

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: NEMA Premium Efficiency Three-Phase	
Product code :	13248783	
Catalog # :	002180T3E145TC-SG	
Frame	: 143/5TC	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Design	: B	
Cooling method	: IC01 - ODP	
Mounting	: F-1	
Rotation ¹	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight ²	: 40.3 lb	
Moment of inertia (J)	: 0.1168 sq.ft.lb	
Output [HP]	2	
Poles	4	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	5.38/2.69	
L. R. Amperes [A]	41.4/20.7	
LRC [A]	7.7x(Code K)	
No load current [A]	2.75/1.38	
Rated speed [RPM]	1740	
Slip [%]	3.33	
Rated torque [ft.lb]	6.04	
Locked rotor torque [%]	260	
Breakdown torque [%]	320	
Service factor	1.00	
Temperature rise	80 K	
Locked rotor time	30s (cold) 17s (hot)	
Noise level ²	52.0 dB(A)	
Efficiency (%)	25%	85.2
	50%	85.5
	75%	86.5
	100%	86.5
Power Factor	25%	0.36
	50%	0.61
	75%	0.74
	100%	0.81
Bearing type	: <u>Drive end</u> 6205 ZZ <u>Non drive end</u> 6203 ZZ	
Sealing	: Without Without	
	: Bearing Seal Bearing Seal	
Lubrication interval	: - -	
Lubricant amount	: - -	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 147 lb	
	Max. compression : 187 lb	
Notes		
USABLE @208V 5.95A SF 1.00 SFA 5.95A		
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.		
Rev.	Changes Summary	
Performed by	Performed	
Checked by	Checked	
Date	14/04/2022	
Page	1 / 16	
Revision		

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



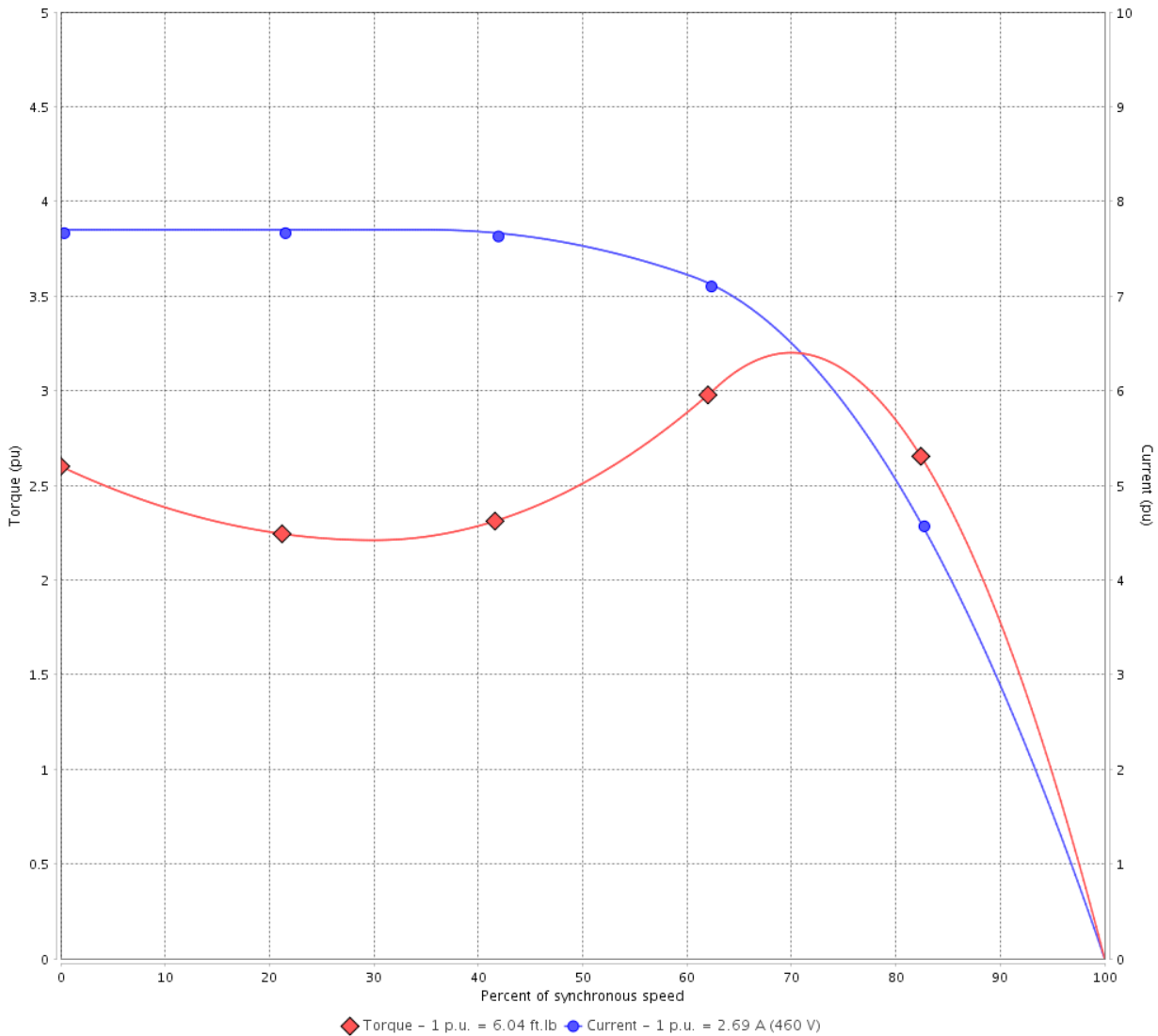
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248783

Catalog # : 002180T3E145TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 5.38/2.69 A
 LRC : 7.7
 Rated torque : 6.04 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 320 %
 Rated speed : 1740 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



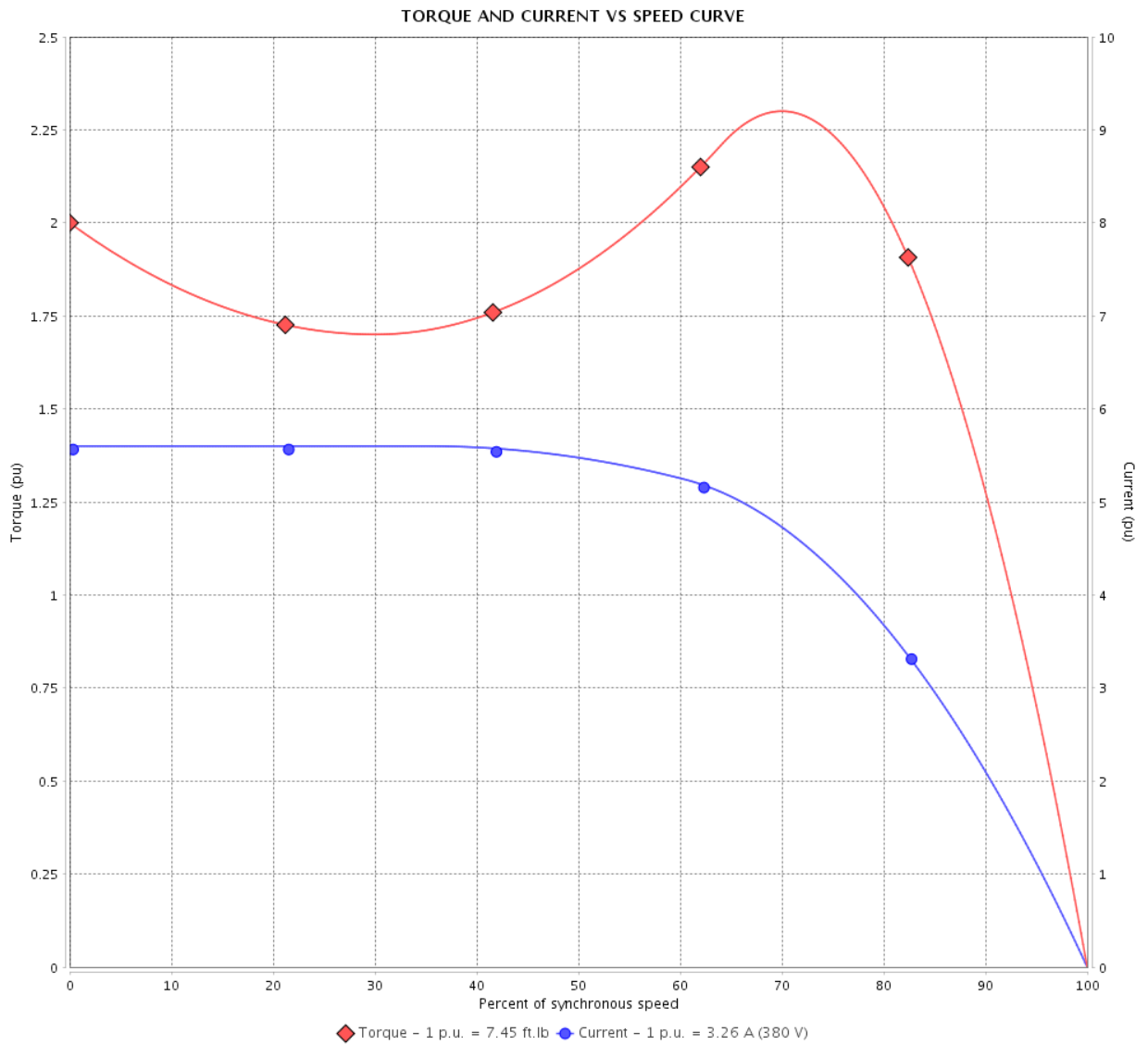
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 13248783

Catalog # : 002180T3E145TC-SG



Performance : 190/380 V 50 Hz 4P

Rated current : 6.52/3.26 A
 LRC : 5.6
 Rated torque : 7.45 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1410 rpm

Moment of inertia (J) : 0.1168 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)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 16		
Date		14/04/2022		

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



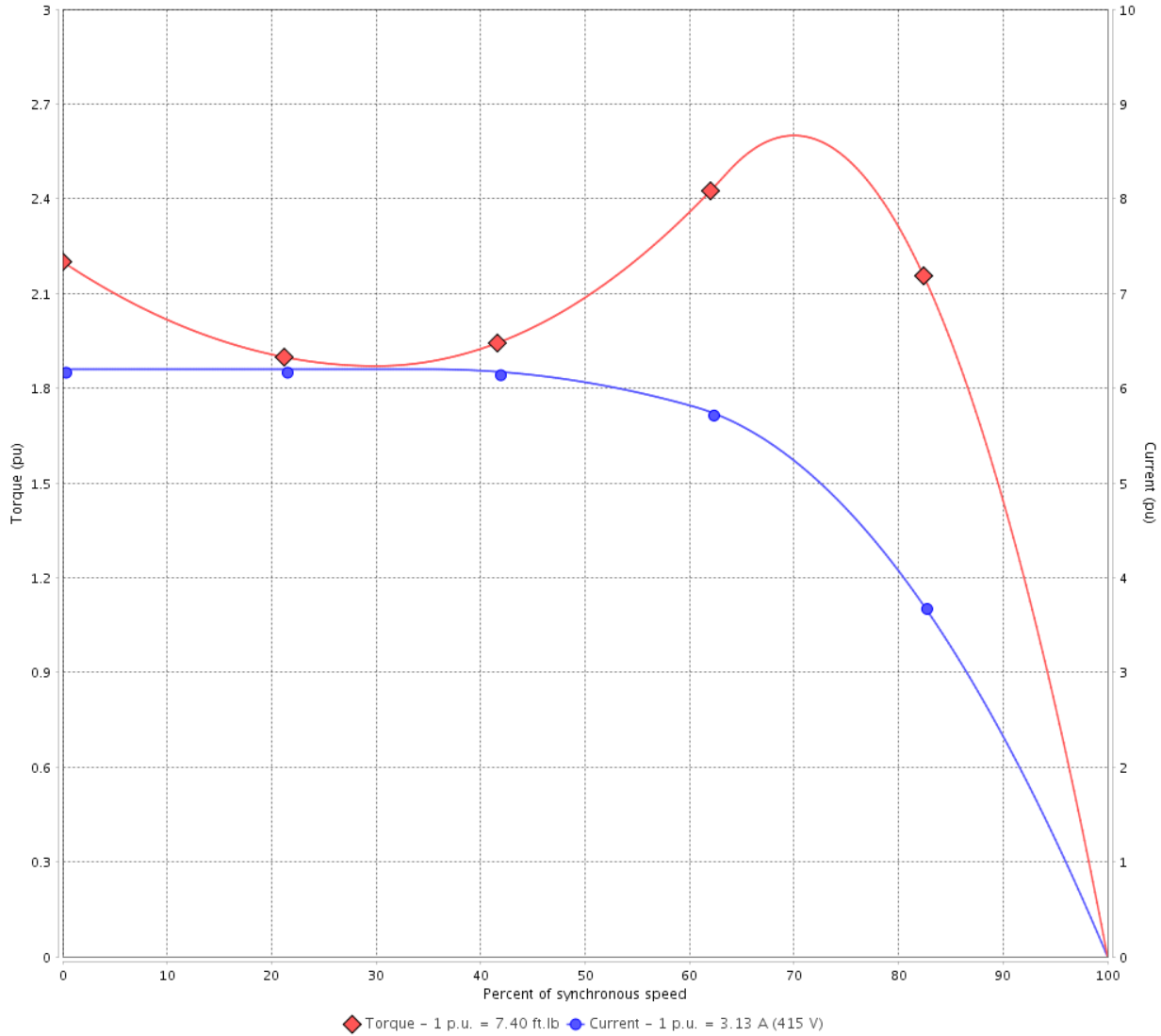
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Product code : 13248783

Catalog # : 002180T3E145TC-SG

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

Rated current	: 5.90/3.13 A	Moment of inertia (J)	: 0.1168 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 7.40 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1420 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	14/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

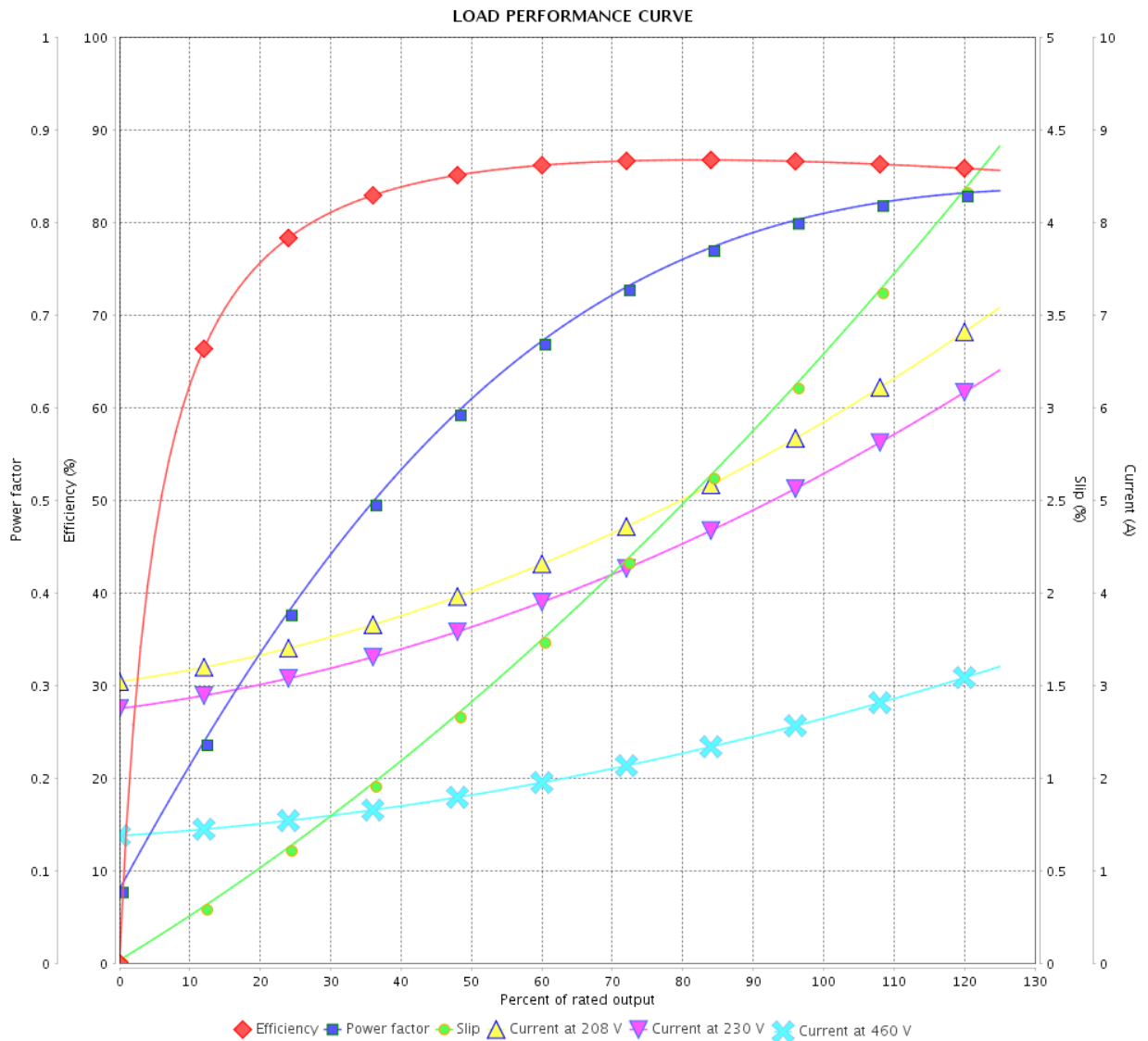


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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 16	
Date	14/04/2022			

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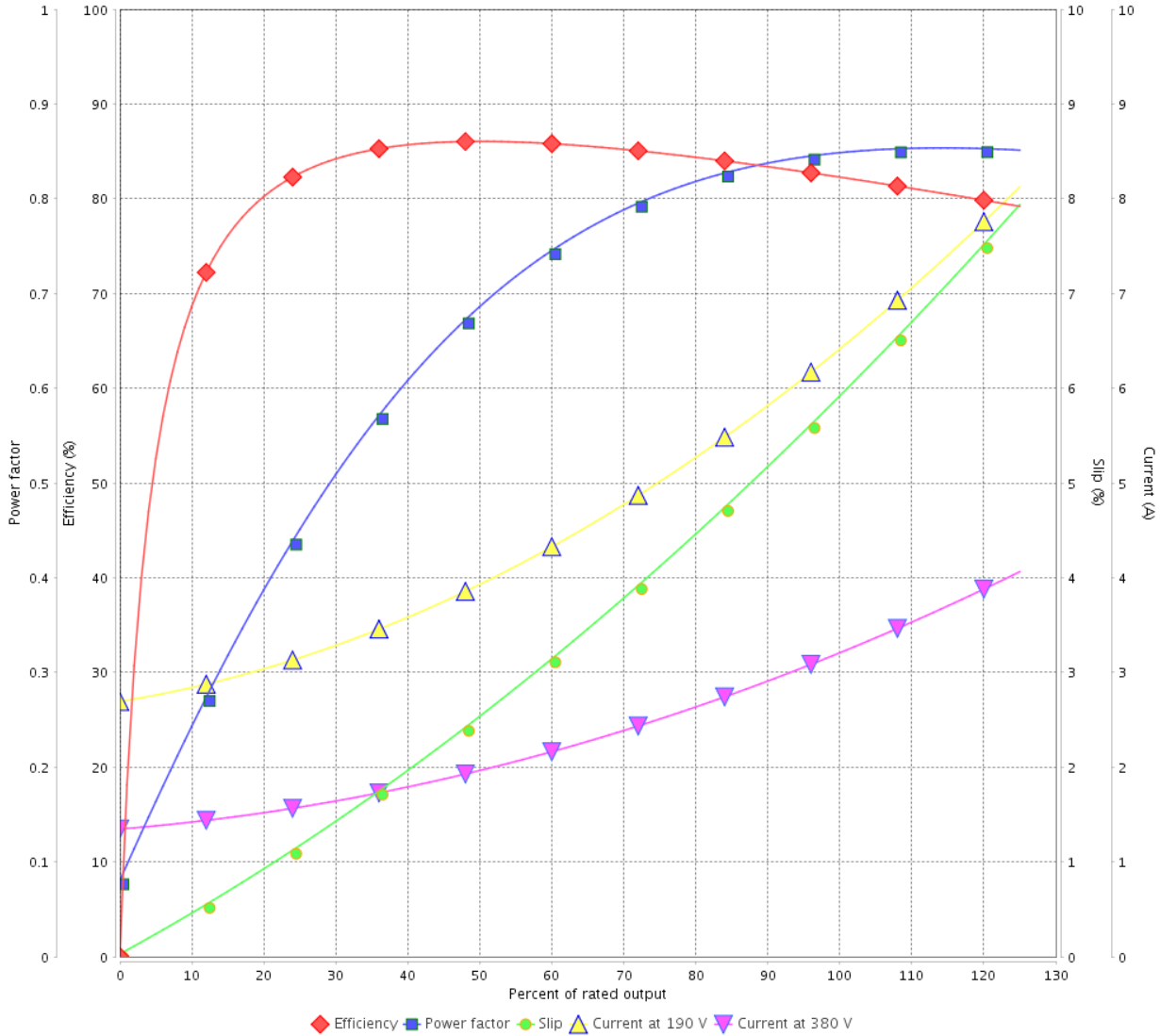
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 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1410 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			6 / 16	
Date	14/04/2022			

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Three Phase Induction Motor - Squirrel Cage

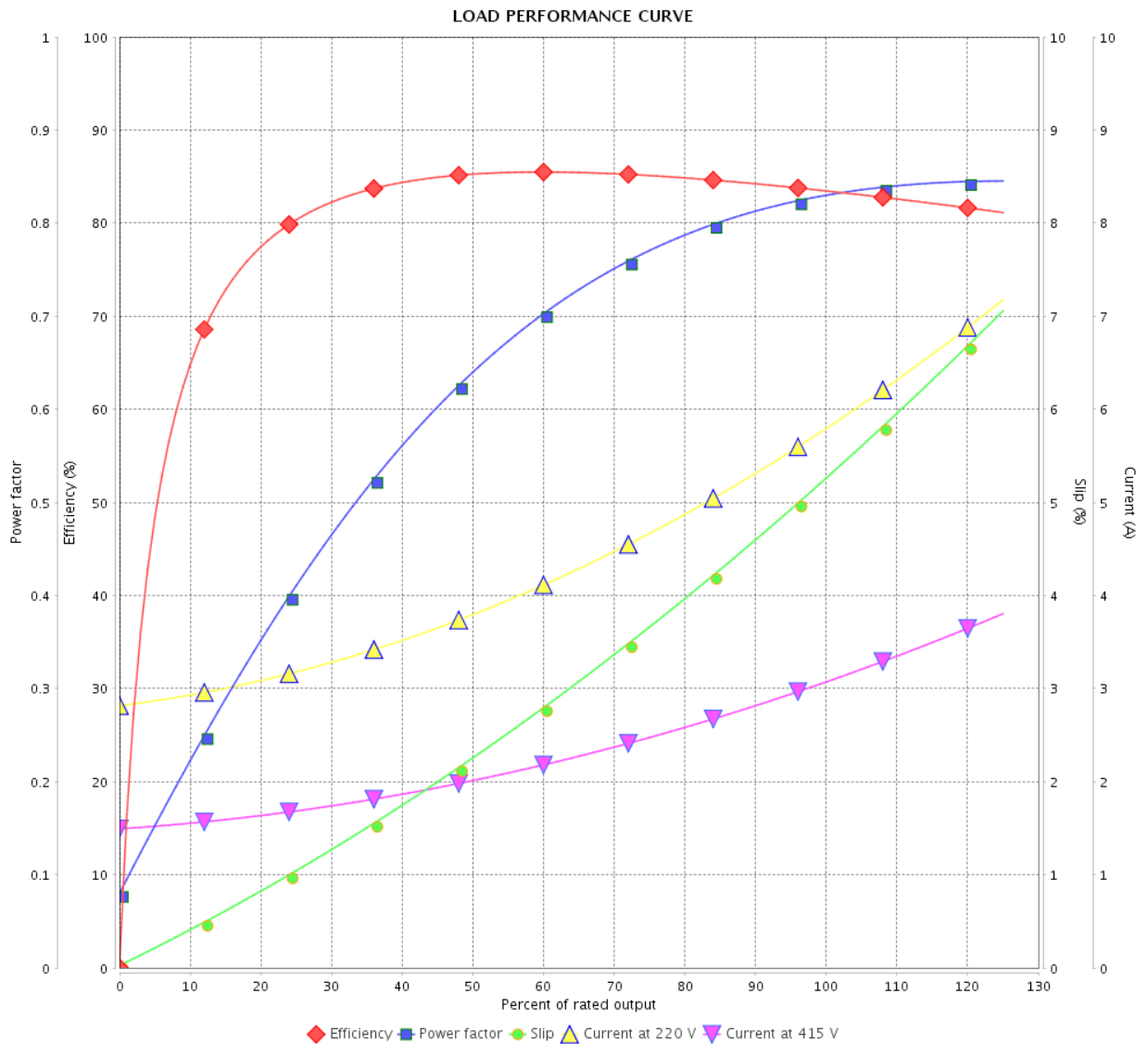


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Catalog # : 00218OT3E145TC-SG



Performance : 220/415 V 50 Hz 4P

Rated current : 5.90/3.13 A
 LRC : 6.2
 Rated torque : 7.40 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 260 %
 Rated speed : 1420 rpm

Moment of inertia (J) : 0.1168 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			7 / 16	
Date	14/04/2022			

THERMAL LIMIT CURVE

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Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1740 rpm	Design	: B

Heating constant

Cooling constant

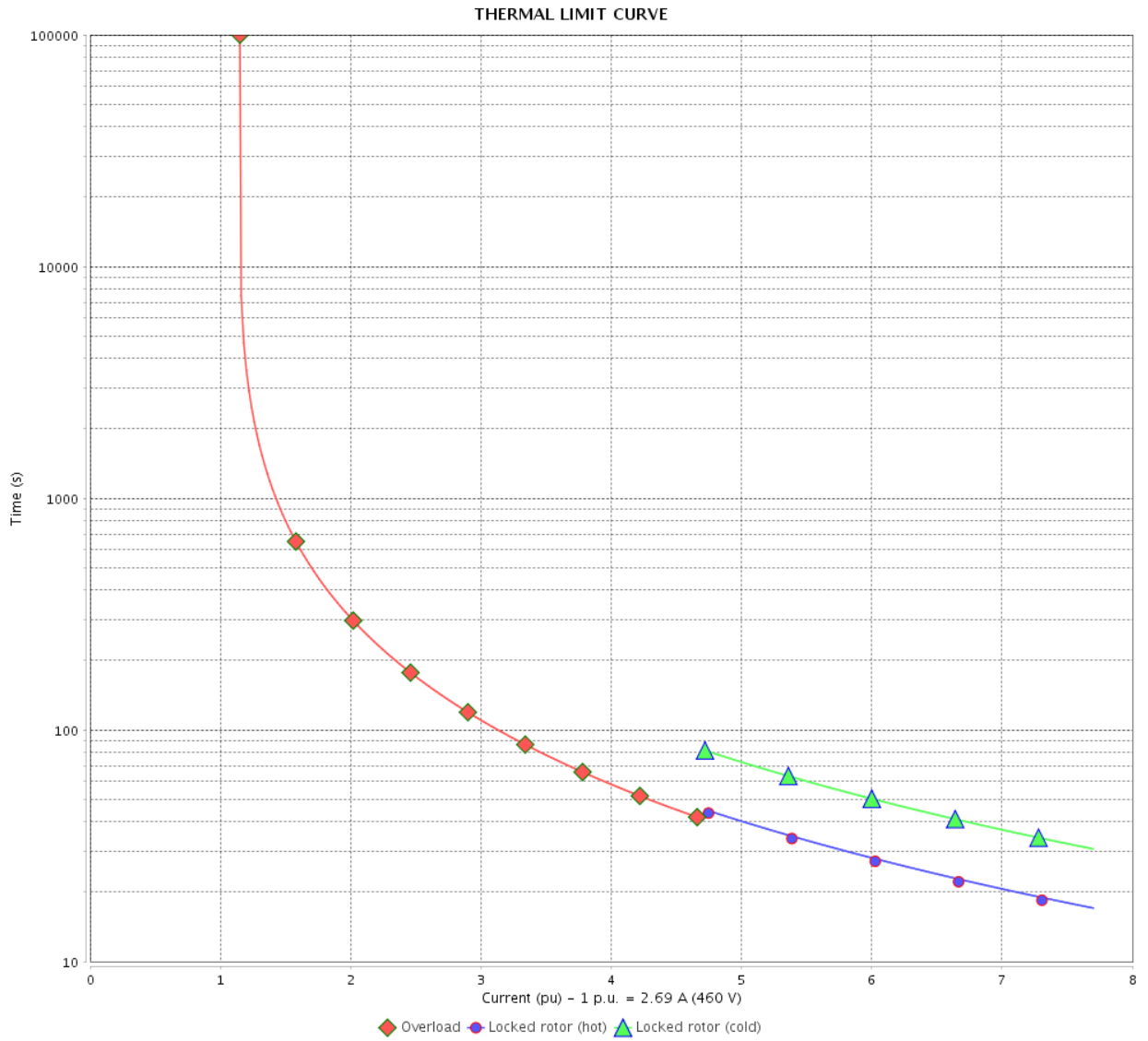
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		8 / 16	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		9 / 16		

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Rated torque	: 7.45 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1410 rpm	Design	: B

Heating constant

Cooling constant

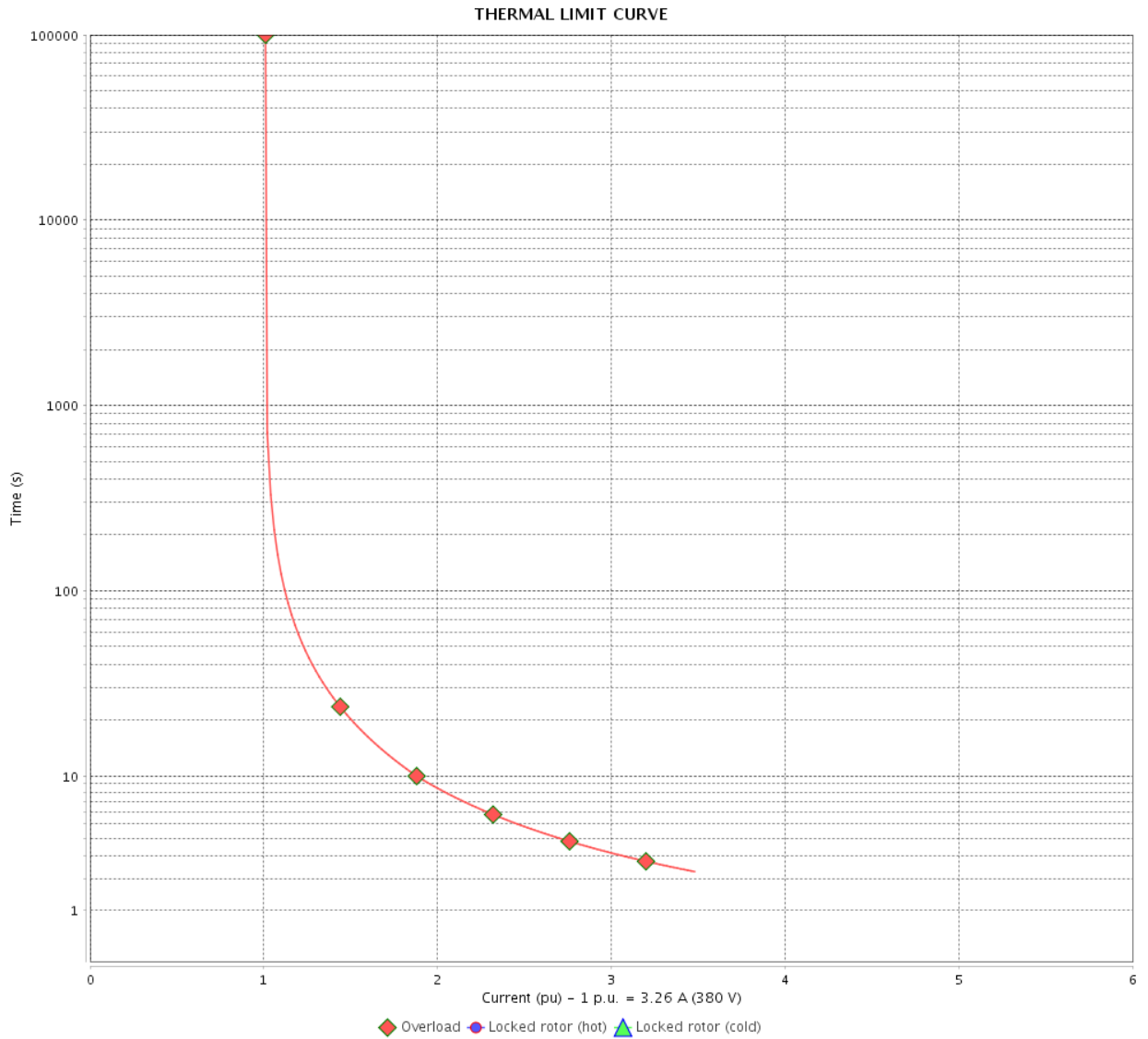
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		10 / 16	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 16		
Date		14/04/2022		

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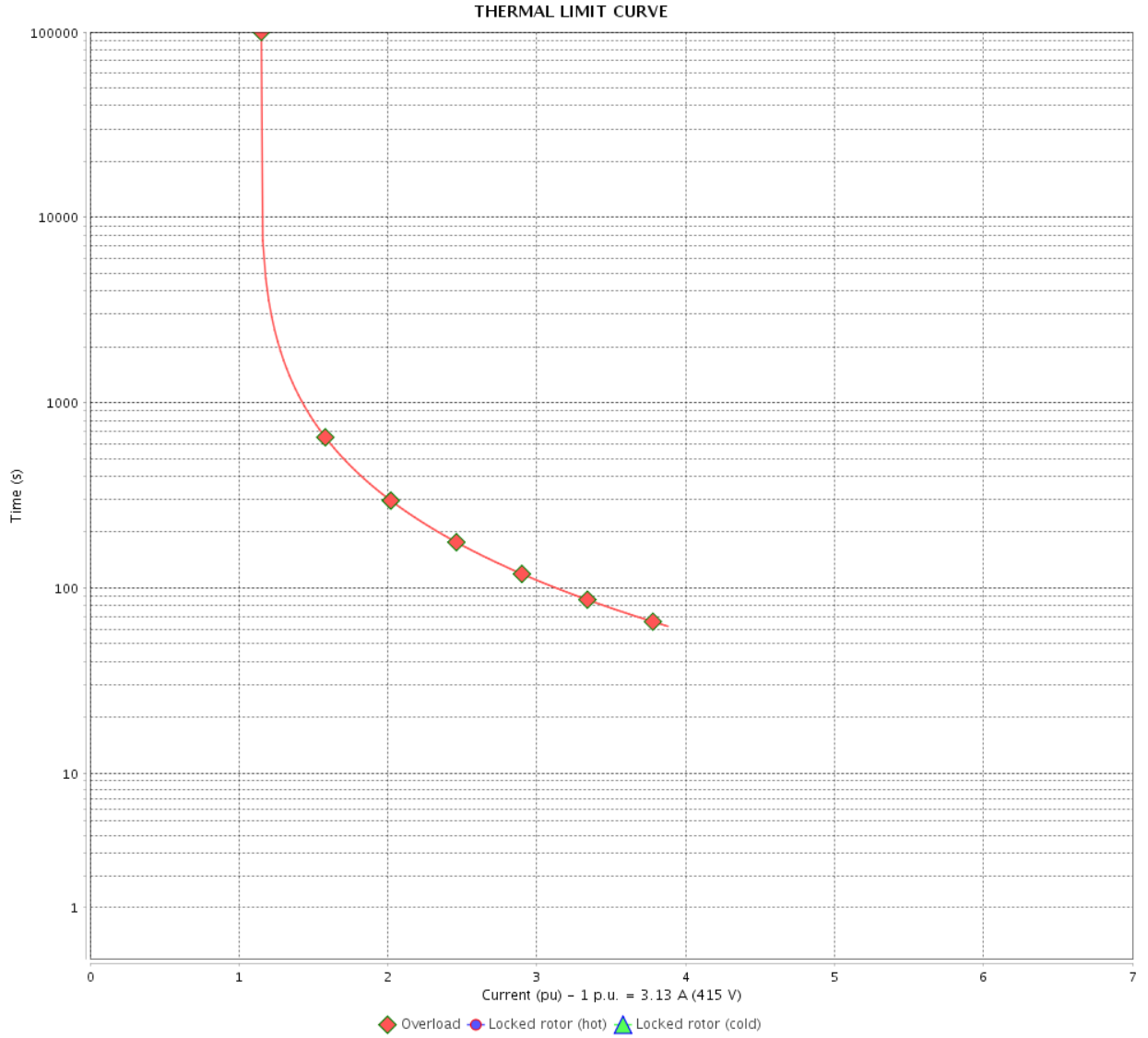
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		12 / 16	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		14/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

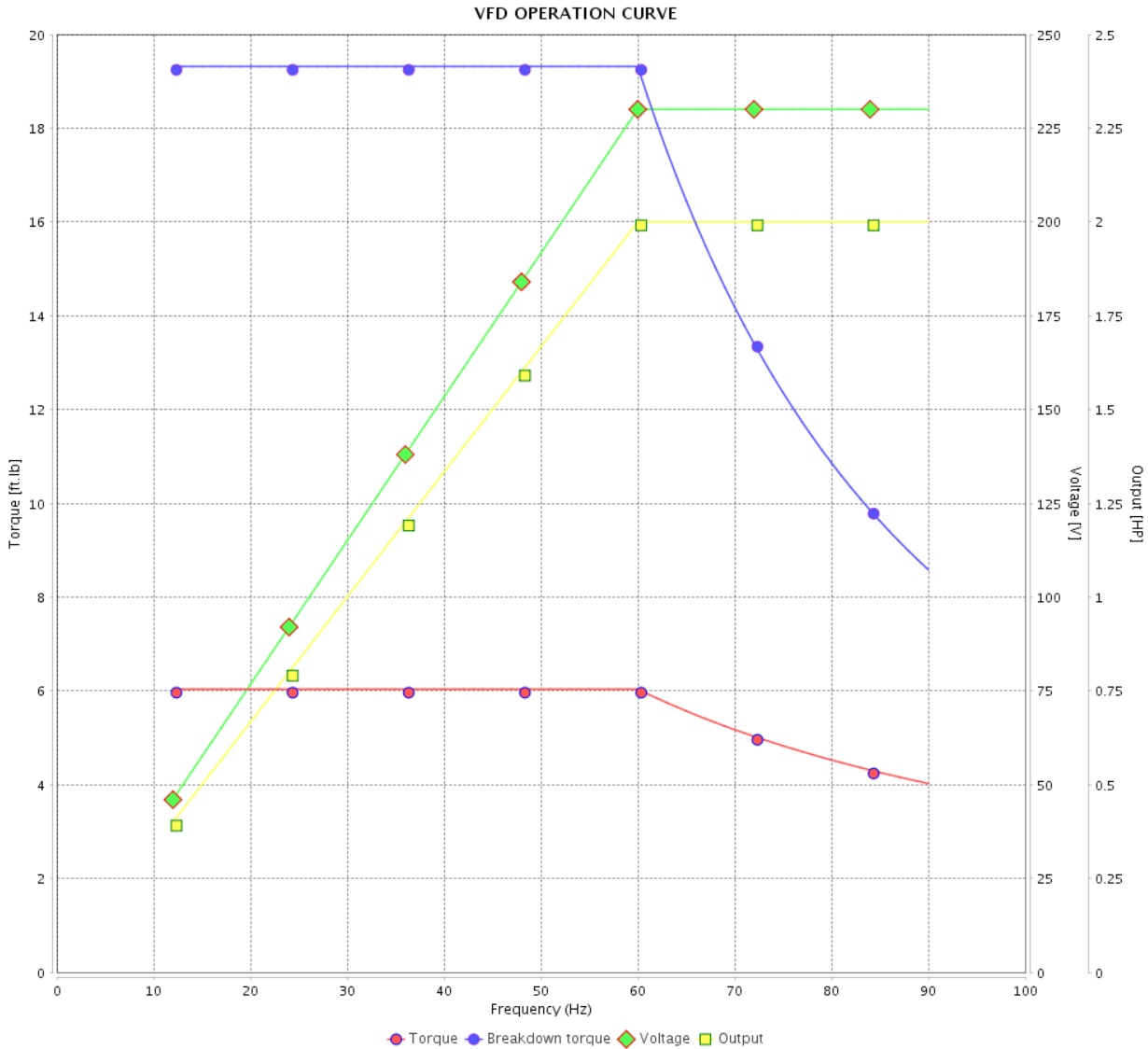


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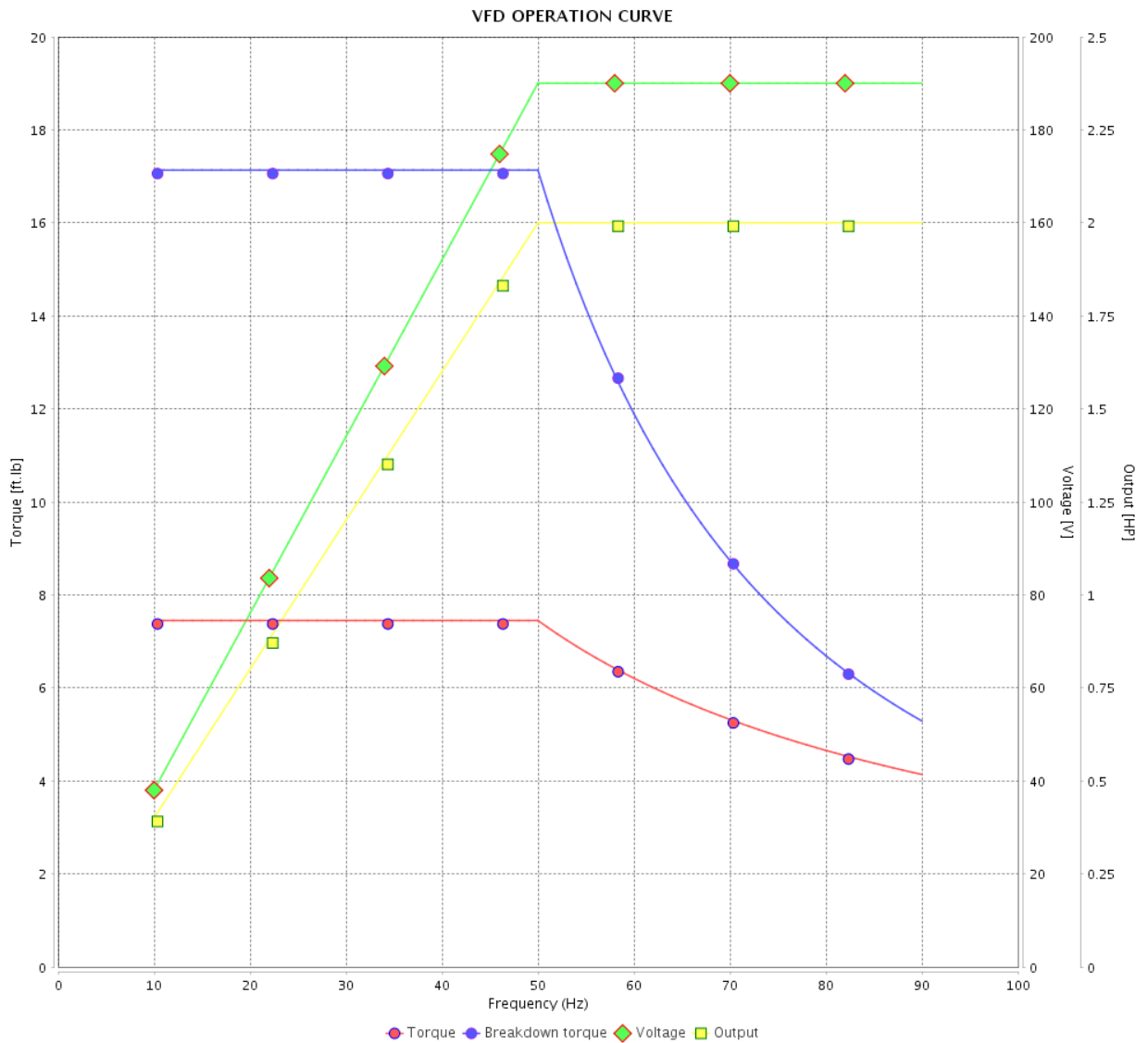


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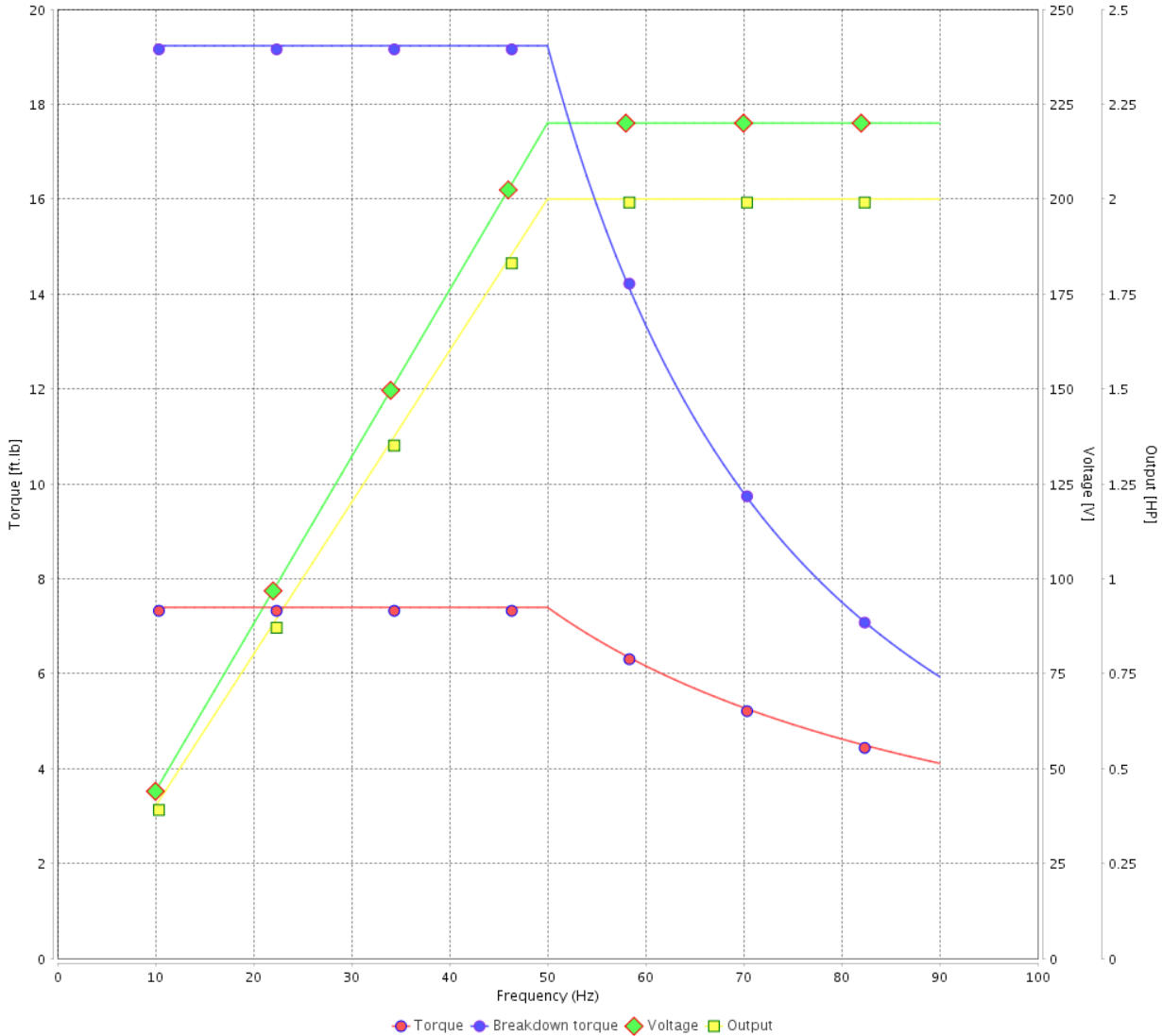
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	14/04/2022			

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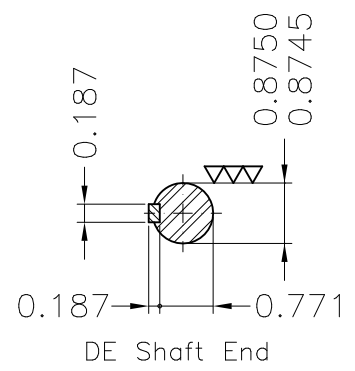
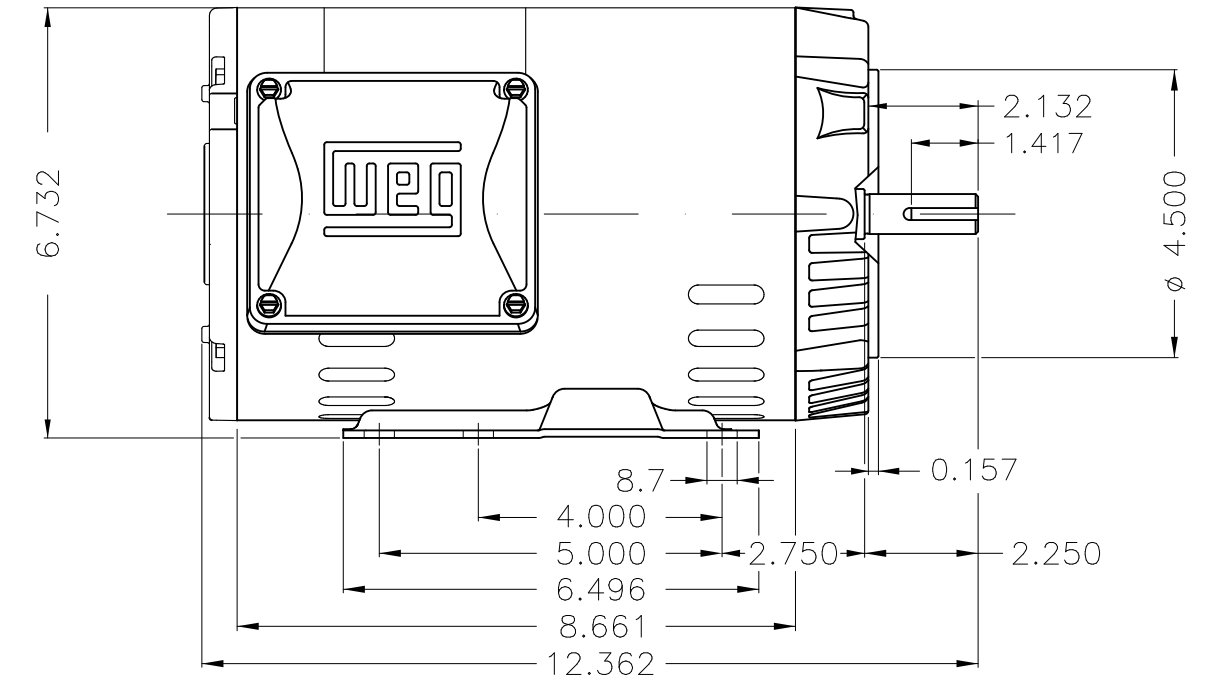
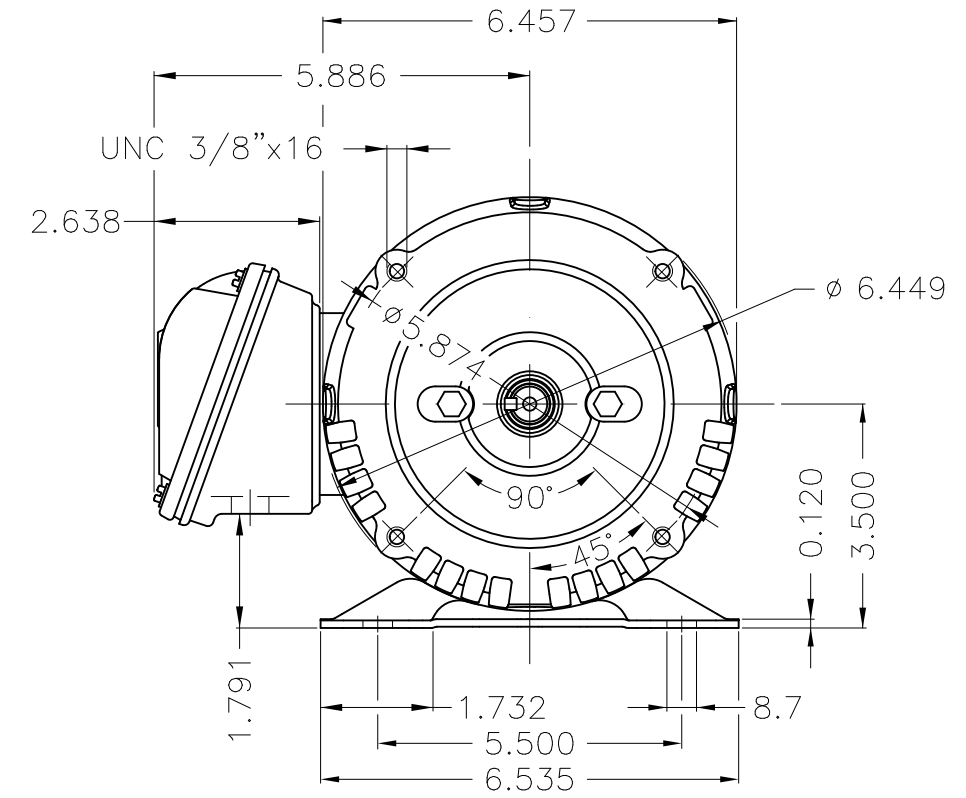
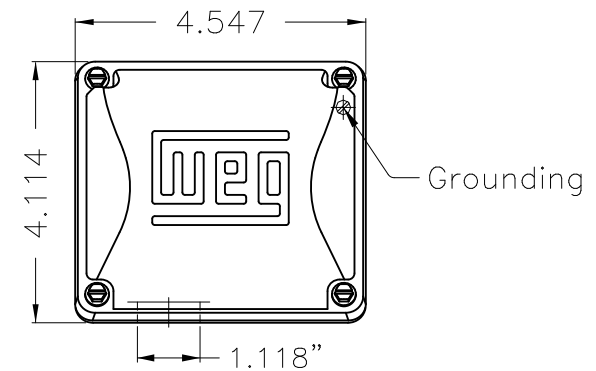
A

B

C

D

E



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 143/5TC IP21 ODP					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET		1 / 1	

2 HP 04 Poles 60 Hz

A

PREVIEW
WDD



Dimensions in inches XME A3