

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14412517		
		Catalog # :	00112XT3E145T		
Frame	: 143/5T	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>	: 75.3 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.1595 sq.ft.lb		
Design	: B				
Output [HP]	1	1	1	1	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	3.26/1.63	1.91	1.86	1.85	
L. R. Amperes [A]	20.2/10.1	9.17	9.67	10.2	
LRC [A]	6.2x(Code K)	4.8x(Code G)	5.2x(Code H)	5.5x(Code J)	
No load current [A]	2.00/1.00	0.950	1.05	1.15	
Rated speed [RPM]	1150	930	940	950	
Slip [%]	4.17	7.00	6.00	5.00	
Rated torque [ft.lb]	4.57	5.65	5.59	5.53	
Locked rotor torque [%]	260	180	210	240	
Breakdown torque [%]	280	200	229	250	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	50s (cold) 28s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	
Noise level <sup>2</sup>	50.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)	
Efficiency (%)	25%	76.0	76.1	74.6	73.0
	50%	77.0	77.0	75.5	74.0
	75%	82.0	78.0	78.0	78.0
	100%	82.5	78.5	78.5	78.5
Power Factor	25%	0.29	0.35	0.32	0.29
	50%	0.51	0.58	0.54	0.50
	75%	0.63	0.70	0.67	0.64
	100%	0.70	0.76	0.74	0.72
Bearing type	: <u>Drive end</u> 6205 2RS <u>Non drive end</u> 6204 2RS	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 82 lb		
Lubrication interval	: - -	Max. compression	: 158 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes					
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



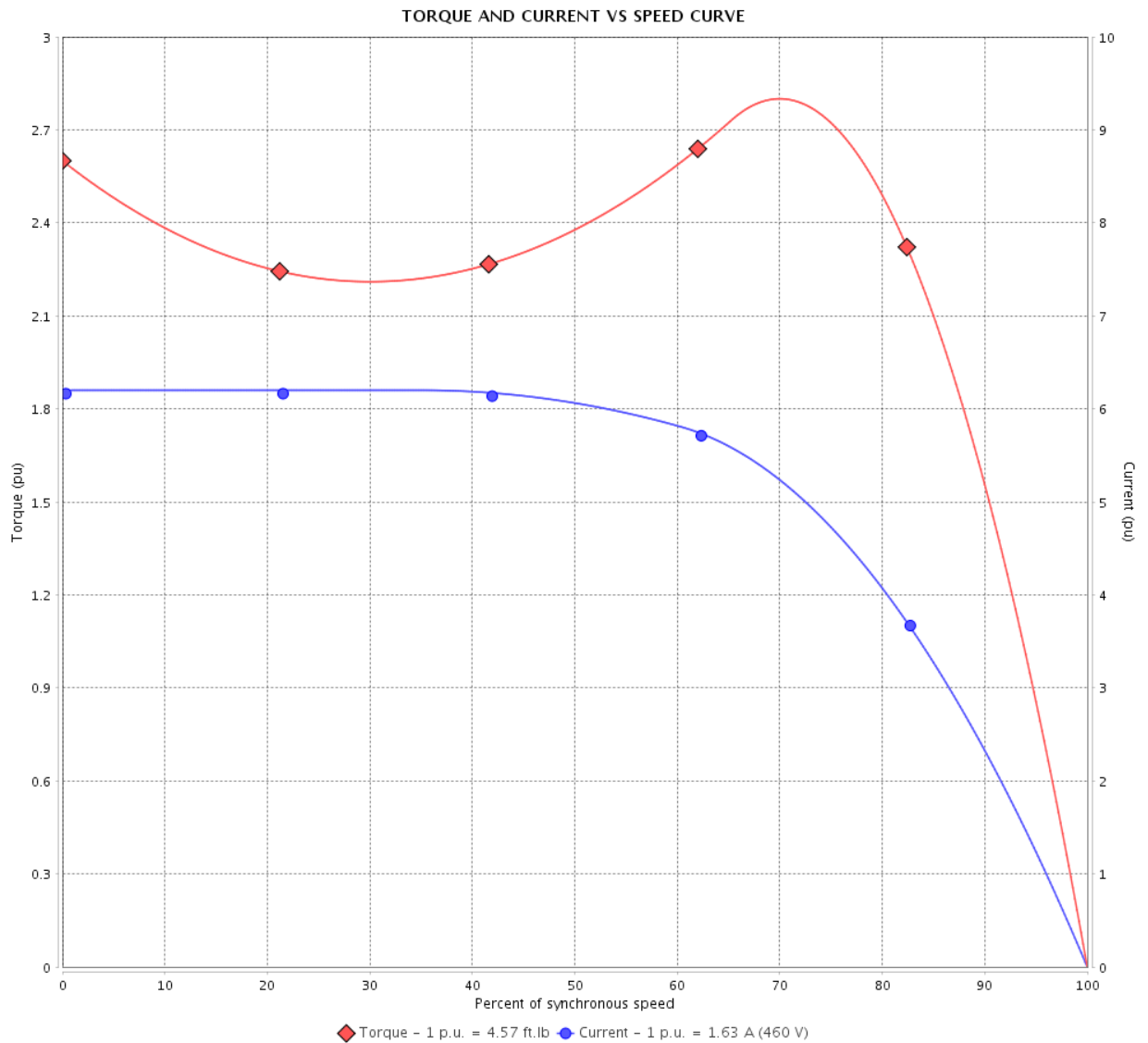
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T



Performance : 230/460 V 60 Hz 6P

Rated current : 3.26/1.63 A  
 LRC : 6.2  
 Rated torque : 4.57 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 280 %  
 Rated speed : 1150 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 50s (cold) 28s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

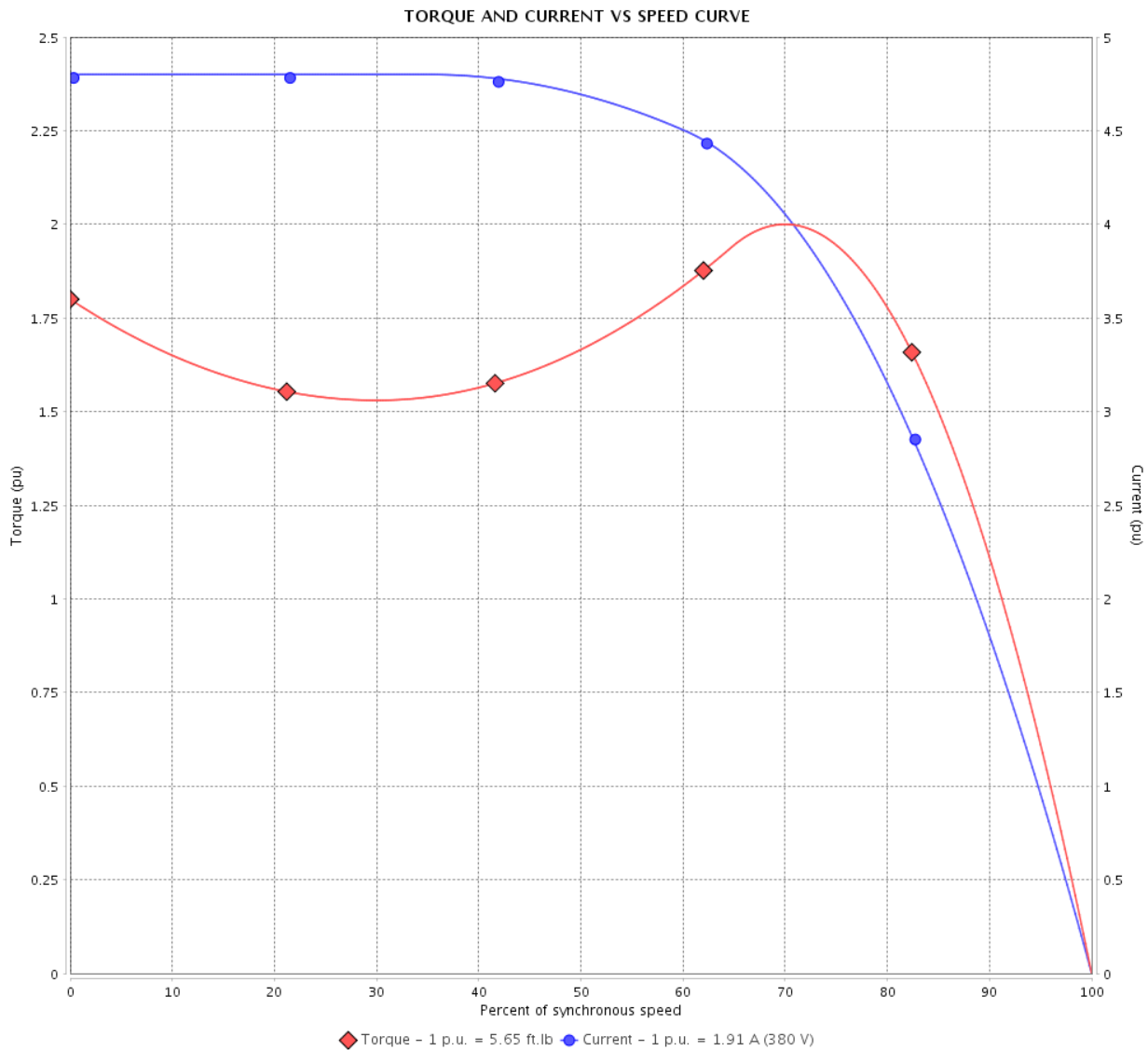


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T



Performance : 380 V 50 Hz 6P IE2

Rated current	: 1.91 A	Moment of inertia (J)	: 0.1595 sq.ft.lb
LRC	: 4.8	Duty cycle	: Cont.(S1)
Rated torque	: 5.65 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 930 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



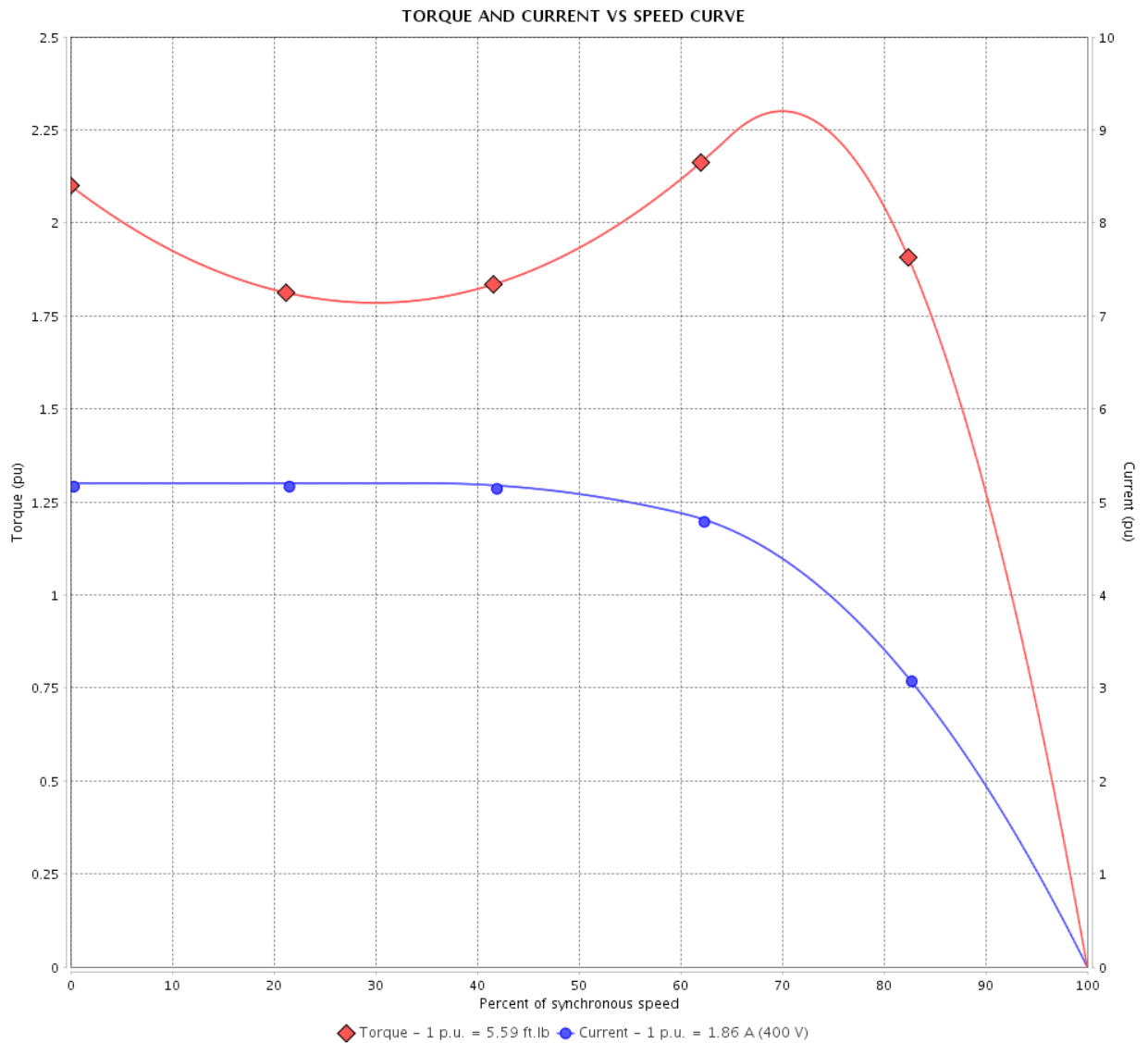
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T



Performance : 400 V 50 Hz 6P IE2

Rated current : 1.86 A  
 LRC : 5.2  
 Rated torque : 5.59 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 229 %  
 Rated speed : 940 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 36s (cold) 20s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



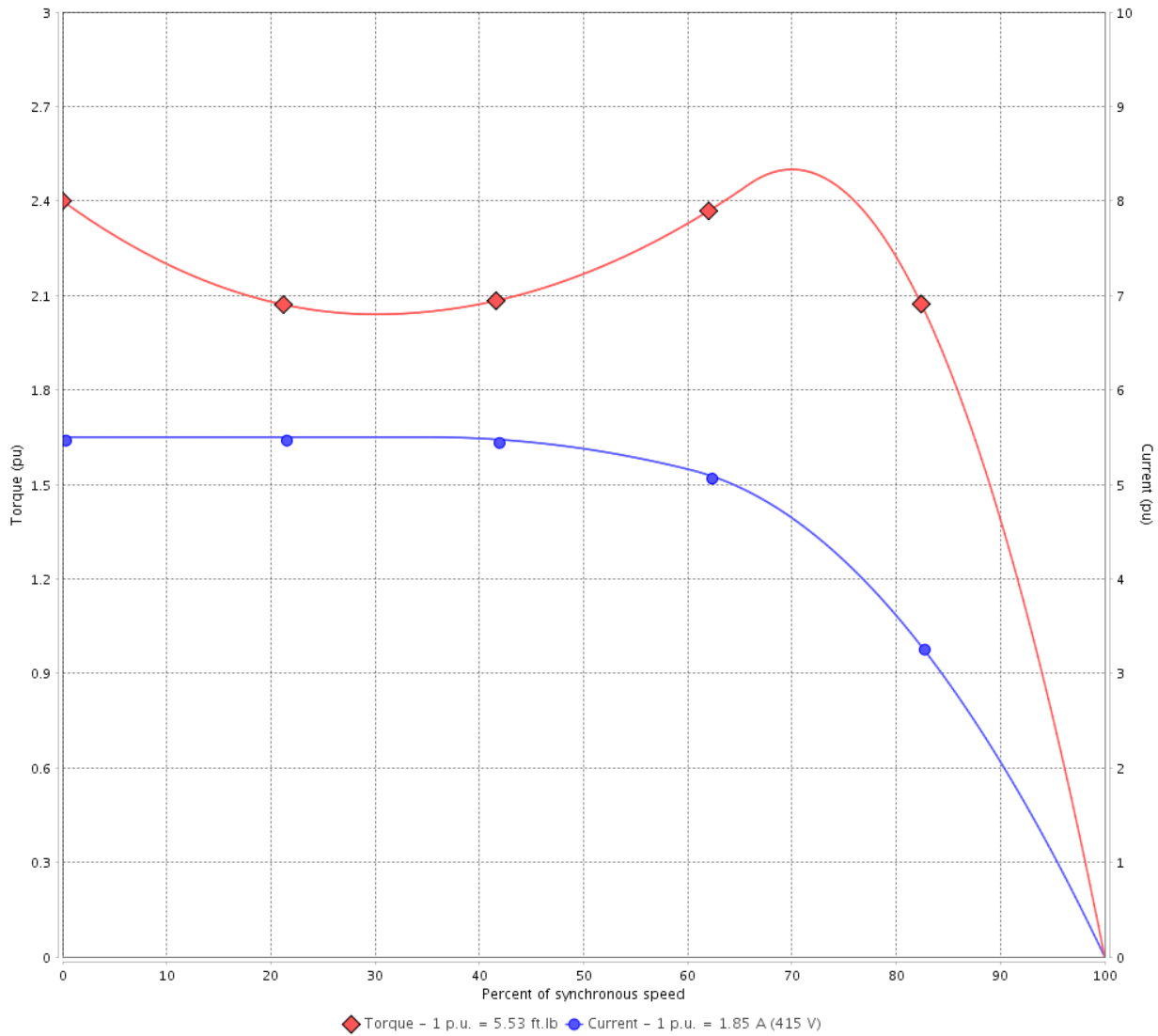
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Product code : 14412517

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 1.85 A	Moment of inertia (J)	: 0.1595 sq.ft.lb
LRC	: 5.5	Duty cycle	: Cont.(S1)
Rated torque	: 5.53 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 950 rpm	Design	: B

Locked rotor time : 36s (cold) 20s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

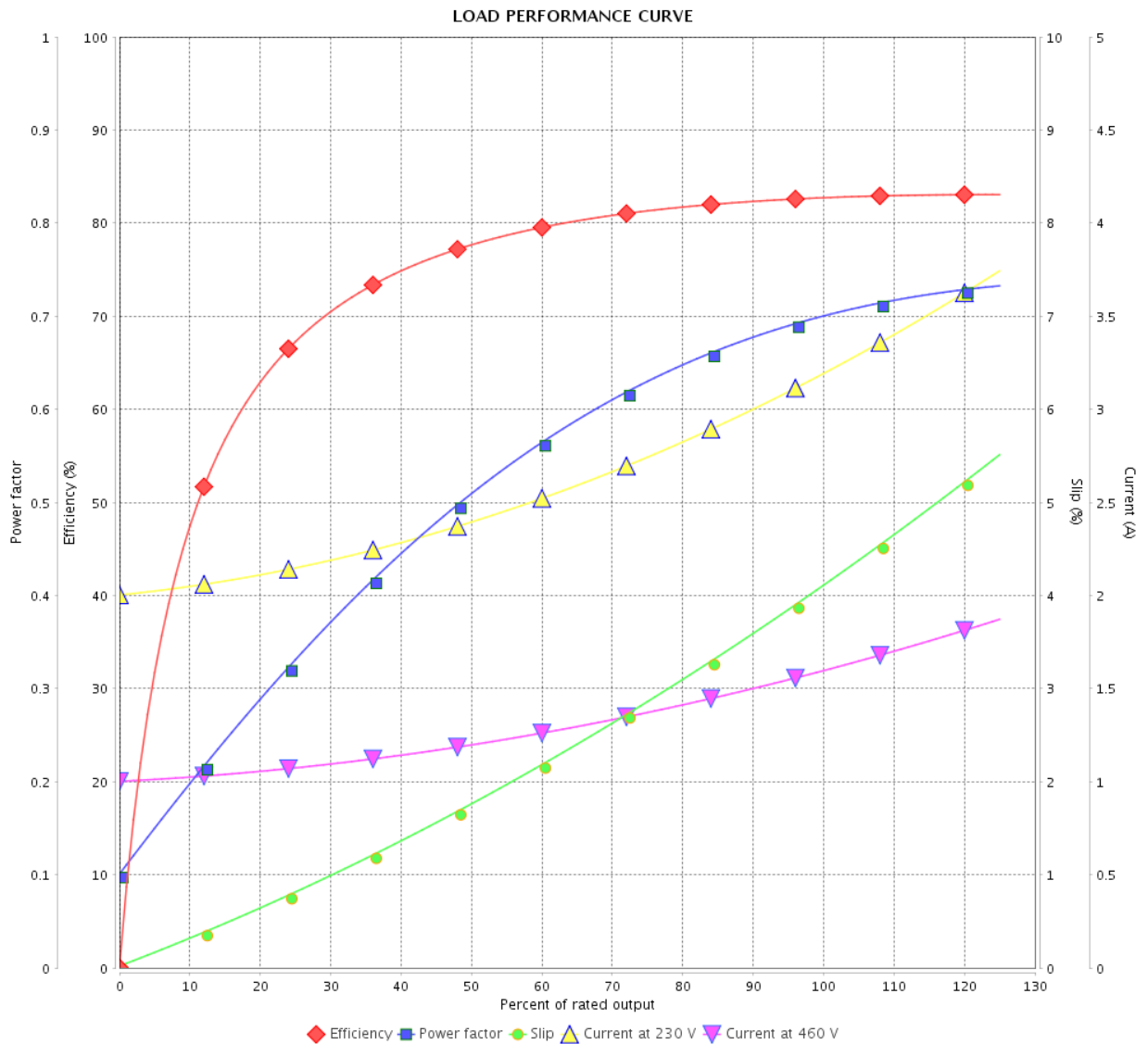


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T



Performance : 230/460 V 60 Hz 6P

Rated current : 3.26/1.63 A  
 LRC : 6.2  
 Rated torque : 4.57 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 280 %  
 Rated speed : 1150 rpm

Moment of inertia (J) : 0.1595 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



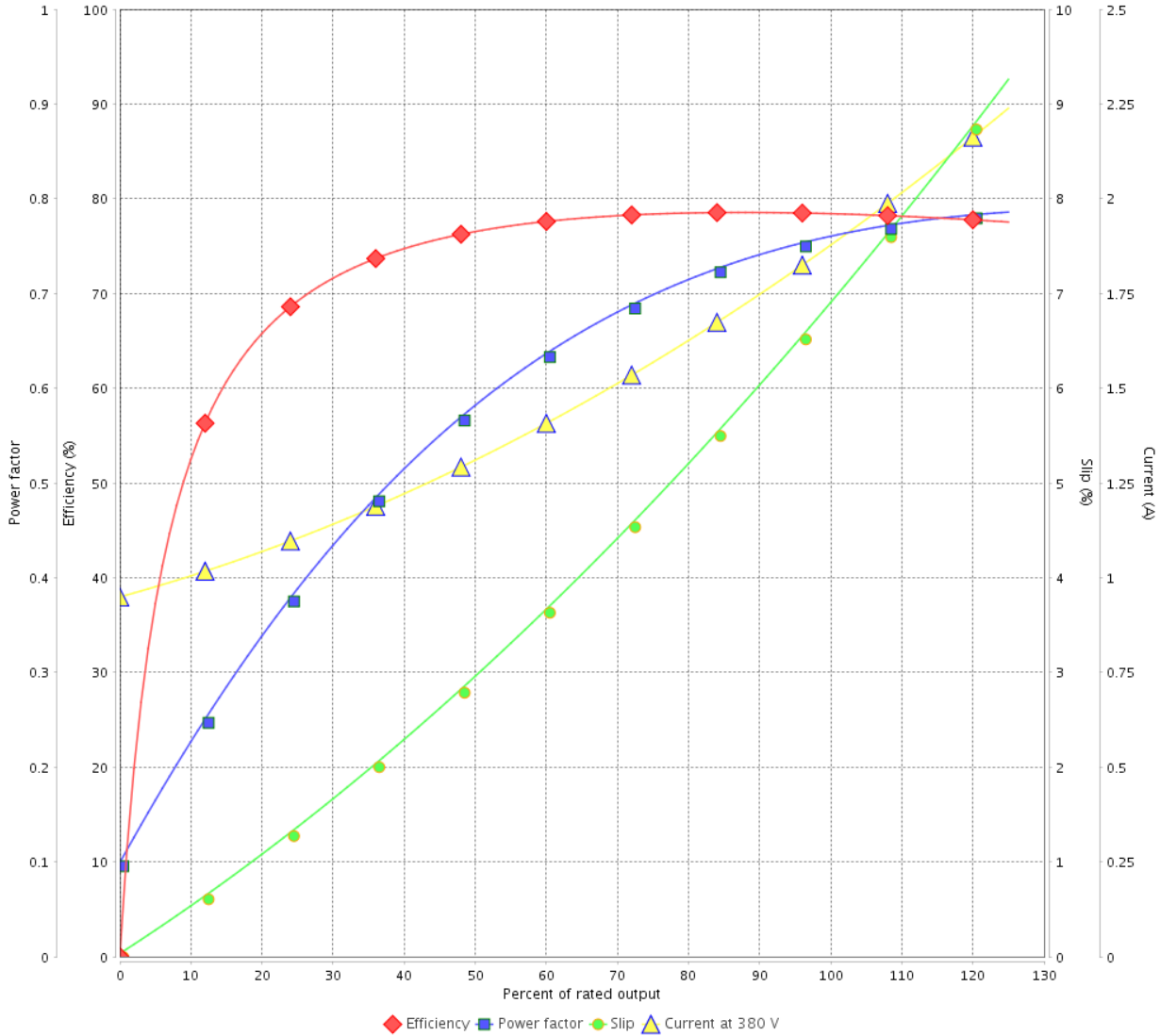
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 1.91 A  
 LRC : 4.8  
 Rated torque : 5.65 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 200 %  
 Rated speed : 930 rpm

Moment of inertia (J) : 0.1595 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

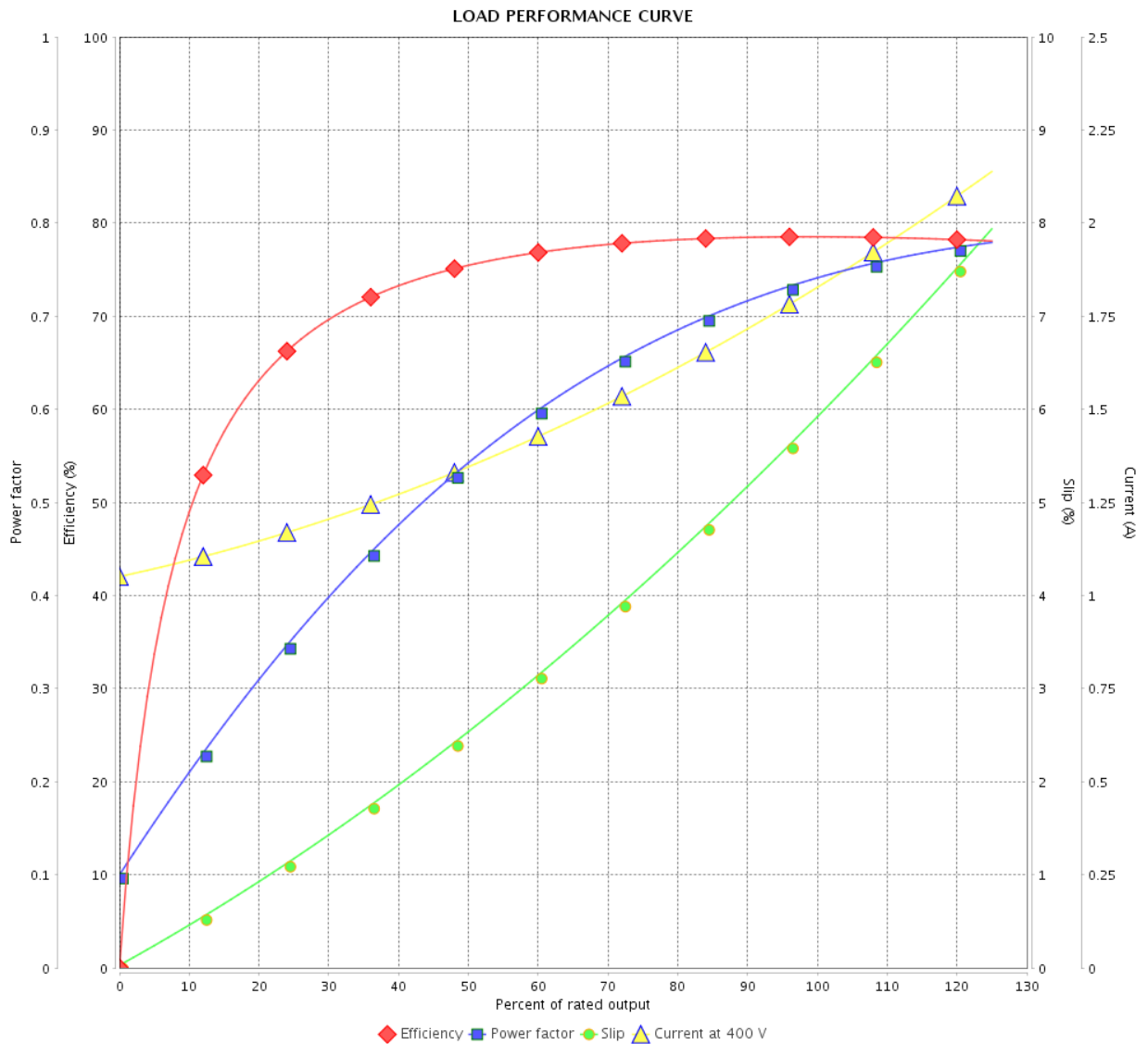


Customer :

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Product code : 14412517

Catalog # : 00112XT3E145T



Performance : 400 V 50 Hz 6P IE2

Rated current : 1.86 A  
 LRC : 5.2  
 Rated torque : 5.59 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 229 %  
 Rated speed : 940 rpm

Moment of inertia (J) : 0.1595 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



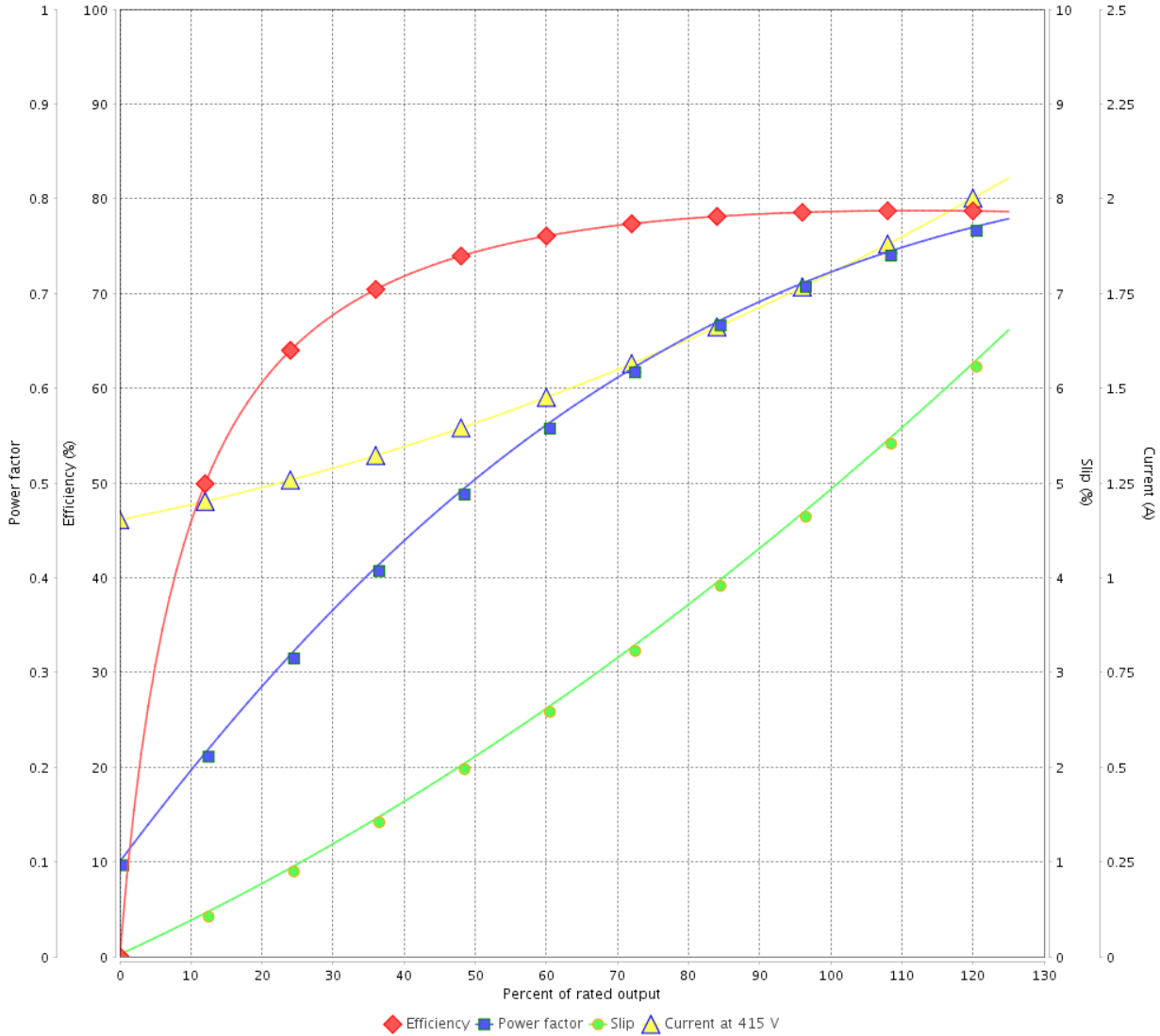
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Product line : NEMA Premium Efficiency Three-Phase

Product code : 14412517

Catalog # : 00112XT3E145T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current : 1.85 A  
 LRC : 5.5  
 Rated torque : 5.53 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 950 rpm

Moment of inertia (J) : 0.1595 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



## Three Phase Induction Motor - Squirrel Cage

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Performance : 230/460 V 60 Hz 6P

Rated current : 3.26/1.63 A	Moment of inertia (J) : 0.1595 sq.ft.lb
LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 4.57 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 1150 rpm	Design : B

Heating constant

Cooling constant

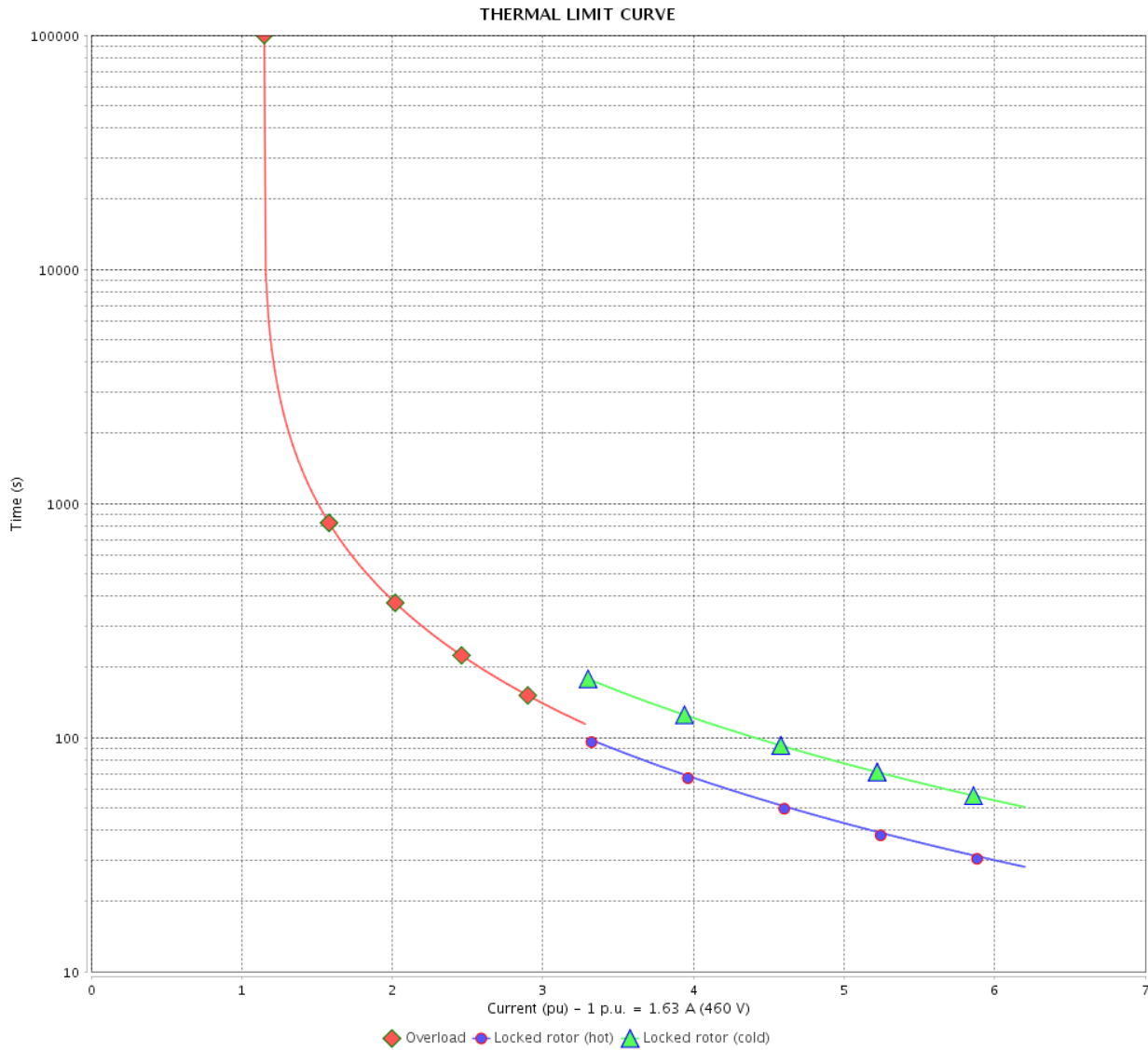
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14412517  
 Catalog # : 00112XT3E145T

Performance : 380 V 50 Hz 6P IE2

Rated current : 1.91 A	Moment of inertia (J) : 0.1595 sq.ft.lb
LRC : 4.8	Duty cycle : Cont.(S1)
Rated torque : 5.65 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 930 rpm	Design : B

Heating constant

Cooling constant

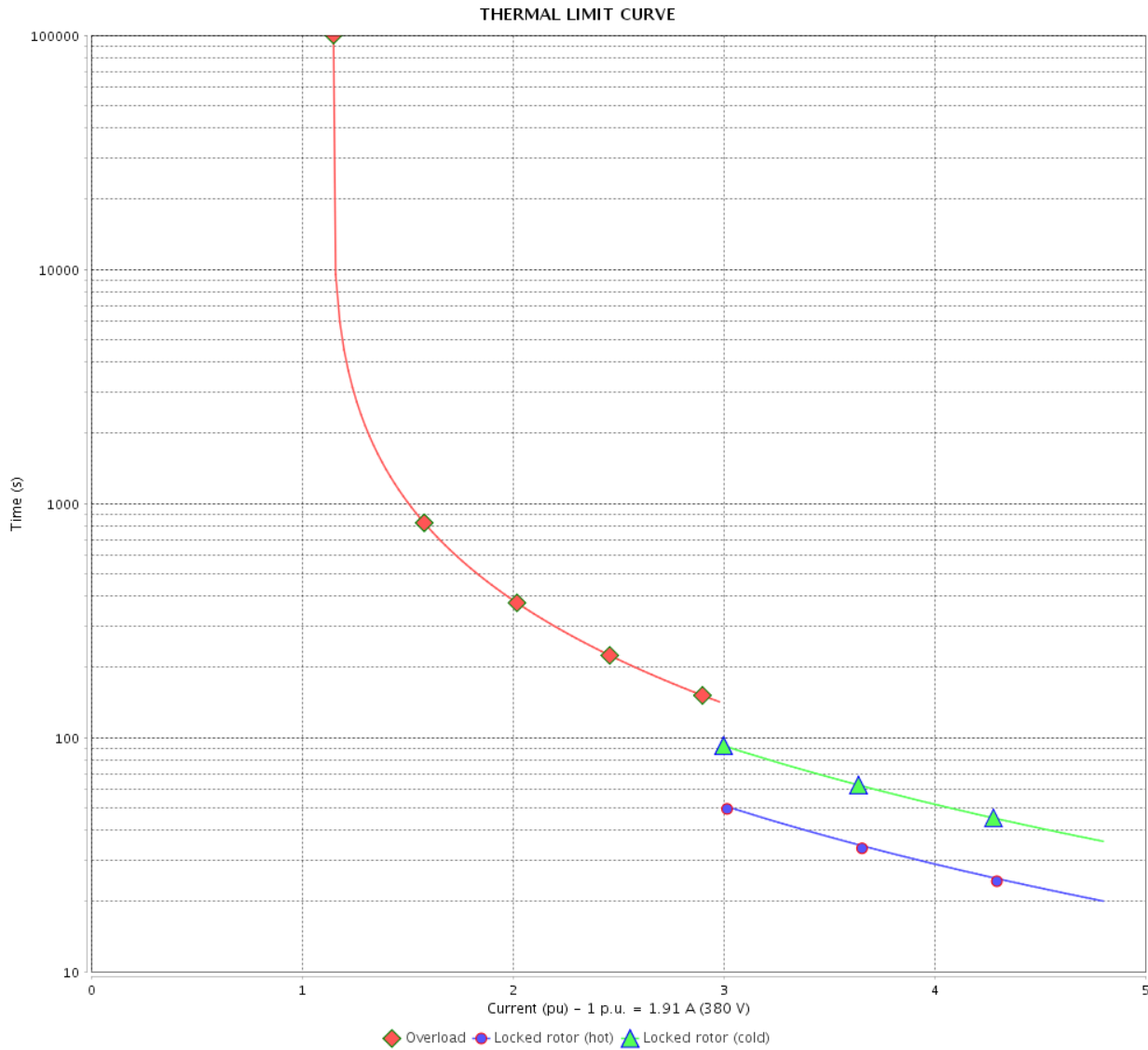
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Three Phase Induction Motor - Squirrel Cage



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



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## Three Phase Induction Motor - Squirrel Cage

Customer :

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 Product code : 14412517  
 Catalog # : 00112XT3E145T

Performance : 400 V 50 Hz 6P IE2

Rated current : 1.86 A	Moment of inertia (J) : 0.1595 sq.ft.lb
LRC : 5.2	Duty cycle : Cont.(S1)
Rated torque : 5.59 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 940 rpm	Design : B

Heating constant

Cooling constant

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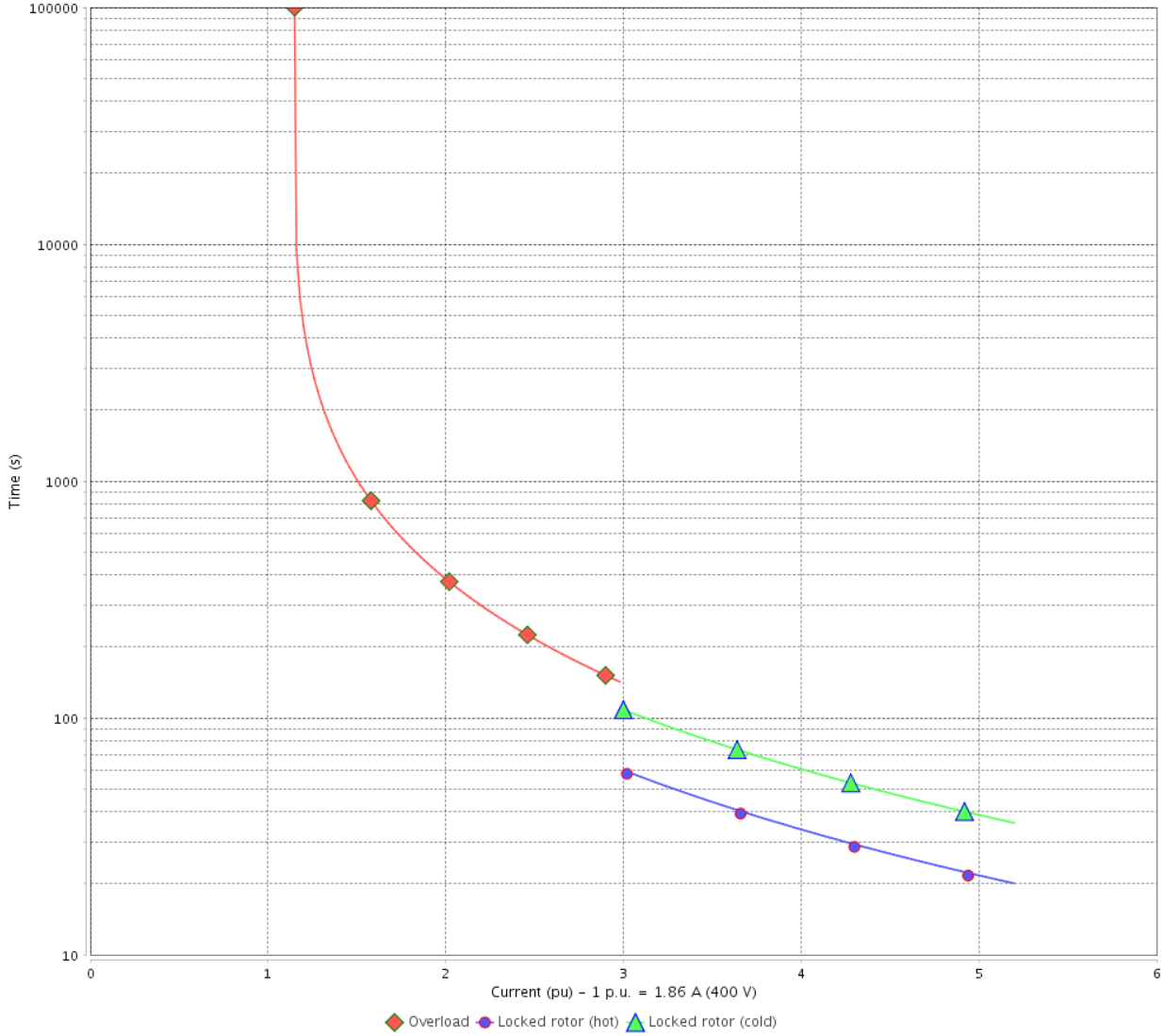
# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

THERMAL LIMIT CURVE



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14412517  
 Catalog # : 00112XT3E145T

Performance : 415 V 50 Hz 6P IE2

Rated current : 1.85 A	Moment of inertia (J) : 0.1595 sq.ft.lb
LRC : 5.5	Duty cycle : Cont.(S1)
Rated torque : 5.53 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 950 rpm	Design : B

Heating constant

Cooling constant

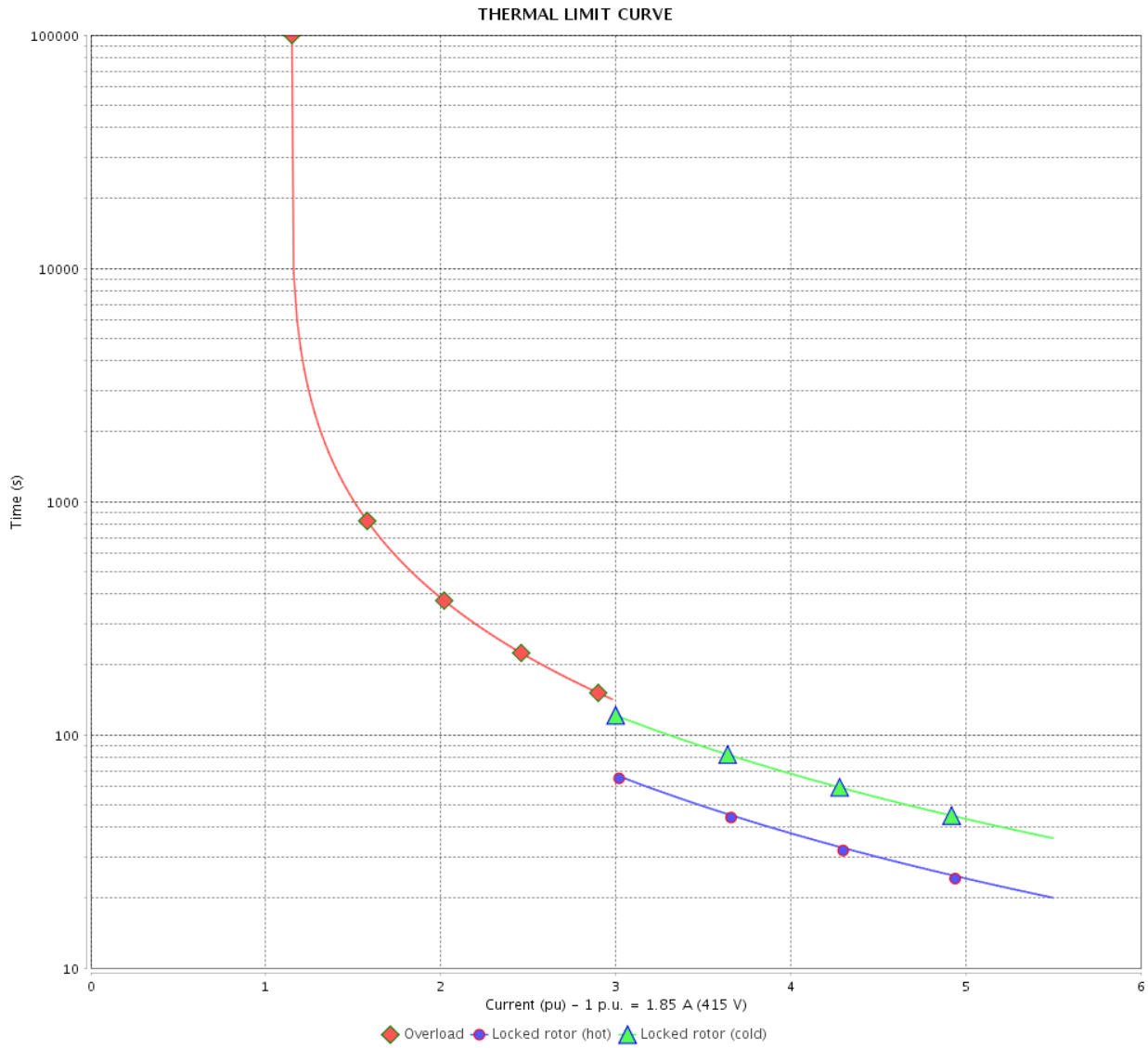
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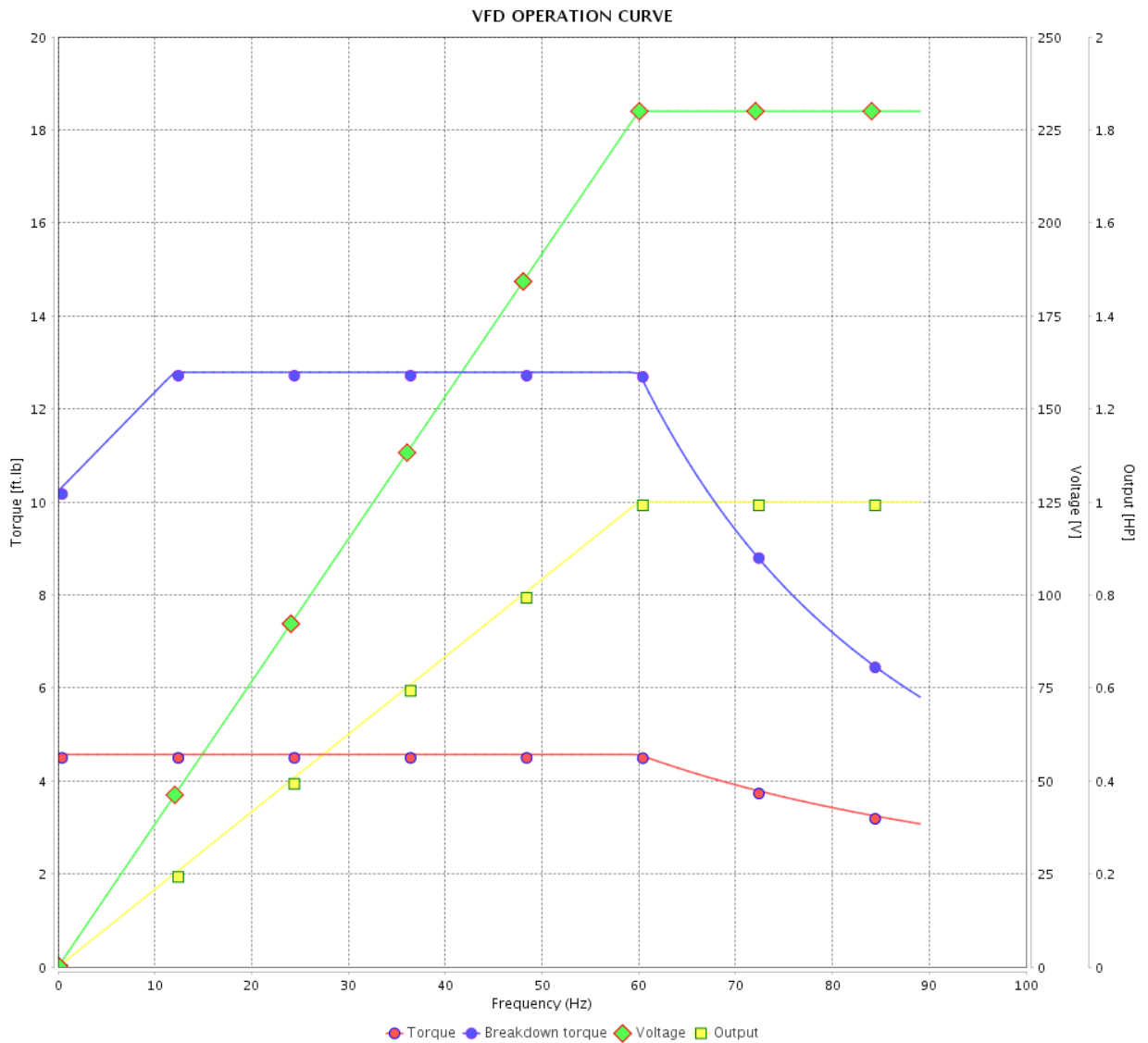
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

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 Product code : 14412517  
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Performance : 230/460 V 60 Hz 6P

Rated current : 3.26/1.63 A  
 LRC : 6.2  
 Rated torque : 4.57 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 280 %  
 Rated speed : 1150 rpm

Moment of inertia (J) : 0.1595 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



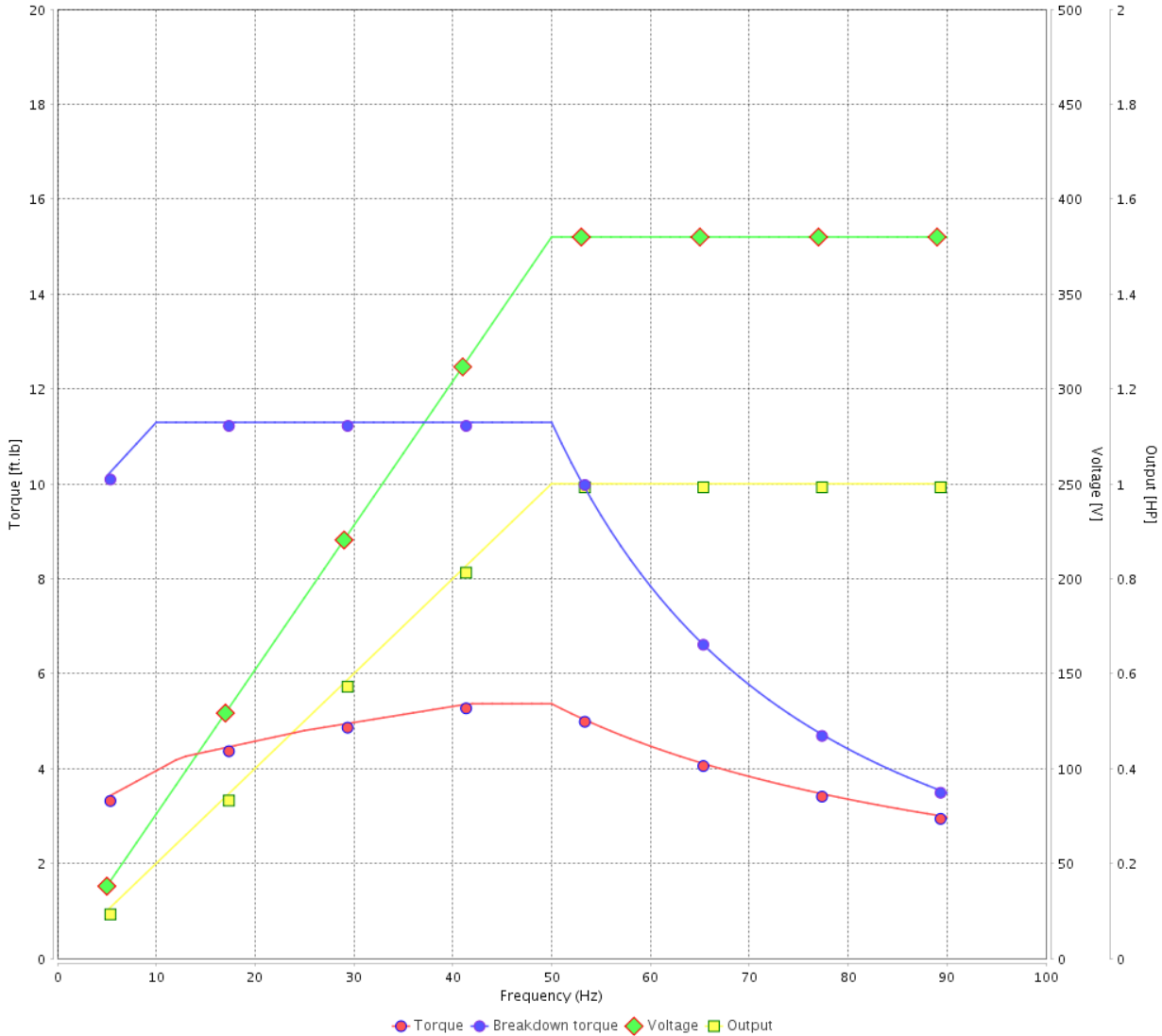
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 1.91 A  
 LRC : 4.8  
 Rated torque : 5.65 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 200 %  
 Rated speed : 930 rpm

Moment of inertia (J) : 0.1595 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

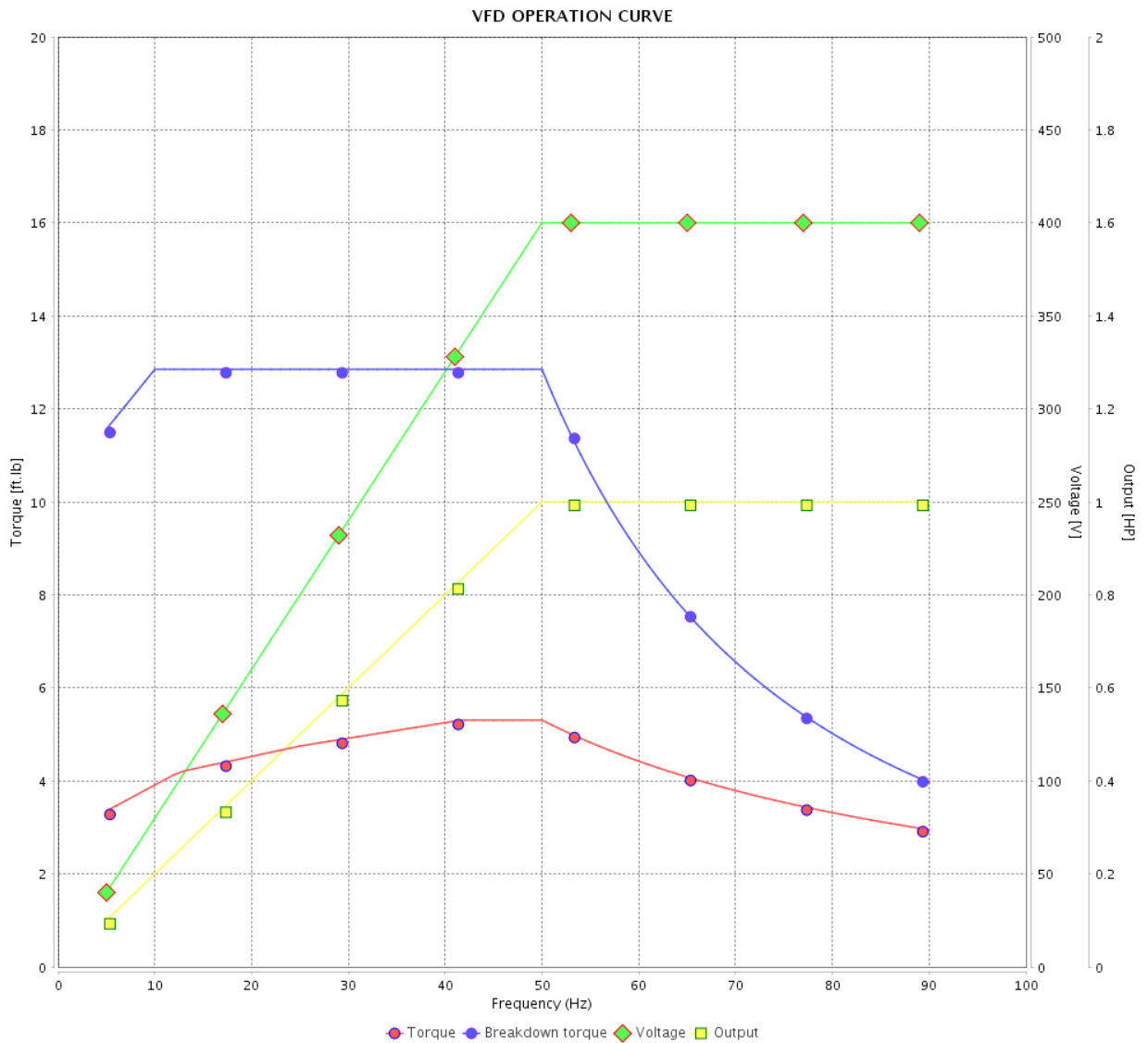


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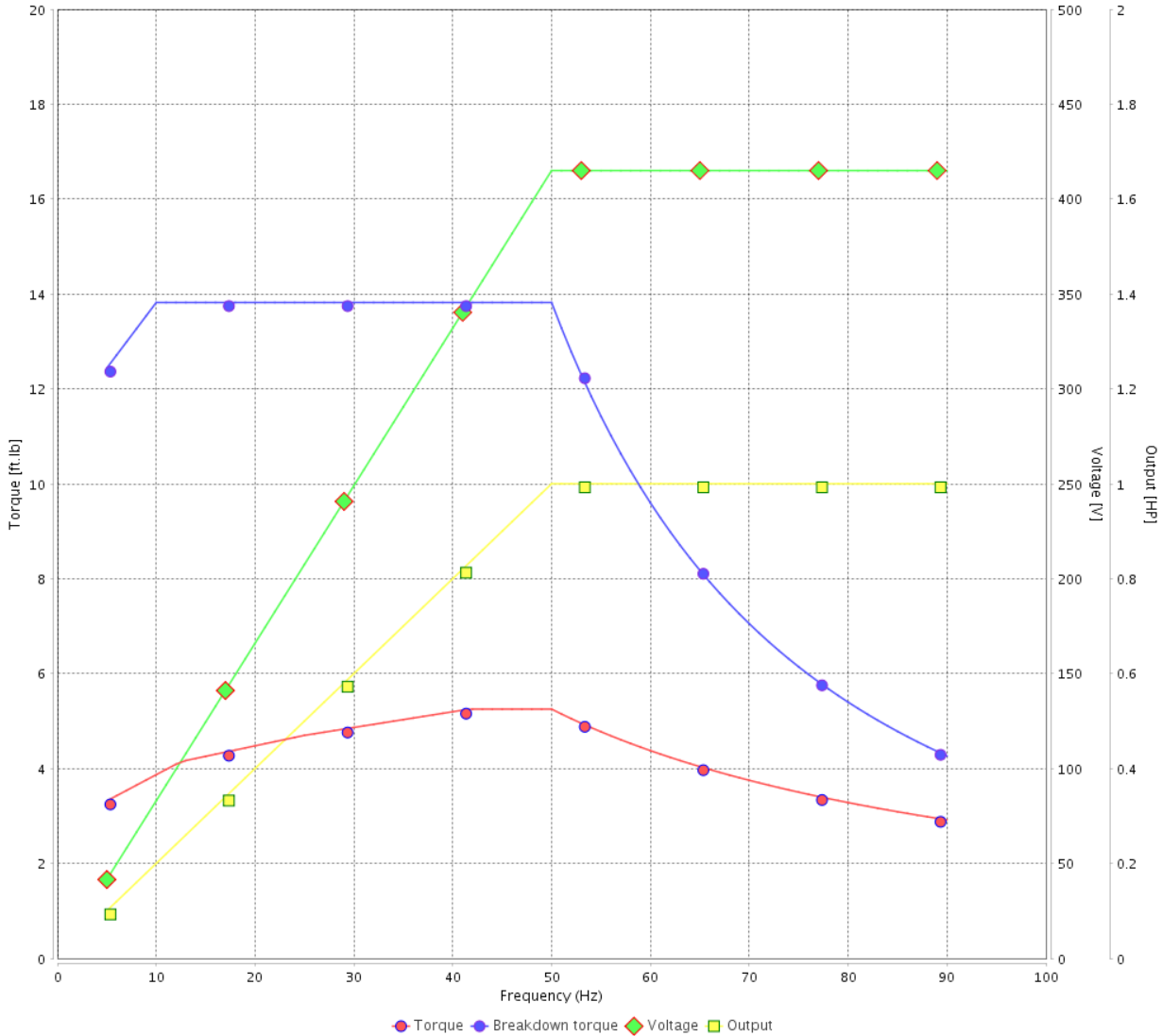
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VFD OPERATION CURVE

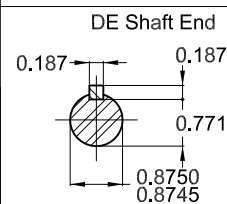
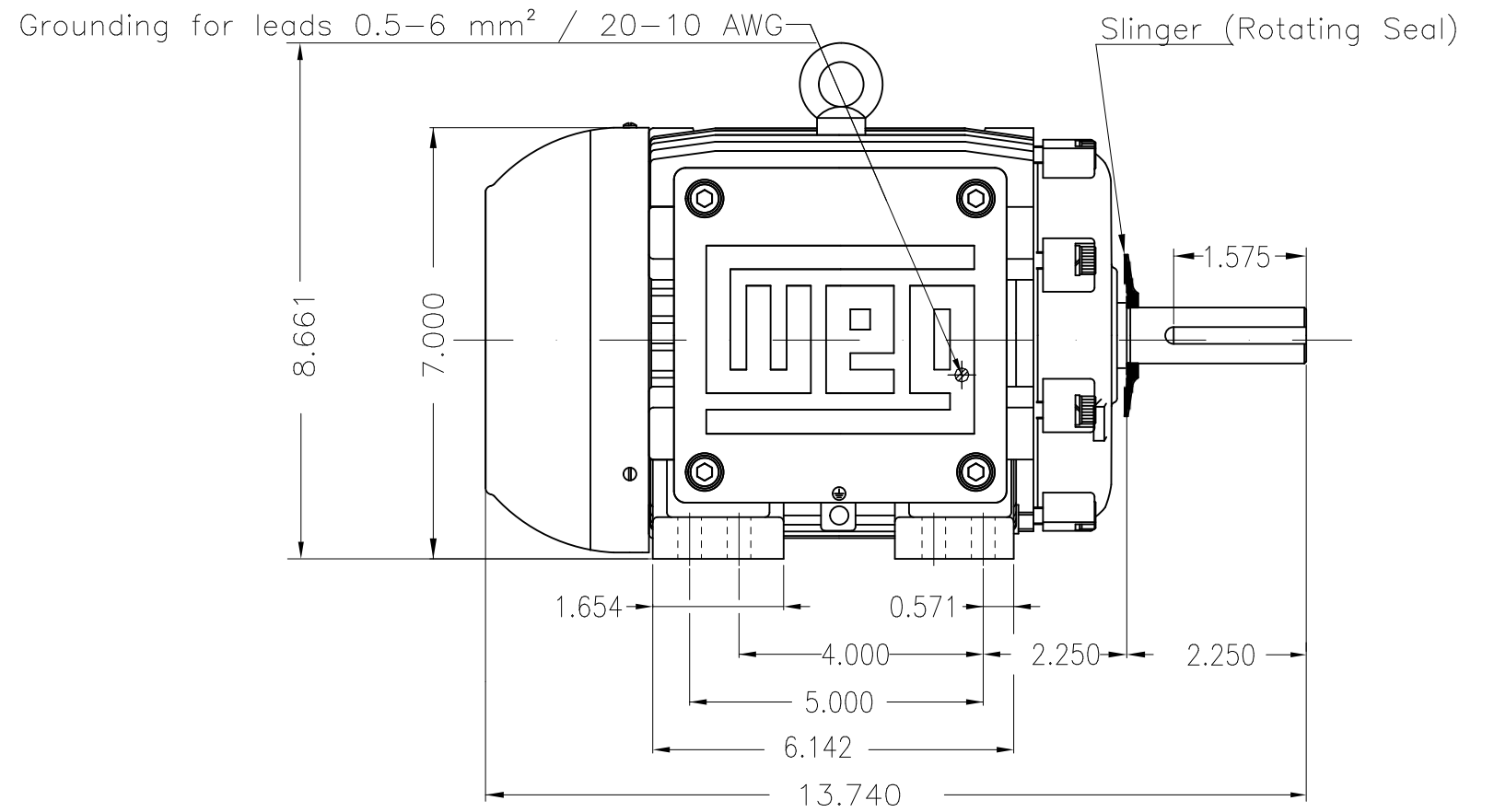
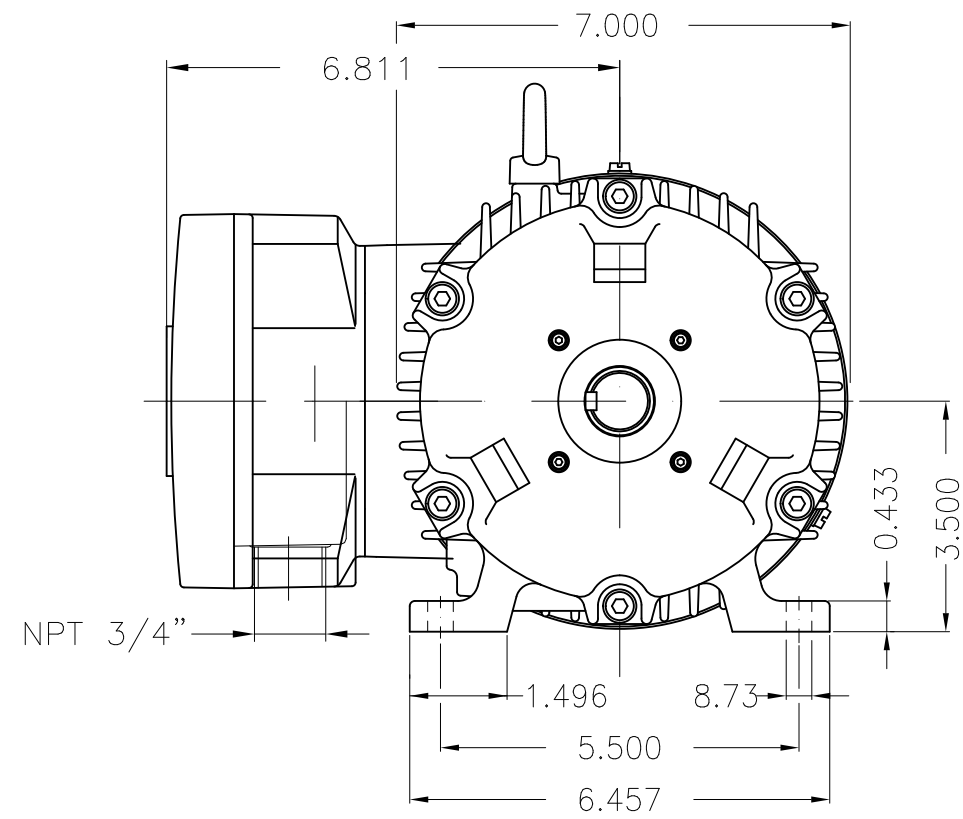


Performance : 415 V 50 Hz 6P IE2

Rated current : 1.85 A  
 LRC : 5.5  
 Rated torque : 5.53 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 250 %  
 Rated speed : 950 rpm

Moment of inertia (J) : 0.1595 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

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

1 HP 06 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 143/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

**PREVIEW**  
WDD



SHEET 1 / 1

MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14412517

CC029A

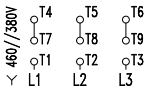
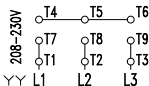
*Inverter Duty Motor*  
*Severe Duty*

LISTED

MODEL 00112XT3E145T

PH 3	FR 143/5T	
HP(kW) 1.0(0.75)		HZ 60 IP55
V 230/460	A 3.26/1.63	
RPM 1150	NEMA NOM EFF 82.5%	
PF 0.70	SFA 3.75/1.87	DES B
INS CL F $\Delta$ T 80 K	SF 1.15	ENCL TEFC
DUTY CONT.	CODE K	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V 3.60 A	SF 1.00
AMB 55°C SF1.0		

1.0HP 0.75kW 50Hz 380V 1.91A 930RPM SF1.00 EFF 78.5% (IE2)



→ 6205-2RS MOBIL POLYREX EM  
→ 6204-2RS

75 Lbs

C US  
Energy Verified

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.