VS SPEED CURVE



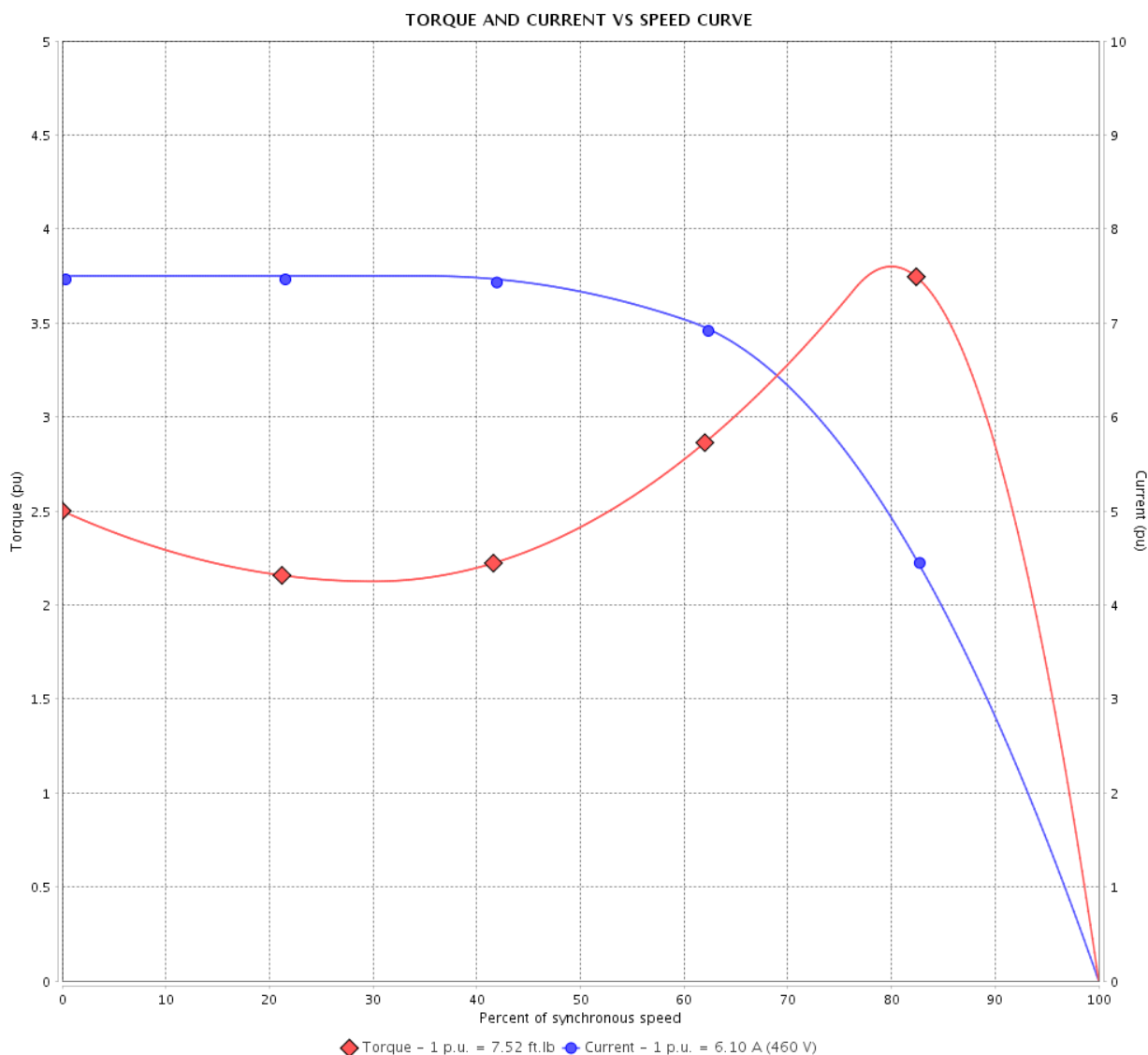
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14284314

Catalog # : 00536XT3E184TC



Performance : 230/460 V 60 Hz 2P

Rated current : 12.2/6.10 A  
 LRC : 7.5  
 Rated torque : 7.52 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.1889 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 46s (cold) 26s (hot)

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Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



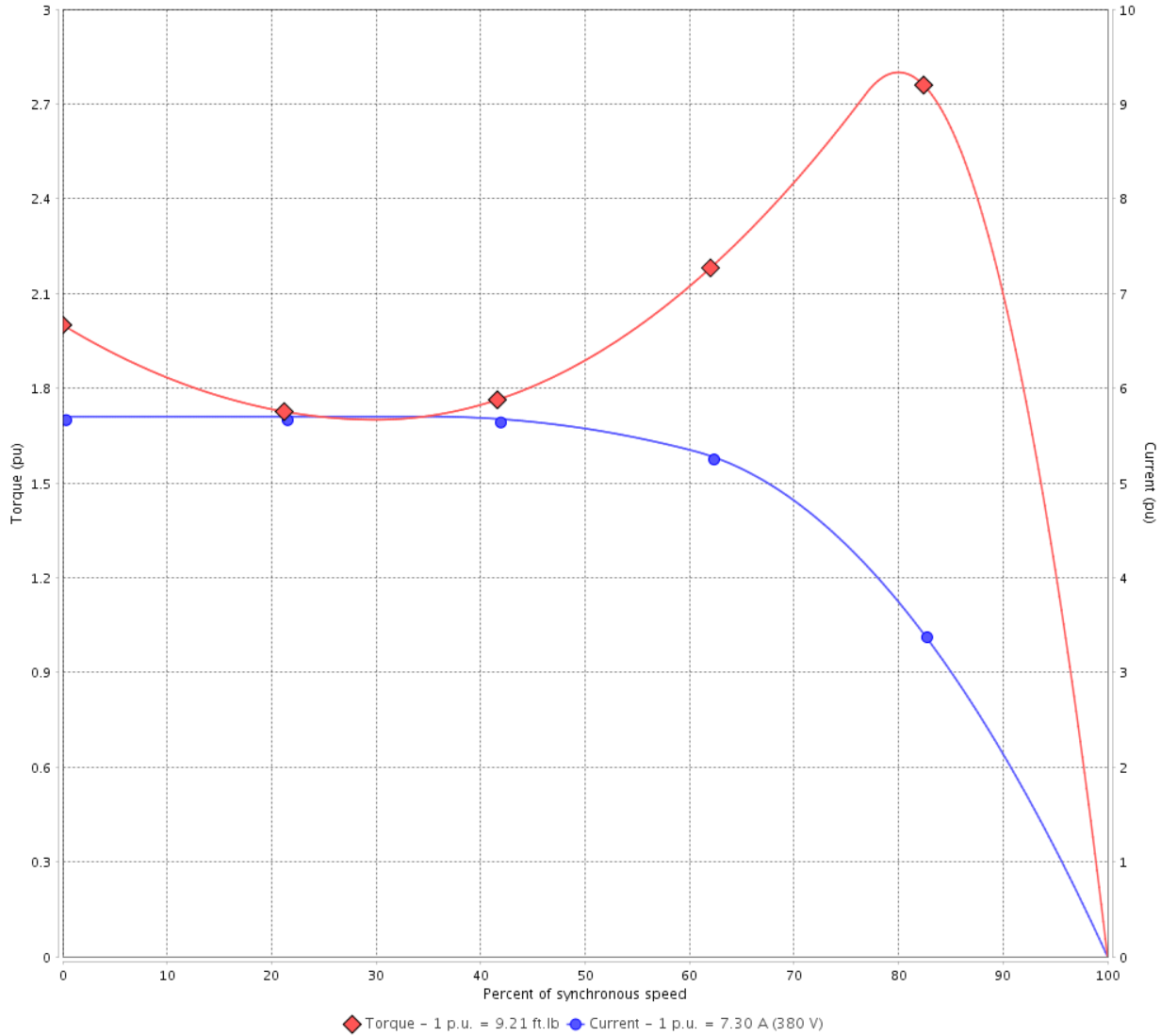
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14284314

Catalog # : 00536XT3E184TC

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 7.30 A	Moment of inertia (J)	: 0.1889 sq.ft.lb
LRC	: 5.7	Duty cycle	: Cont.(S1)
Rated torque	: 9.21 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2850 rpm	Design	: B

Locked rotor time : 46s (cold) 26s (hot)

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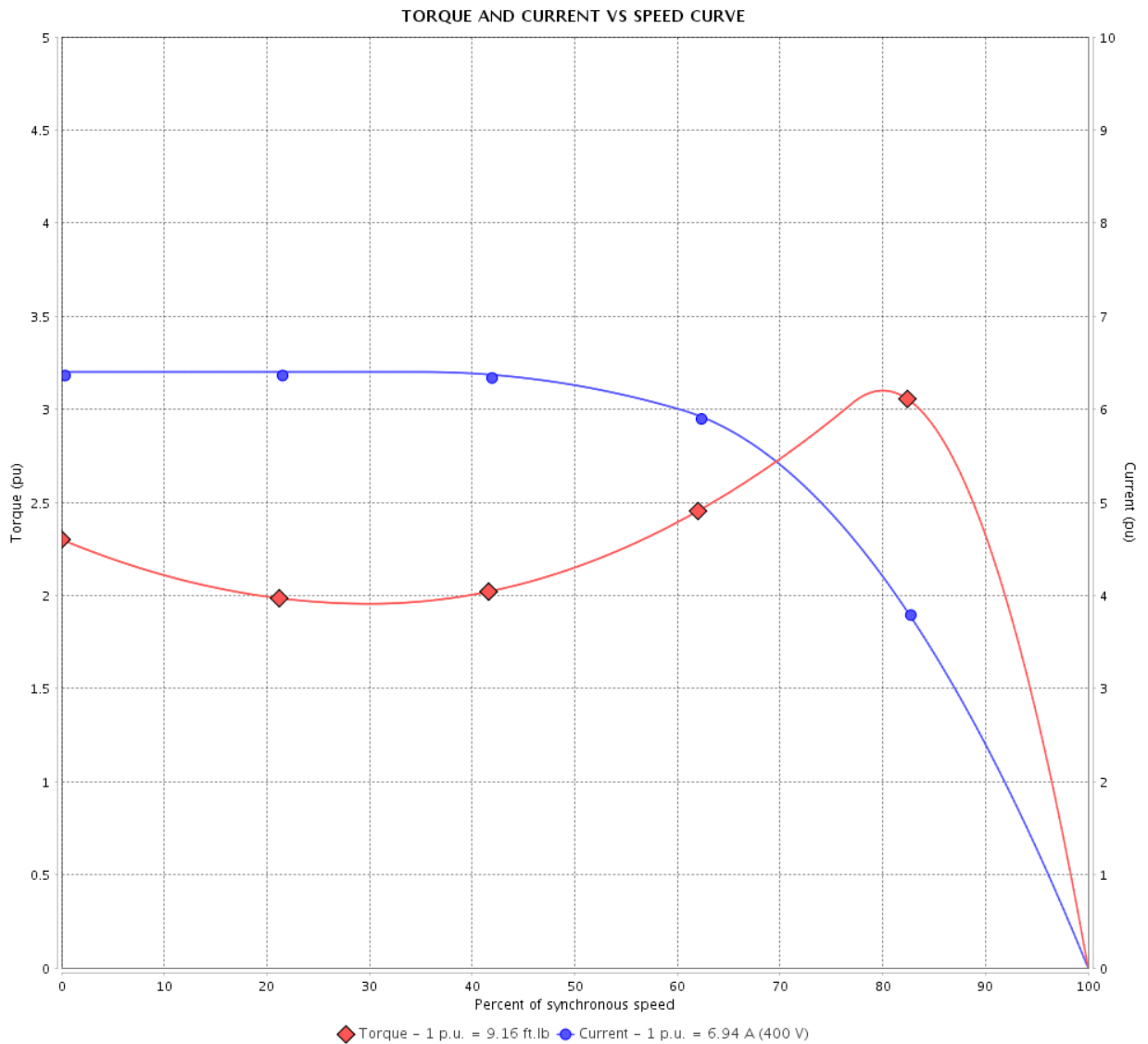
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Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14284314

Catalog # : 00536XT3E184TC



Performance : 400 V 50 Hz 2P IE2

Rated current	: 6.94 A	Moment of inertia (J)	: 0.1889 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 9.16 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2865 rpm	Design	: B

Locked rotor time : 46s (cold) 26s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



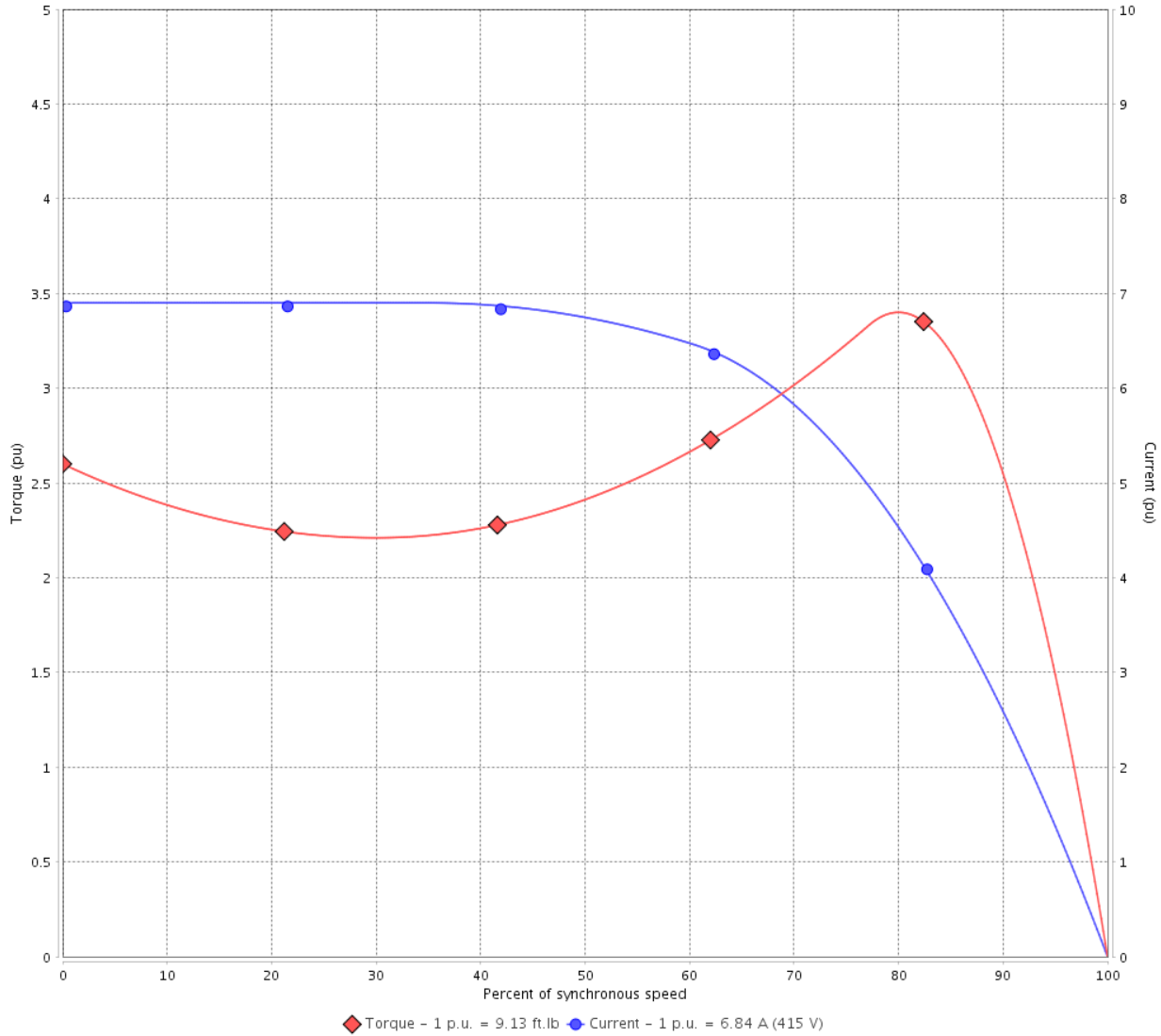
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE2

Rated current	: 6.84 A	Moment of inertia (J)	: 0.1889 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 9.13 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 2875 rpm	Design	: B

Locked rotor time : 46s (cold) 26s (hot)

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# LOAD PERFORMANCE CURVE

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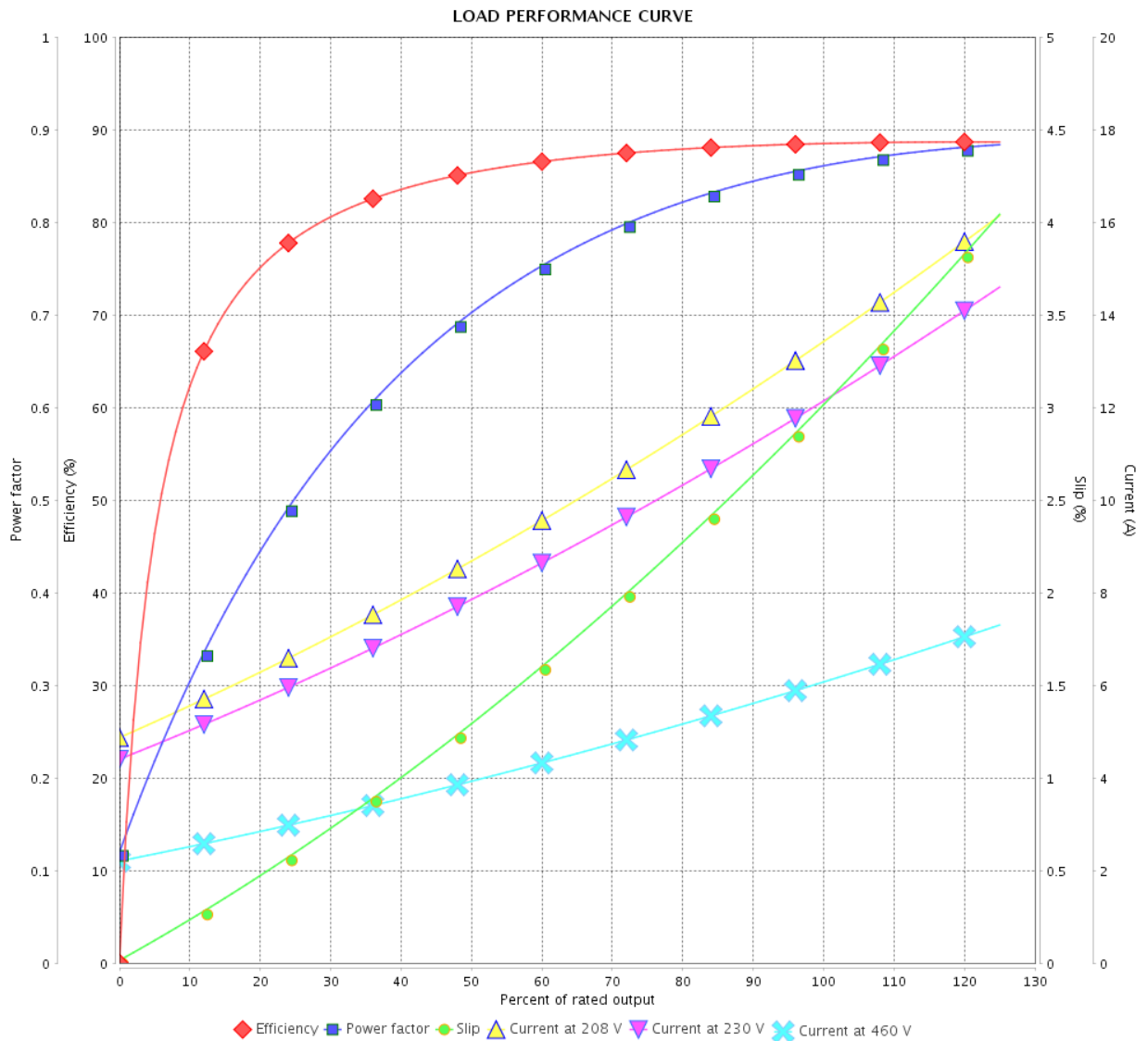


Customer :

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Catalog # : 00536XT3E184TC



Performance : 230/460 V 60 Hz 2P

Rated current : 12.2/6.10 A  
 LRC : 7.5  
 Rated torque : 7.52 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.1889 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

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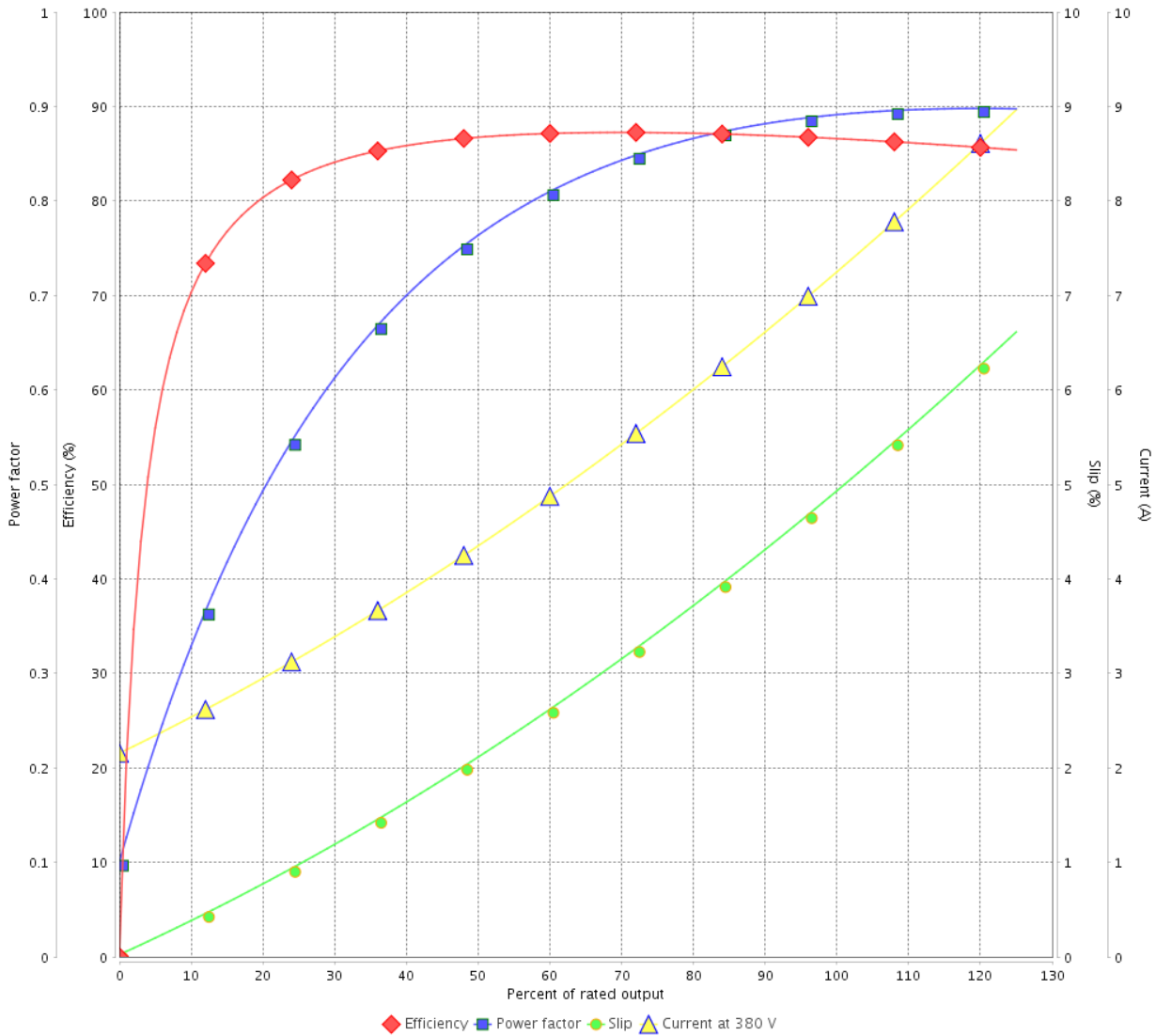
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Product code : 14284314

Catalog # : 00536XT3E184TC

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 7.30 A  
 LRC : 5.7  
 Rated torque : 9.21 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 280 %  
 Rated speed : 2850 rpm

Moment of inertia (J) : 0.1889 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

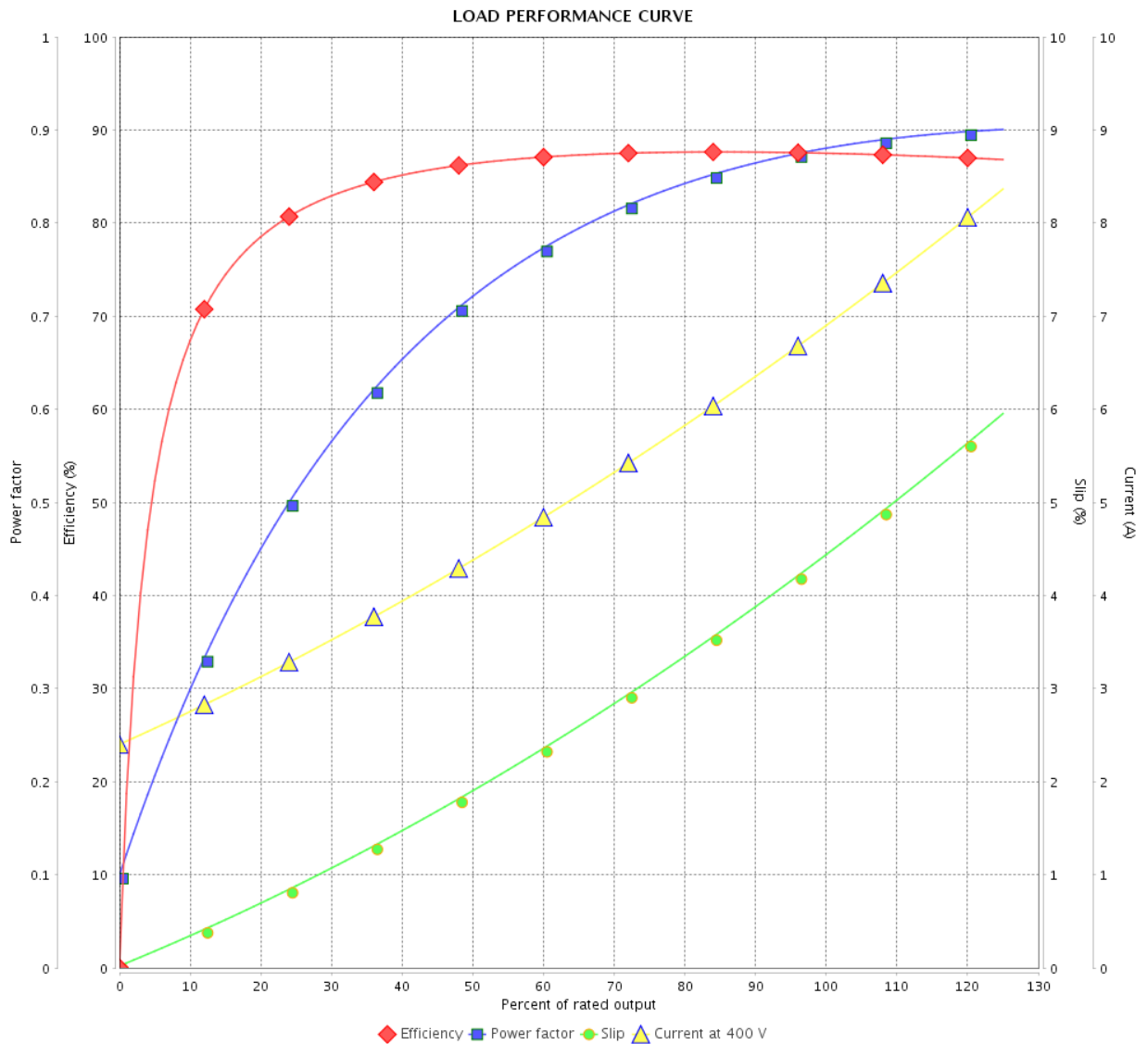


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14284314

Catalog # : 00536XT3E184TC



Performance : 400 V 50 Hz 2P IE2

Rated current : 6.94 A  
 LRC : 6.4  
 Rated torque : 9.16 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 310 %  
 Rated speed : 2865 rpm

Moment of inertia (J) : 0.1889 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



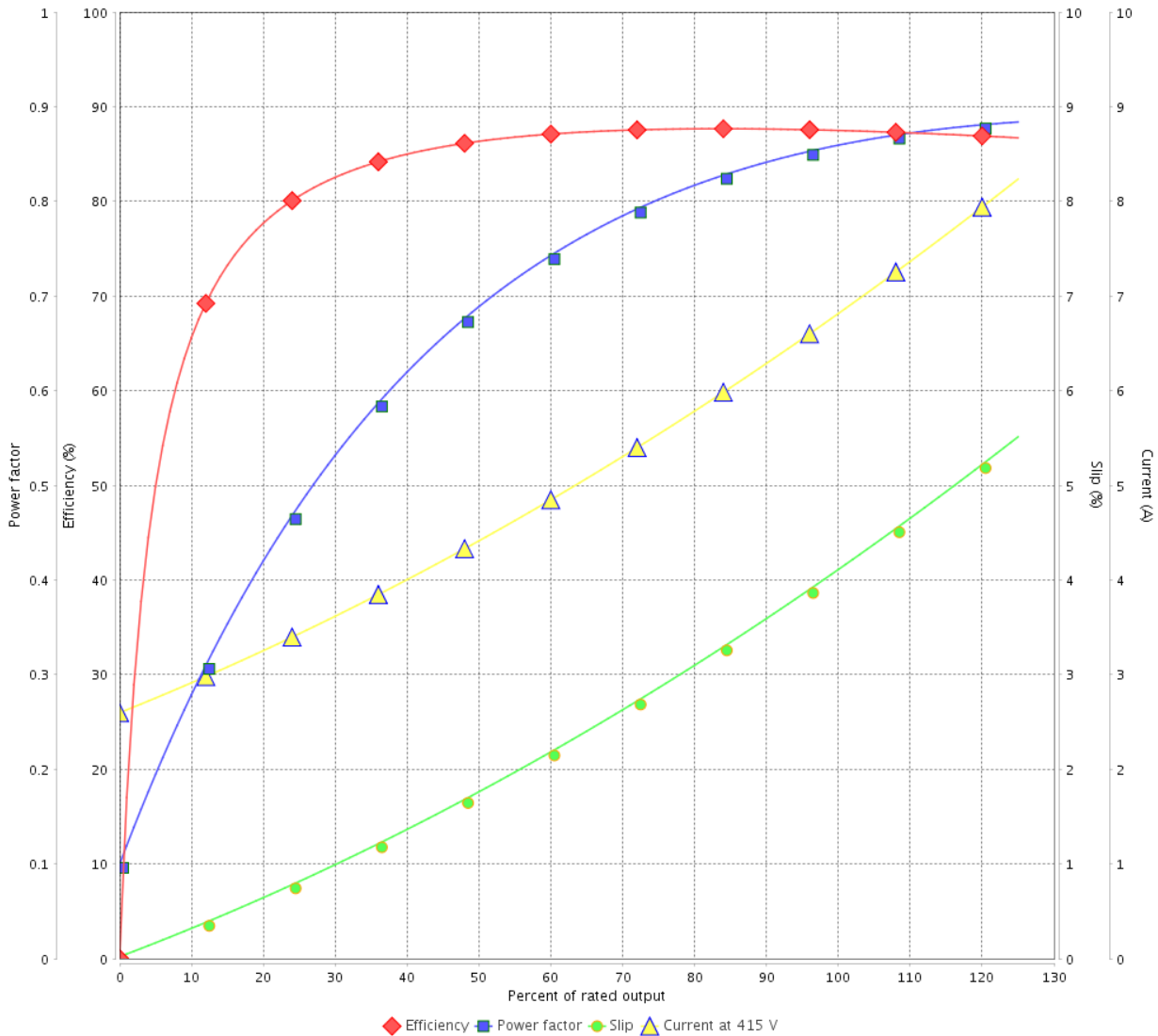
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Performance : 415 V 50 Hz 2P IE2

Rated current : 6.84 A  
 LRC : 6.9  
 Rated torque : 9.13 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 340 %  
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1889 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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Performance : 230/460 V 60 Hz 2P

Rated current : 12.2/6.10 A	Moment of inertia (J) : 0.1889 sq.ft.lb
LRC : 7.5	Duty cycle : Cont.(S1)
Rated torque : 7.52 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.15
Breakdown torque : 380 %	Temperature rise : 80 K
Rated speed : 3490 rpm	Design : B

Heating constant

Cooling constant

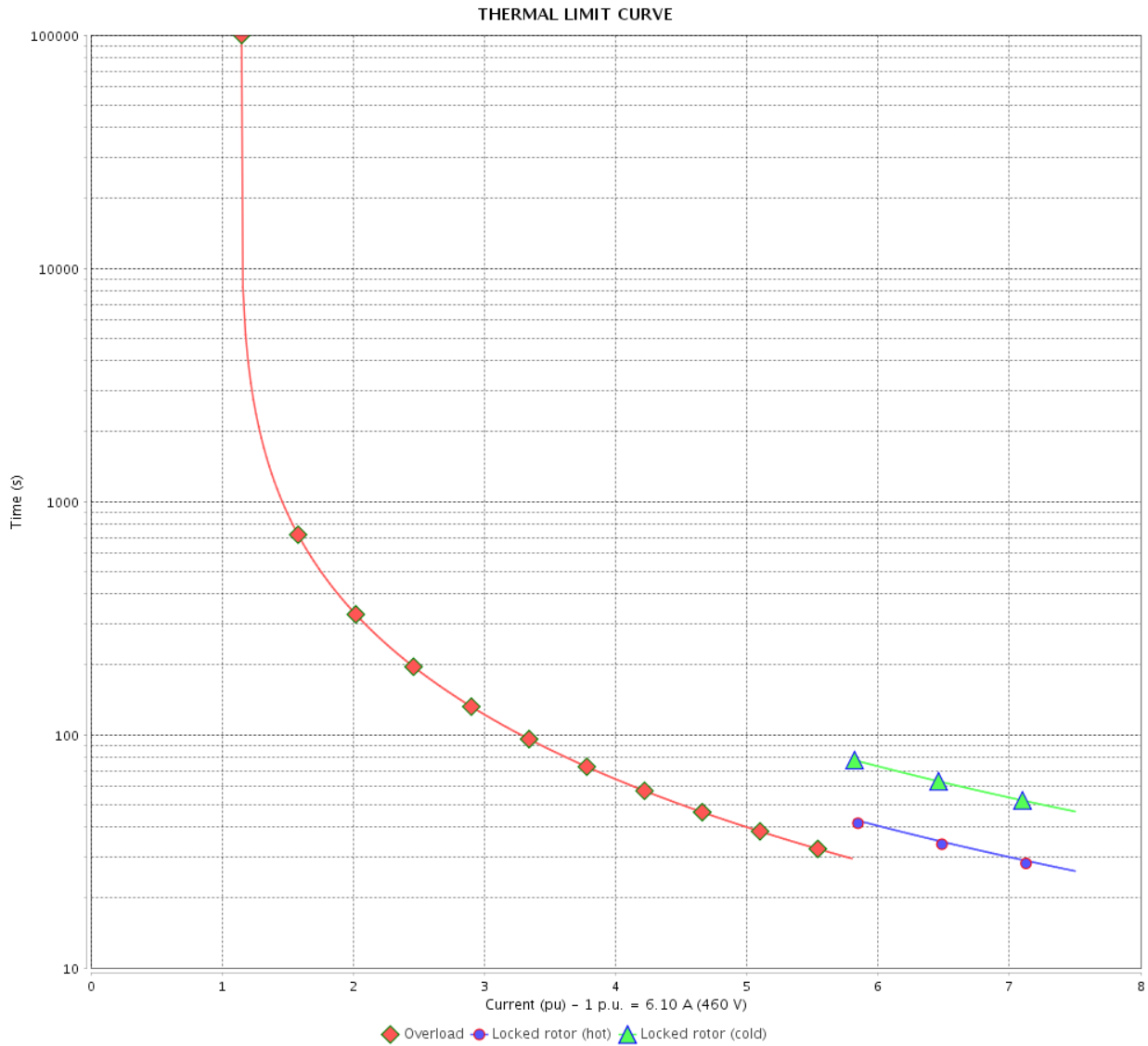
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Three Phase Induction Motor - Squirrel Cage



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## Three Phase Induction Motor - Squirrel Cage

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Performance : 380 V 50 Hz 2P IE2

Rated current : 7.30 A	Moment of inertia (J) : 0.1889 sq.ft.lb
LRC : 5.7	Duty cycle : Cont.(S1)
Rated torque : 9.21 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 2850 rpm	Design : B

Heating constant

Cooling constant

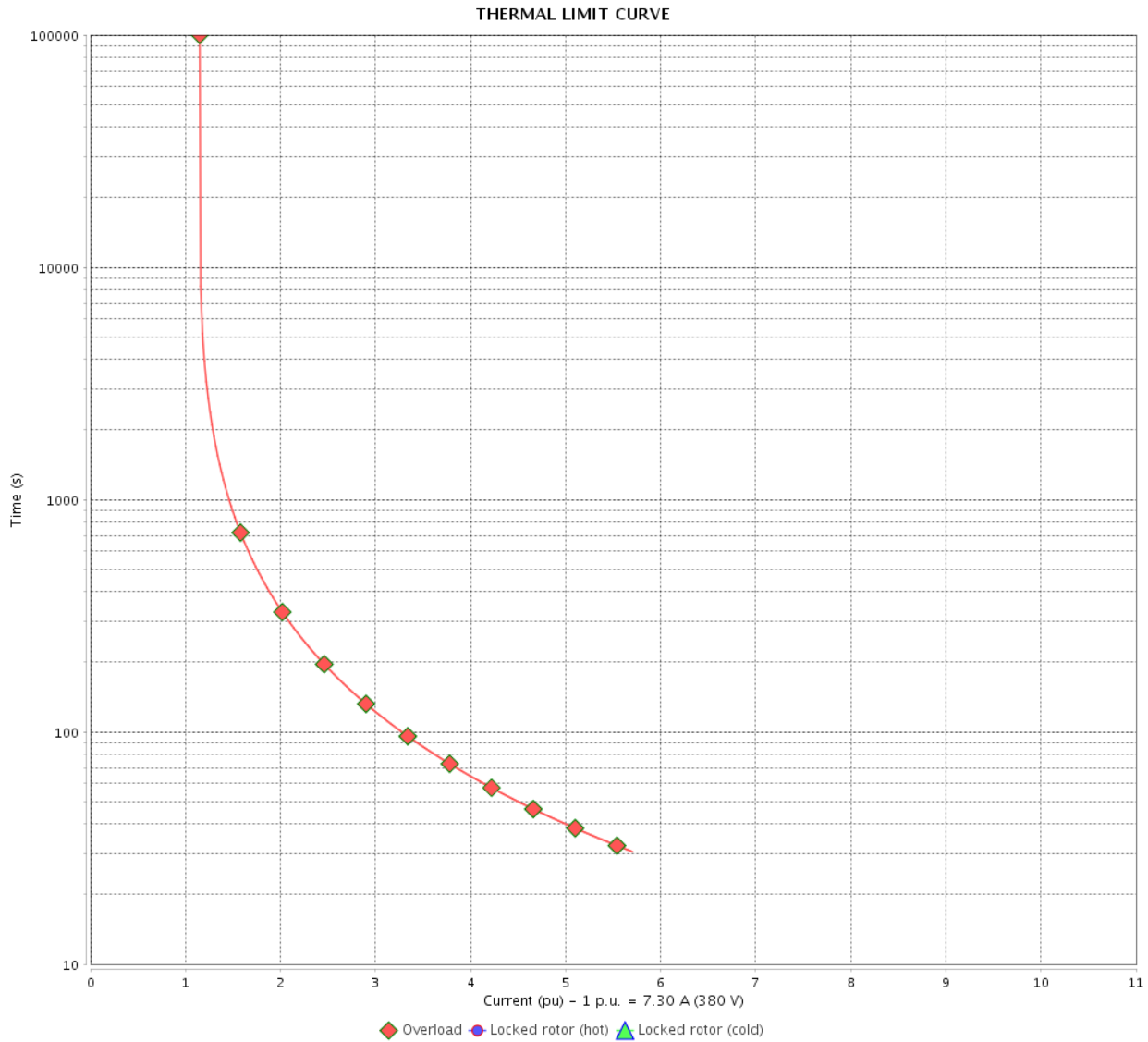
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Three Phase Induction Motor - Squirrel Cage



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Rated current : 6.94 A	Moment of inertia (J) : 0.1889 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 9.16 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 310 %	Temperature rise : 80 K
Rated speed : 2865 rpm	Design : B

Heating constant

Cooling constant

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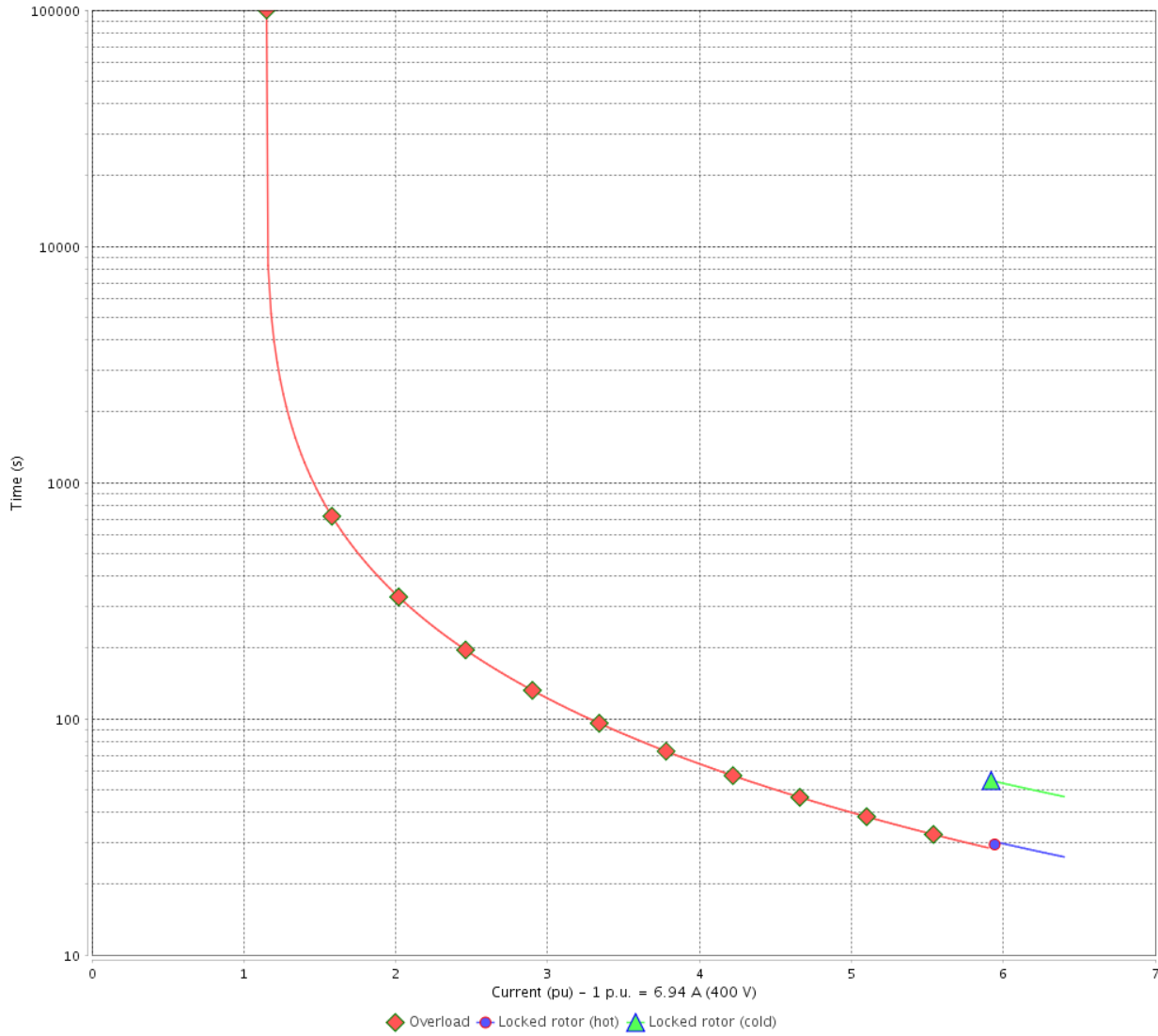
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



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Rated current : 6.84 A	Moment of inertia (J) : 0.1889 sq.ft.lb
LRC : 6.9	Duty cycle : Cont.(S1)
Rated torque : 9.13 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 340 %	Temperature rise : 80 K
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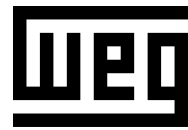
Heating constant

Cooling constant

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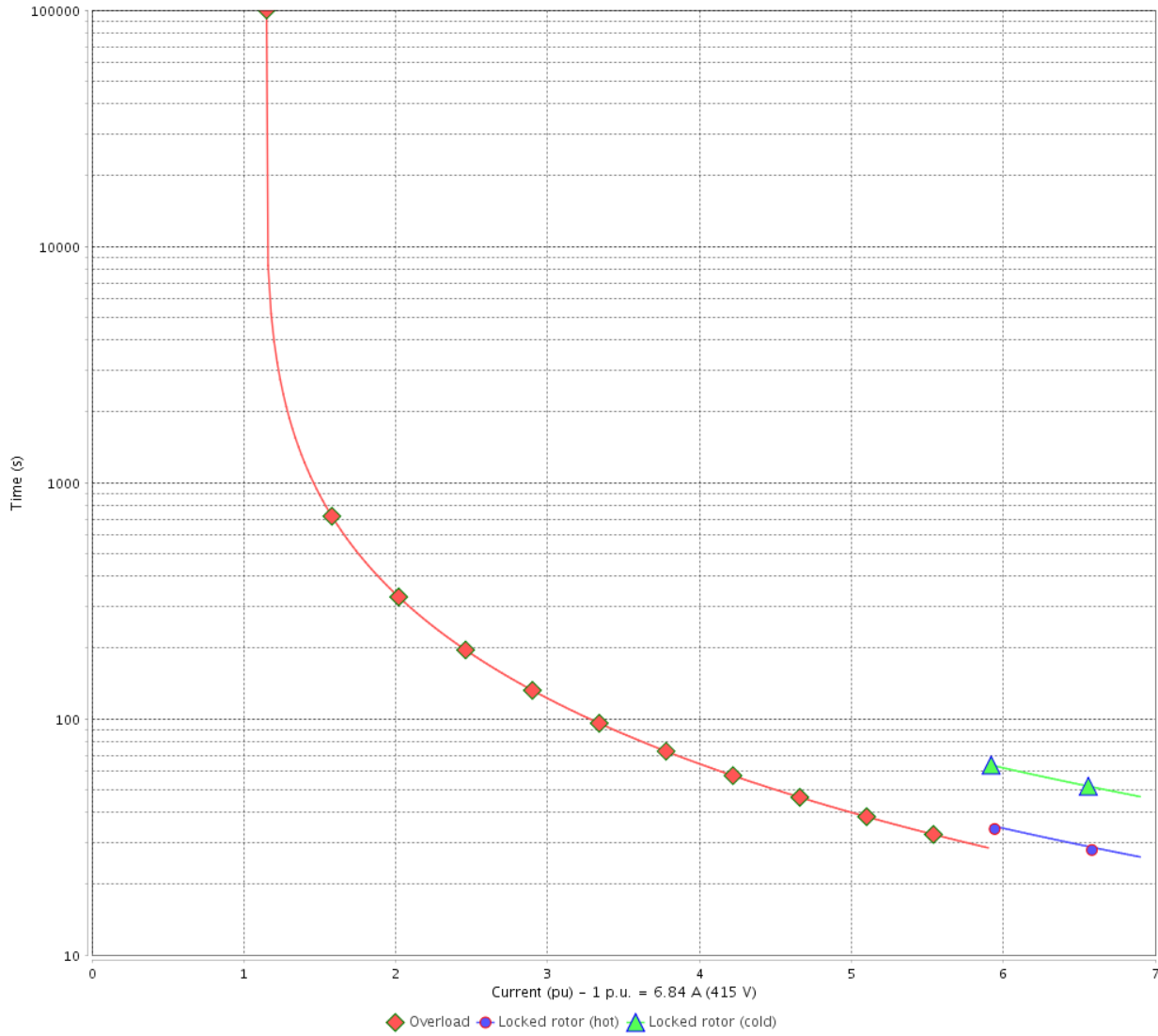
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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

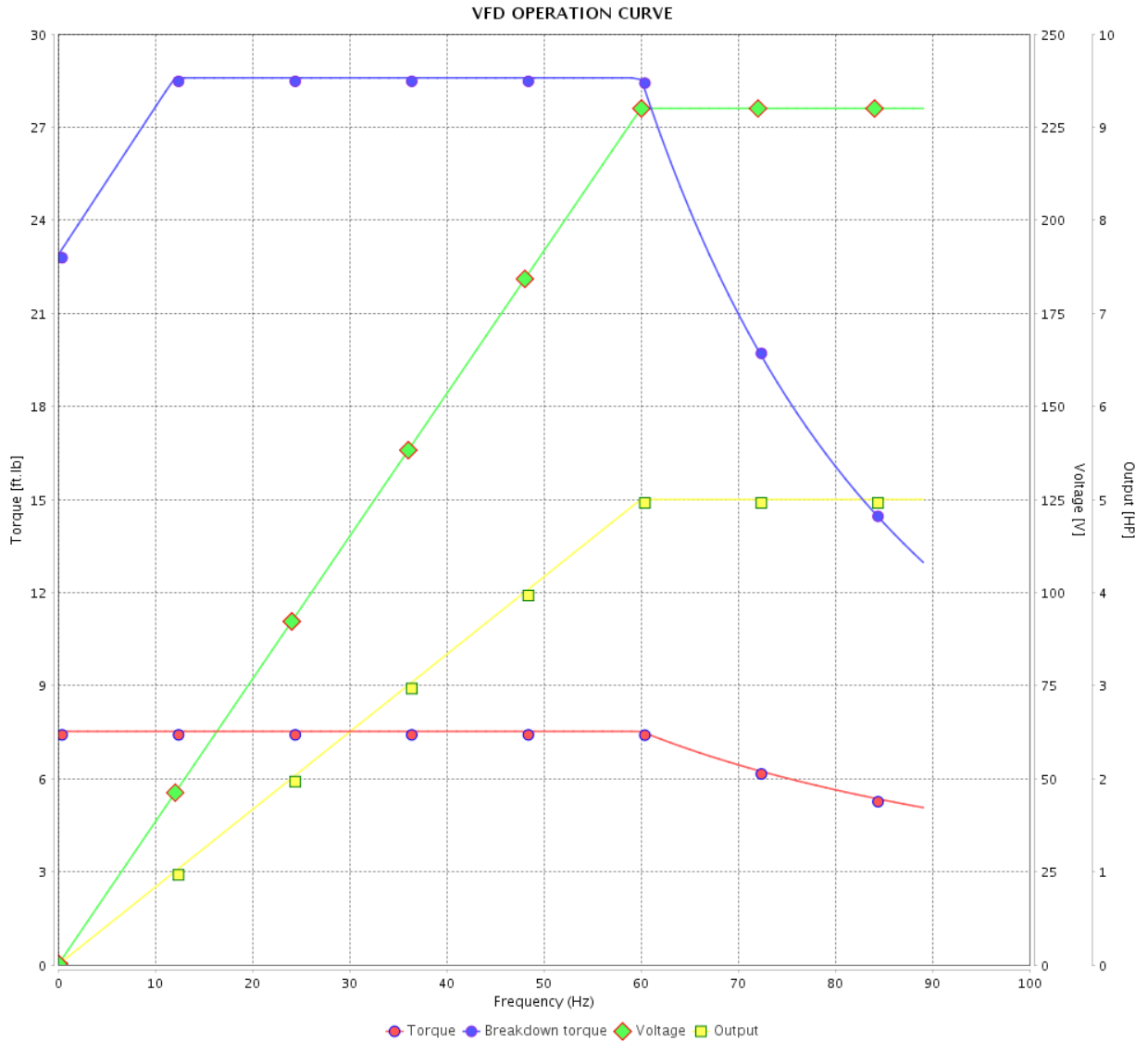


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Product code : 14284314

Catalog # : 00536XT3E184TC



Performance : 230/460 V 60 Hz 2P

Rated current : 12.2/6.10 A  
 LRC : 7.5  
 Rated torque : 7.52 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 380 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.1889 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



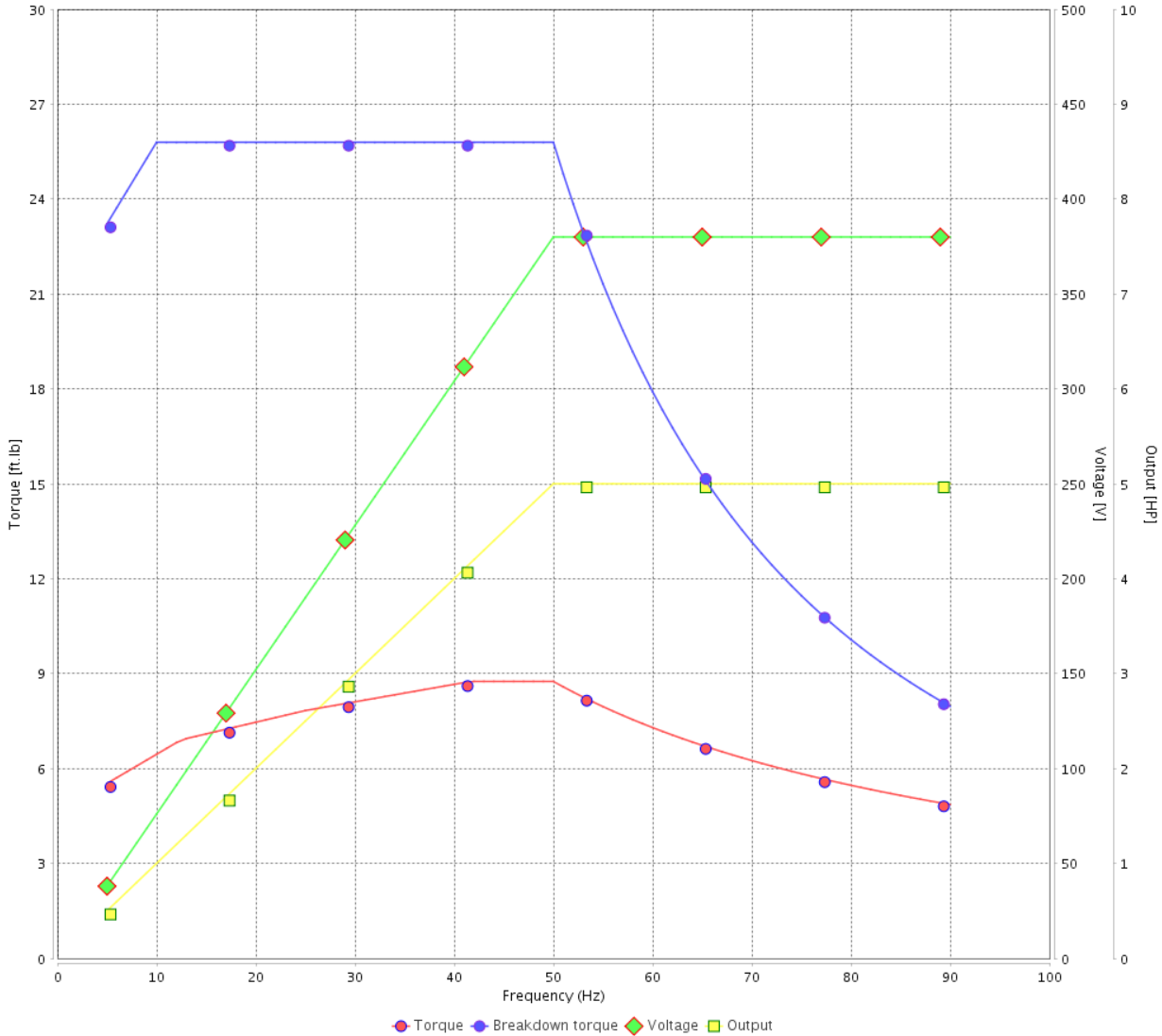
Customer : \_\_\_\_\_

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Product code : 14284314

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VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 7.30 A  
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 Rated torque : 9.21 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 280 %  
 Rated speed : 2850 rpm

Moment of inertia (J) : 0.1889 sq.ft.lb  
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# VFD OPERATION CURVE

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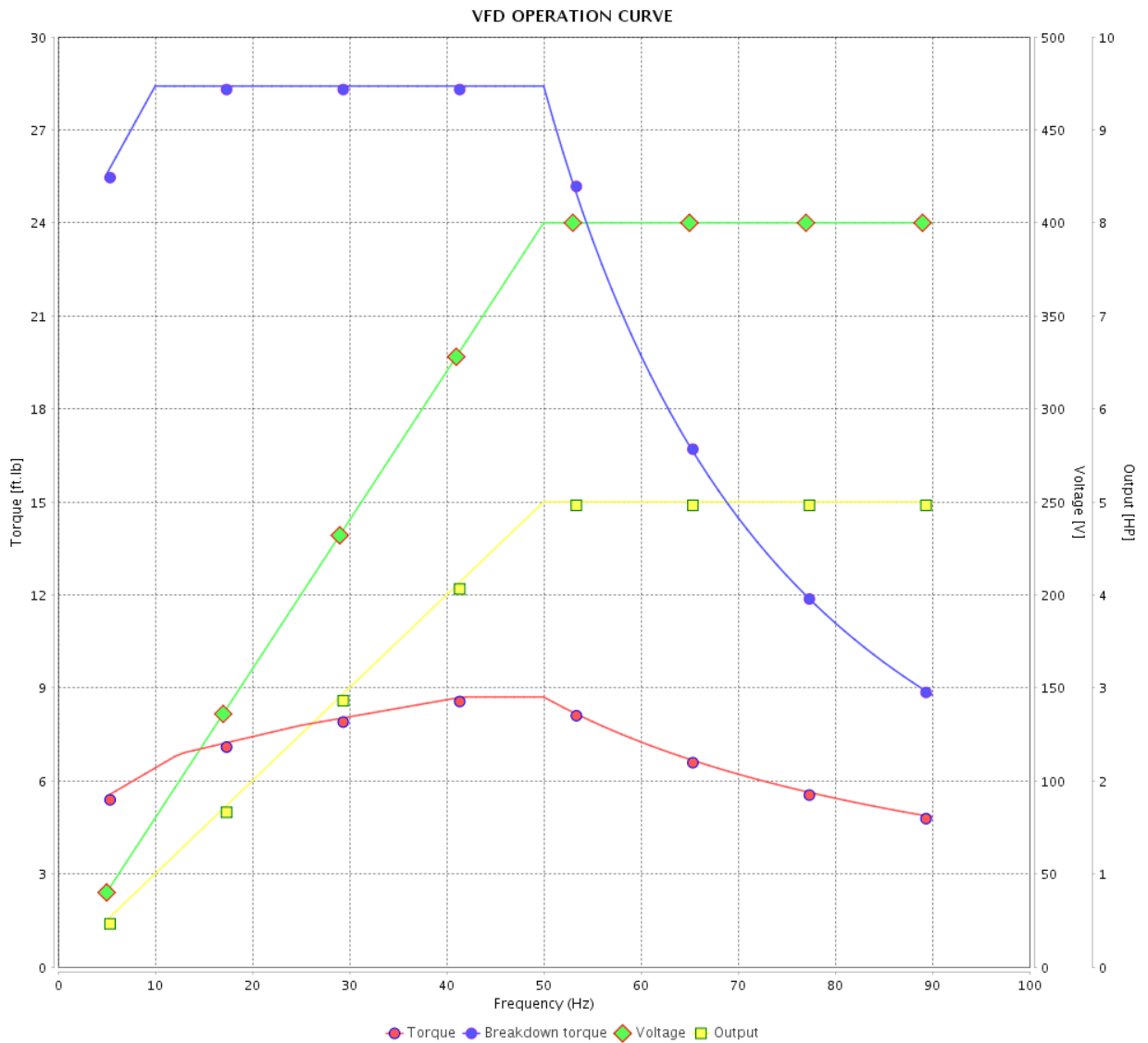


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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



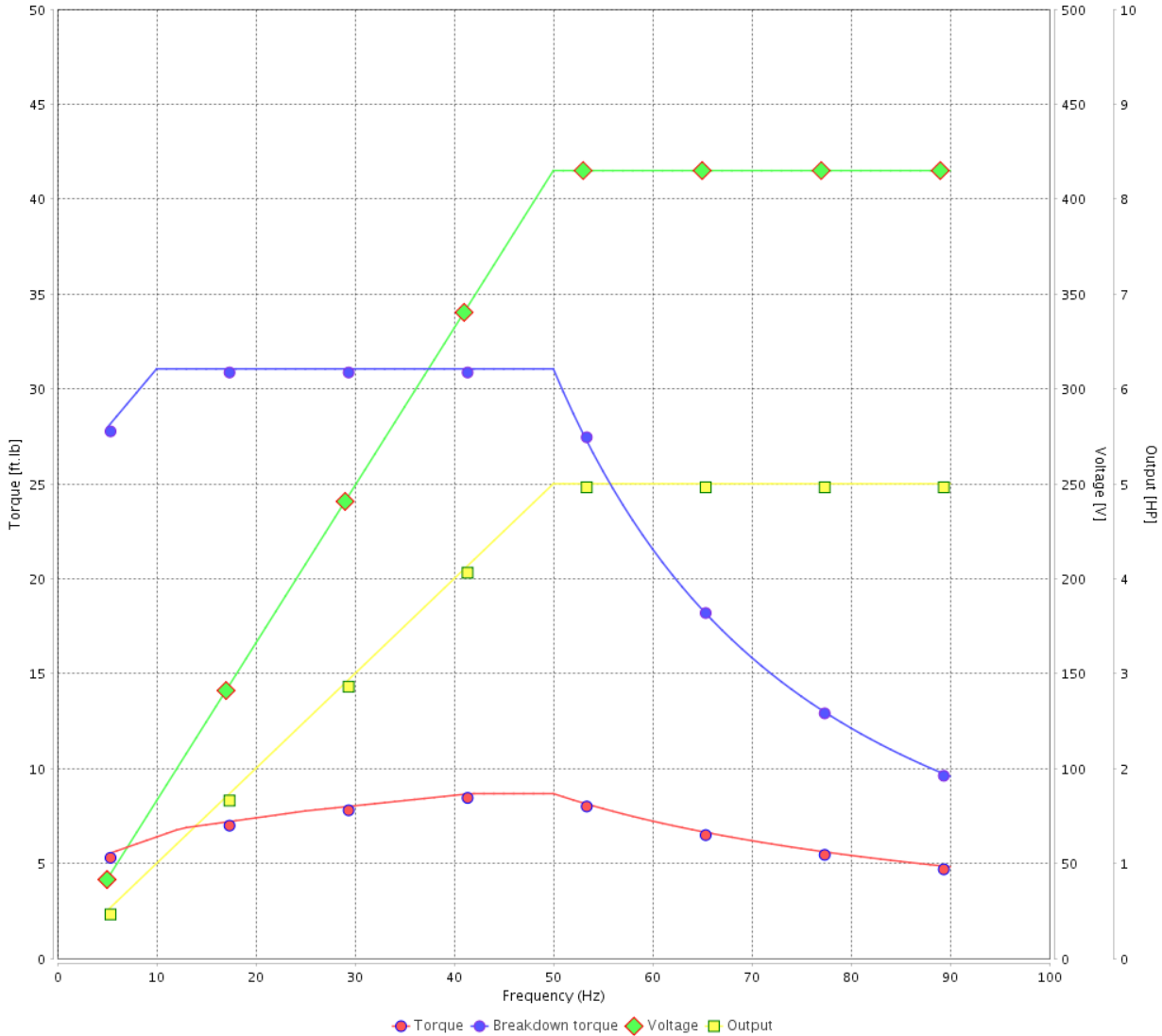
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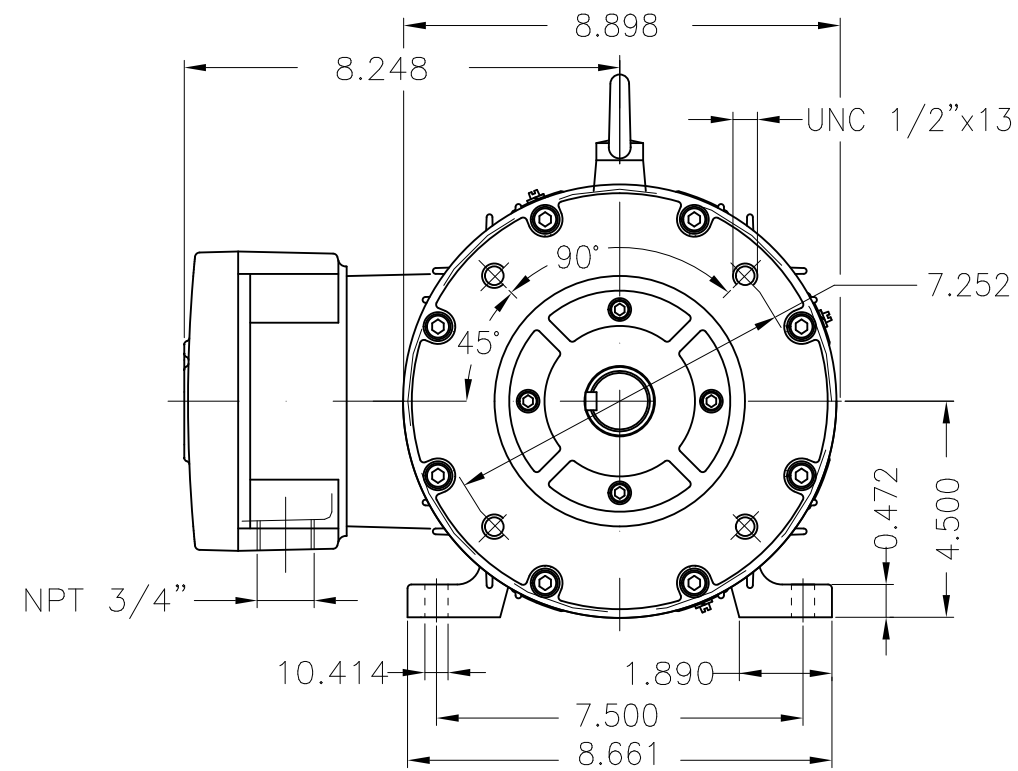


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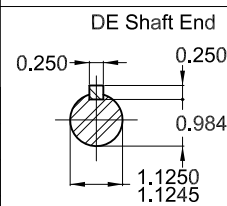
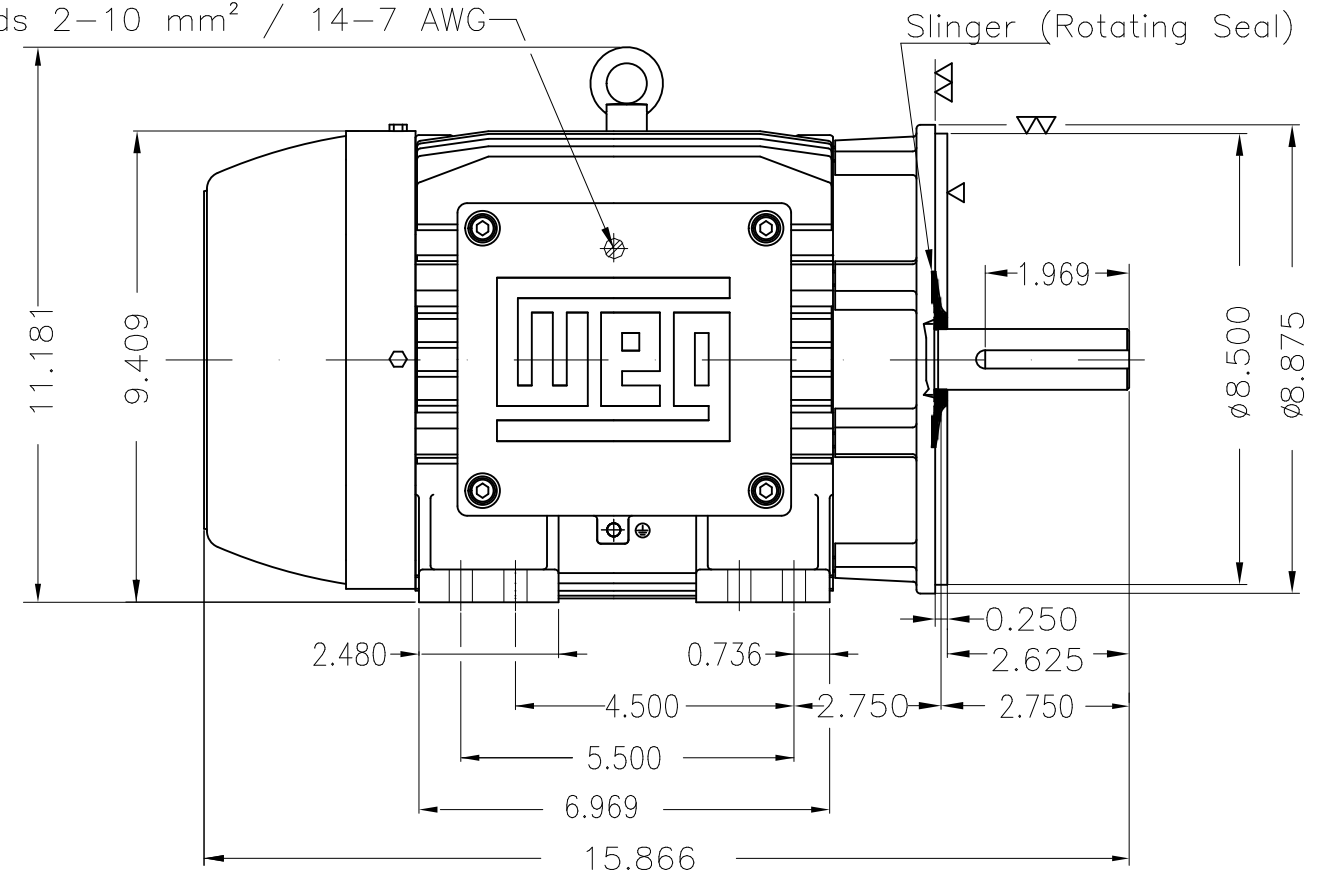
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Grounding for leads 2-10 mm<sup>2</sup> / 14-7 AWG



Color RAL 5009  
 Painting plan 202P  
 Mounting NEMA F-1  
 Mounting B34R(D)

5 HP 02 Poles 60 Hz

Dimensions in inches

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

**PREVIEW**  
 WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14284314

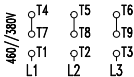
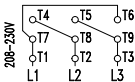
CC029A

*Inverter Duty Motor*  
*Severe Duty*

LISTED

MODEL 00536XT3E184TC

PH 3	FR 182/4TC		
HP(kW) 5.0(3.7)		HZ 60	IP55
V 230/460		A 12.2/6.10	
RPM 3490		NEMA NOM EFF 88.5%	
PF 0.86		SFA 14.0/7.01	DES B
INS CL F $\Delta$ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE J	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	13.5 A	SF 1.15 SFA 15.5
AMB 55°C SF1.0			
5.0HP 3.7kW 50Hz 380V 7.30A 2850RPM SF1.00 EFF 86.5% (IE2)			



→ 6307-2RS MOBIL POLYREX EM  
→ 6206-2RS

134 Lbs



TEMP CODE T3C  
CSA/UL: Class I - Div. 1 - Groups C and D  
CSA: Class II - Div. 1 - Groups F and G  
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 20:1CT, 1.0SF, T3C, AMB 40°C.