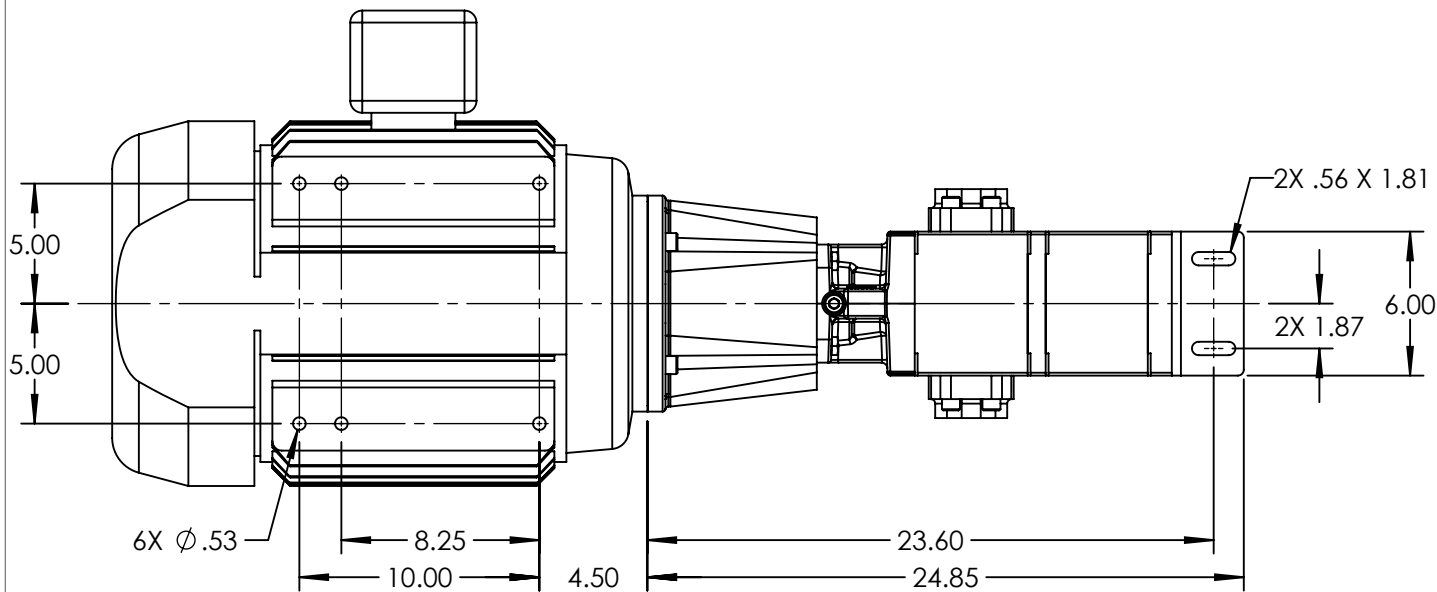
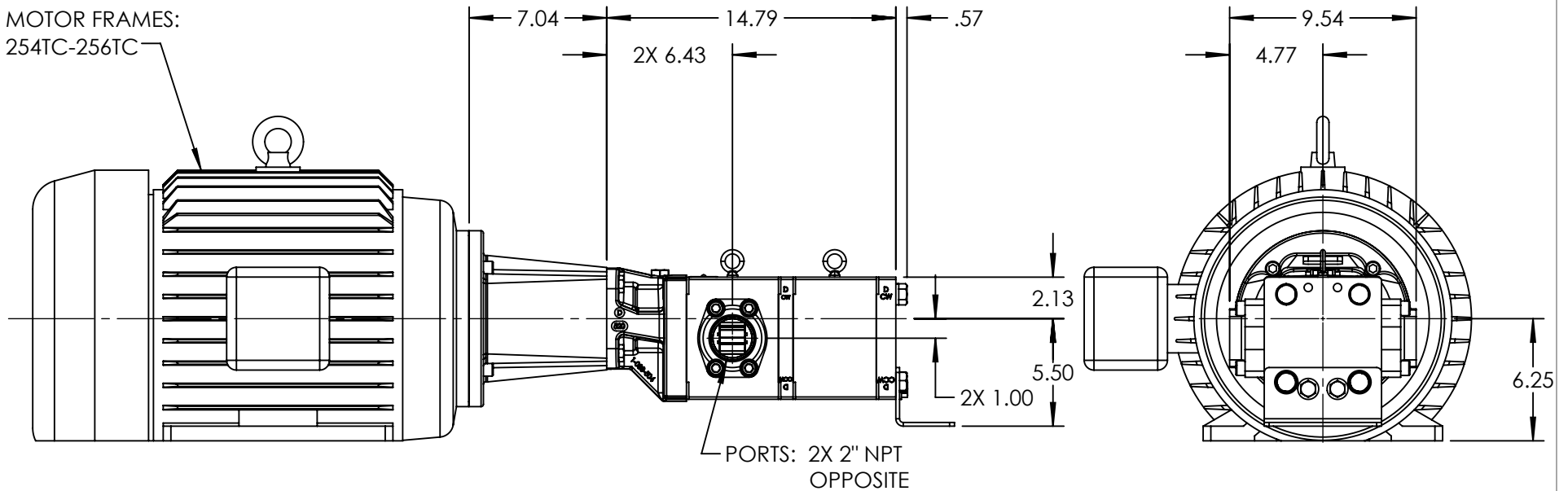


MOTOR FRAMES:  
254TC-256TC



NOTES:

1. ALL DIMENSIONS ARE FOR REFERENCE ONLY.

STANDARD MODELS: GB-41022-G00-M, GB-41022-G10-M

STATE	Released	08/18/2021
DRAWN	bmanernach	8/18/2021
CHECKED	BAM	08/18/2021

DIMENSIONS ARE IN  
INCHES  
PROJECT: E331  
WAS:



VIKING PUMP, INC.  
A Unit of IDEX Corporation  
Cedar Falls, IA 50613  
U.S.A.

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3D

DWG. NO. SHEET 1 OF 1  
GPV-1022-004-U

REV. A.0  
08/18/2021

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :						
Product line : W22 NEMA Premium Efficiency Three-Phase			Product code : 11440444		Catalog # : 02018ET3E256TC-W22	
Frame : 254/6TC Output : 20 HP (15 kW) Poles : 4 Frequency : 60 Hz Rated voltage : 230/460 V Rated current : 48.2/24.1 A L. R. Amperes : 333/166 A LRC : 6.9x(Code H) No load current : 19.2/9.60 A Rated speed : 1770 rpm Slip : 1.67 % Rated torque : 59.3 ft.lb Locked rotor torque : 240 % Breakdown torque : 260 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 3.10 sq.ft.lb Design : B			Locked rotor time : 54s (cold) 30s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation <sup>1</sup> : Both (CW and CCW) Noise level <sup>2</sup> : 64.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 343 lb			
Output            50%            75%            100%			Foundation loads			
Efficiency (%)    91.7            92.4            93.0 Power Factor     0.68            0.79            0.84			Max. traction                            : 723 lb Max. compression                      : 1065 lb			
Losses at normative operating points (speed;torque), in percentage of rated output power						
P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
7.5	6.4	5.8	3.6	2.5	1.6	1.1
			<u>Drive end</u>		<u>Non drive end</u>	
Bearing type :			6309 C3		6209 C3	
Sealing :			V'Ring		V'Ring	
Lubrication interval :			20000 h		20000 h	
Lubricant amount :			13 g		9 g	
Lubricant type :			Mobil Polyrex EM			
Notes USABLE @208V 53.3A SF 1.15 SFA 61.3A						
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	Checked	Date
Performed by						
Checked by					Page	Revision
Date	13/11/2023				1 / 6	

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



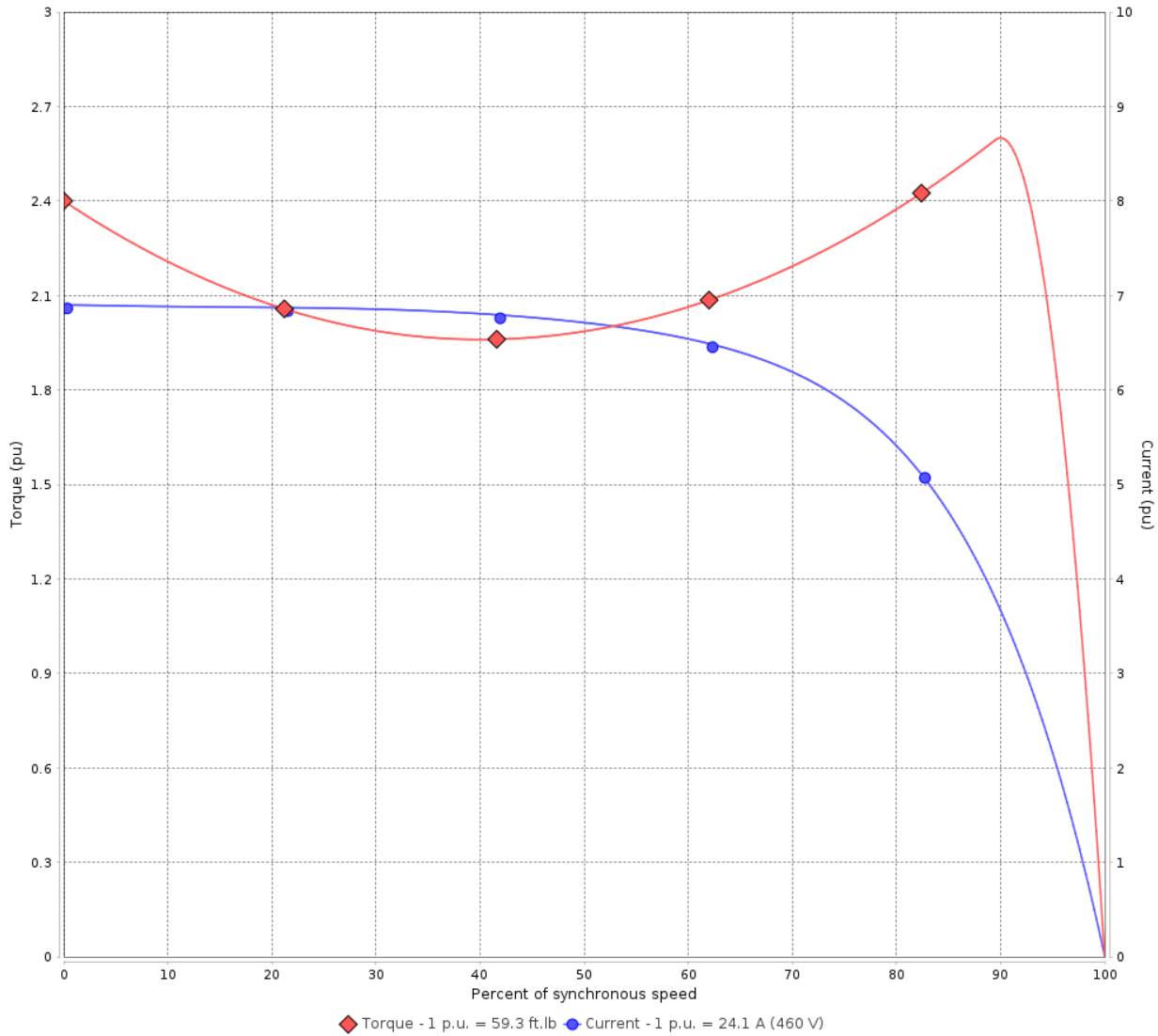
Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11440444

Catalog # : 02018ET3E256TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 48.2/24.1 A	Moment of inertia (J)	: 3.10 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 59.3 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

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Performed by			Page 2 / 6	Revision
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Date	13/11/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

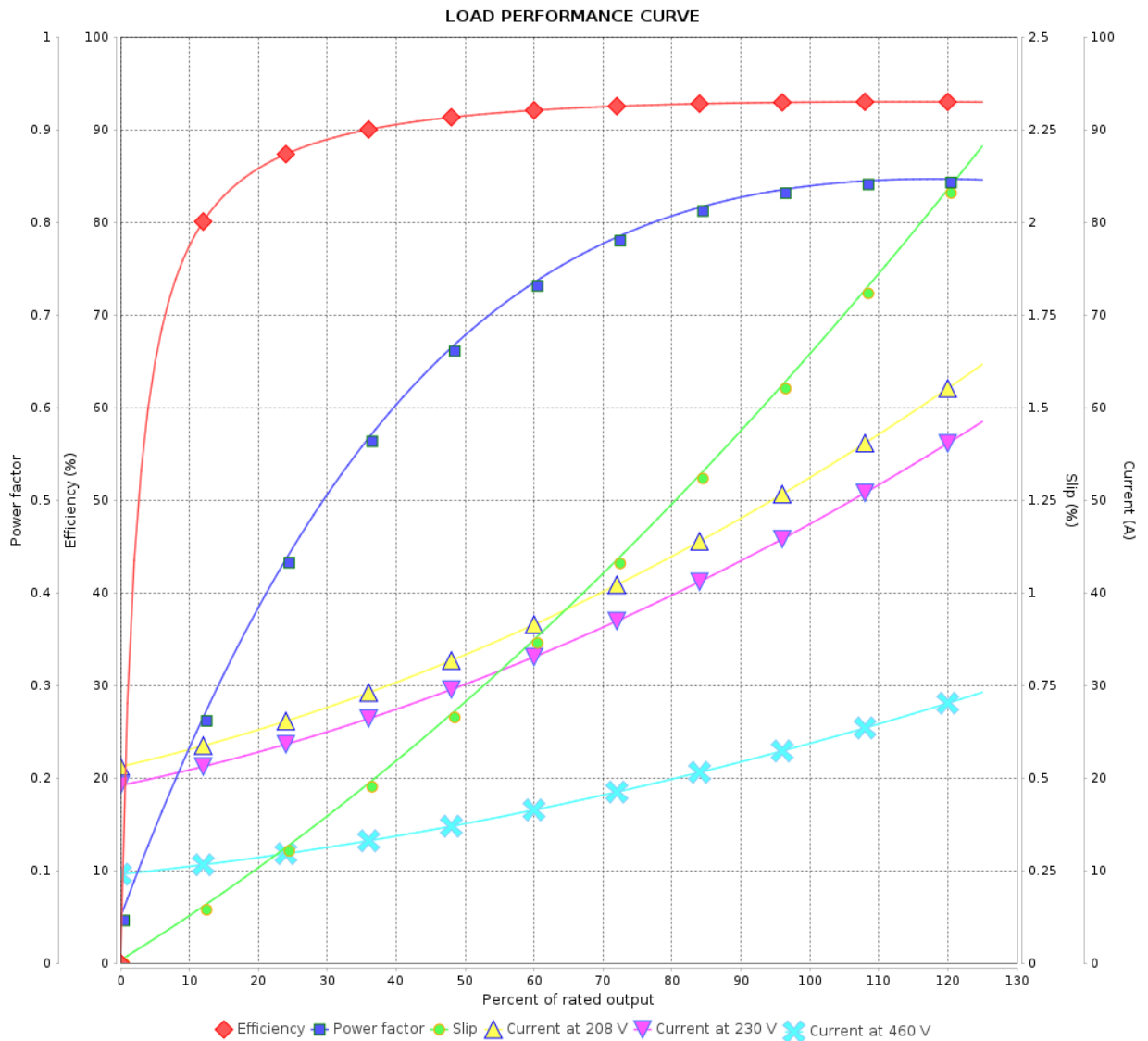


Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11440444

Catalog # : 02018ET3E256TC-W22



Performance : 230/460 V 60 Hz 4P

Rated current : 48.2/24.1 A  
 LRC : 6.9  
 Rated torque : 59.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 3.10 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11440444

Catalog # : 02018ET3E256TC-W22

Performance : 230/460 V 60 Hz 4P

Rated current : 48.2/24.1 A  
LRC : 6.9  
Rated torque : 59.3 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 260 %  
Rated speed : 1770 rpm

Moment of inertia (J) : 3.10 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

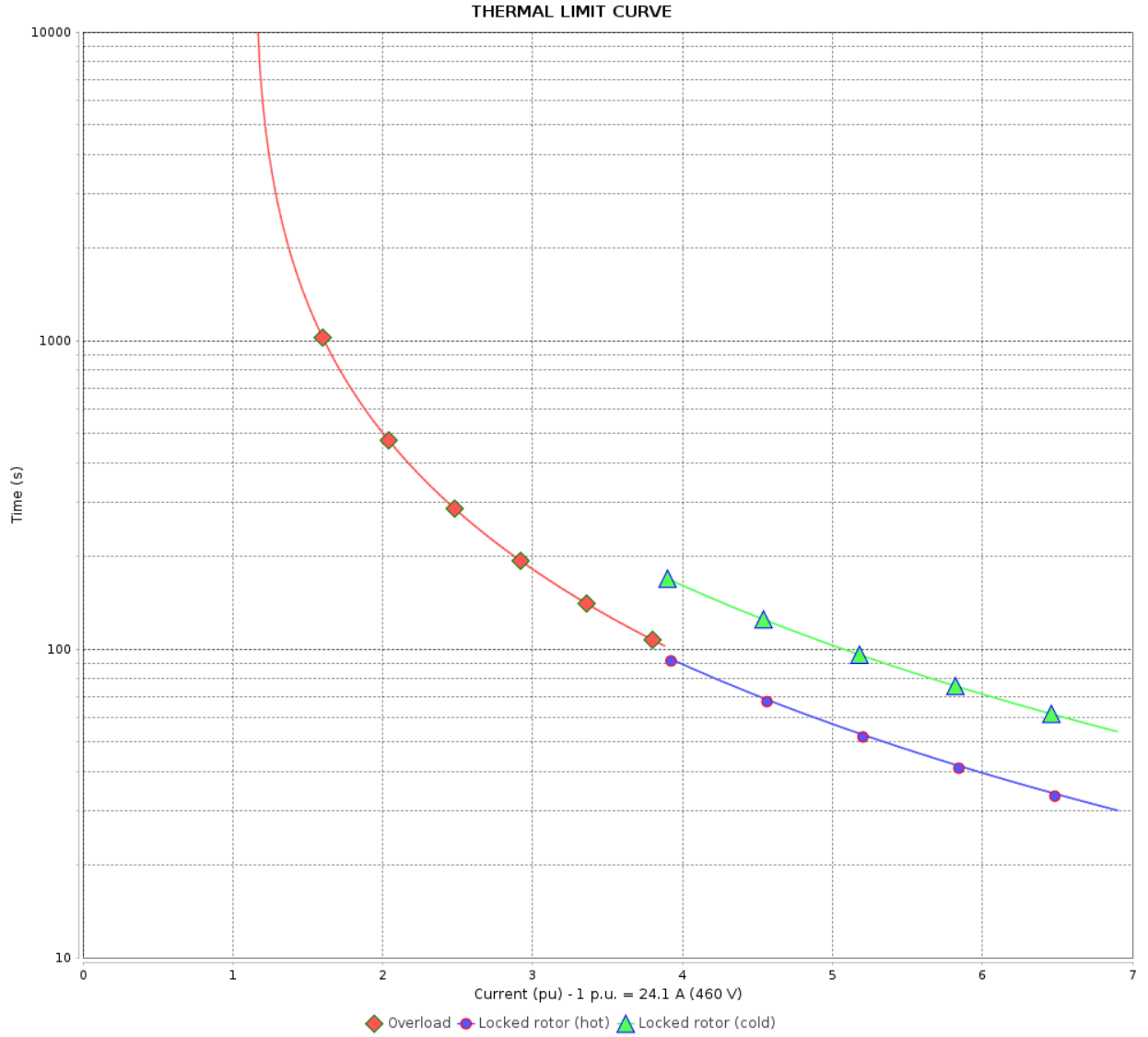
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 6		Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

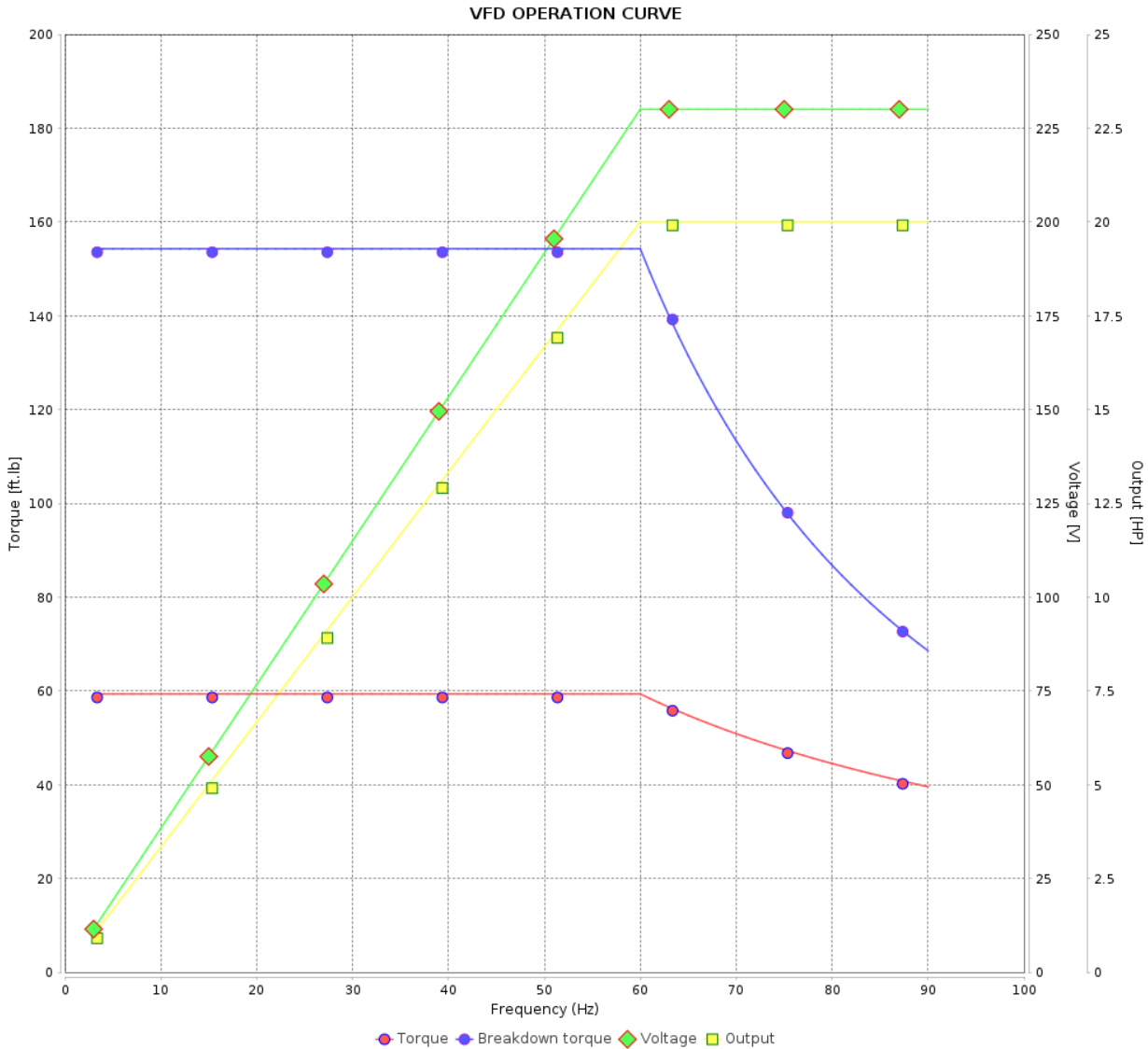


Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 11440444

Catalog # : 02018ET3E256TC-W22

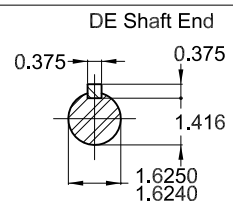
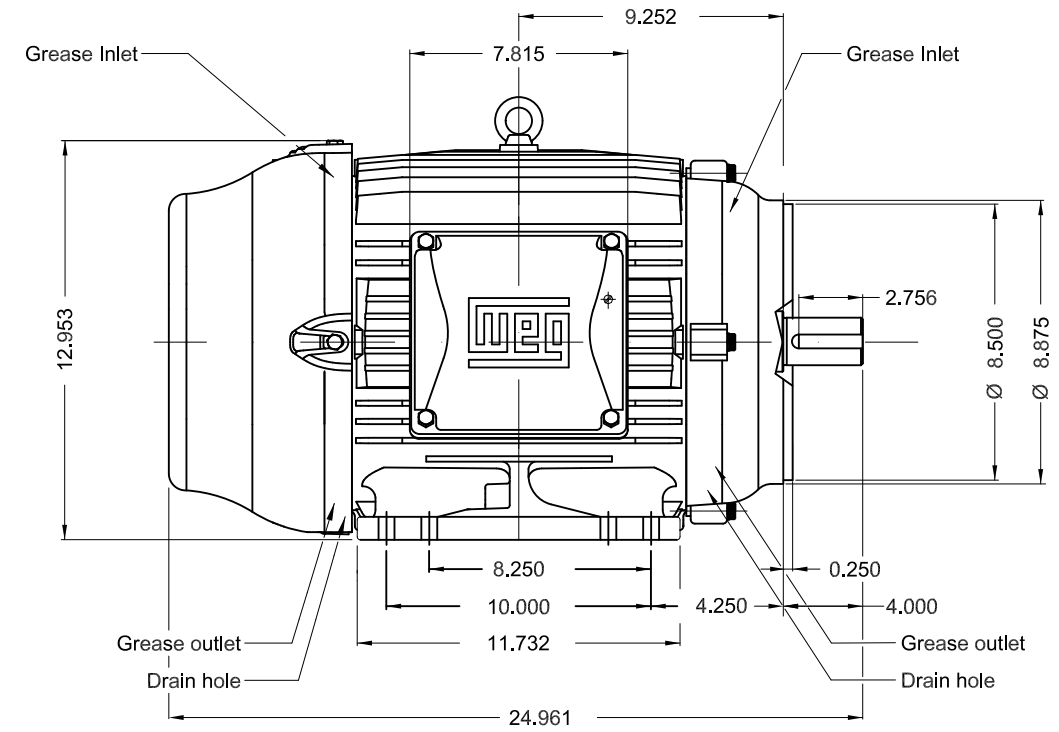
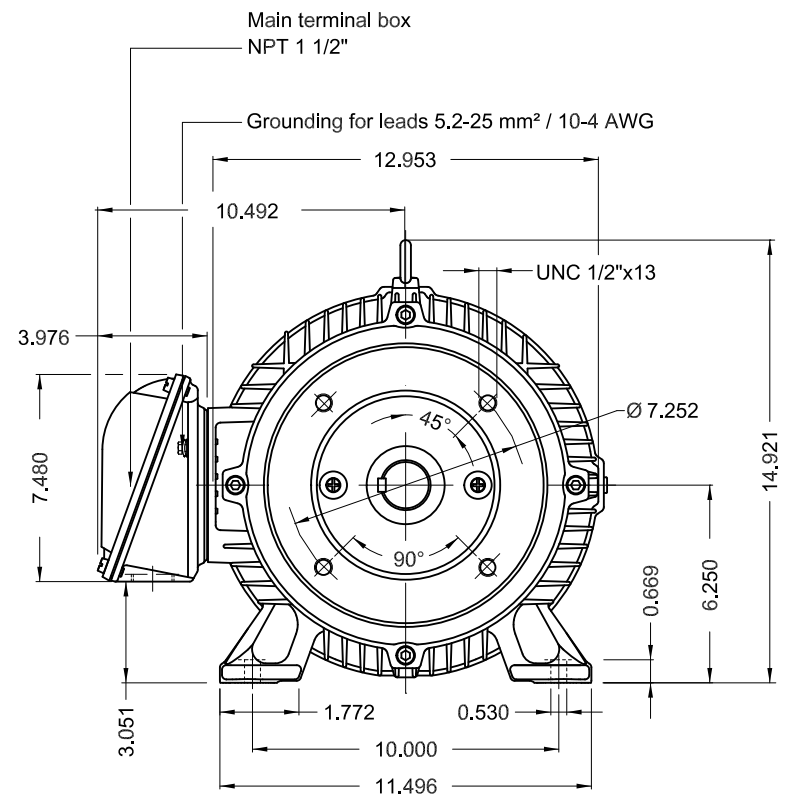


Performance : 230/460 V 60 Hz 4P

Rated current : 48.2/24.1 A  
 LRC : 6.9  
 Rated torque : 59.3 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 260 %  
 Rated speed : 1770 rpm

Moment of inertia (J) : 3.10 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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Date	13/11/2023			



Without vertical jackscrews  
 Color RAL 5009  
 Painting plan 203A  
 Mounting B34R(D)

20 HP 04 Poles 60 Hz A

						USERADMIN								00	
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER					
EXECUTED	USERADMIN	THREE PH. MOTOR W22 NEMA PREM. EFF.										PREVIEW			
CHECKED		FRAME 254/6TC IP55 TEFC										WDD		00	
RELEASED												SHEET		1 / 1	
REL. DATE		WMO Jaragua do Sul		Product Engineering											







FOR SAFE AREA  
Mod. TE1BFOXON  
CC029A



For use on 60Hz  
Class I, Div 2, Gr A, B, C and D - T3  
Class I, Zone 2, IIC - T3  
Class II, Div 2, Gr F and G - T4  
For use on PWM: Gr. A, B, C, D and F,  
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 02018ET3E256TC-W22

Inverter Duty Motor  
Severe Duty

PH3 60Hz Fr. 254/6TC 1000m.a.s.l. IP55 TEFC 343lb

V 230/460

A 48.2/24.1

HP 20

kW 15

SF 1.25

SFA 60.3/30.1

RPM 1770

PF 0.84

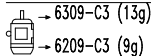
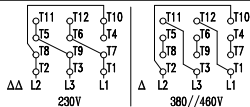
AMB 40°C

INS cl. F DT80K NEMA NOM EFF 93.0%

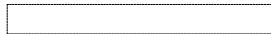
DUTY CONT.

DES B Code H

20HP 15kW 50Hz 380V 29.4A 1455RPM SF 1.00 EFF 90.2% (IE1)



MOBIL POLYREX EM (20000h)



MADE IN MEXICO  
11440444