

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer : Automation Direct

Product line : NEMA Premium Efficiency Three-Phase      Product code : 14802475  
 Catalog # : 00158ET3E145TC-S

Frame	: 143/5TC	Locked rotor time	: 37s (cold) 21s (hot)
Output	: 1.5 HP (1.1 kW)	Temperature rise	: 80 K
Poles	: 4	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 230/460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 4.04/2.02 A	Protection degree	: IP55
L. R. Amperes	: 33.1/16.6 A	Cooling method	: IC411 - TEFC
LRC	: 8.2x(Code K)	Mounting	: F-1
No load current	: 2.17/1.08 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 1750 rpm	Noise level <sup>2</sup>	: 52.0 dB(A)
Slip	: 2.78 %	Starting method	: Direct On Line
Rated torque	: 4.50 ft.lb	Approx. weight <sup>3</sup>	: 39.0 lb
Locked rotor torque	: 270 %		
Breakdown torque	: 300 %		
Insulation class	: F		
Service factor	: 1.15		
Moment of inertia (J)	: 0.1101 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	85.2	85.5	86.5	86.5	Max. traction	: 124 lb
Power Factor	0.35	0.59	0.72	0.79	Max. compression	: 163 lb

	Drive end	Non drive end
Bearing type	: 6205 ZZ	: 6203 ZZ
Sealing	: V'Ring	: Without Bearing Seal
Lubrication interval	: -	: -
Lubricant amount	: -	: -
Lubricant type	: Mobil Polyrex EM	

Notes  
 USABLE @208V 4.47A SF 1.00 SFA 4.47A

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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Date	22/08/2022			

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

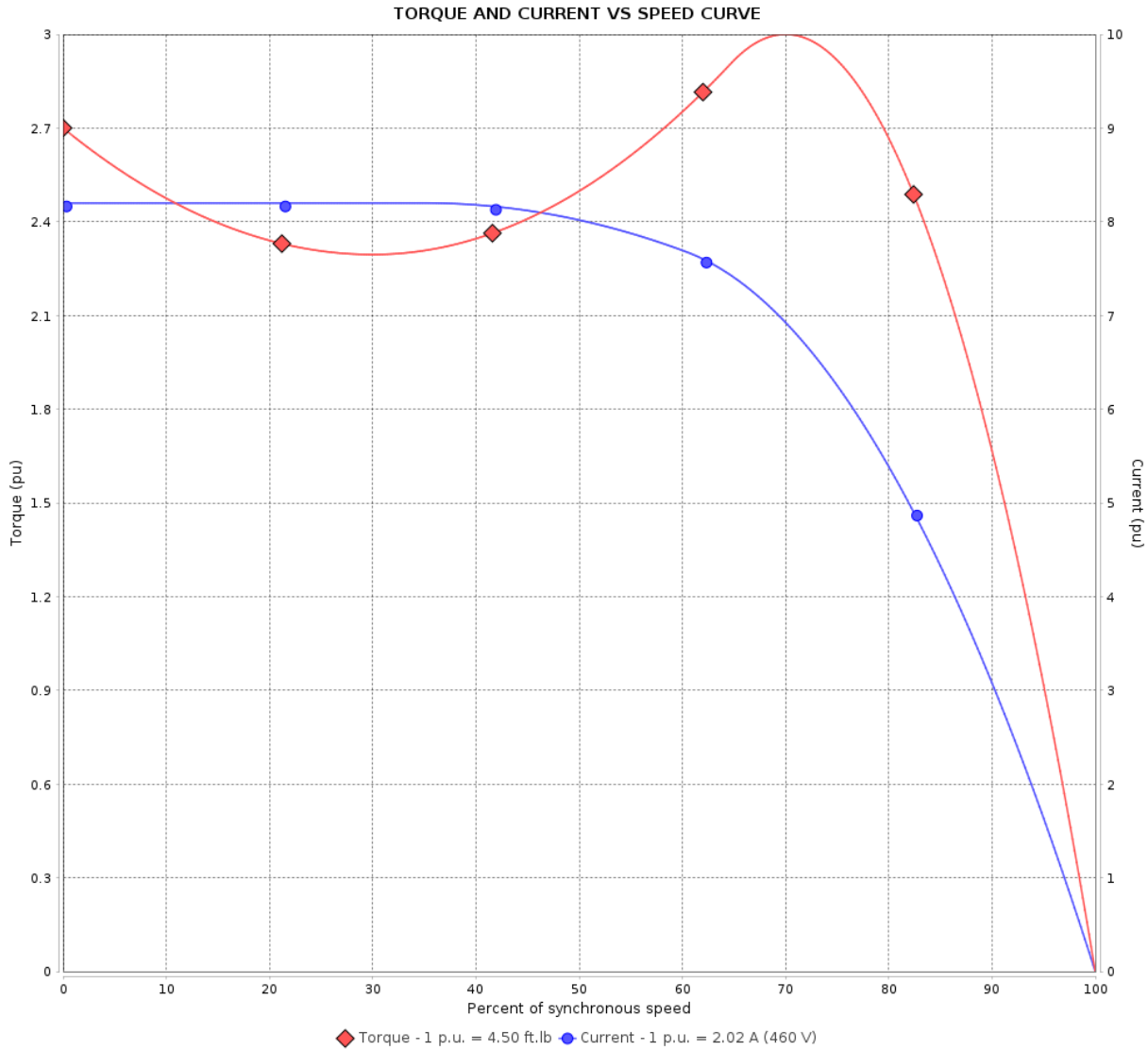
Product line : NEMA Premium Efficiency Three-Phase

Product code :

14802475

Catalog # :

00158ET3E145TC-S



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 37s (cold) 21s (hot)

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Date	22/08/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

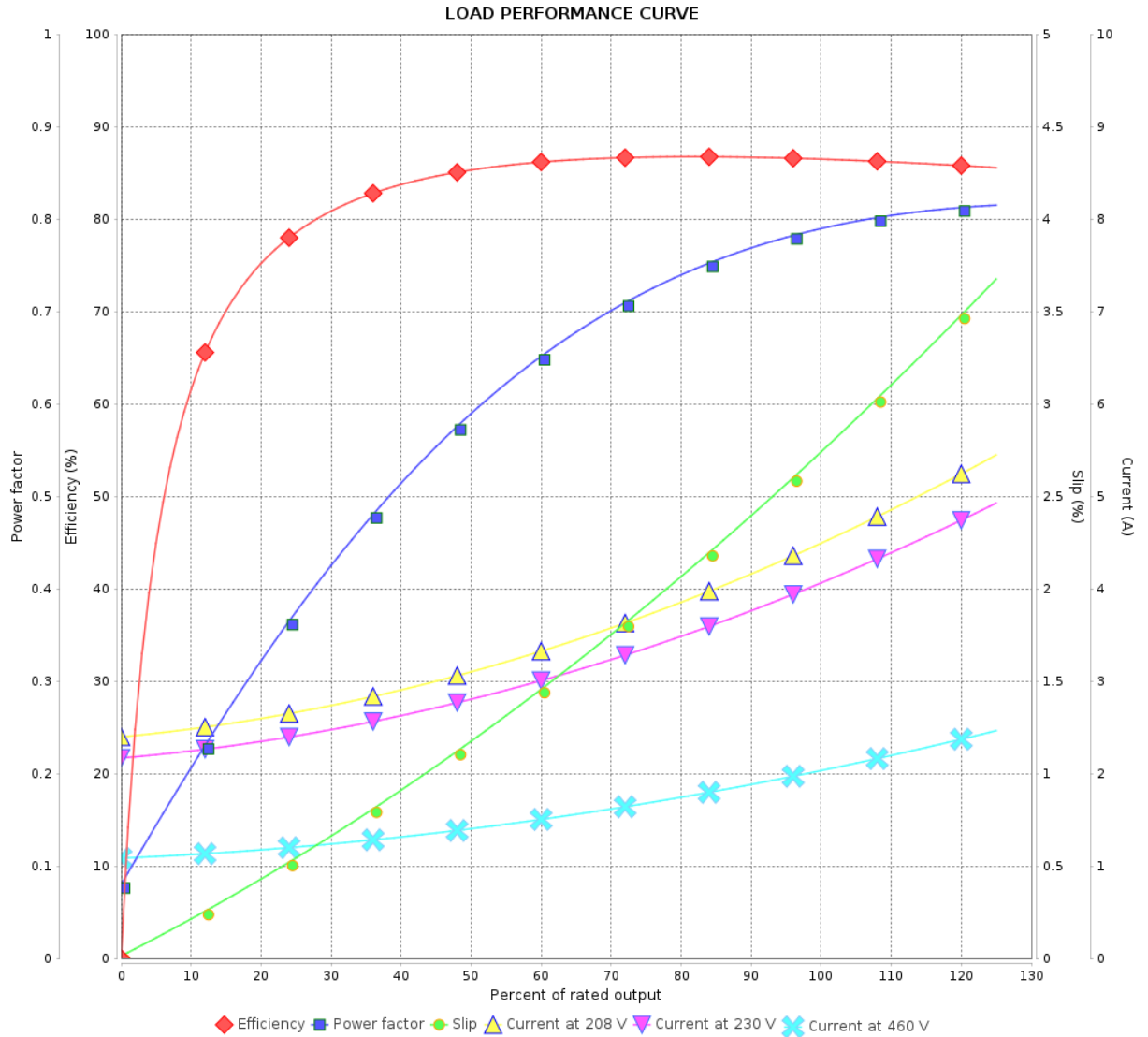
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Product code :

14802475

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Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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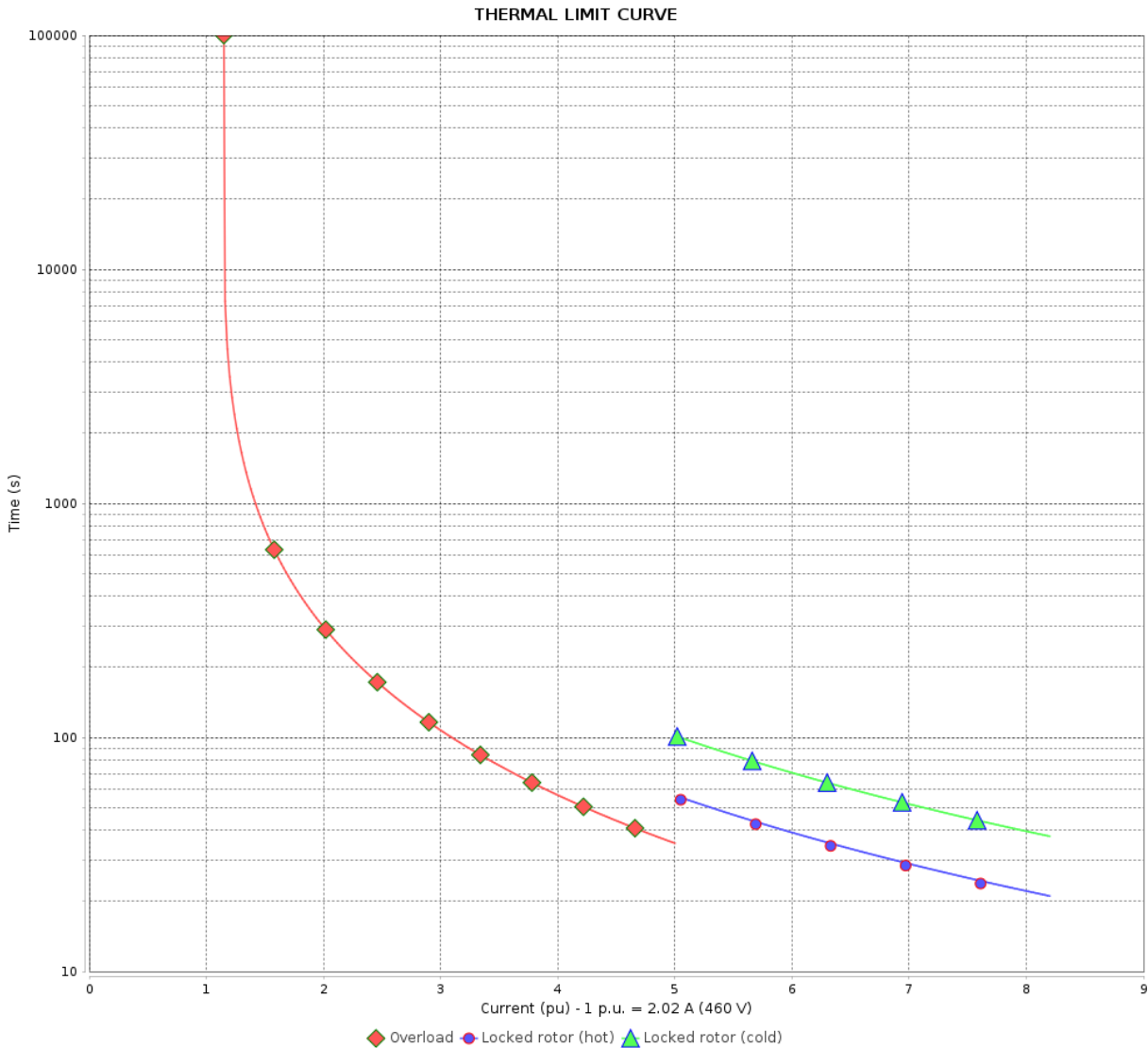
Product line : NEMA Premium Efficiency Three-Phase

Product code :

14802475

Catalog # :

00158ET3E145TC-S



Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
 LRC : 8.2  
 Rated torque : 4.50 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.1101 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

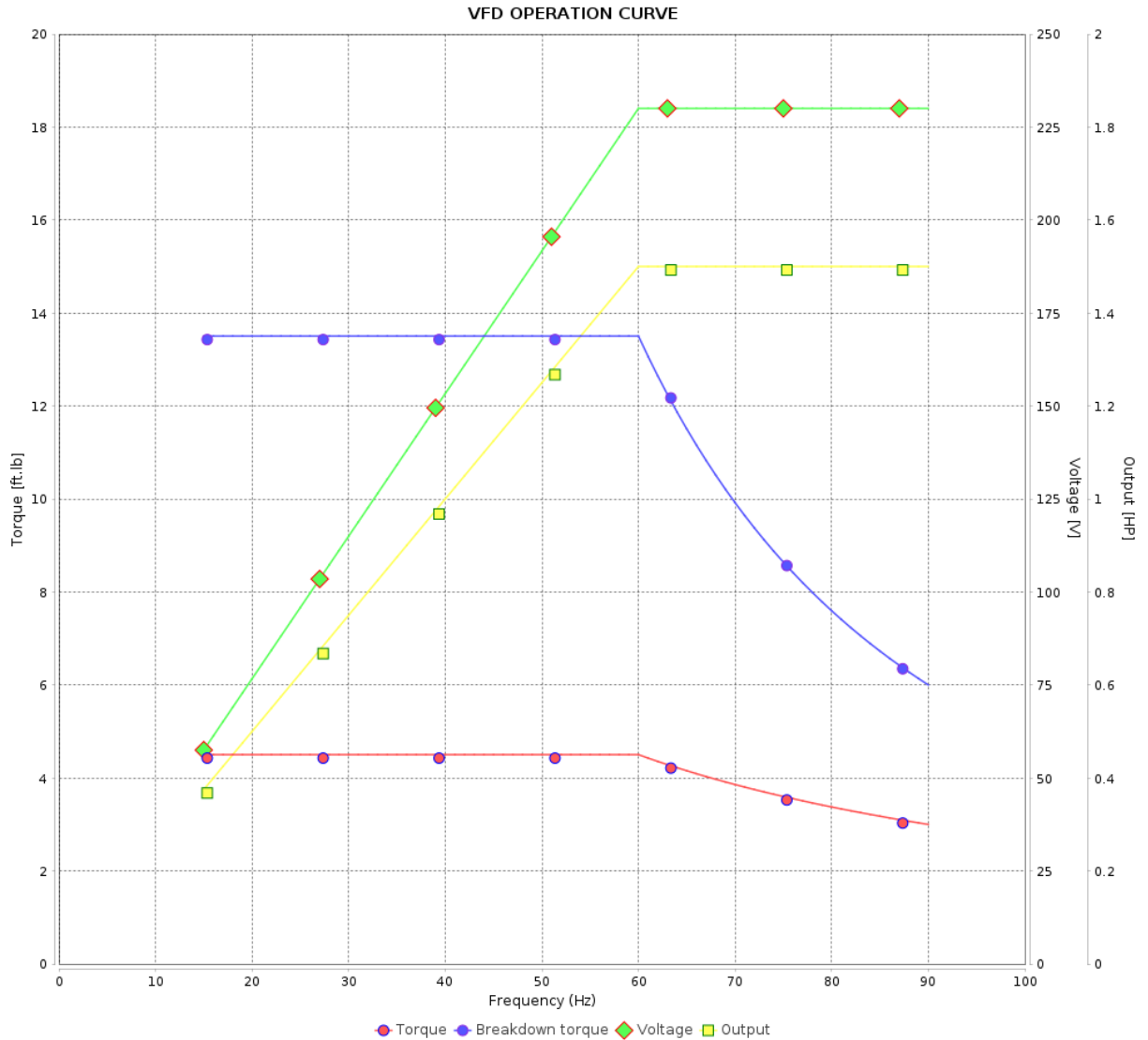


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Product line : NEMA Premium Efficiency Three-Phase

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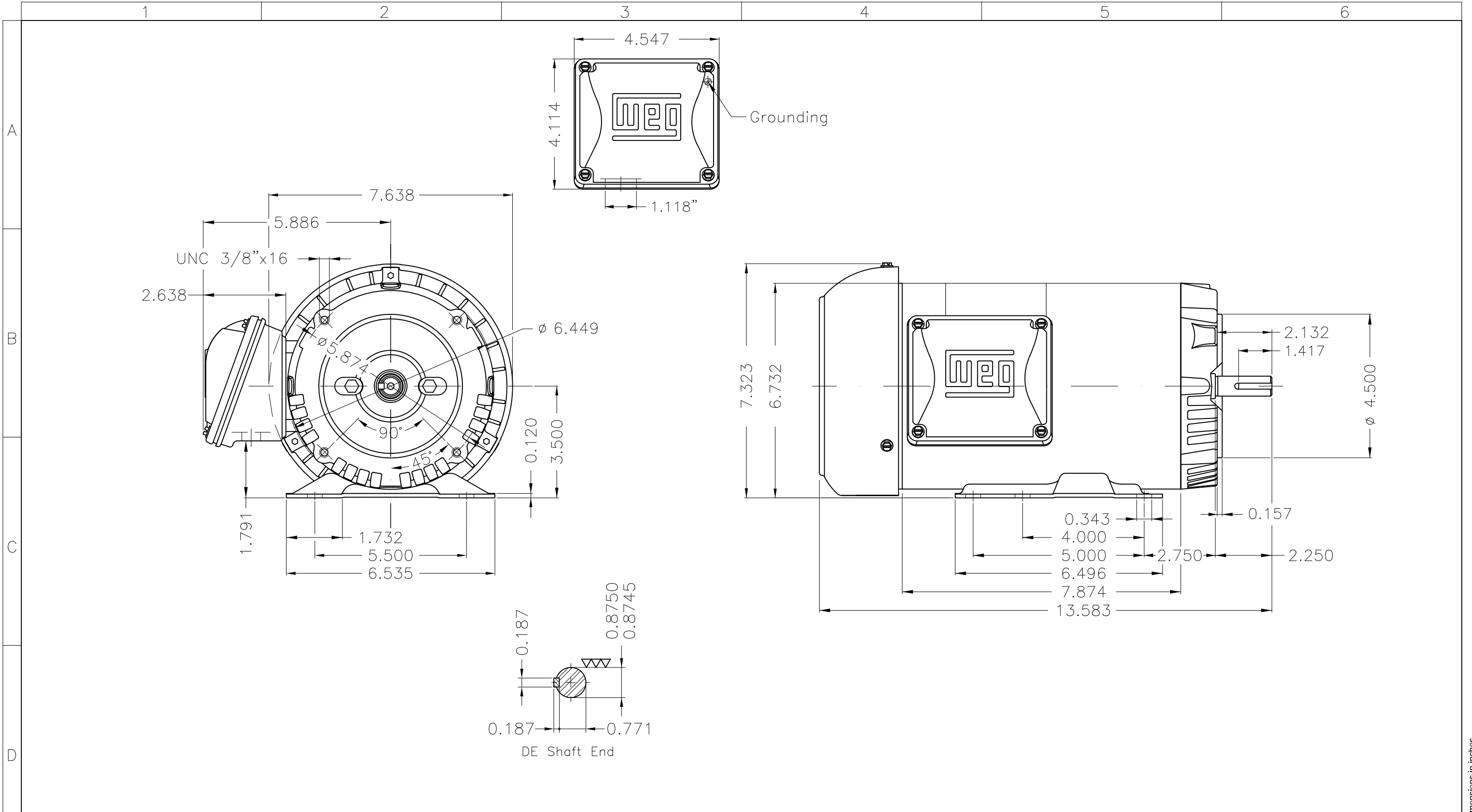


Performance : 230/460 V 60 Hz 4P

Rated current : 4.04/2.02 A  
LRC : 8.2  
Rated torque : 4.50 ft.lb  
Locked rotor torque : 270 %  
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Rated speed : 1750 rpm

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Insulation class : F  
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A  
B  
C  
D  
E

Dimensions in inches XME A3

Fan cover - steel plate									
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	HYBRISUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.			PREVIEW		WDD		
CHECKED		FRAME 143/5TC IP55 TEFC			WDD		SHEET 1 / 1		
RELEASED					WEG				
REL DT.	WMO	Jaragua do Sul	Product Engineering						

1.5 HP 04 Poles 60 Hz



**NEMA**  
**Premium**



MADE IN BRAZIL

**MAT: 14802475 CC029A**

**W01.TE0IC0X0N**

**MODEL 00158ET3E145TC-S**

**12AUG2022 B/N:**

**For 60Hz: Class I, Zone 2, IIC  
Class I, Div.2, Gr. A,B,C,D - T3  
Div 2 Inverter Duty (SF1.00)**

**CT 2:1/VT 1000:1**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 1.5</b>
<b>FR 143/5TC</b>		<b>KW 1.1</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 4.04/2.02</b>
<b>INS CL F AT 80K</b>	<b>IP55</b>	<b>SFA 4.65/2.32</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL TEFC</b>	<b>CODE K</b>	<b>PF 0.79</b>
<b>USABLE @ 208V 4.47A</b>		<b>RPM 1750</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 86.5%</b>

<b>ALTERNATE RATING: 1.5HP 50Hz 190-220/380-415V SF1.15</b>
<b>4.82-4.28/2.41-2.27A 1420RPM EFF 82.7% (IE2) IEC 60034-1</b>

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 4:1 CT

<b>DE 6205-ZZ</b>	<b>ODE 6203-ZZ</b>	<b>MOBIL POLYREX EM</b>
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T1-BLU T2-WHT  
T3-ORG T4-YEL  
T5-BLK T6-GRY  
T7-PNK T8-RED  
T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



**WARNING:** Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

**AVERTISSEMENT:** Le moteur doit être mis à la terre

conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

