

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14318121		
		Catalog # :	00152ET3E182JP-W22		
Frame	: 182/4JP	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>	: 70.3 lb		
Protection degree	: IP55	Moment of inertia (J)	: 0.4879 sq.ft.lb		
Design	: B				
Output [HP]	1.5	1.5	1.5	1.5	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	5.08/2.54	2.68	2.62	2.64	
L. R. Amperes [A]	39.6/19.8	16.9	18.1	19.5	
LRC [A]	7.8x(Code M)	6.3x(Code J)	6.9x(Code K)	7.4x(Code L)	
No load current [A]	3.25/1.63	1.60	1.71	1.80	
Rated speed [RPM]	1170	955	960	965	
Slip [%]	2.50	4.50	4.00	3.50	
Rated torque [ft.lb]	6.73	8.25	8.21	8.16	
Locked rotor torque [%]	320	250	300	330	
Breakdown torque [%]	400	290	330	370	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	28s (cold) 16s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	
Noise level <sup>2</sup>	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	82.8	86.0	84.1	82.8
	50%	84.0	85.5	84.5	84.0
	75%	86.5	86.5	86.5	85.5
	100%	87.5	85.5	86.5	86.5
Power Factor	25%	0.25	0.29	0.27	0.25
	50%	0.45	0.52	0.48	0.45
	75%	0.54	0.63	0.60	0.57
	100%	0.62	0.73	0.70	0.67
Bearing type	: Drive end : 6307 ZZ Non drive end : 6206 ZZ	Foundation loads			
Sealing	: V'Ring V'Ring	Max. traction	: 158 lb		
Lubrication interval	: - -	Max. compression	: 228 lb		
Lubricant amount	: - -				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 5.62A SF 1.15 SFA 6.46A					
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



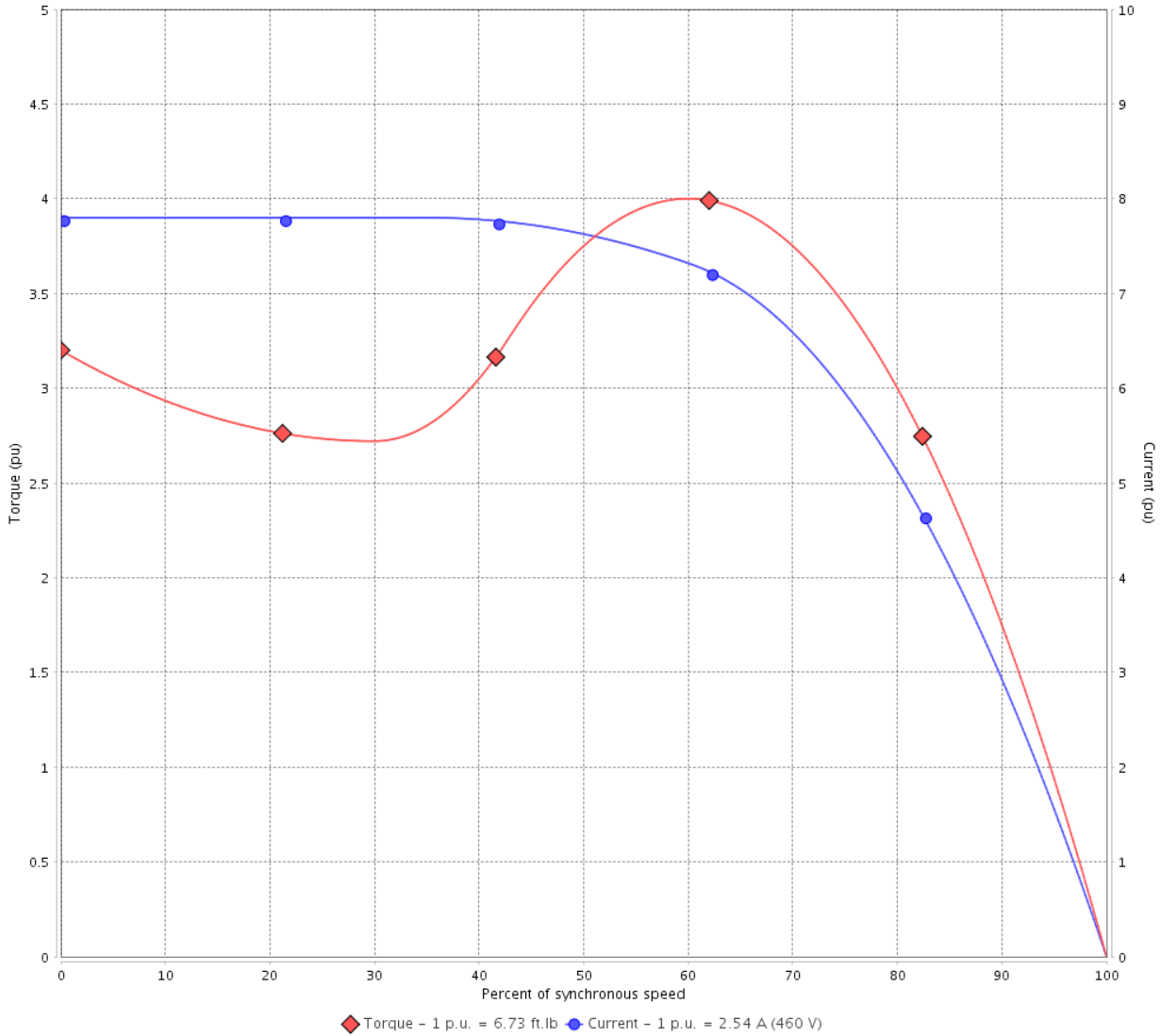
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 5.08/2.54 A  
 LRC : 7.8  
 Rated torque : 6.73 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 400 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 0.4879 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 28s (cold) 16s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



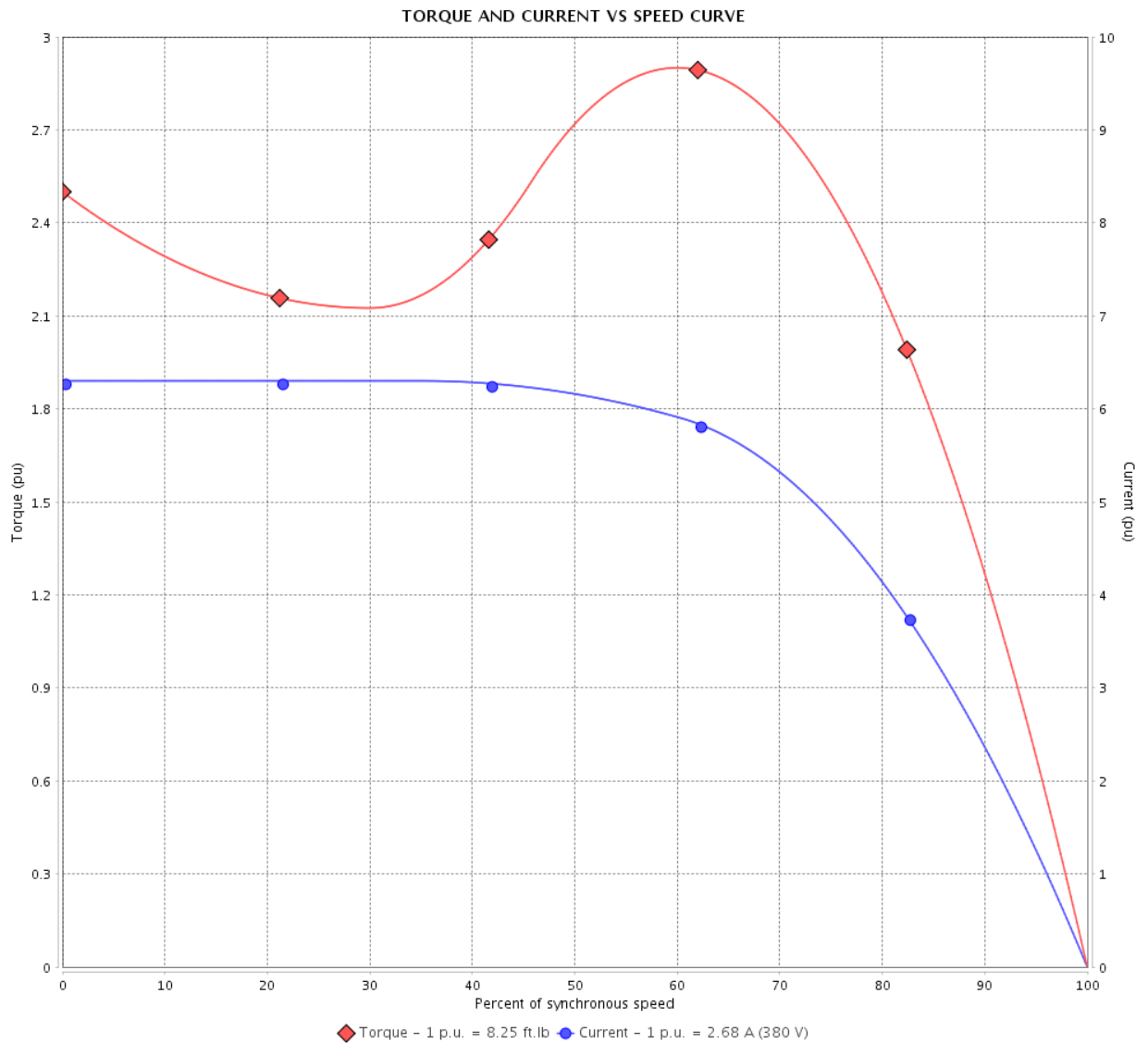
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 380 V 50 Hz 6P IE4

Rated current	: 2.68 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 8.25 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 955 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



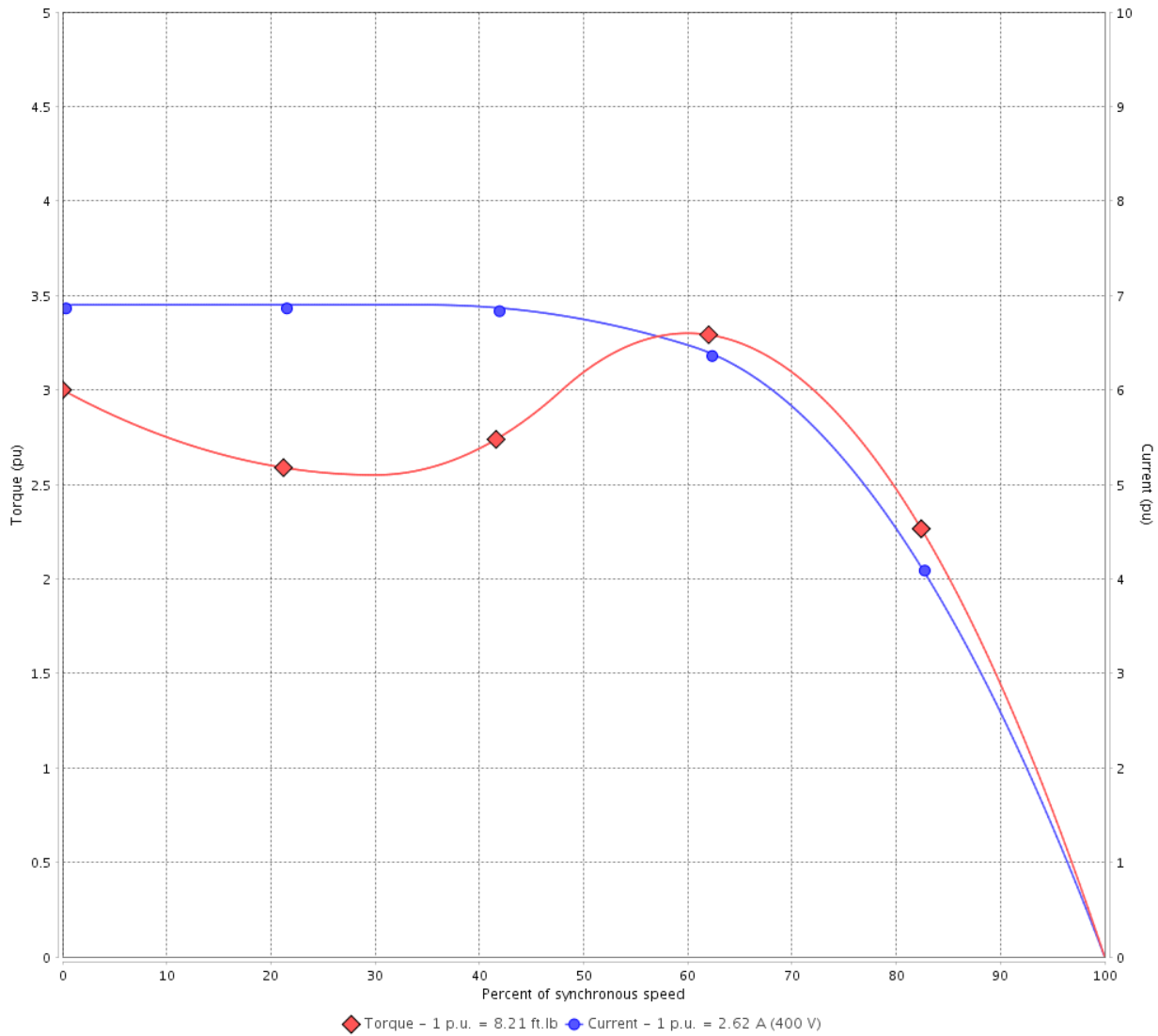
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current	: 2.62 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 8.21 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



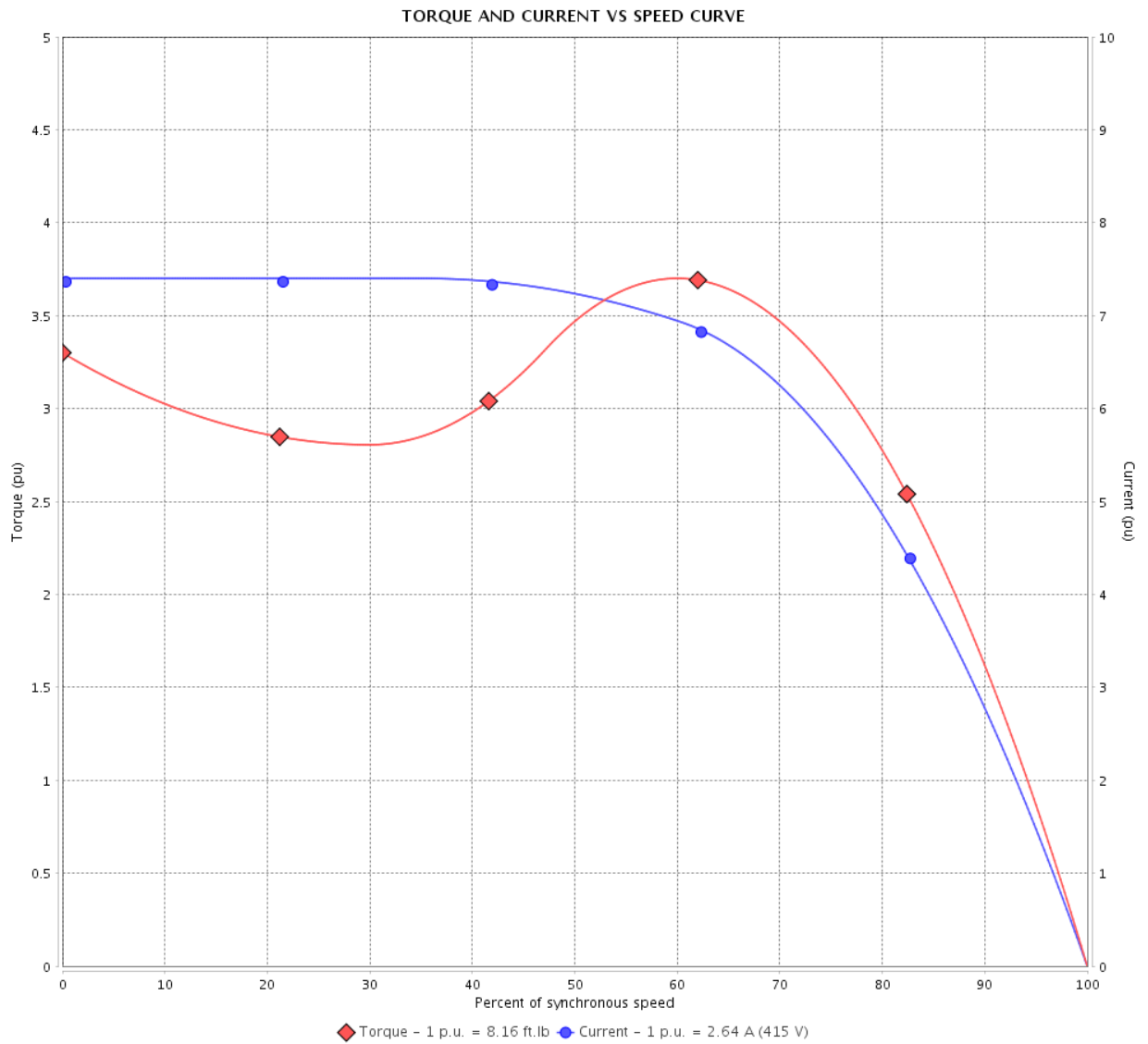
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 415 V 50 Hz 6P IE4

Rated current	: 2.64 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 8.16 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



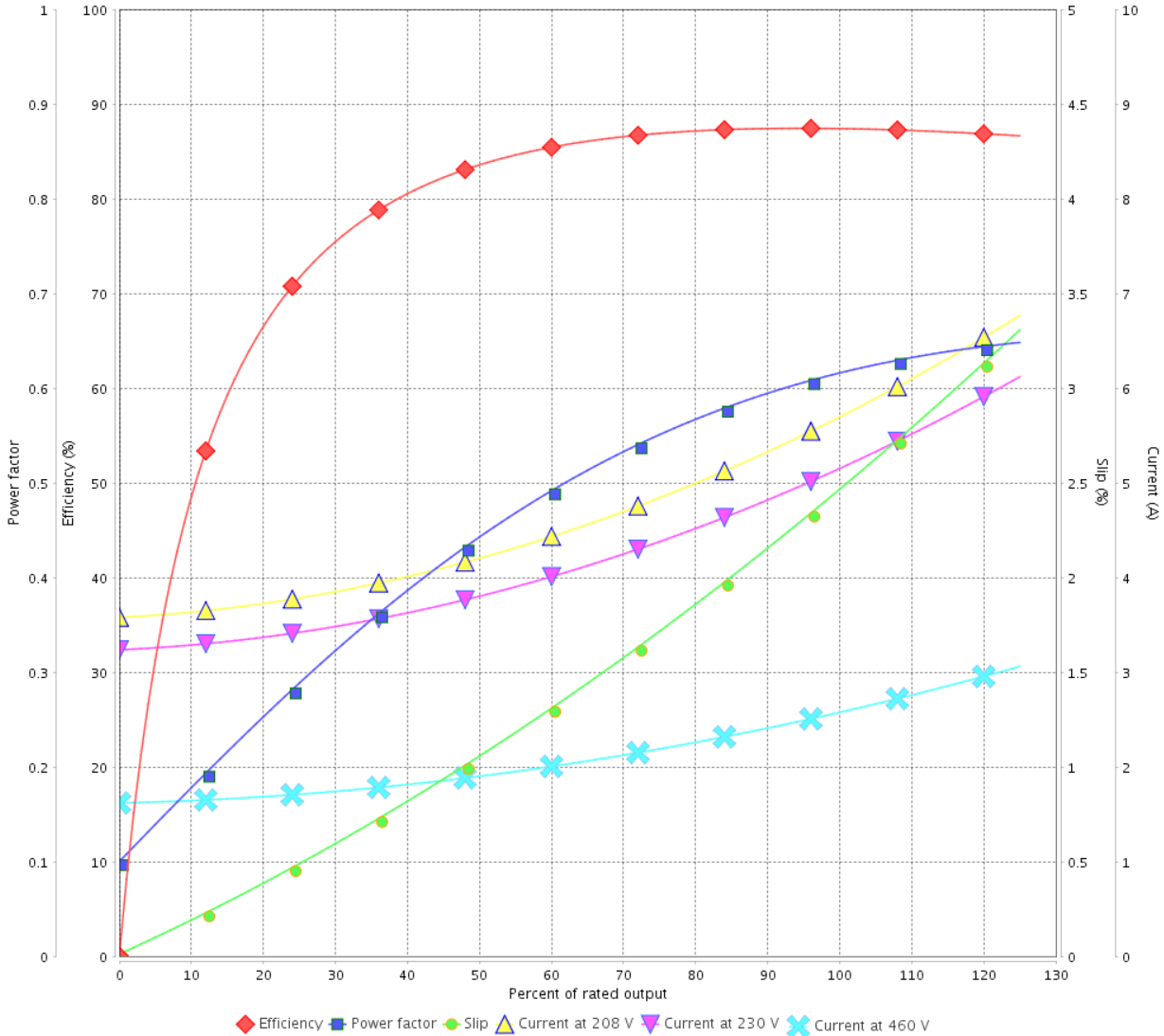
Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 5.08/2.54 A  
 LRC : 7.8  
 Rated torque : 6.73 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 400 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 0.4879 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

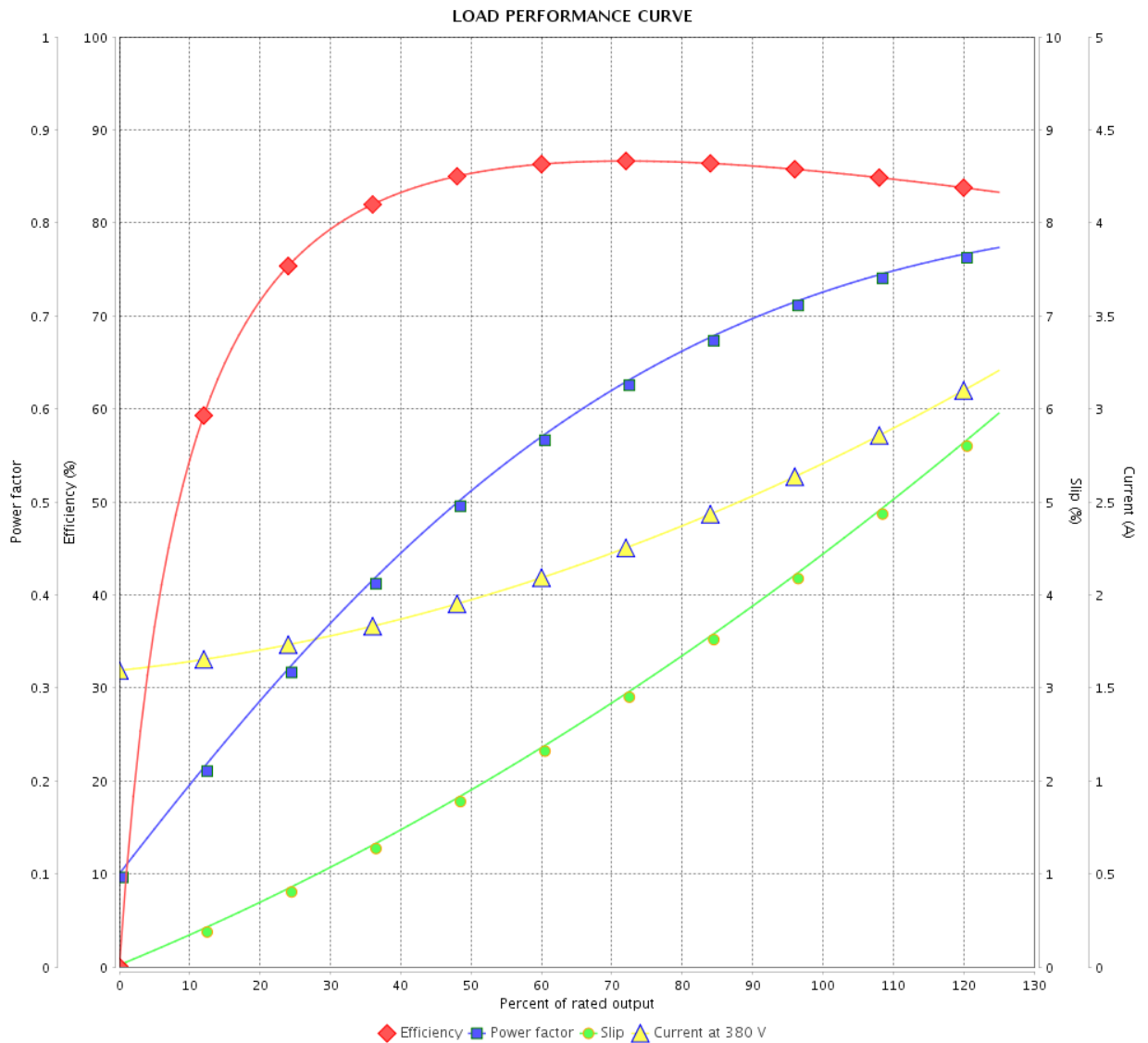


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 380 V 50 Hz 6P IE4

Rated current : 2.68 A  
 LRC : 6.3  
 Rated torque : 8.25 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 290 %  
 Rated speed : 955 rpm

Moment of inertia (J) : 0.4879 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



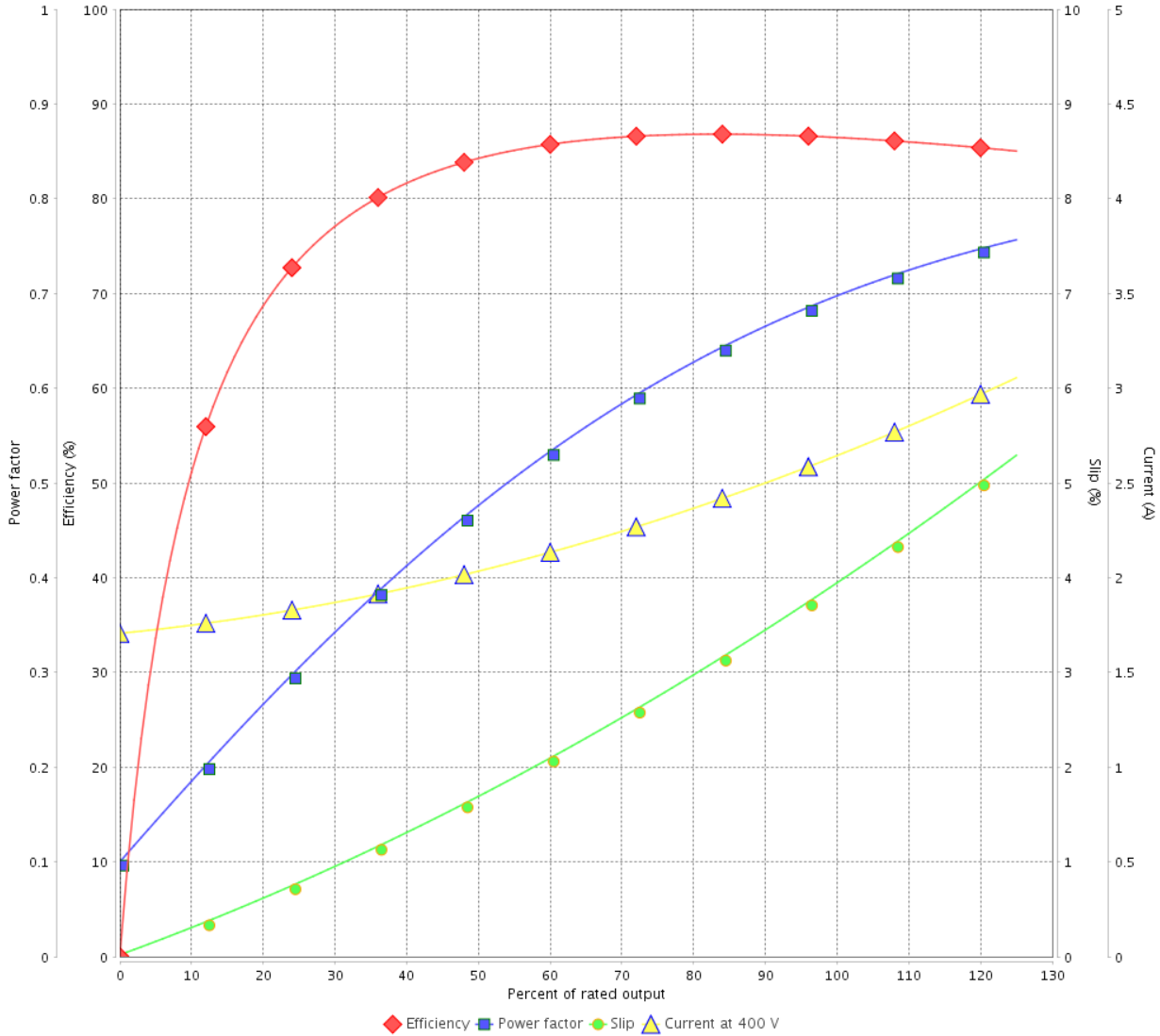
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current : 2.62 A  
 LRC : 6.9  
 Rated torque : 8.21 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 330 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 0.4879 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

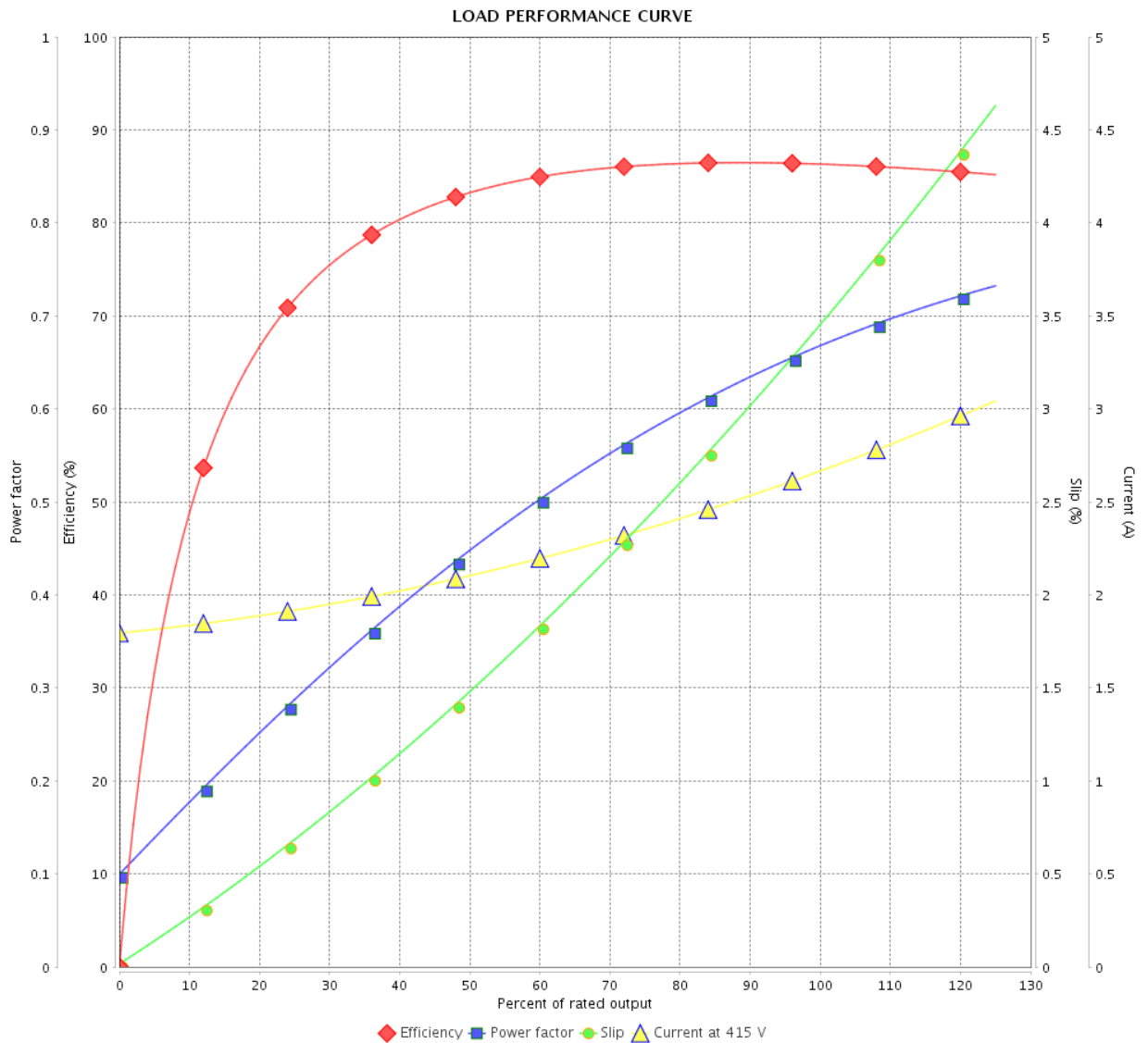


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 415 V 50 Hz 6P IE4

Rated current : 2.64 A  
 LRC : 7.4  
 Rated torque : 8.16 ft.lb  
 Locked rotor torque : 330 %  
 Breakdown torque : 370 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.4879 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

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14318121  
Catalog # : 00152ET3E182JP-W22

Performance : 230/460 V 60 Hz 6P

Rated current : 5.08/2.54 A	Moment of inertia (J) : 0.4879 sq.ft.lb
LRC : 7.8	Duty cycle : Cont.(S1)
Rated torque : 6.73 ft.lb	Insulation class : F
Locked rotor torque : 320 %	Service factor : 1.25
Breakdown torque : 400 %	Temperature rise : 80 K
Rated speed : 1170 rpm	Design : B

Heating constant

Cooling constant

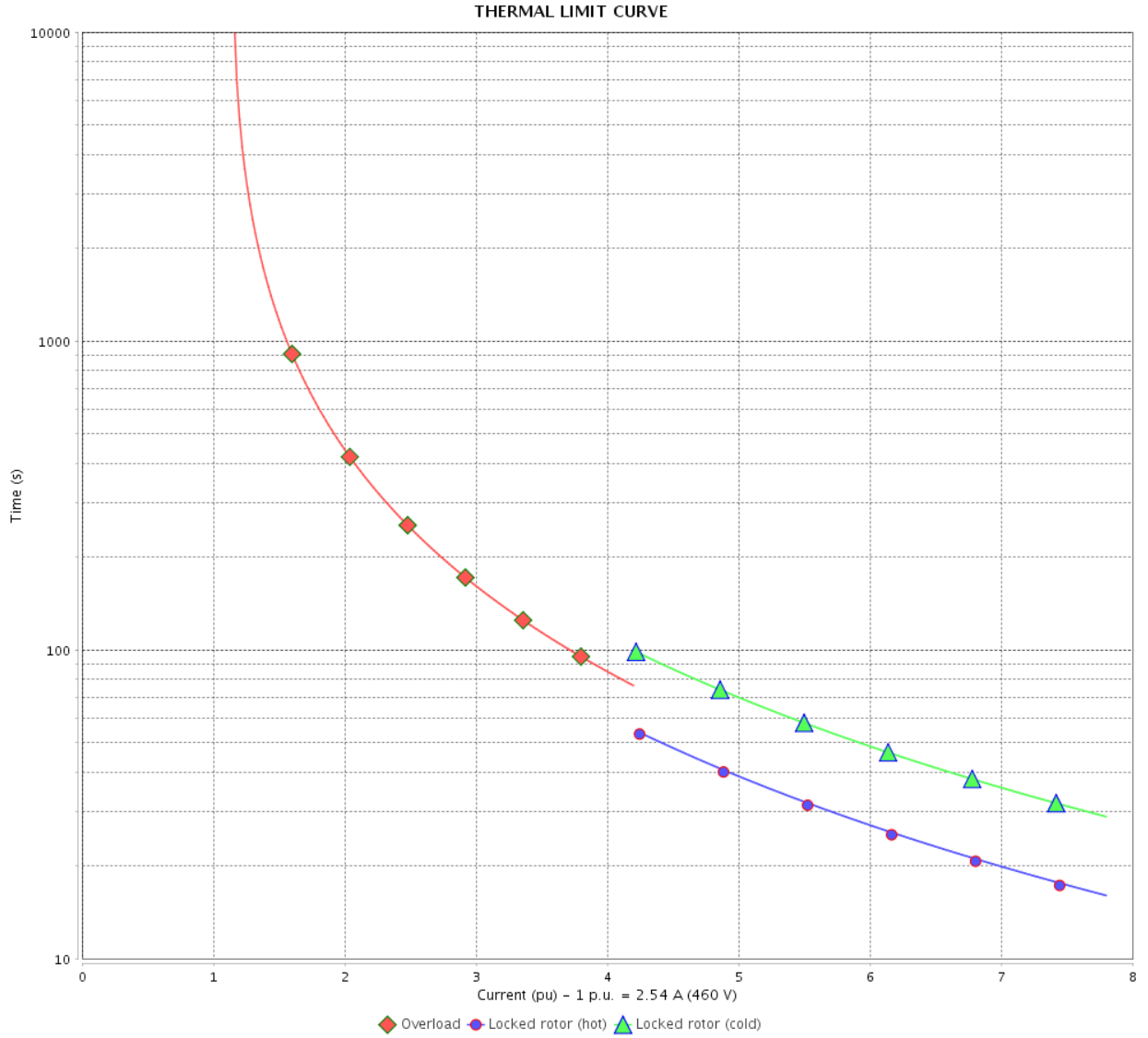
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14318121  
Catalog # : 00152ET3E182JP-W22

Performance : 380 V 50 Hz 6P IE4

Rated current	: 2.68 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 8.25 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 955 rpm	Design	: B

Heating constant

Cooling constant

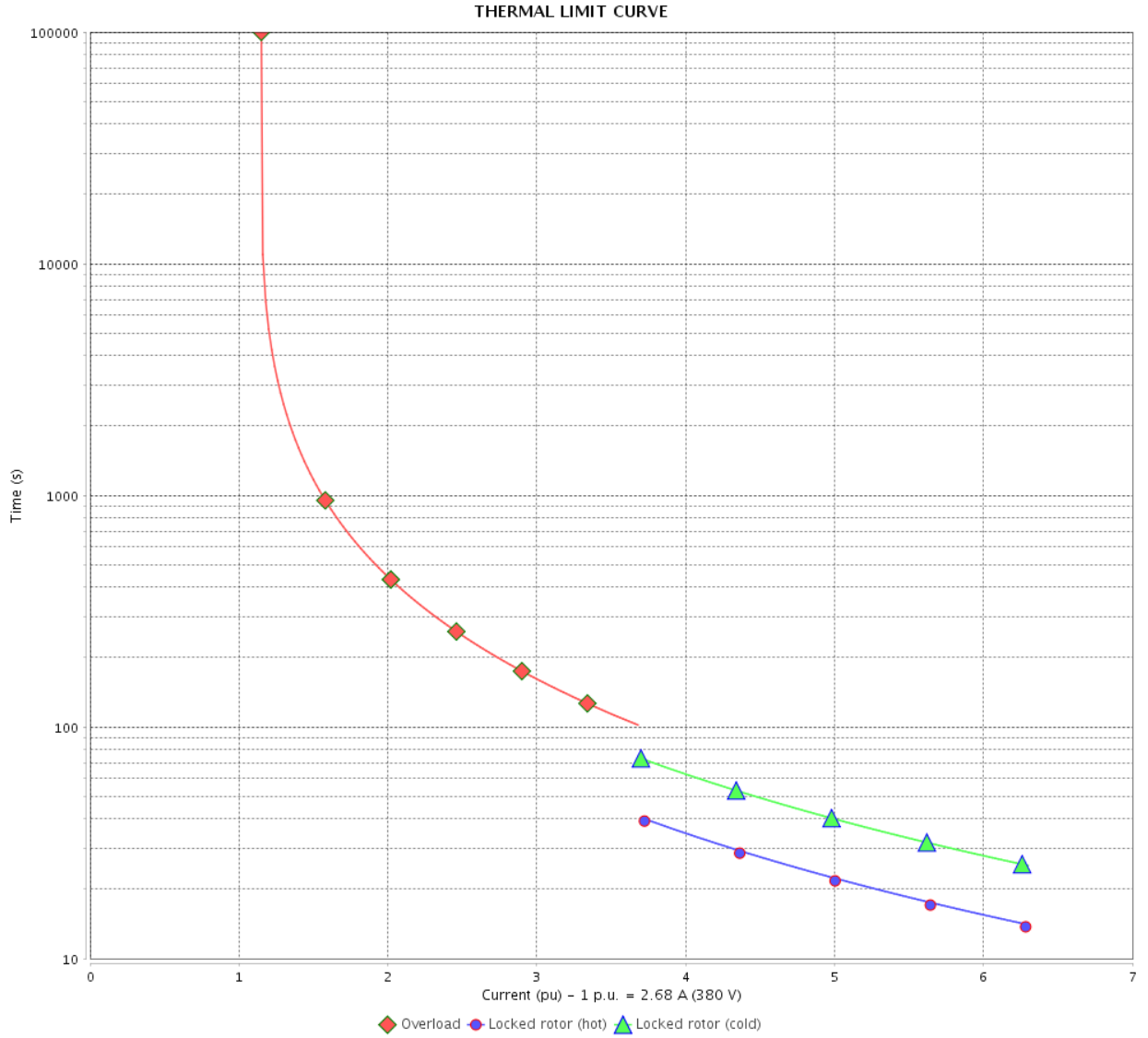
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# THERMAL LIMIT CURVE

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 : 14318121  
Catalog # : 00152ET3E182JP-W22

Performance : 400 V 50 Hz 6P IE4

Rated current	: 2.62 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 8.21 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

Heating constant

Cooling constant

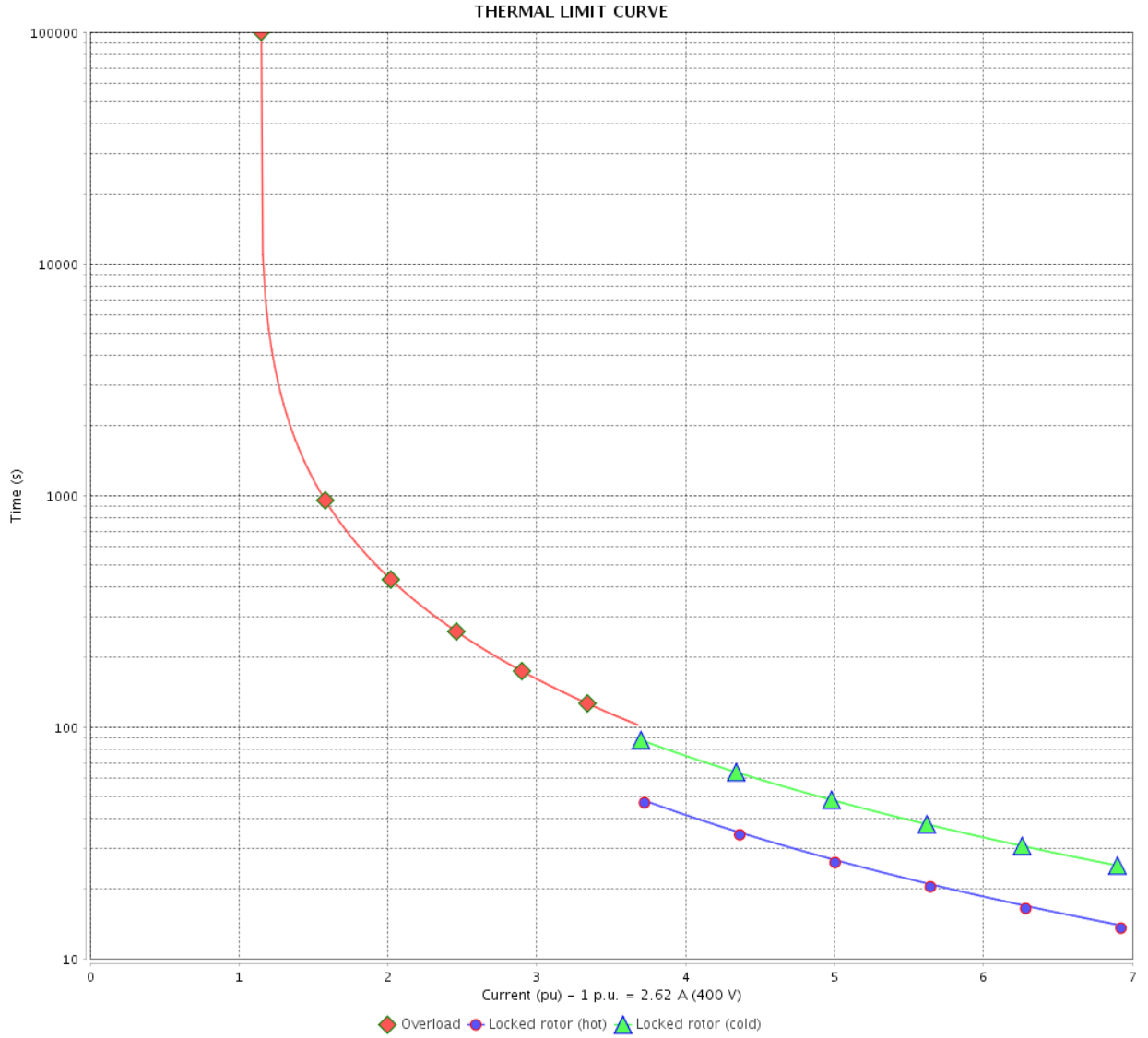
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# THERMAL LIMIT CURVE

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 : 14318121  
Catalog # : 00152ET3E182JP-W22

Performance : 415 V 50 Hz 6P IE4

Rated current	: 2.64 A	Moment of inertia (J)	: 0.4879 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 8.16 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 370 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

Heating constant

Cooling constant

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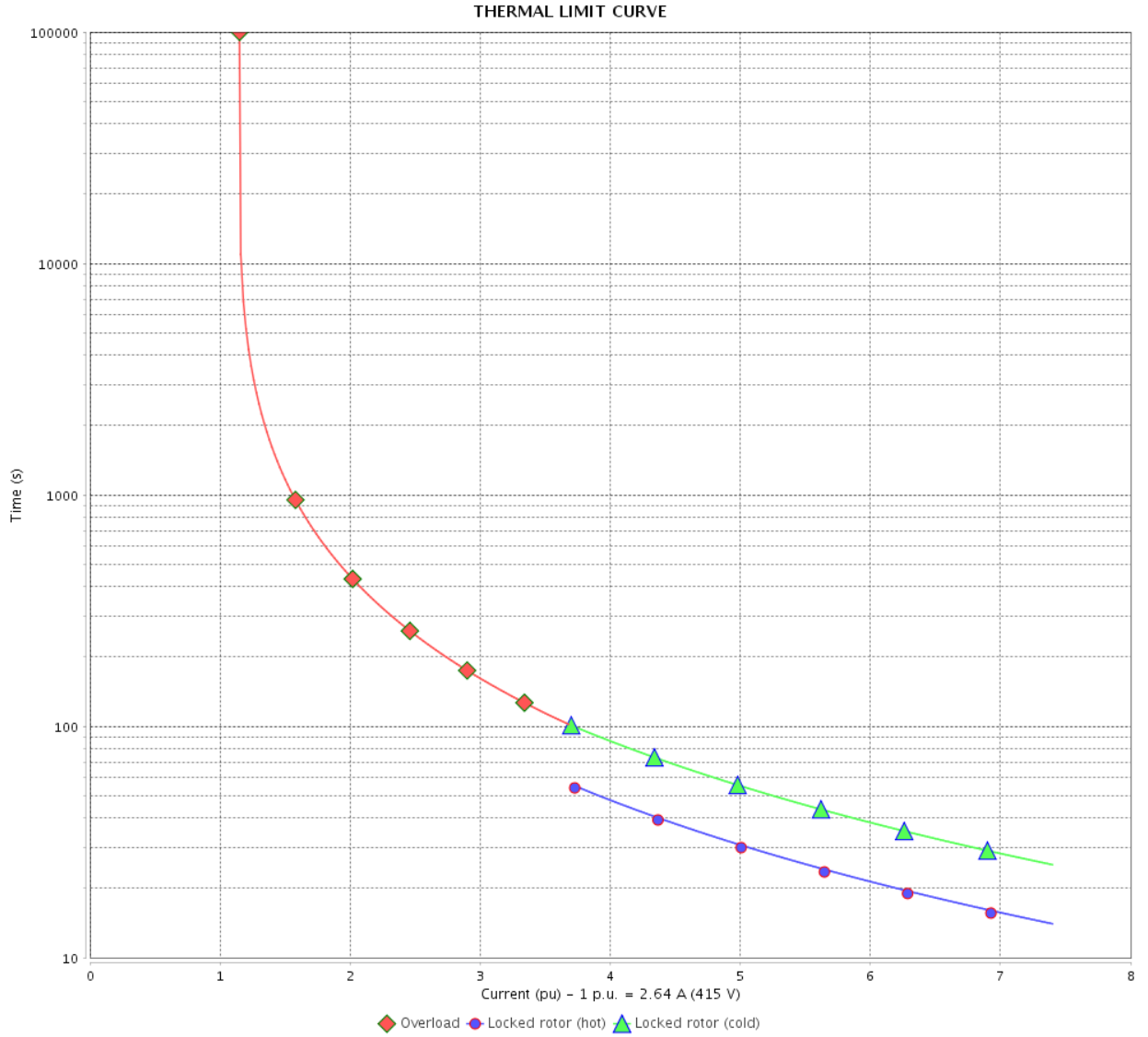


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



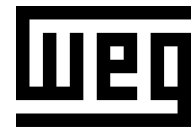
Customer : \_\_\_\_\_



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

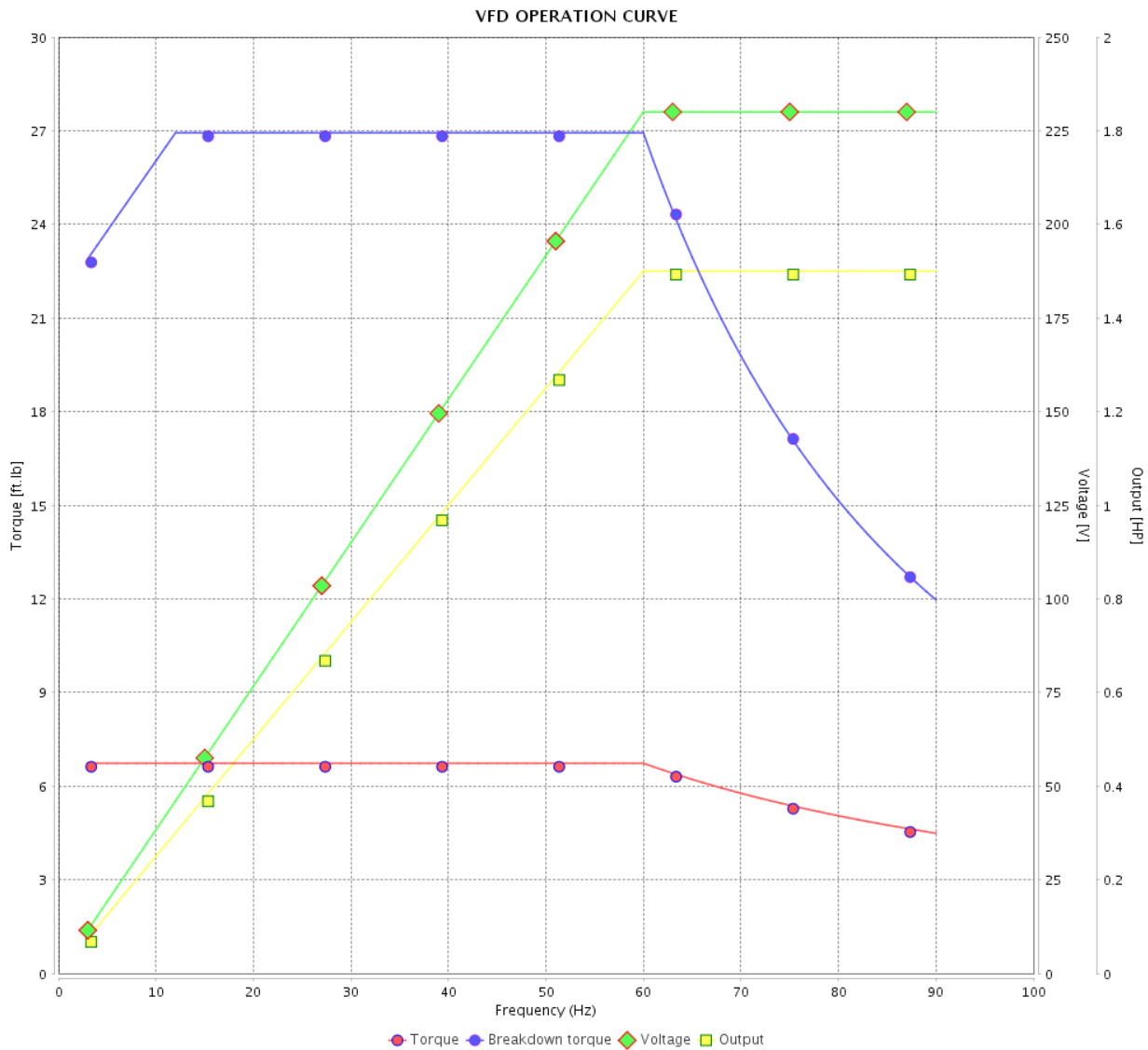


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 230/460 V 60 Hz 6P

Rated current : 5.08/2.54 A  
 LRC : 7.8  
 Rated torque : 6.73 ft.lb  
 Locked rotor torque : 320 %  
 Breakdown torque : 400 %  
 Rated speed : 1170 rpm

Moment of inertia (J) : 0.4879 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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Checked by				
Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

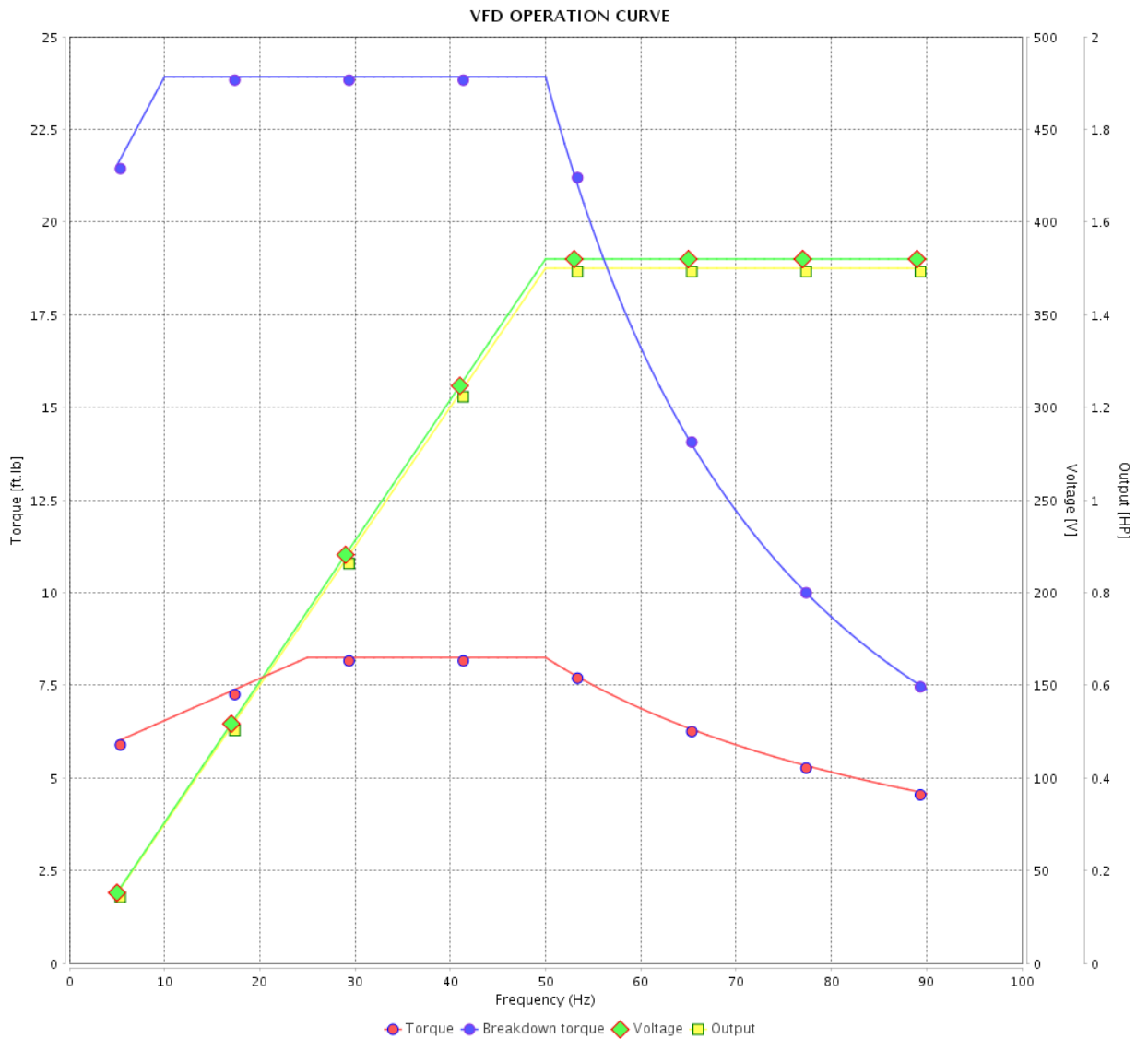


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 380 V 50 Hz 6P IE4

Rated current : 2.68 A  
 LRC : 6.3  
 Rated torque : 8.25 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 290 %  
 Rated speed : 955 rpm

Moment of inertia (J) : 0.4879 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



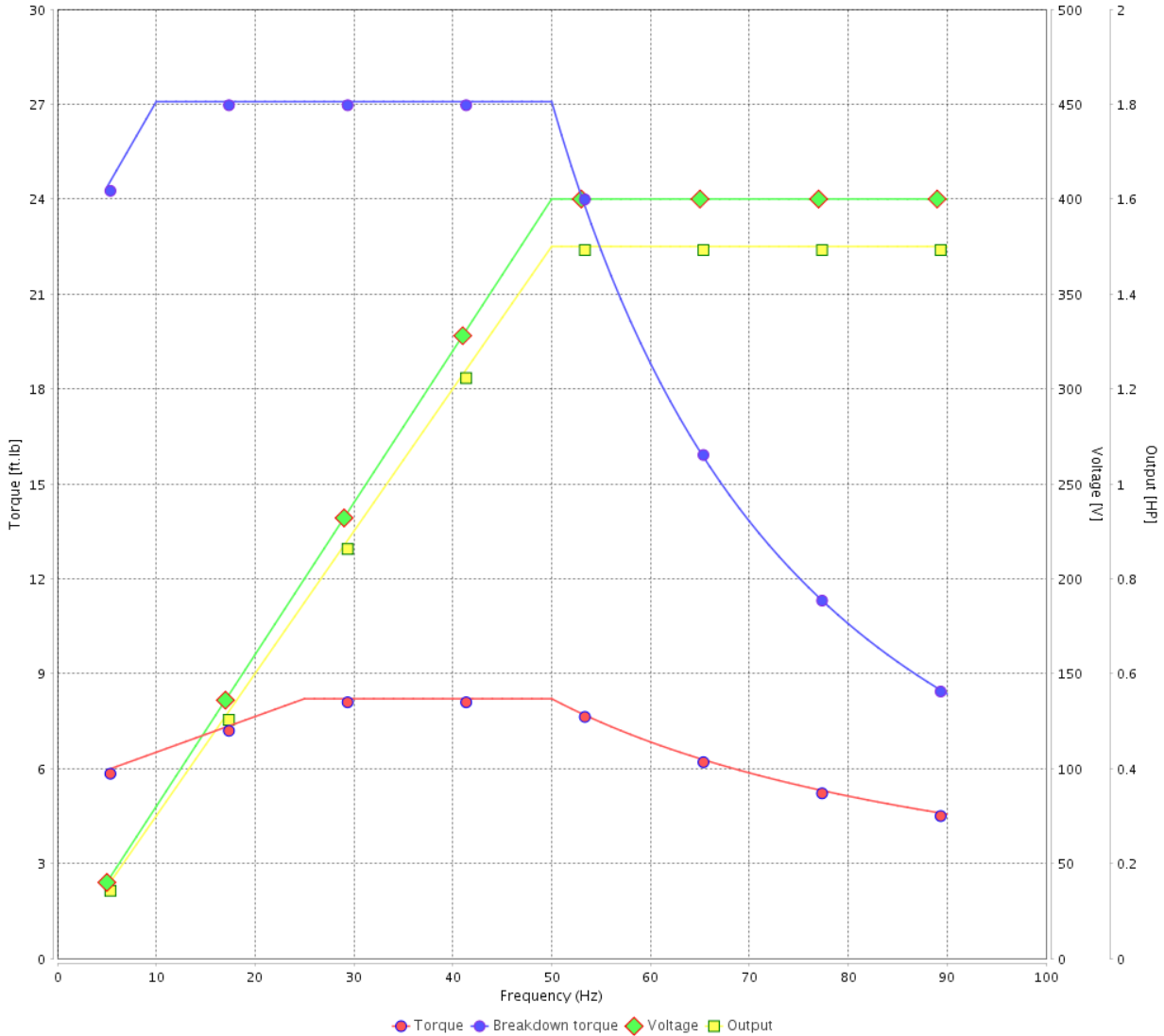
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current : 2.62 A  
 LRC : 6.9  
 Rated torque : 8.21 ft.lb  
 Locked rotor torque : 300 %  
 Breakdown torque : 330 %  
 Rated speed : 960 rpm

Moment of inertia (J) : 0.4879 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

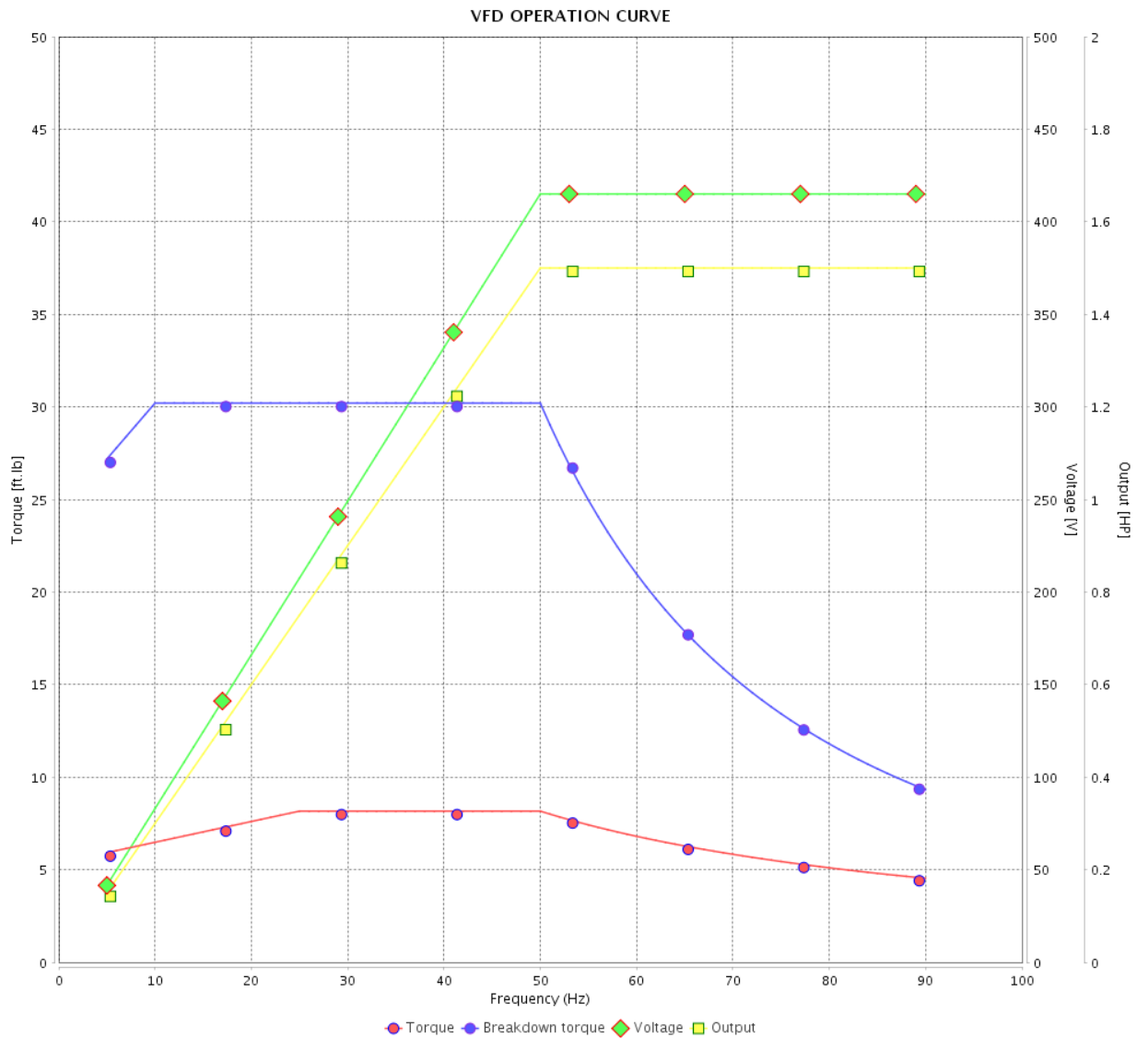


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14318121

Catalog # : 00152ET3E182JP-W22



Performance : 415 V 50 Hz 6P IE4

Rated current : 2.64 A  
 LRC : 7.4  
 Rated torque : 8.16 ft.lb  
 Locked rotor torque : 330 %  
 Breakdown torque : 370 %  
 Rated speed : 965 rpm

Moment of inertia (J) : 0.4879 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

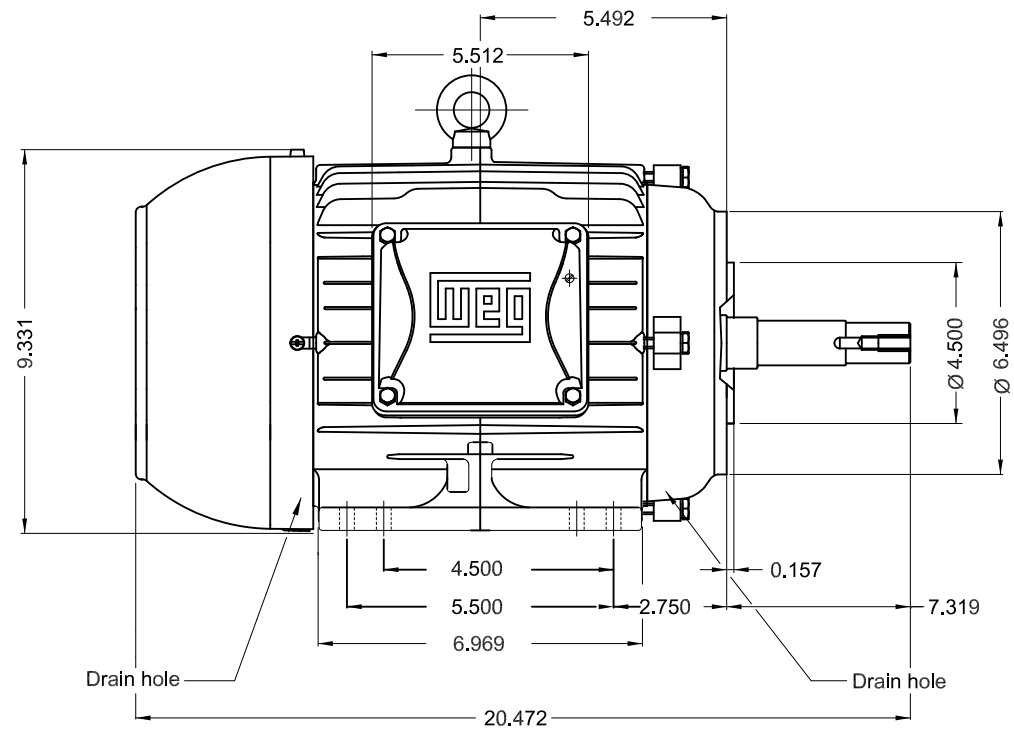
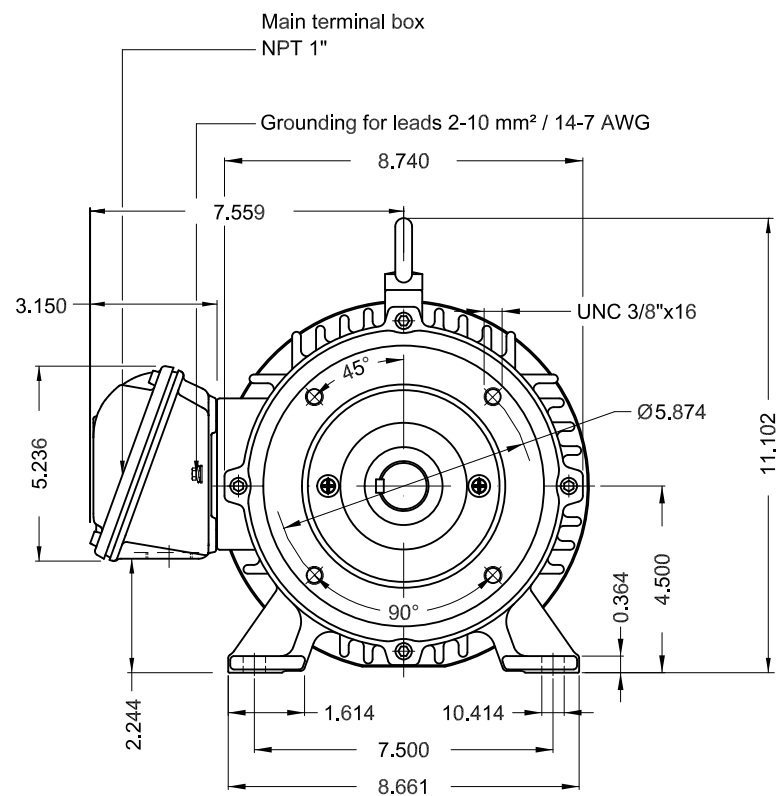
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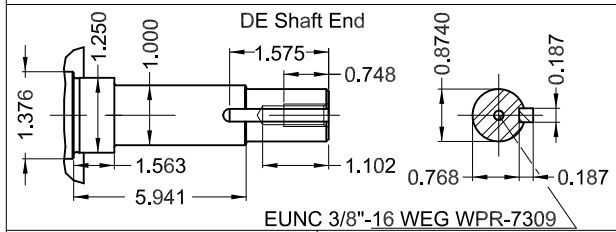
A

B

C



D



E

Color RAL 5009  
 Painting plan 207A  
 Mounting NEMA F-1  
 Mounting B34R(D)

1.5 HP 06 Poles 60 Hz

A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR JM/JP/JET PUMP W22 PREM. EFF.					
CHECKED		FRAME 182/4JP IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW  
 WDD

