

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14401934		
		Catalog # :	00159XT3E184T		
Frame	: 182/4T	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)	: 0.5223 sq.ft.lb		
Design	: B				
Output [HP]	1.5	1.5	1.5	1.5	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	5.68/2.84	3.04	3.12	3.11	
L. R. Amperes [A]	35.2/17.6	17.6	18.7	19.3	
LRC [A]	6.2x(Code L)	5.8x(Code J)	6.0x(Code K)	6.2x(Code L)	
No load current [A]	3.80/1.90	1.79	1.92	2.04	
Rated speed [RPM]	860	700	710	715	
Slip [%]	4.44	6.67	5.33	4.67	
Rated torque [ft.lb]	9.16	11.3	11.1	11.0	
Locked rotor torque [%]	240	200	229	260	
Breakdown torque [%]	260	190	210	240	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	
Noise level <sup>2</sup>	50.0 dB(A)	46.0 dB(A)	46.0 dB(A)	46.0 dB(A)	
Efficiency (%)	25%	76.6	80.9	79.5	77.5
	50%	77.0	80.0	78.5	77.0
	75%	78.5	80.0	78.5	78.0
	100%	78.5	78.5	77.0	77.0
Power Factor	25%	0.23	0.29	0.26	0.24
	50%	0.42	0.51	0.47	0.44
	75%	0.54	0.62	0.58	0.55
	100%	0.62	0.70	0.66	0.64
Bearing type	: <u>Drive end</u> 6307 2RS <u>Non drive end</u> 6206 2RS	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 102 lb		
Lubrication interval	: - -	Max. compression	: 236 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 5.97A SF 1.15 SFA 6.87A					
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



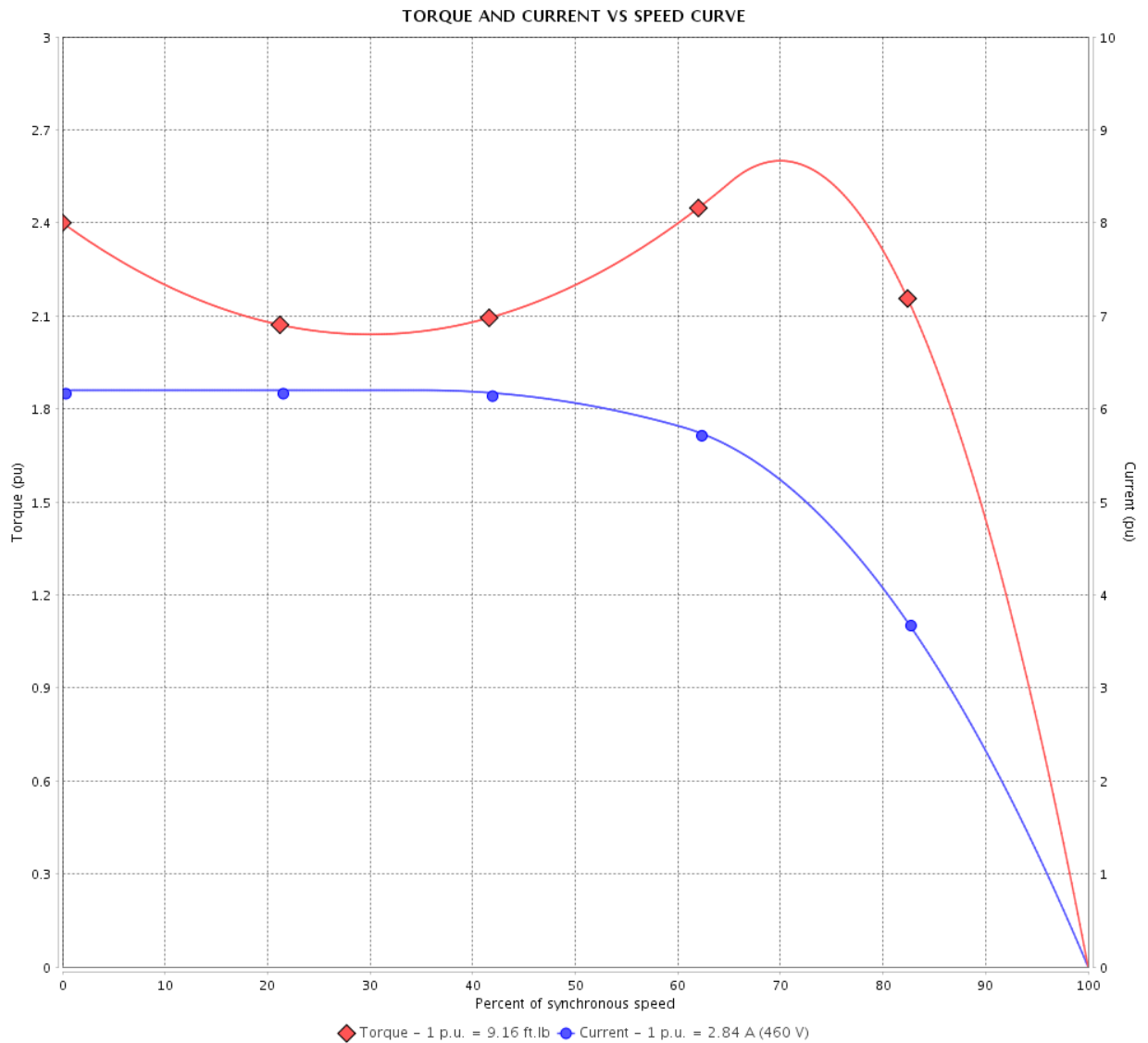
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T



Performance : 230/460 V 60 Hz 8P

Rated current : 5.68/2.84 A  
 LRC : 6.2  
 Rated torque : 9.16 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 860 rpm

Moment of inertia (J) : 0.5223 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



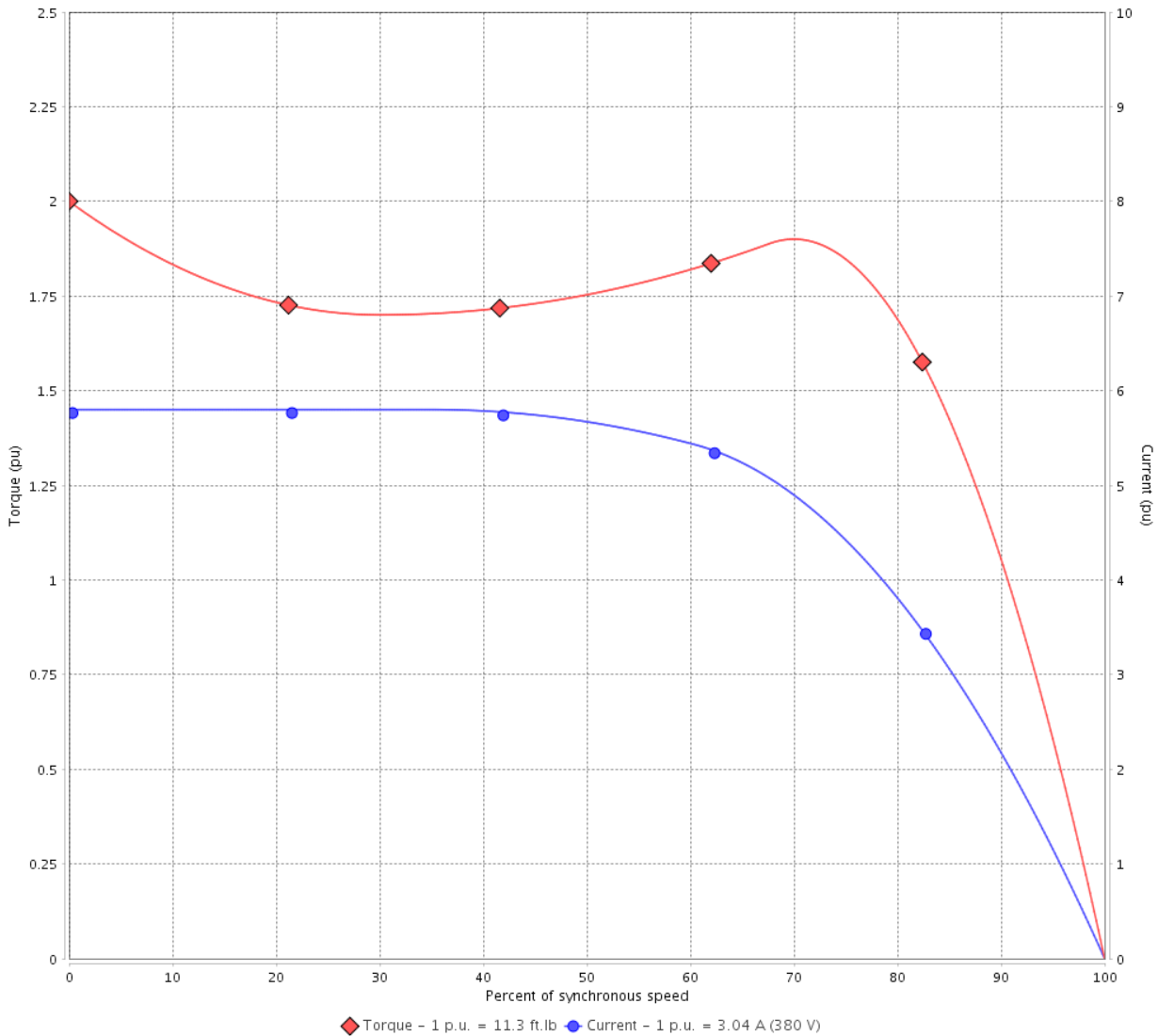
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current	: 3.04 A	Moment of inertia (J)	: 0.5223 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 11.3 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 190 %	Temperature rise	: 80 K
Rated speed	: 700 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



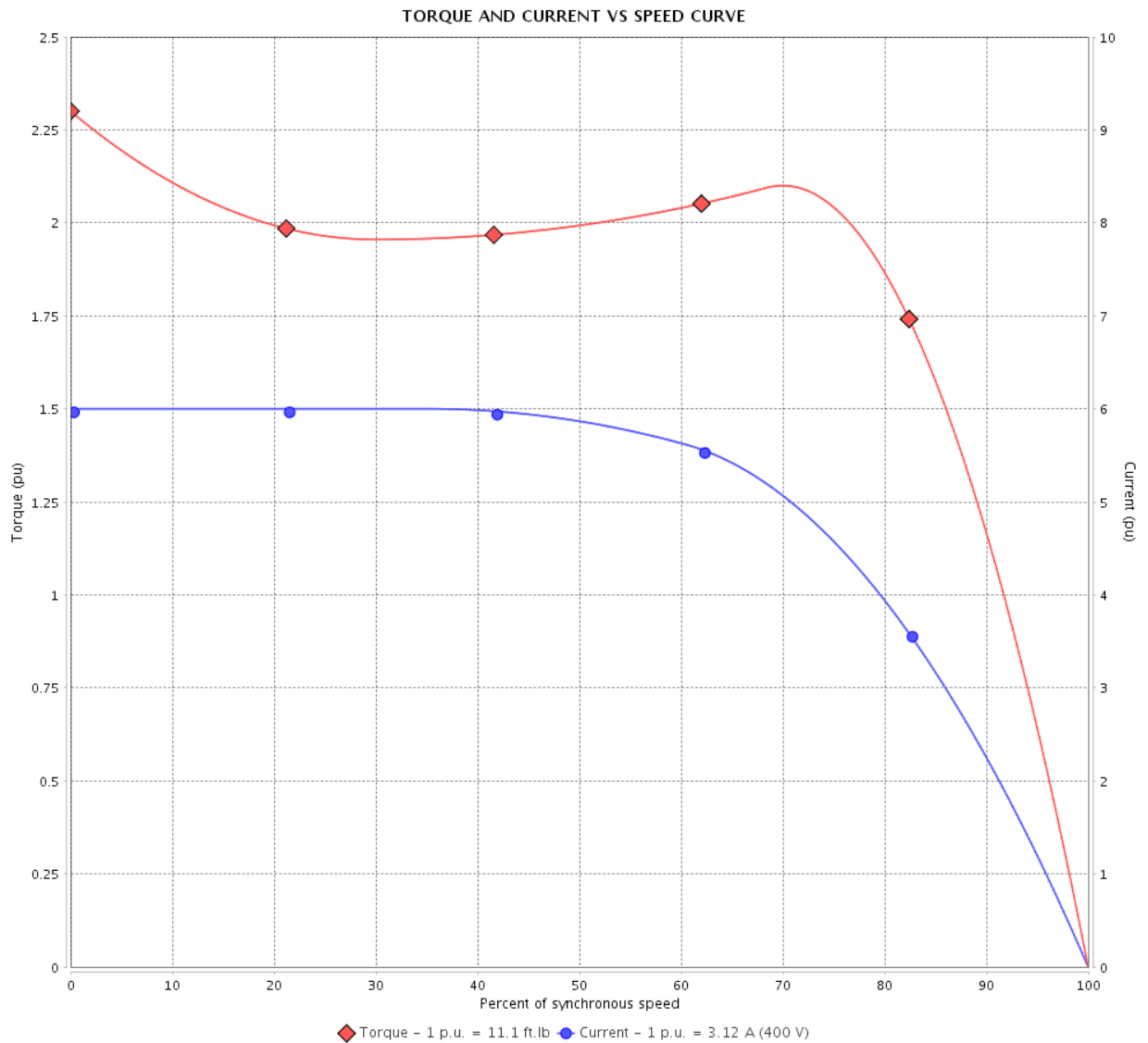
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T



Performance : 400 V 50 Hz 8P IE2

Rated current	: 3.12 A	Moment of inertia (J)	: 0.5223 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 11.1 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 710 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



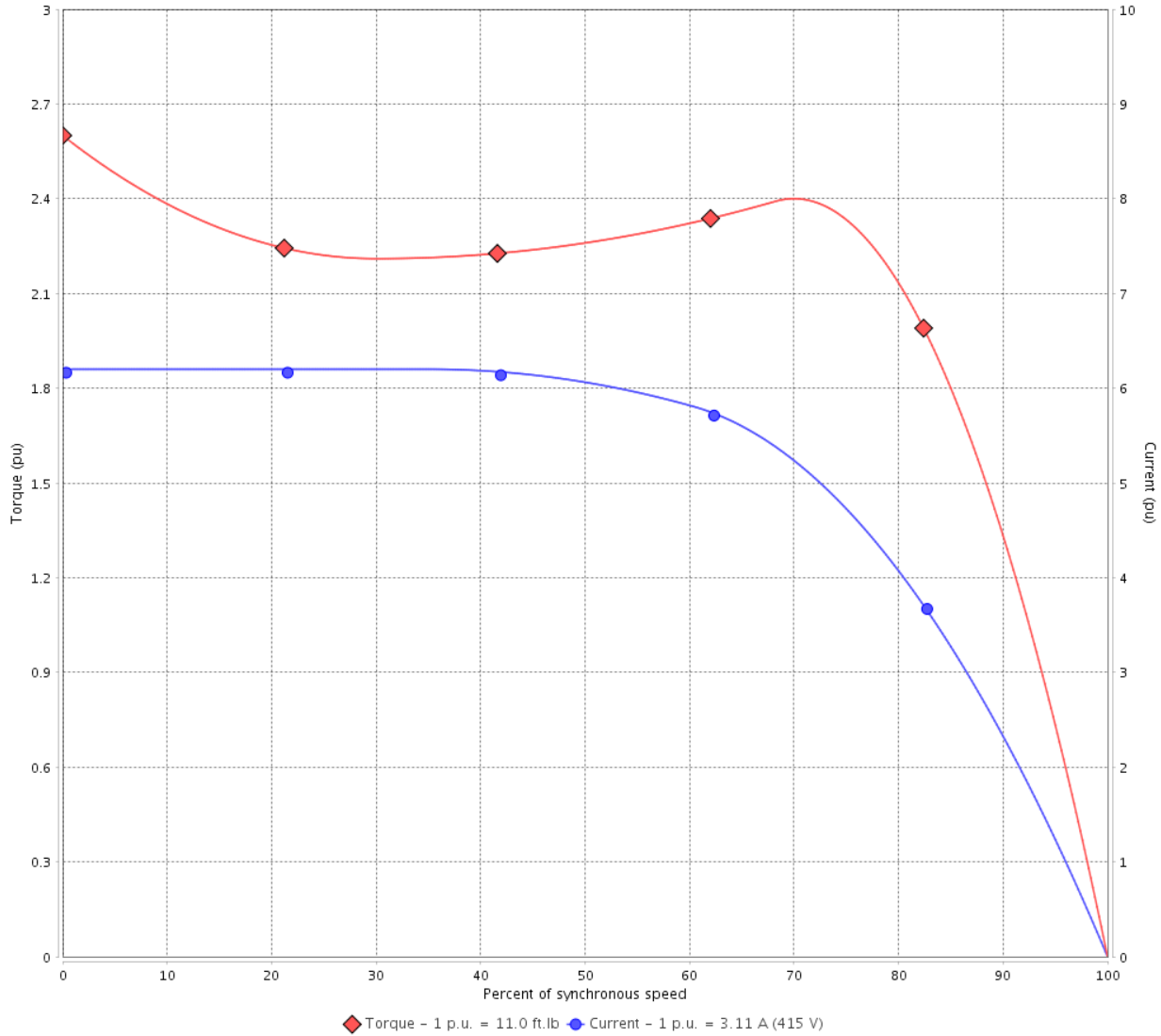
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE2

Rated current	: 3.11 A	Moment of inertia (J)	: 0.5223 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 11.0 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

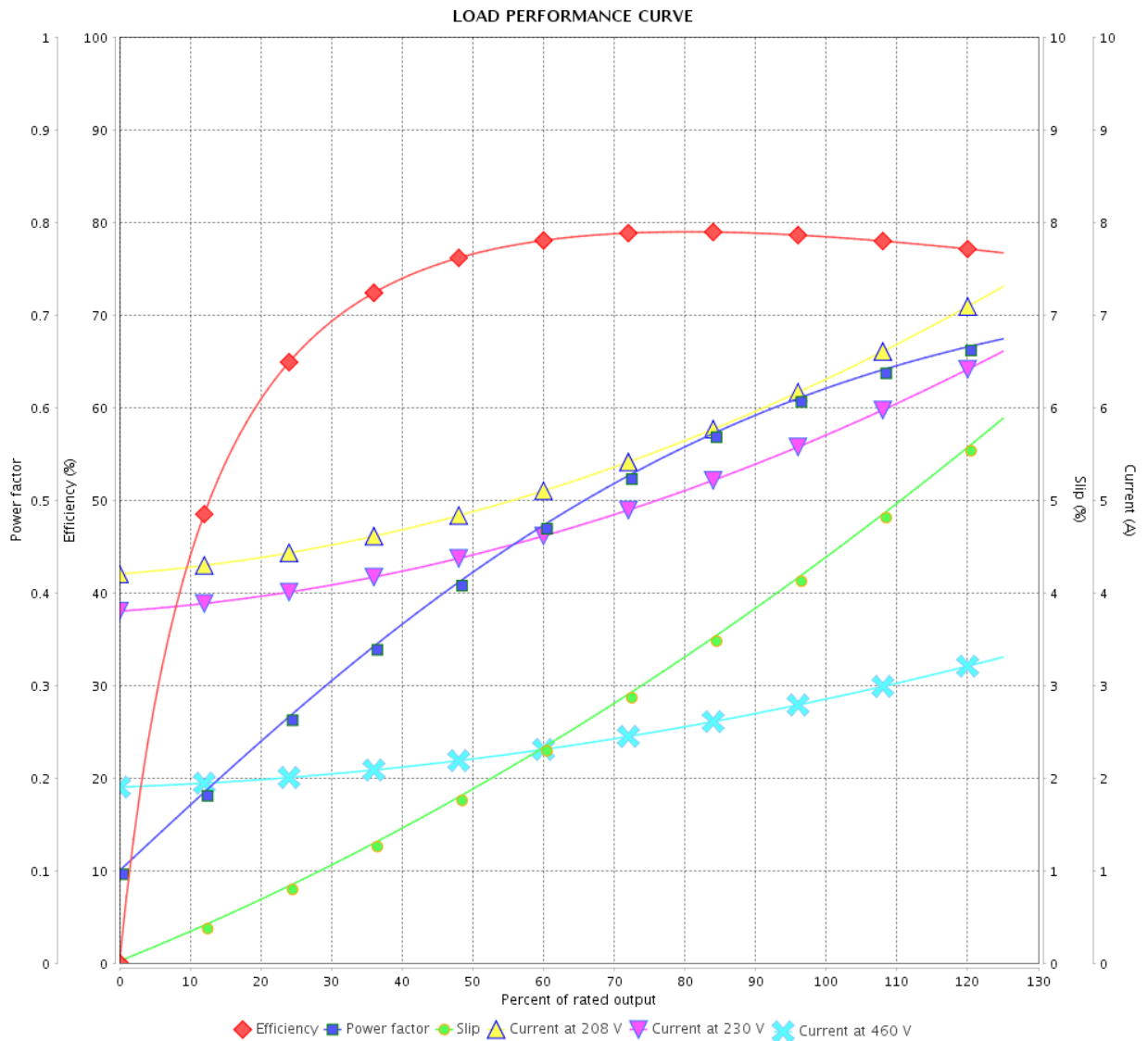


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T



Performance : 230/460 V 60 Hz 8P

Rated current : 5.68/2.84 A  
 LRC : 6.2  
 Rated torque : 9.16 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 860 rpm

Moment of inertia (J) : 0.5223 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

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Three Phase Induction Motor - Squirrel Cage



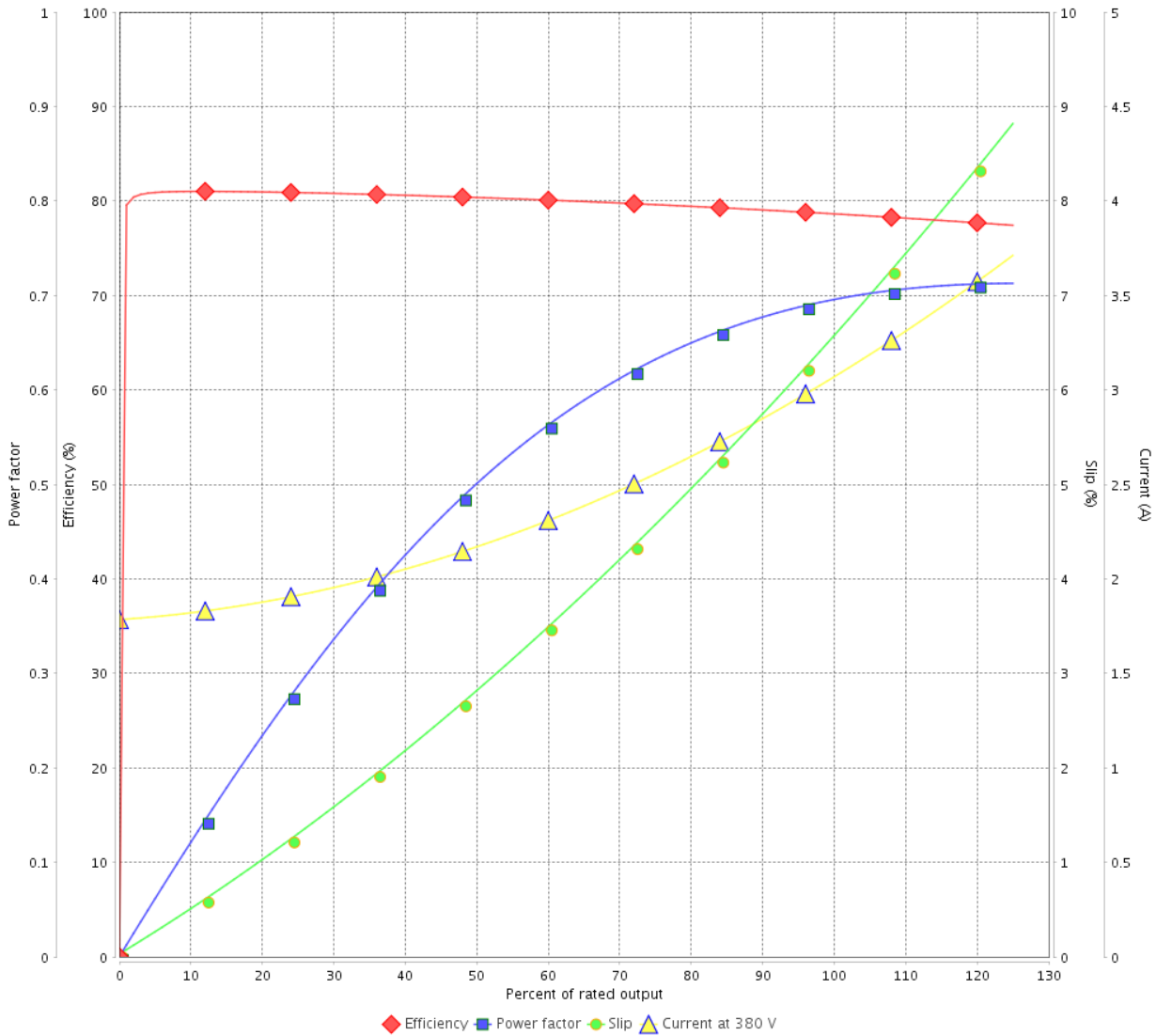
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current : 3.04 A  
 LRC : 5.8  
 Rated torque : 11.3 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 190 %  
 Rated speed : 700 rpm

Moment of inertia (J) : 0.5223 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

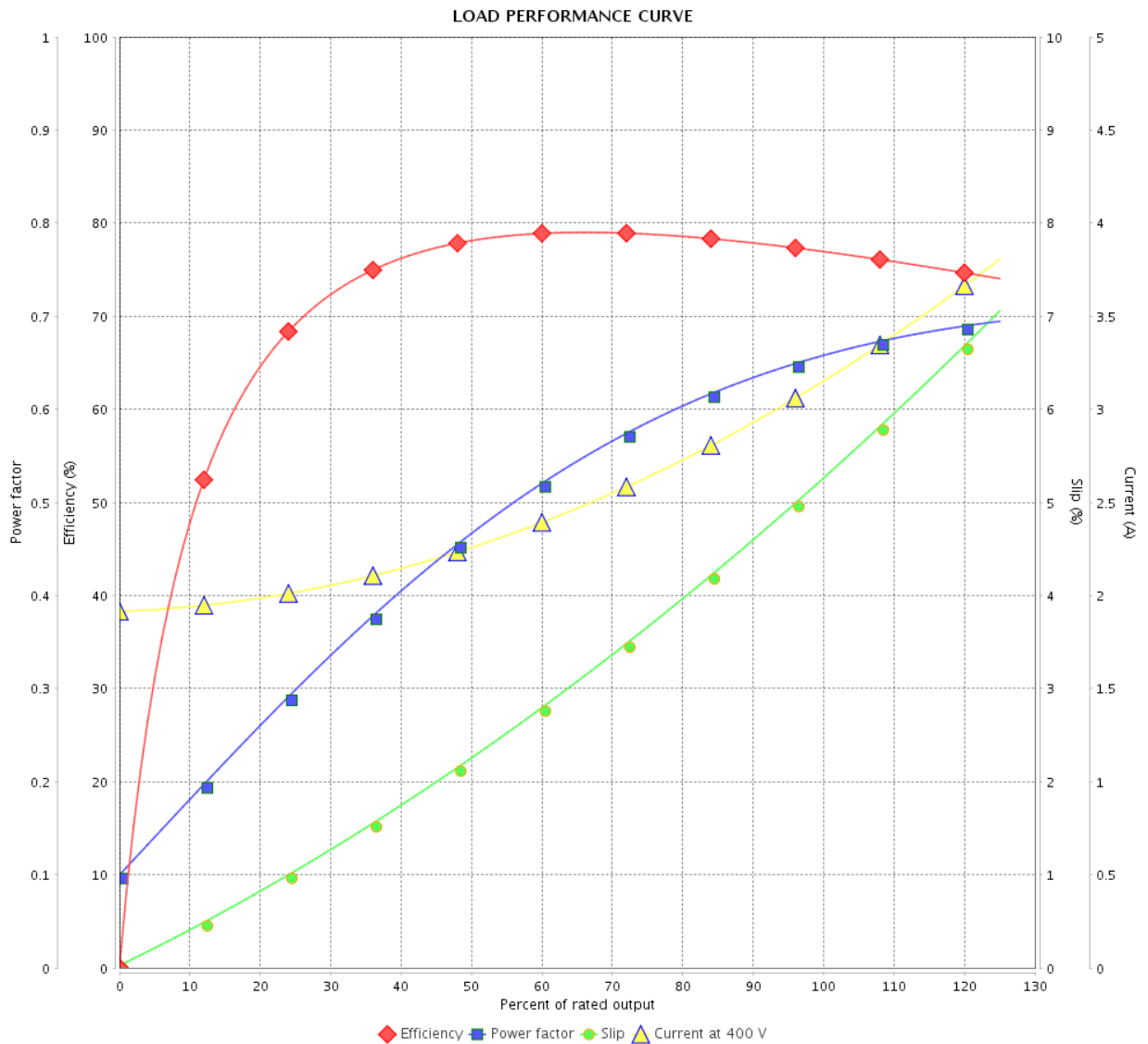


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T



Performance : 400 V 50 Hz 8P IE2

Rated current : 3.12 A  
 LRC : 6.0  
 Rated torque : 11.1 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 210 %  
 Rated speed : 710 rpm

Moment of inertia (J) : 0.5223 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



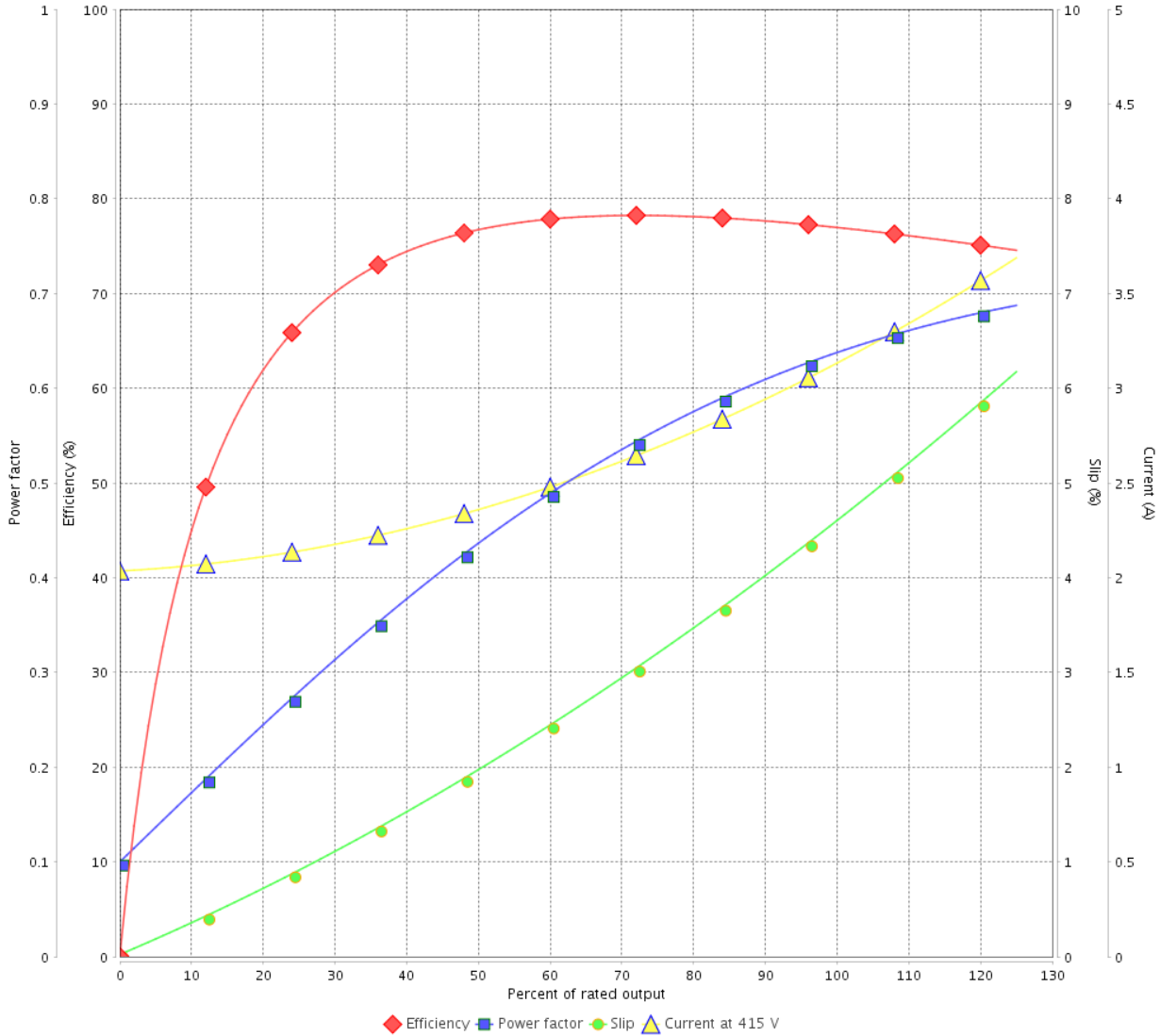
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 8P IE2

Rated current : 3.11 A  
 LRC : 6.2  
 Rated torque : 11.0 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 240 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.5223 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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LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 9.16 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.15
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 860 rpm	Design : B

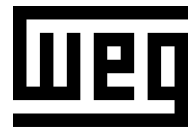
Heating constant

Cooling constant

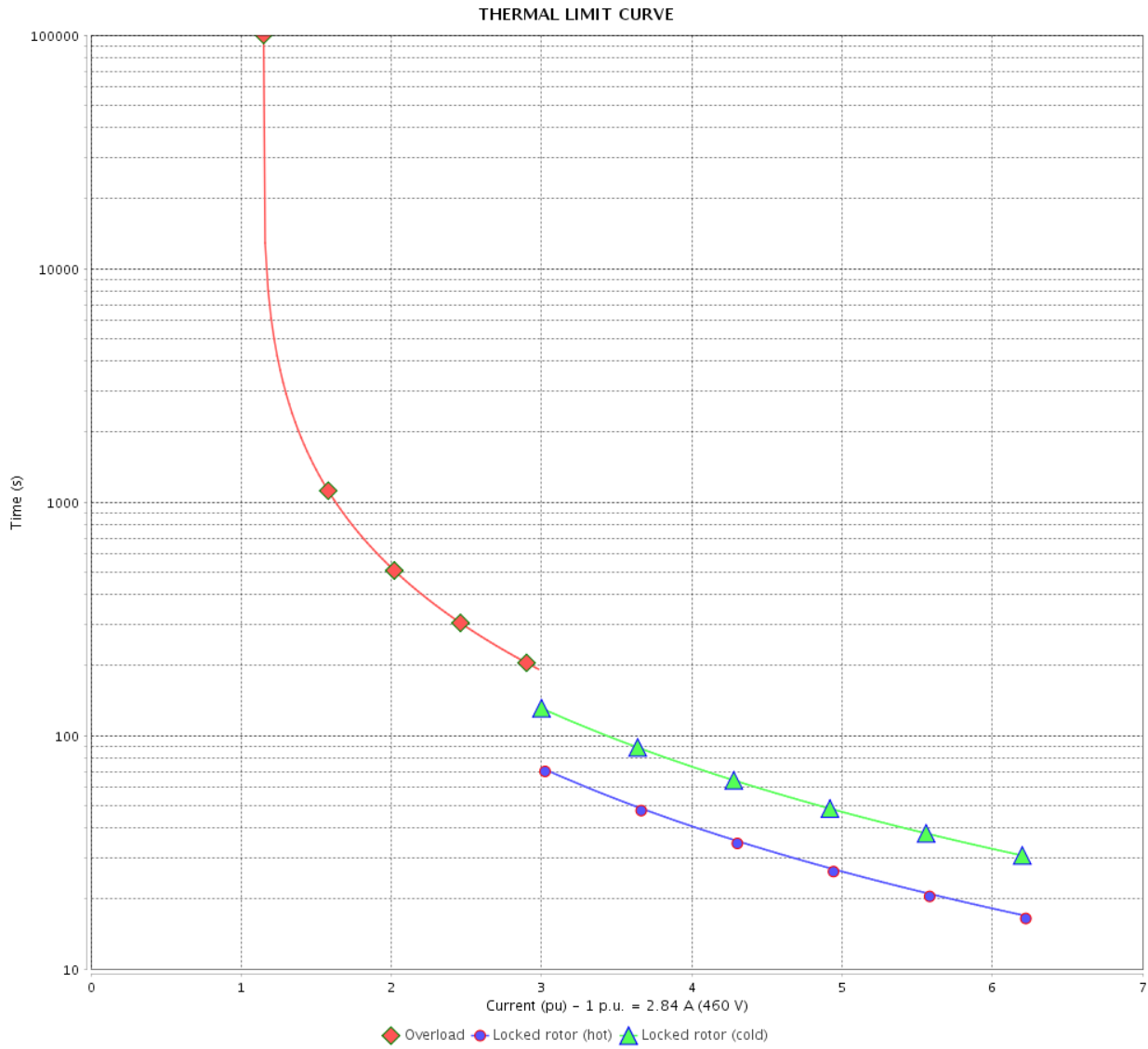
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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## Three Phase Induction Motor - Squirrel Cage

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Performance : 380 V 50 Hz 8P IE3

Rated current : 3.04 A	Moment of inertia (J) : 0.5223 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 11.3 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 190 %	Temperature rise : 80 K
Rated speed : 700 rpm	Design : B

Heating constant

Cooling constant

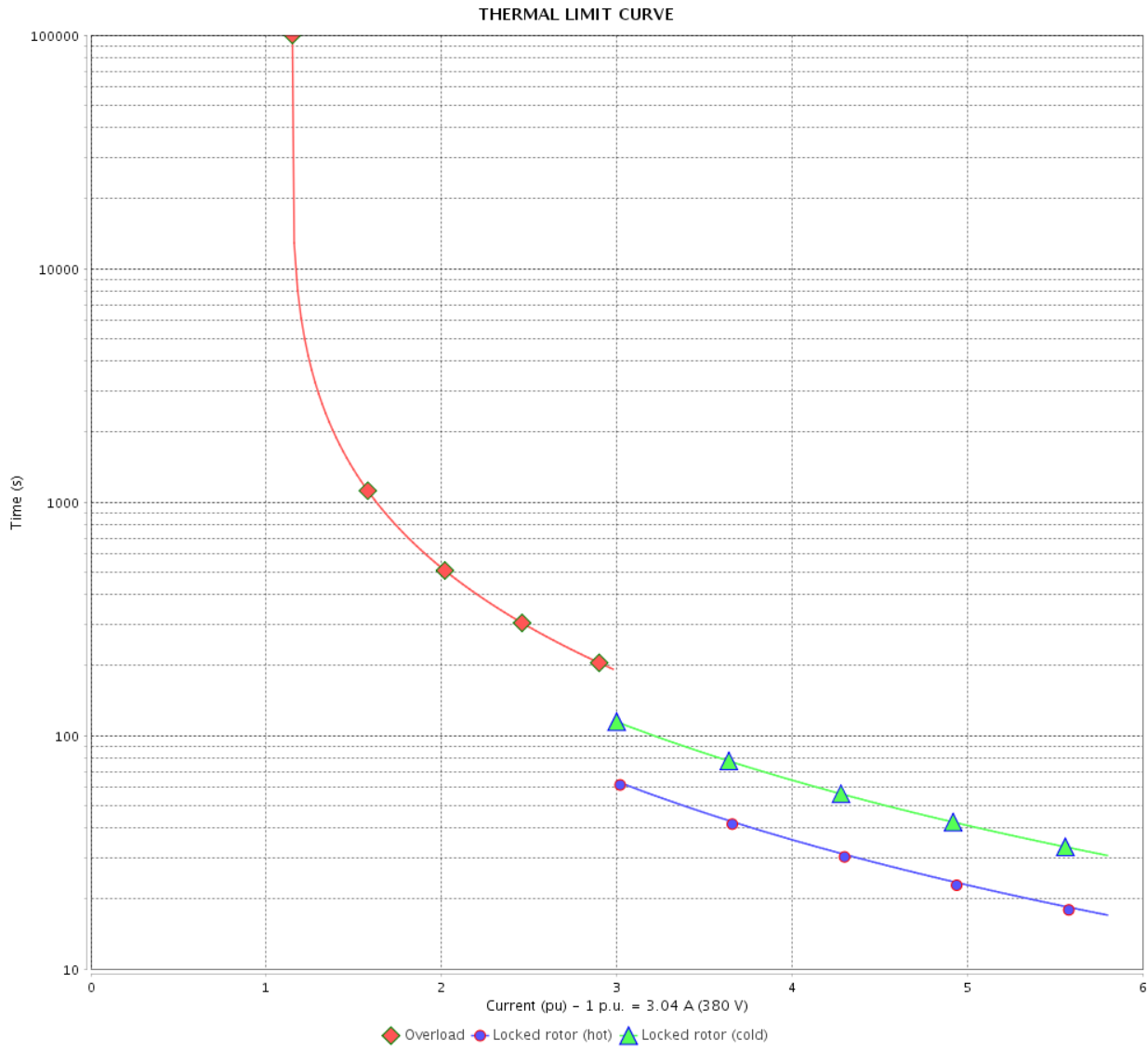
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Customer : \_\_\_\_\_



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## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
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Performance : 400 V 50 Hz 8P IE2

Rated current	: 3.12 A	Moment of inertia (J)	: 0.5223 sq.ft.lb
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 11.1 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 710 rpm	Design	: B

Heating constant

Cooling constant

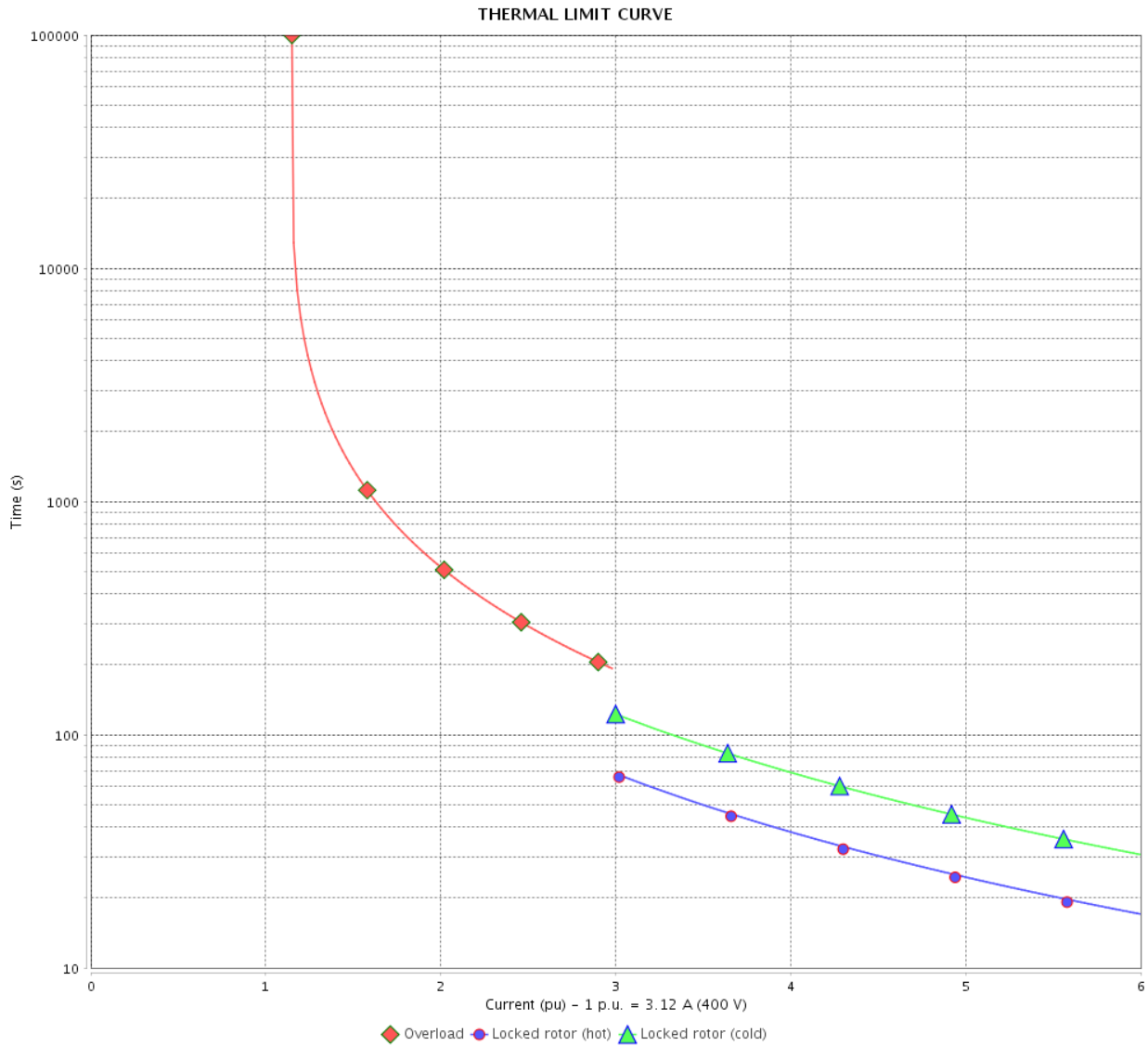
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LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 11.0 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 715 rpm	Design : B

Heating constant

Cooling constant

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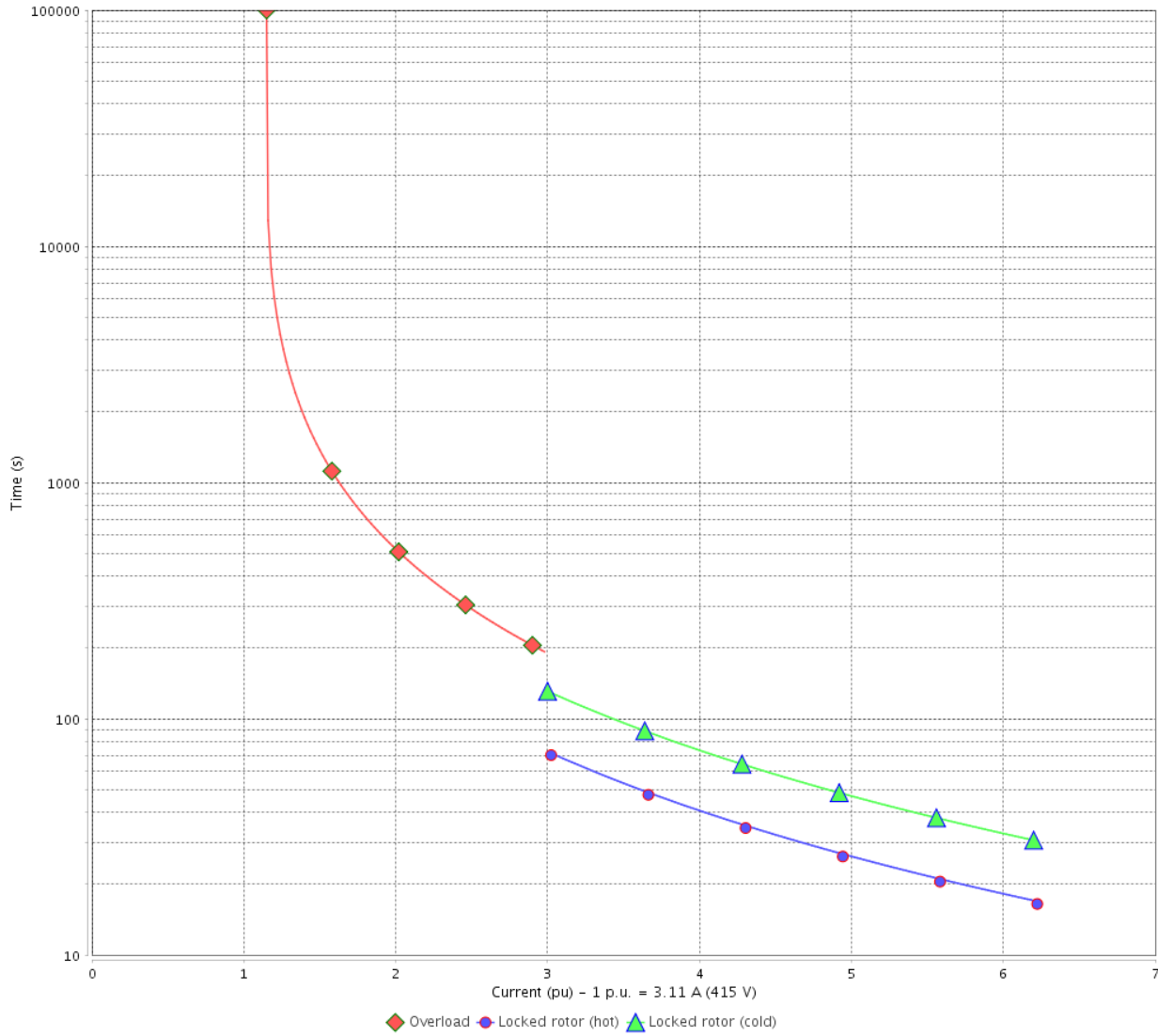
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Customer : \_\_\_\_\_

THERMAL LIMIT CURVE



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Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

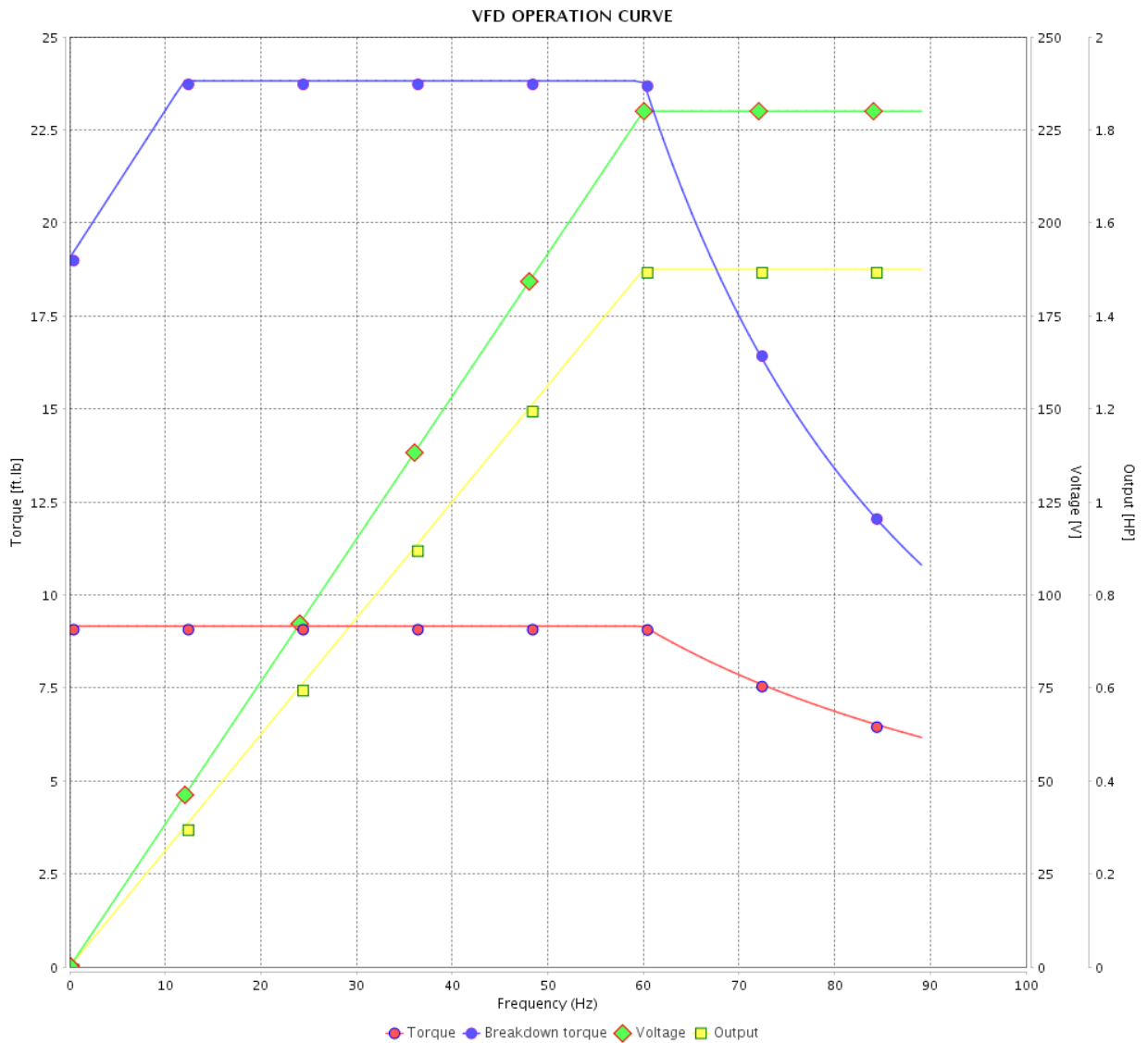


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14401934

Catalog # : 00159XT3E184T



Performance : 230/460 V 60 Hz 8P

Rated current : 5.68/2.84 A  
 LRC : 6.2  
 Rated torque : 9.16 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 860 rpm

Moment of inertia (J) : 0.5223 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



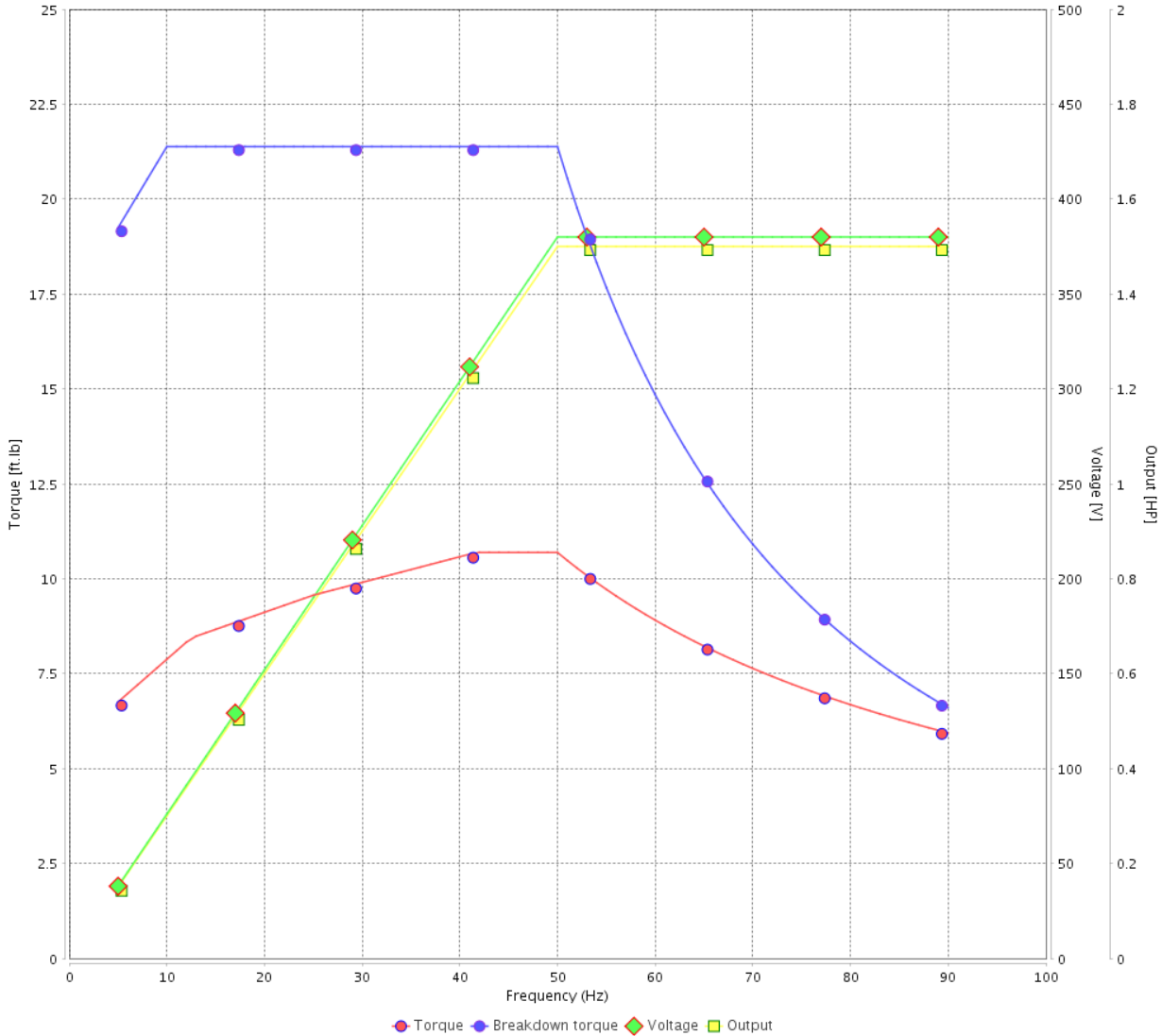
Customer :

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Product code : 14401934

Catalog # : 00159XT3E184T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 8P IE3

Rated current : 3.04 A  
 LRC : 5.8  
 Rated torque : 11.3 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 190 %  
 Rated speed : 700 rpm

Moment of inertia (J) : 0.5223 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

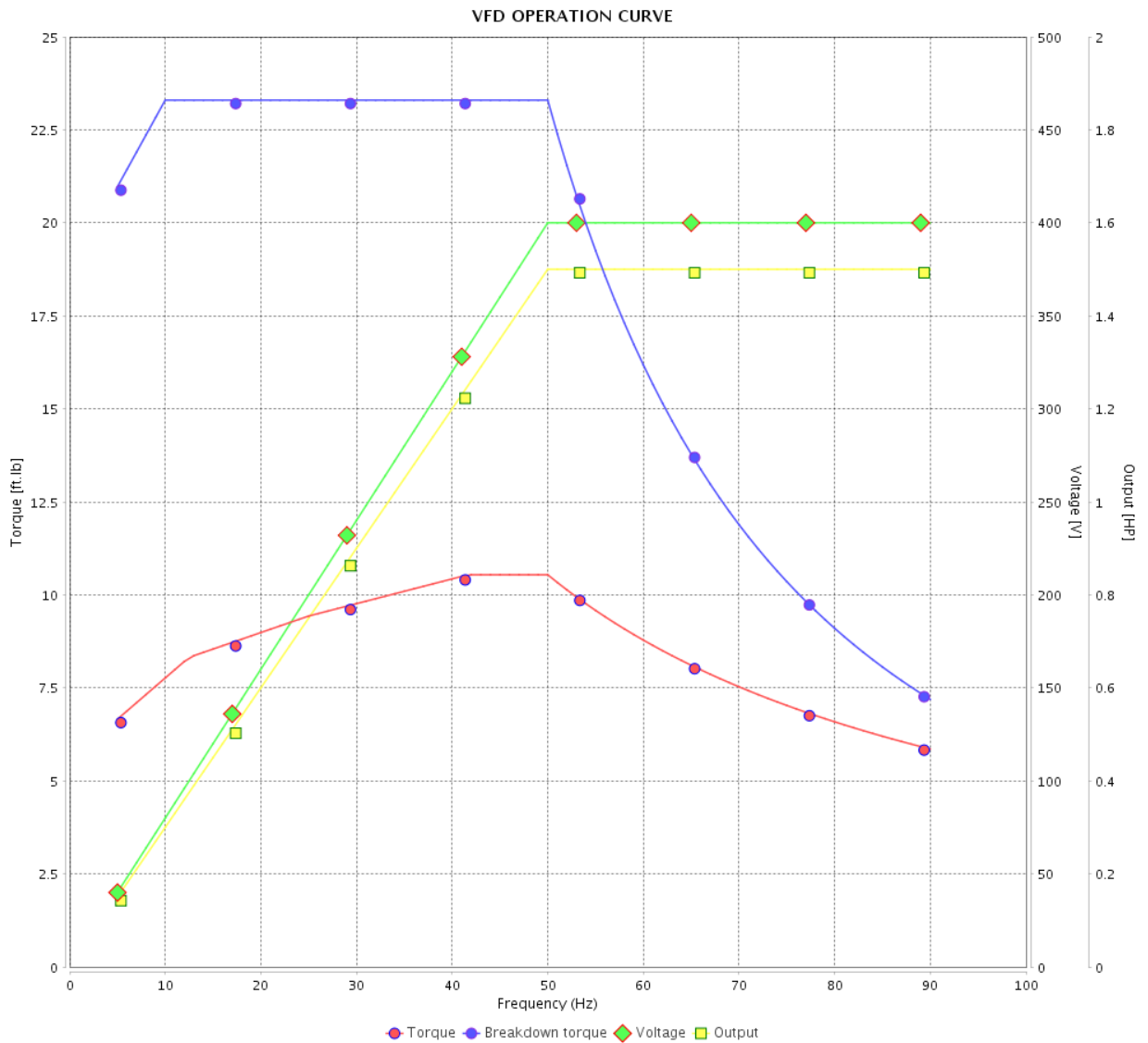


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 Breakdown torque : 210 %  
 Rated speed : 710 rpm

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



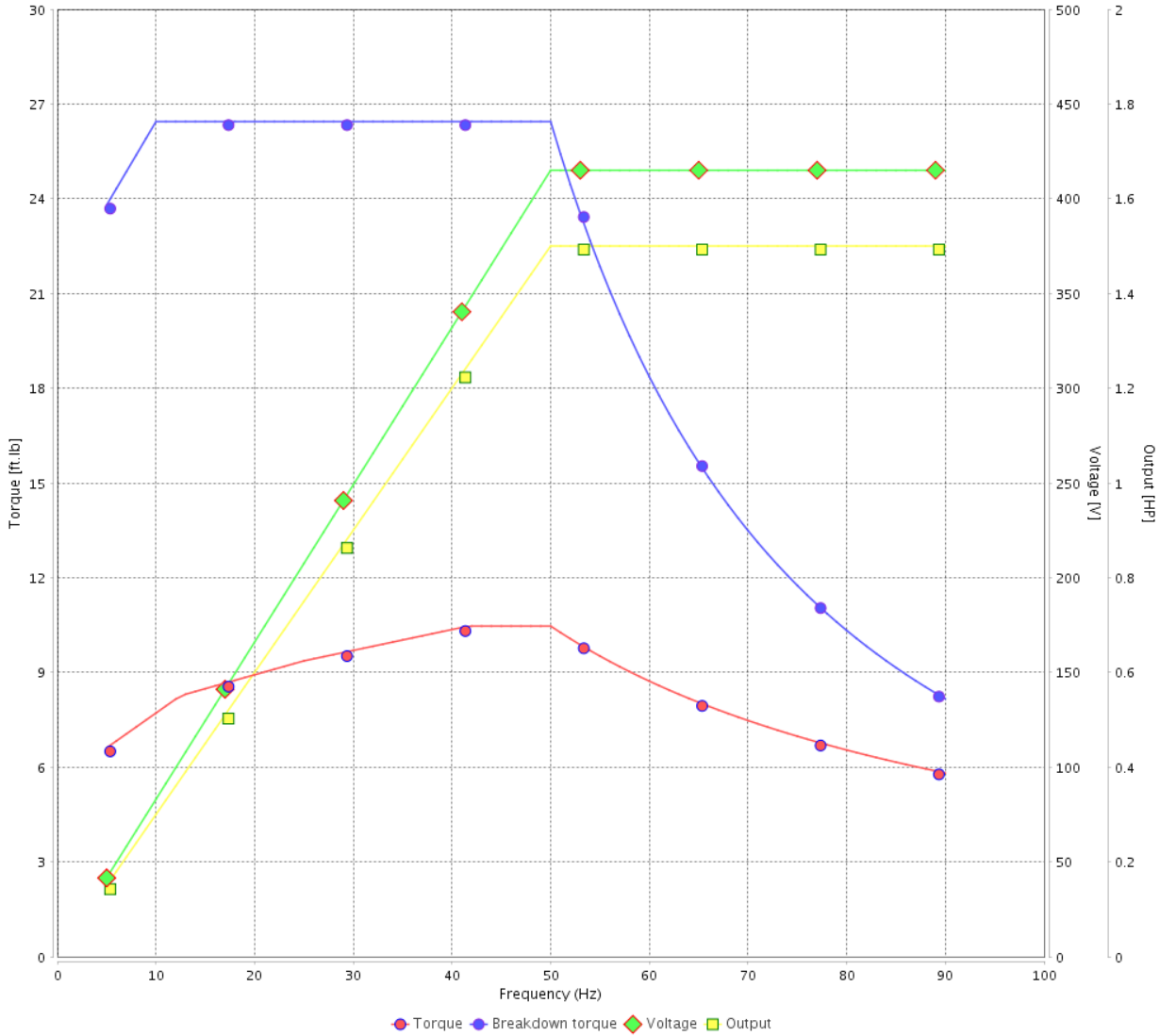
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VFD OPERATION CURVE

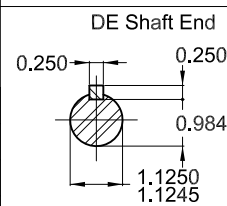
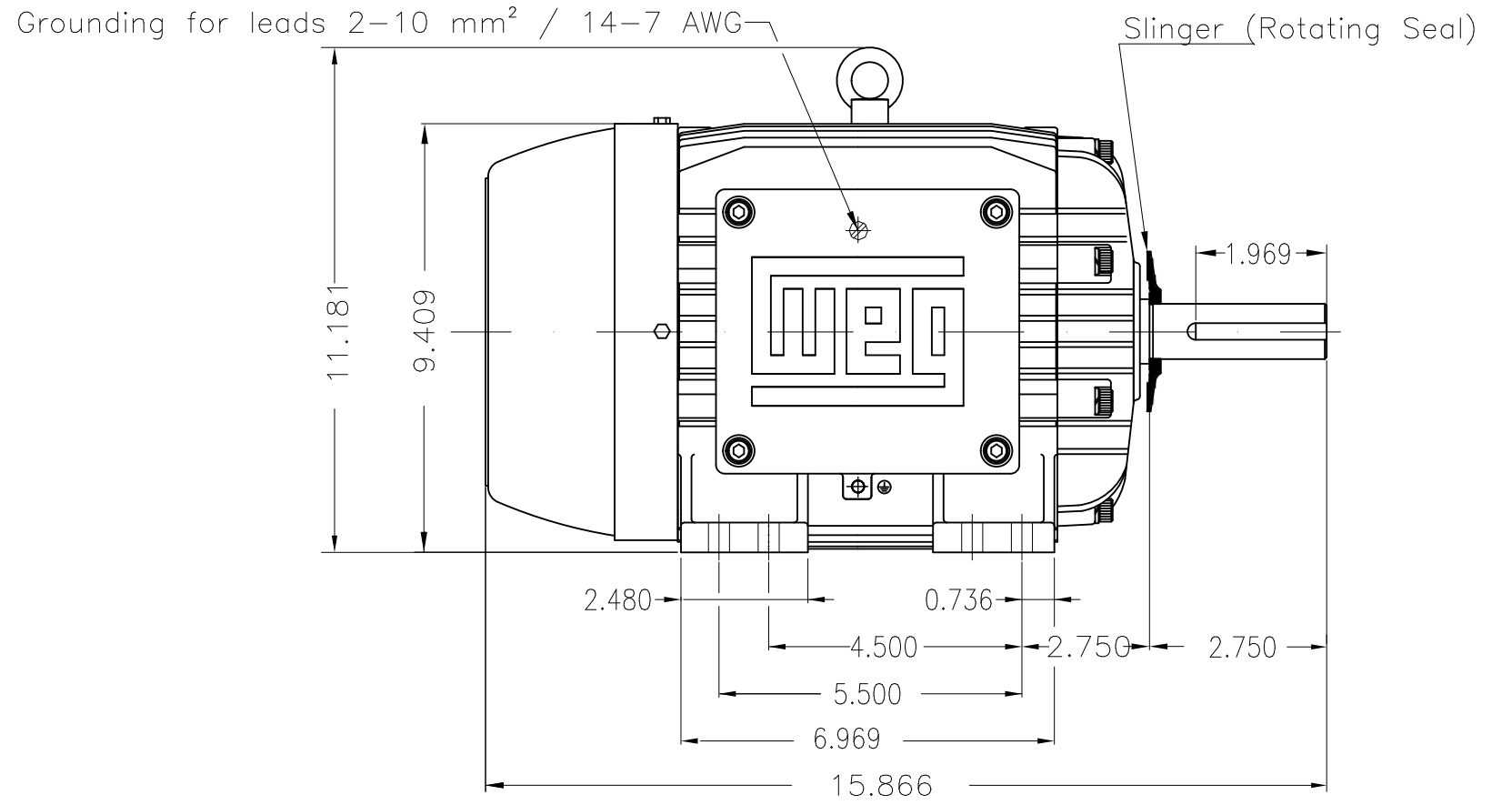
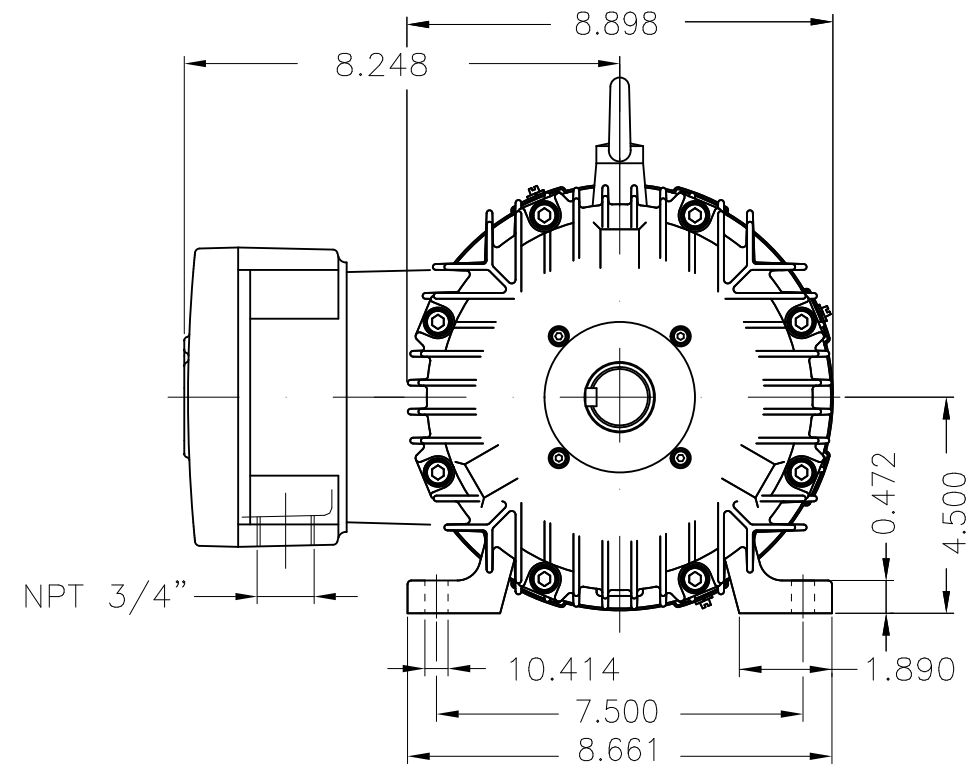


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Rated current : 3.11 A  
 LRC : 6.2  
 Rated torque : 11.0 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 240 %  
 Rated speed : 715 rpm

Moment of inertia (J) : 0.5223 sq.ft.lb  
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 Service factor : 1.00  
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 Design : B

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Color RAL 5009  
 Painting plan 202P  
 Mounting NEMA F-1  
 Mounting B3R(D)

1.5 HP 08 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 182/4T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
 WDD



SHEET 1 / 1

MADE IN BRAZIL


**W21X NEMA**  
**Premium**

14401934



LISTED

CC029A

*Inverter Duty Motor*  
*Severe Duty*

MODEL 00159XT3E184T

PH 3 | FR 182/4T

HP(kW) 1.5(1.1)

HZ 60

IP55

V 230/460

A 5.68/2.84

RPM 860

NEMA NOM EFF 78.5%

PF 0.62

SFA 6.53/3.27

DES B

INS CL F  $\Delta$ T 80 K | SF 1.15

ENCL TEFC

DUTY CONT.

CODE L

ALT 1000

m.a.s.l.

AMB 40°C

USABLE @208V

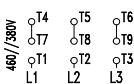
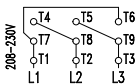
5.97 A

SF 1.15

SFA 6.87

AMB 55°C SF1.0

1.5HP 1.1kW 50Hz 380V 3.04A 700RPM SF1.00 EFF 78.5% (IE3)



→ 6307-2RS MOBIL POLYREX EM

→ 6206-2RS

132 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.