

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: Rolled Steel NEMA Premium Efficiency Three-Phase		Product code : 15608393
			Catalog # :	002120T3ER184TC-S
Frame	: 182/4TC	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: W-6	
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>	: 73.9 lb	
Design	: B	Moment of inertia (J)	: 0.2800 sq.ft.lb	
Output [HP]	2	2	2	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190-220/380	415	
Rated current [A]	5.90/2.95	6.96-6.01/3.48	3.36	
L. R. Amperes [A]	38.9/19.5	35.5-30.7/17.7	20.5	
LRC [A]	6.6x(Code J)	5.1x(Code G)	6.1x(Code J)	
No load current [A]	3.42/1.71	3.37-2.91/1.69	1.99	
Rated speed [RPM]	1165	945	955	
Slip [%]	2.92	5.50	4.50	
Rated torque [ft.lb]	9.02	11.1	11.0	
Locked rotor torque [%]	200	160	210	
Breakdown torque [%]	300	220	270	
Service factor	1.15	1.00	1.00	
Temperature rise	80 K	105 K	80 K	
Locked rotor time	59s (cold) 33s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level <sup>2</sup>	52.0 dB(A)	50.0 dB(A)	50.0 dB(A)	
Efficiency (%)	25%	84.4	86.1	83.1
	50%	85.5	84.8	83.0
	75%	86.5	84.9	84.6
	100%	87.5	83.0	84.0
Power Factor	25%	0.30	0.36	0.30
	50%	0.53	0.61	0.53
	75%	0.66	0.73	0.66
	100%	0.73	0.79	0.74
Bearing type	: <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6205 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 153 lb	
Lubrication interval	: - -	Max. compression	: 226 lb	
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 6.52A SF 1.00 SFA 6.52A				
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
Performed by				
Checked by				
Date	08/09/2023		Page	Revision
			1 / 16	

# TORQUE AND CURRENT VS SPEED CURVE



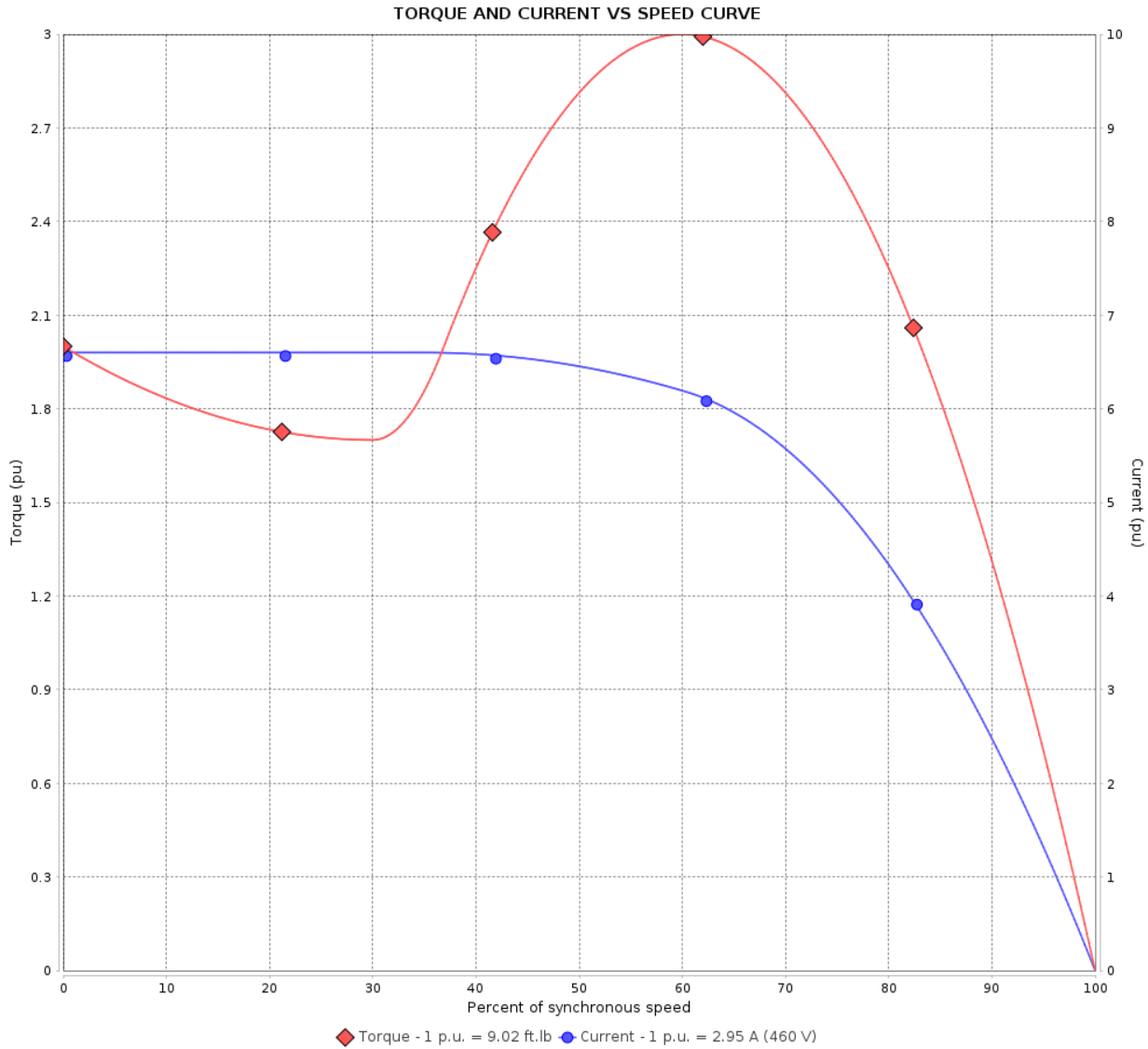
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 230/460 V 60 Hz 6P

Rated current	: 5.90/2.95 A	Moment of inertia (J)	: 0.2800 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 9.02 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1165 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	08/09/2023			

# TORQUE AND CURRENT VS SPEED CURVE



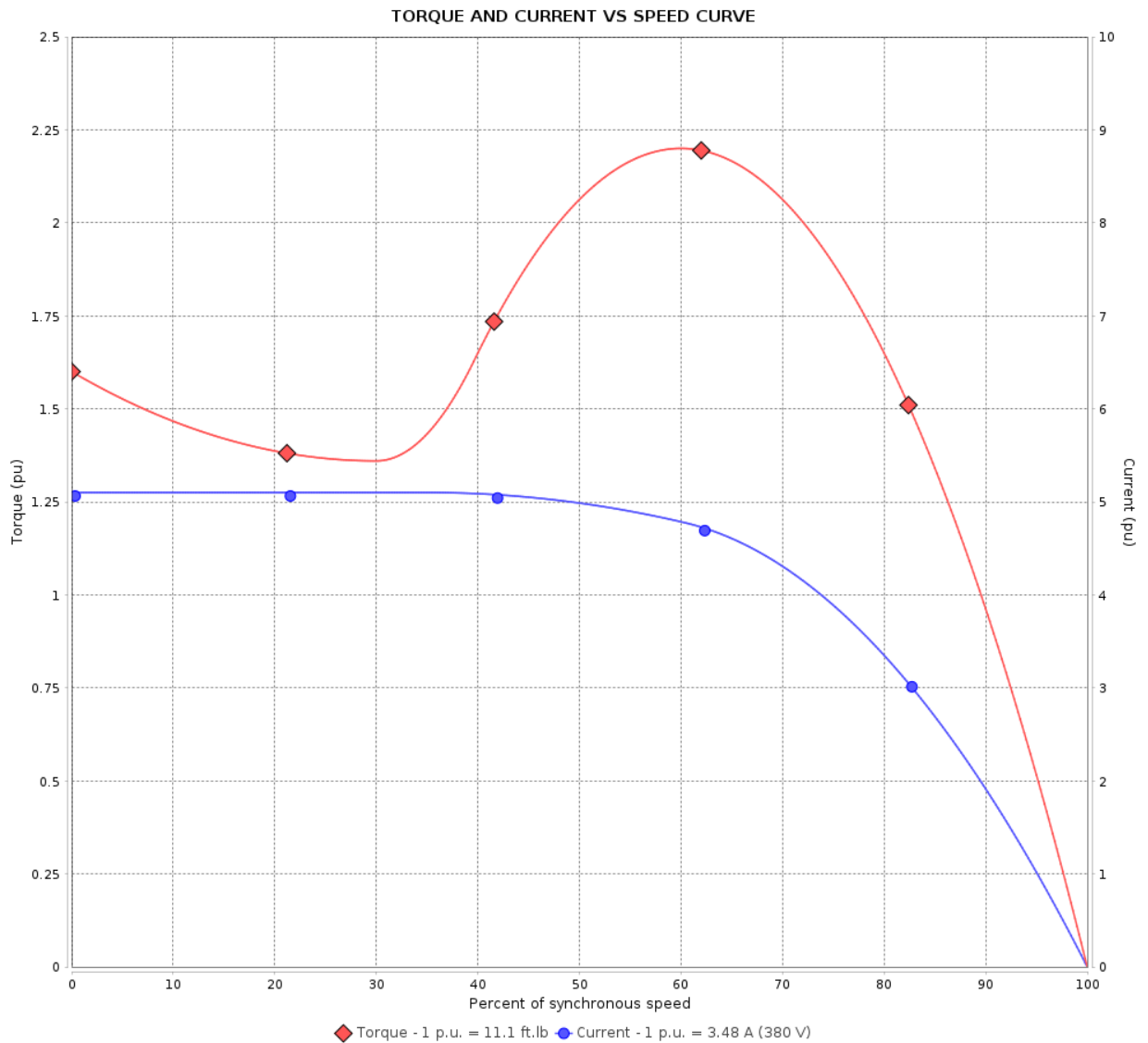
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 190-220/380 V 50 Hz 6P

Rated current	: 6.96-6.01/3.48 A	Moment of inertia (J)	: 0.2800 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 11.1 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 105 K
Rated speed	: 945 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	08/09/2023			

# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

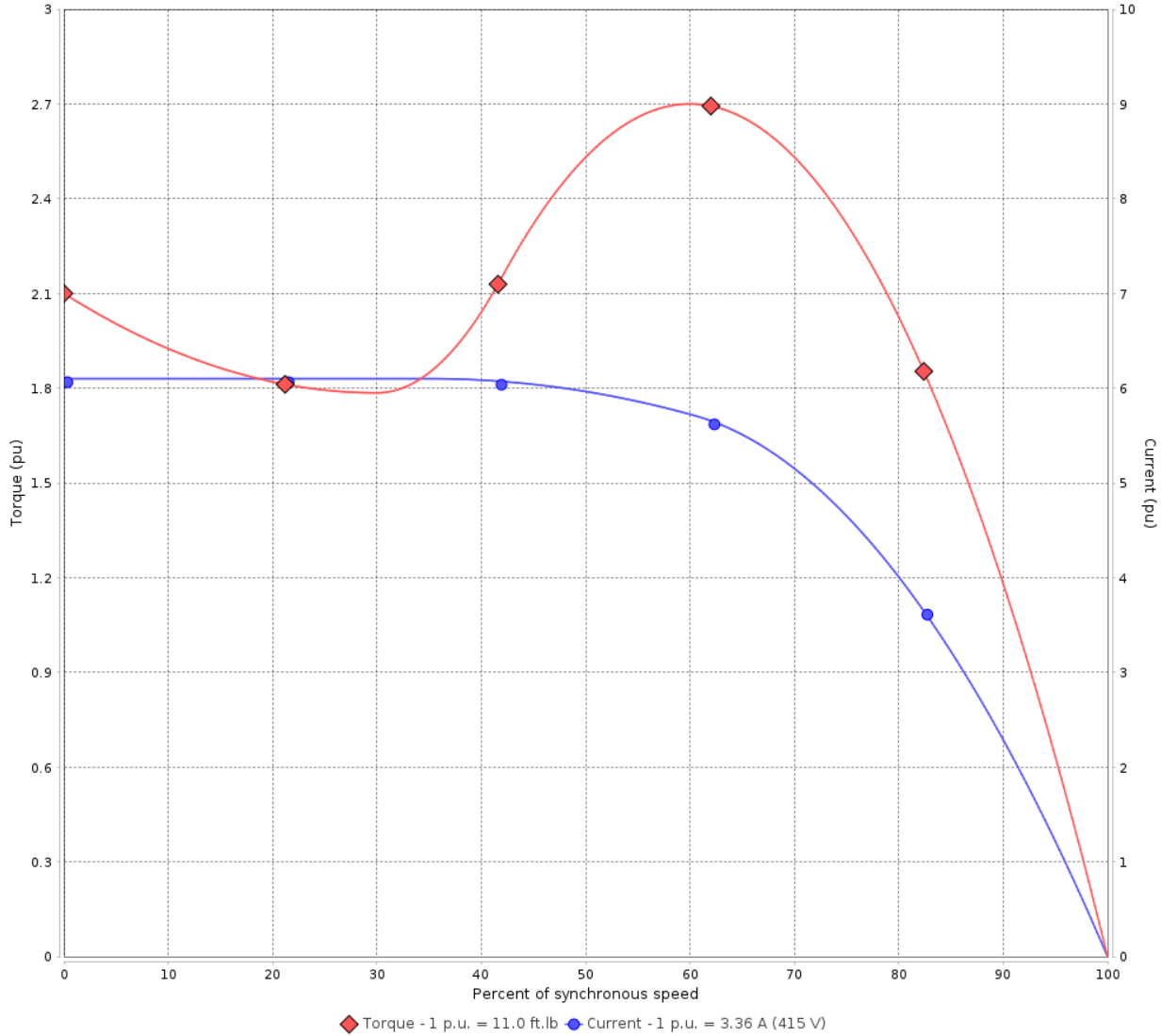
Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P

Rated current : 3.36 A  
LRC : 6.1  
Rated torque : 11.0 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 270 %  
Rated speed : 955 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	08/09/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

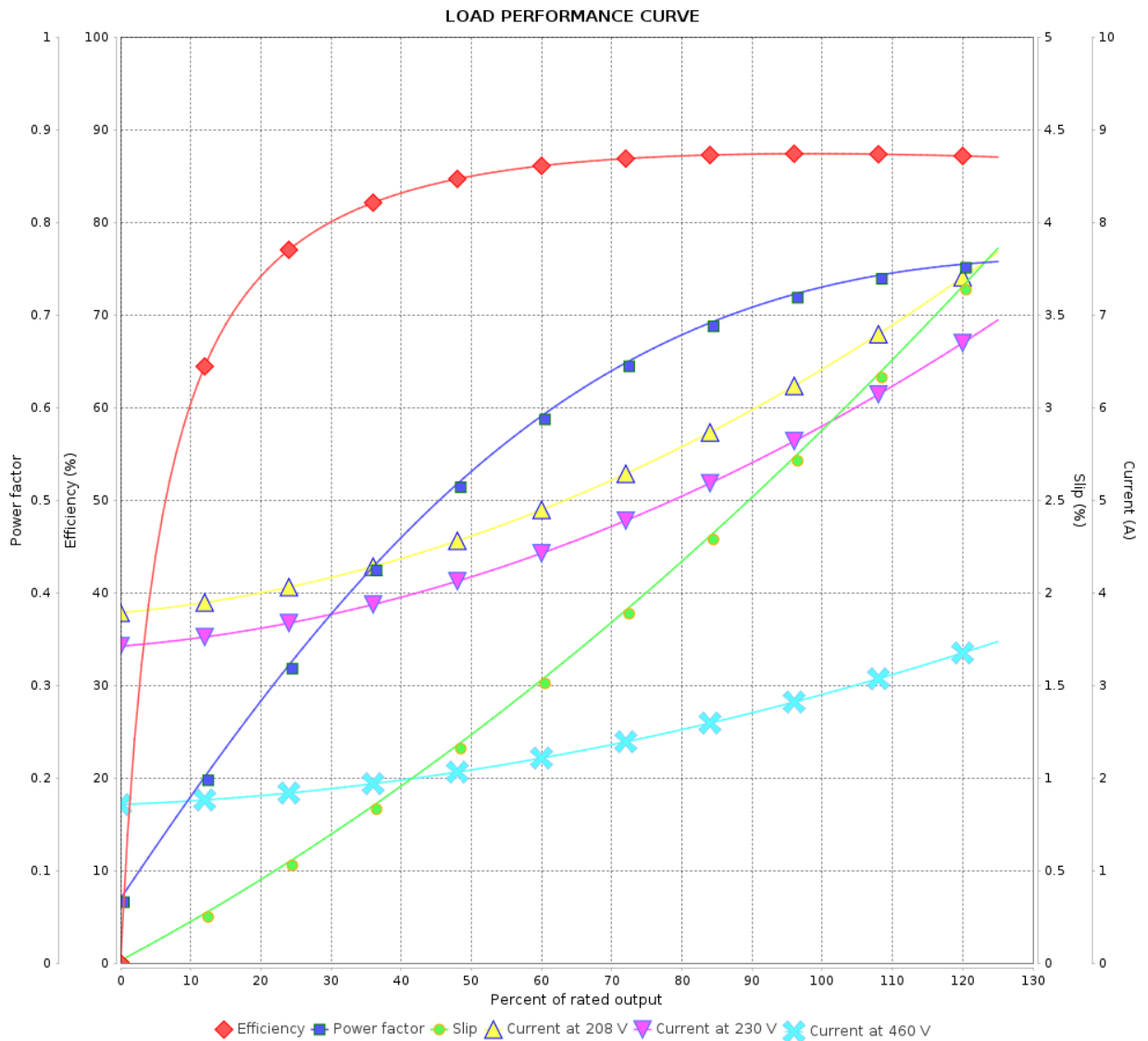


Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 230/460 V 60 Hz 6P

Rated current : 5.90/2.95 A  
LRC : 6.6  
Rated torque : 9.02 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 300 %  
Rated speed : 1165 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 16	
Date	08/09/2023			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

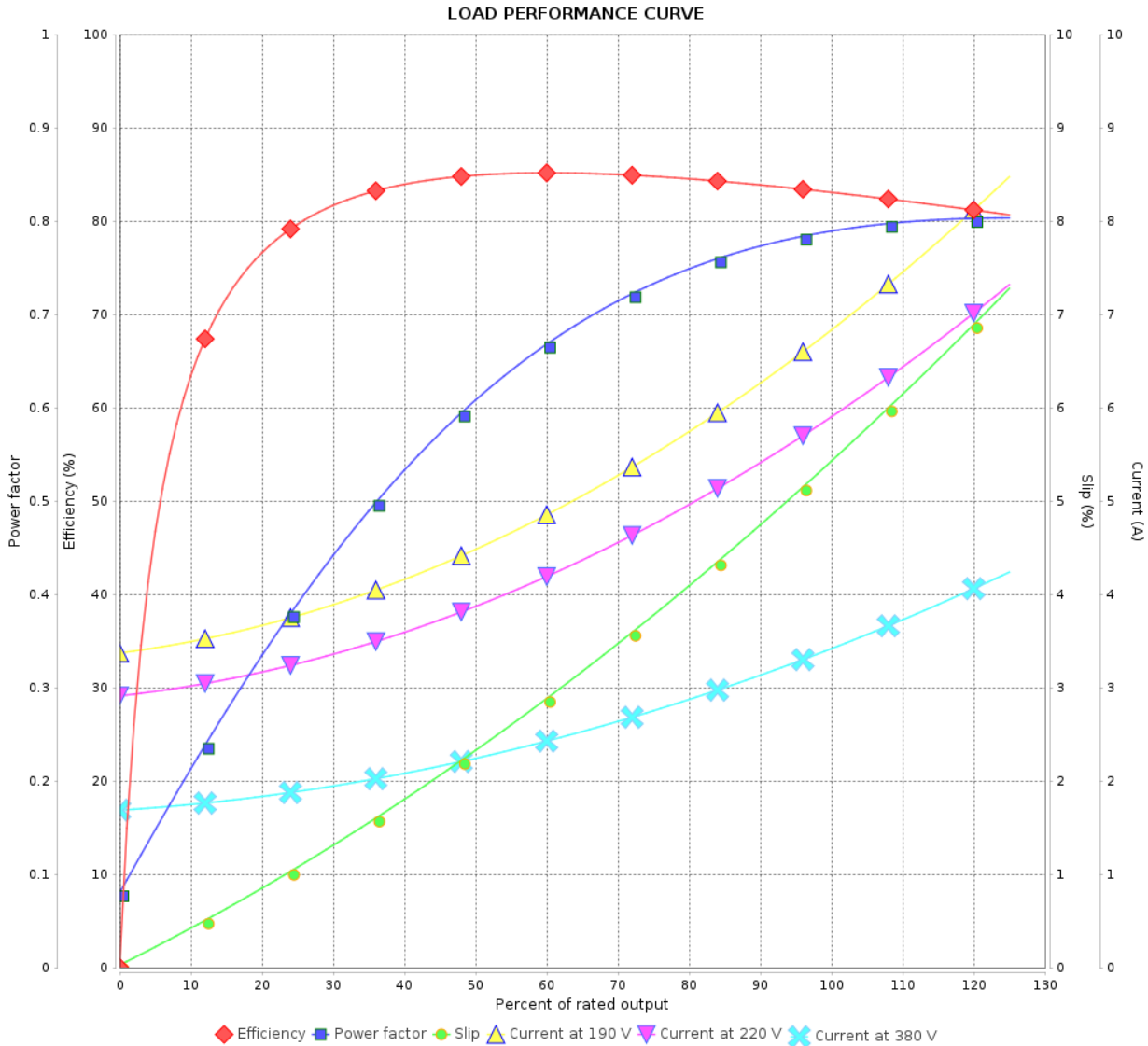


Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 190-220/380 V 50 Hz 6P

Rated current : 6.96-6.01/3.48 A  
 LRC : 5.1  
 Rated torque : 11.1 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 220 %  
 Rated speed : 945 rpm

Moment of inertia (J) : 0.2800 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 6 / 16	Revision
Checked by				
Date	08/09/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

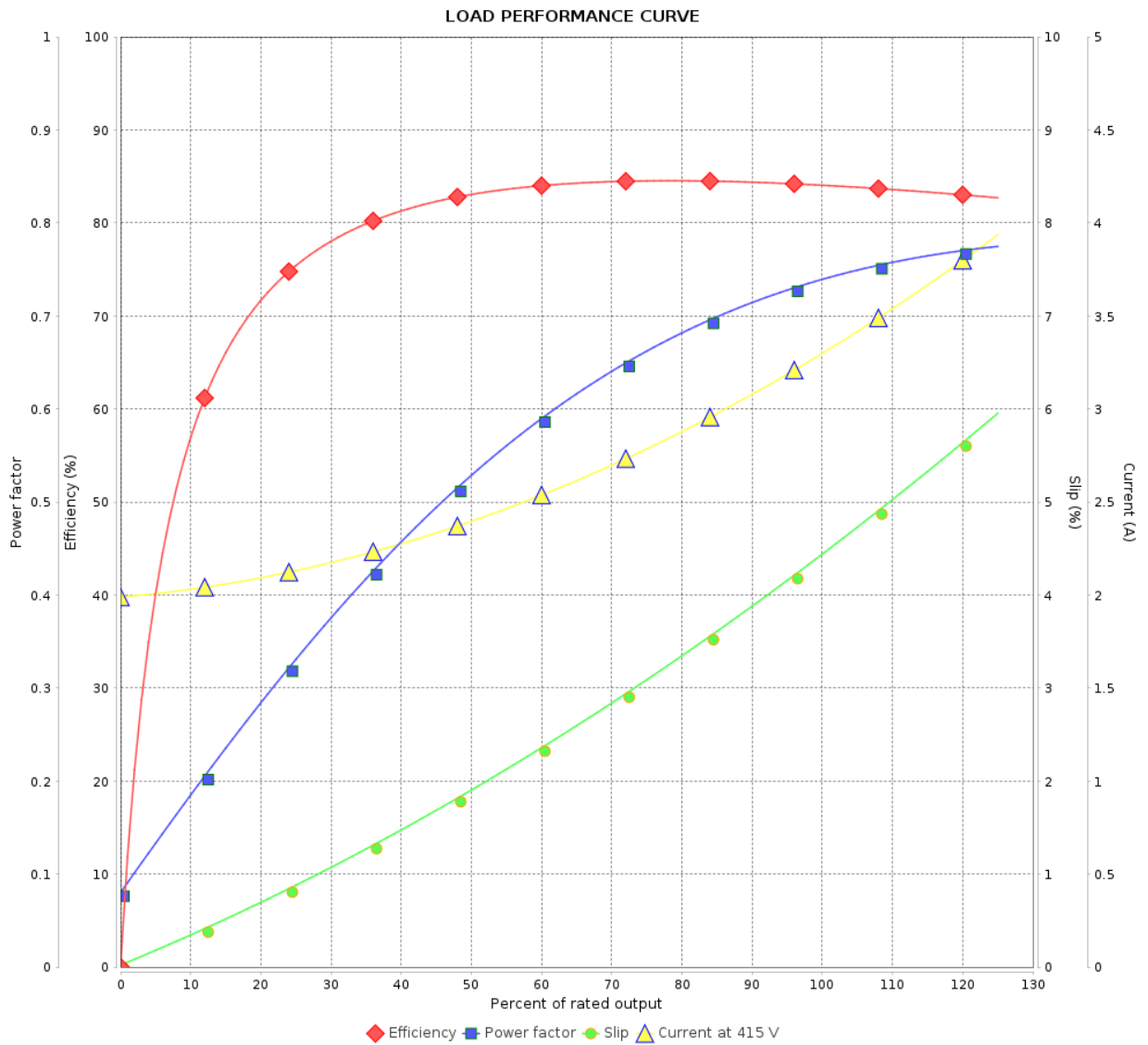


Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 415 V 50 Hz 6P

Rated current : 3.36 A  
 LRC : 6.1  
 Rated torque : 11.0 ft.lb  
 Locked rotor torque : 210 %  
 Breakdown torque : 270 %  
 Rated speed : 955 rpm

Moment of inertia (J) : 0.2800 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	08/09/2023			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 00212OT3ER184TC-S

Performance : 230/460 V 60 Hz 6P

Rated current : 5.90/2.95 A  
LRC : 6.6  
Rated torque : 9.02 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 300 %  
Rated speed : 1165 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	08/09/2023		8 / 16	

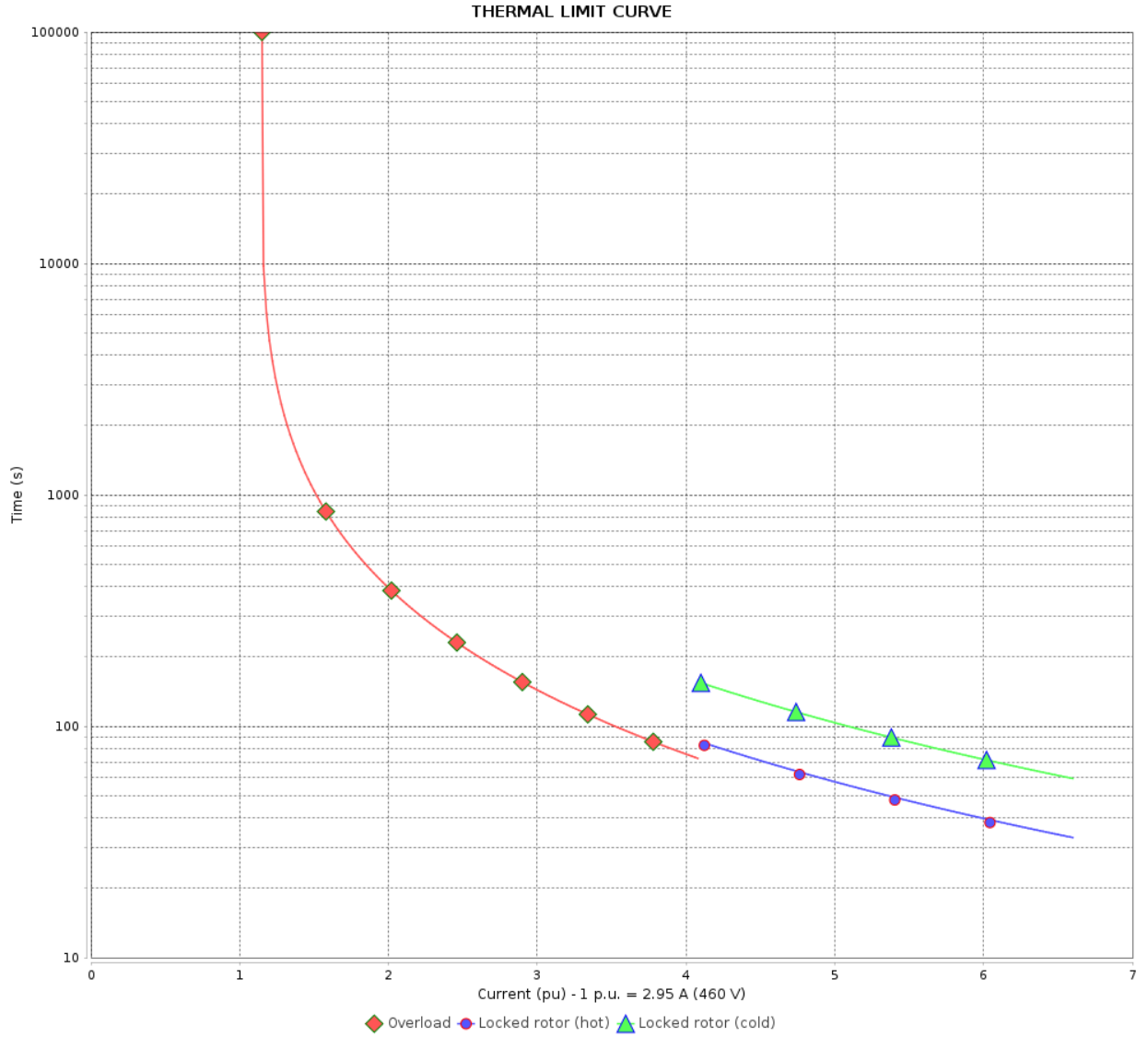


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 00212OT3ER184TC-S

Performance : 190-220/380 V 50 Hz 6P

Rated current : 6.96-6.01/3.48 A  
LRC : 5.1  
Rated torque : 11.1 ft.lb  
Locked rotor torque : 160 %  
Breakdown torque : 220 %  
Rated speed : 945 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 105 K  
Design : B

Heating constant

Cooling constant

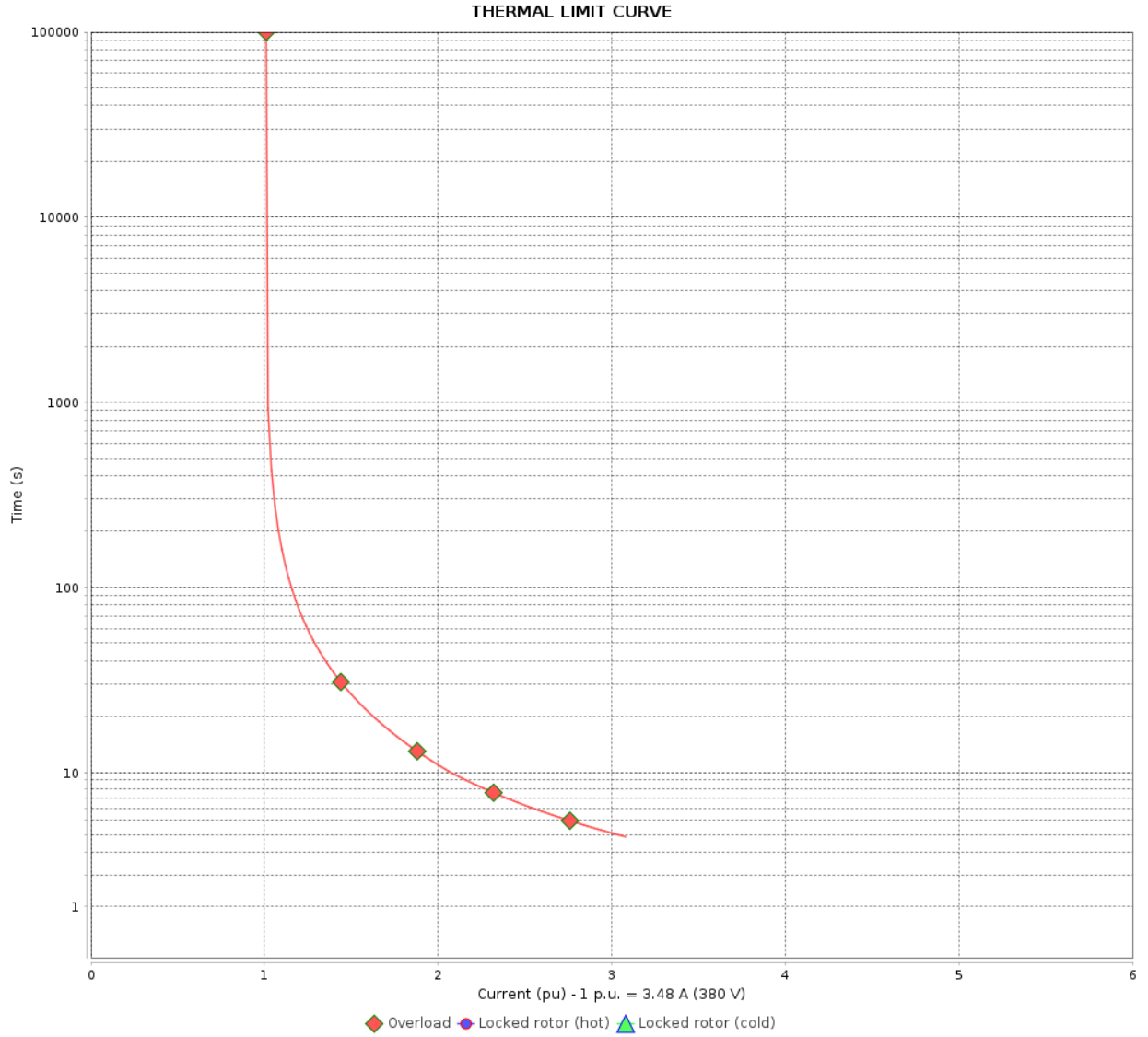
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	08/09/2023		10 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 16		
Date		08/09/2023		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 00212OT3ER184TC-S

Performance : 415 V 50 Hz 6P

Rated current : 3.36 A  
LRC : 6.1  
Rated torque : 11.0 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 270 %  
Rated speed : 955 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

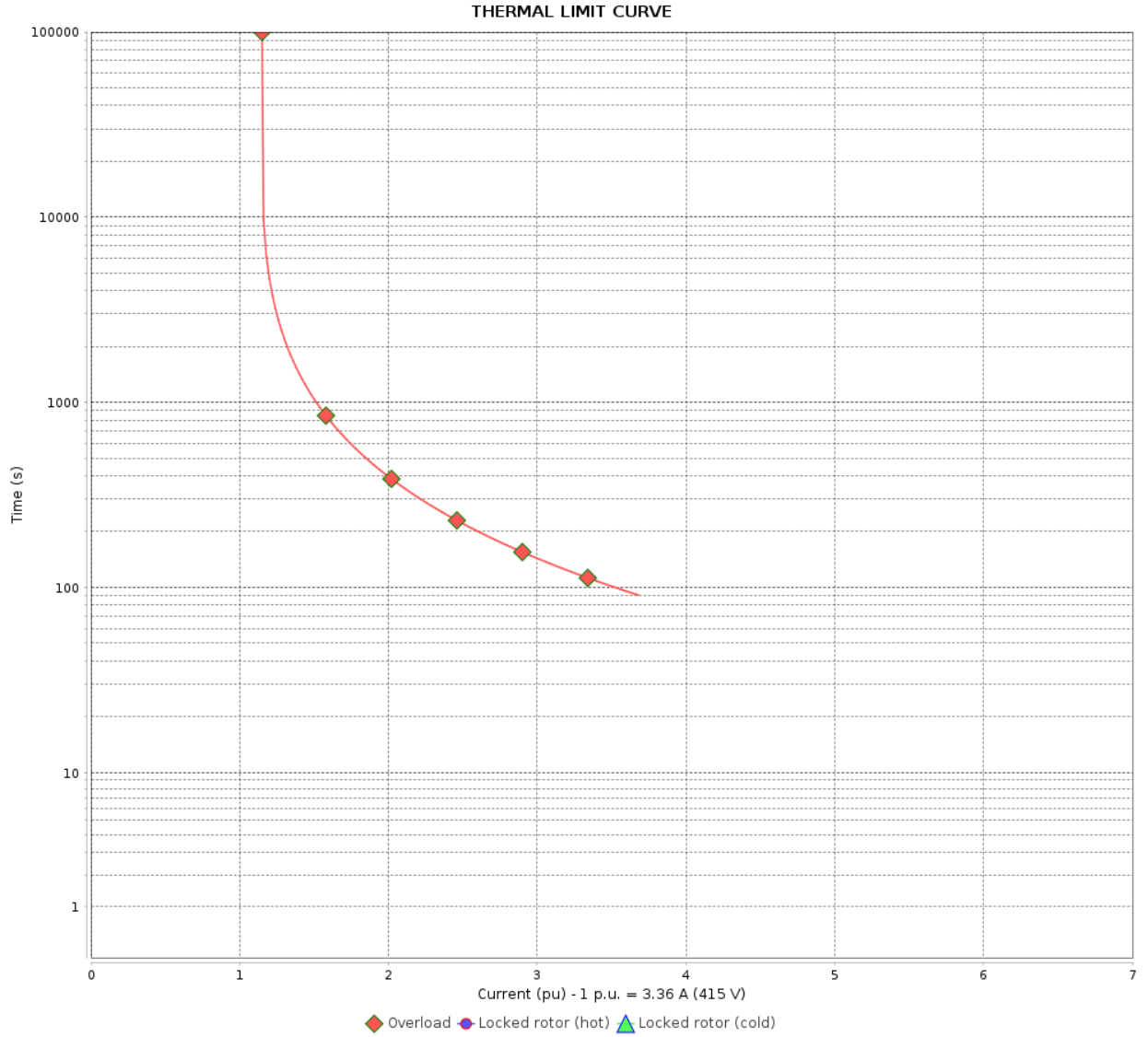
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	08/09/2023		12 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		08/09/2023		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

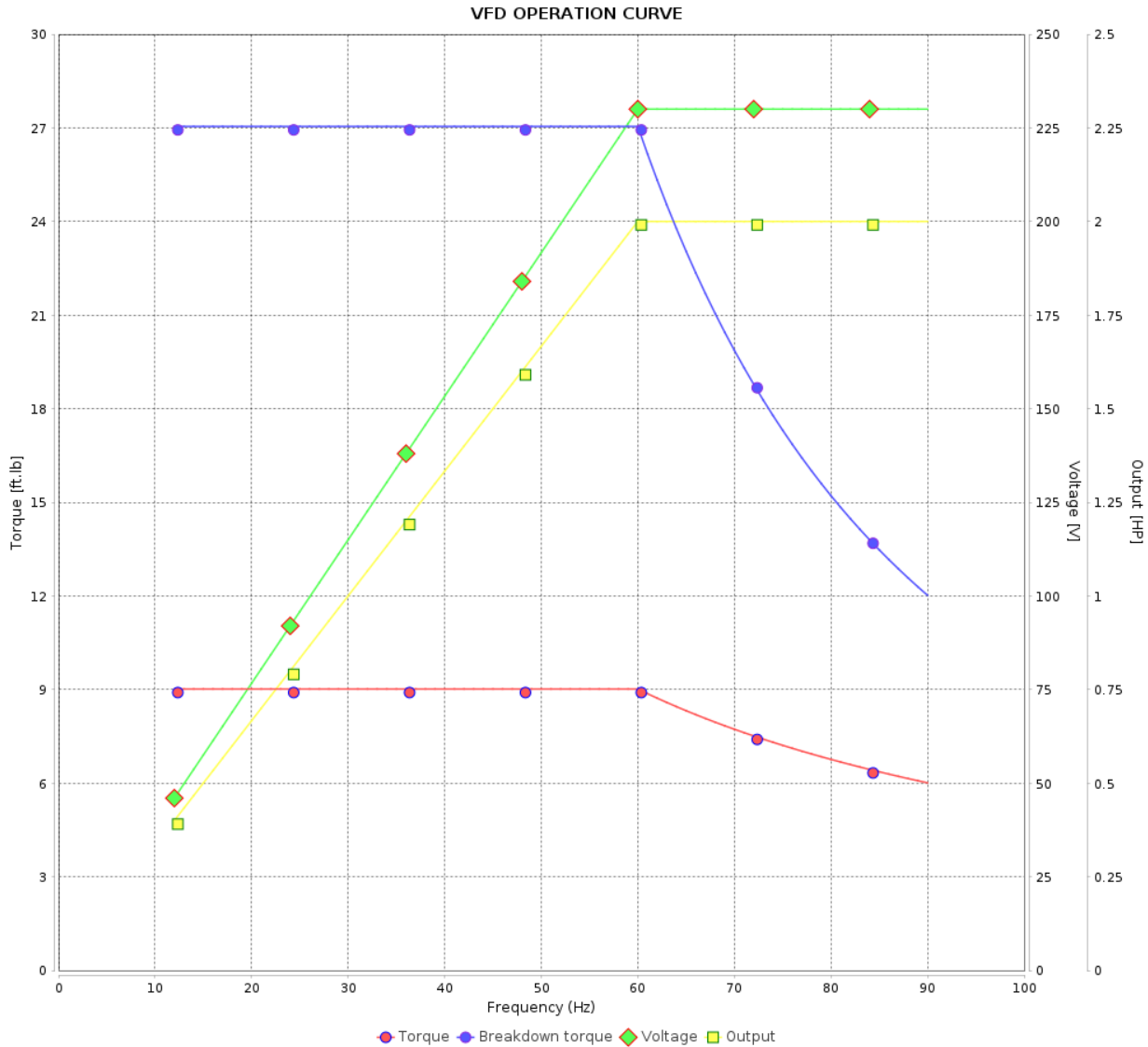


Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 230/460 V 60 Hz 6P

Rated current : 5.90/2.95 A  
 LRC : 6.6  
 Rated torque : 9.02 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 300 %  
 Rated speed : 1165 rpm

Moment of inertia (J) : 0.2800 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

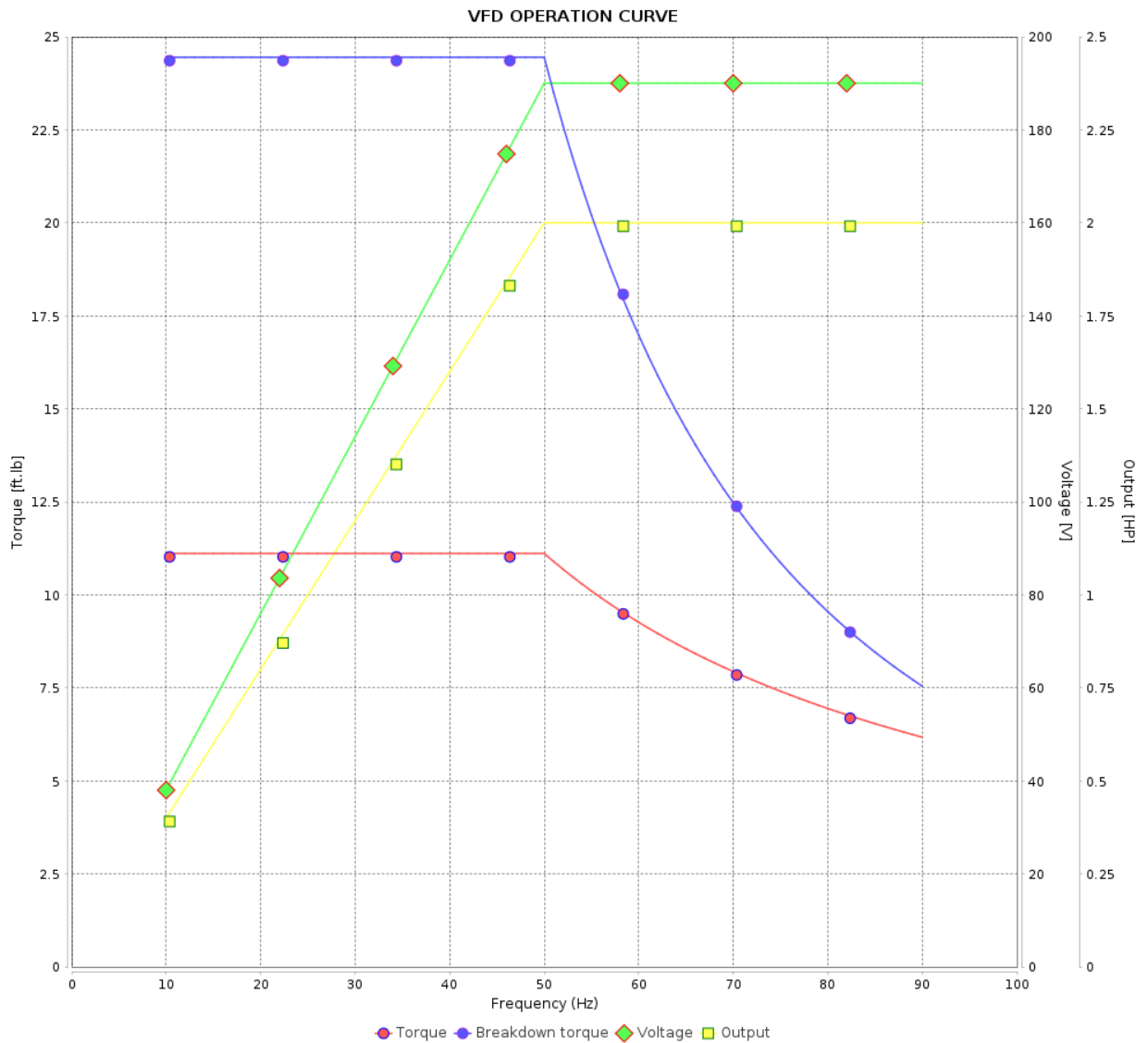


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 190-220/380 V 50 Hz 6P

Rated current : 6.96-6.01/3.48 A  
 LRC : 5.1  
 Rated torque : 11.1 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 220 %  
 Rated speed : 945 rpm

Moment of inertia (J) : 0.2800 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				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

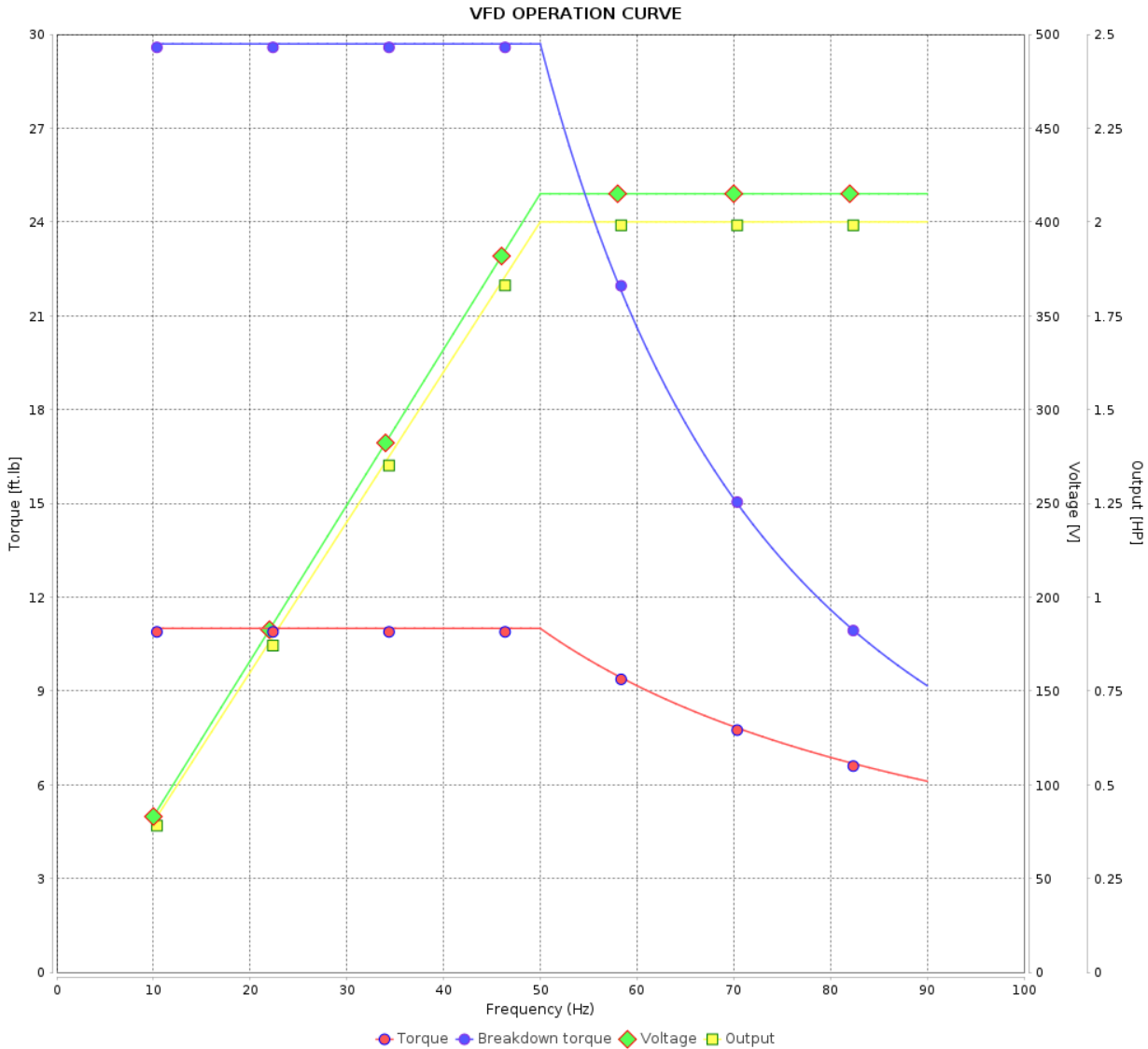


Customer :

Product line : Rolled Steel NEMA Premium Efficiency  
Three-Phase

Product code : 15608393

Catalog # : 002120T3ER184TC-S



Performance : 415 V 50 Hz 6P

Rated current : 3.36 A  
LRC : 6.1  
Rated torque : 11.0 ft.lb  
Locked rotor torque : 210 %  
Breakdown torque : 270 %  
Rated speed : 955 rpm

Moment of inertia (J) : 0.2800 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				
Date				



1 2 3 4 5 6

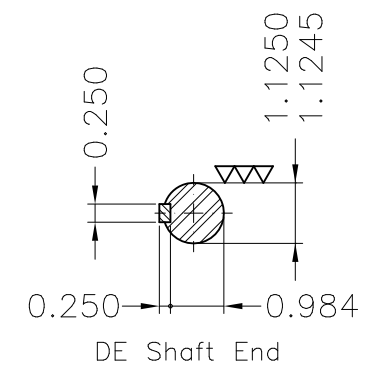
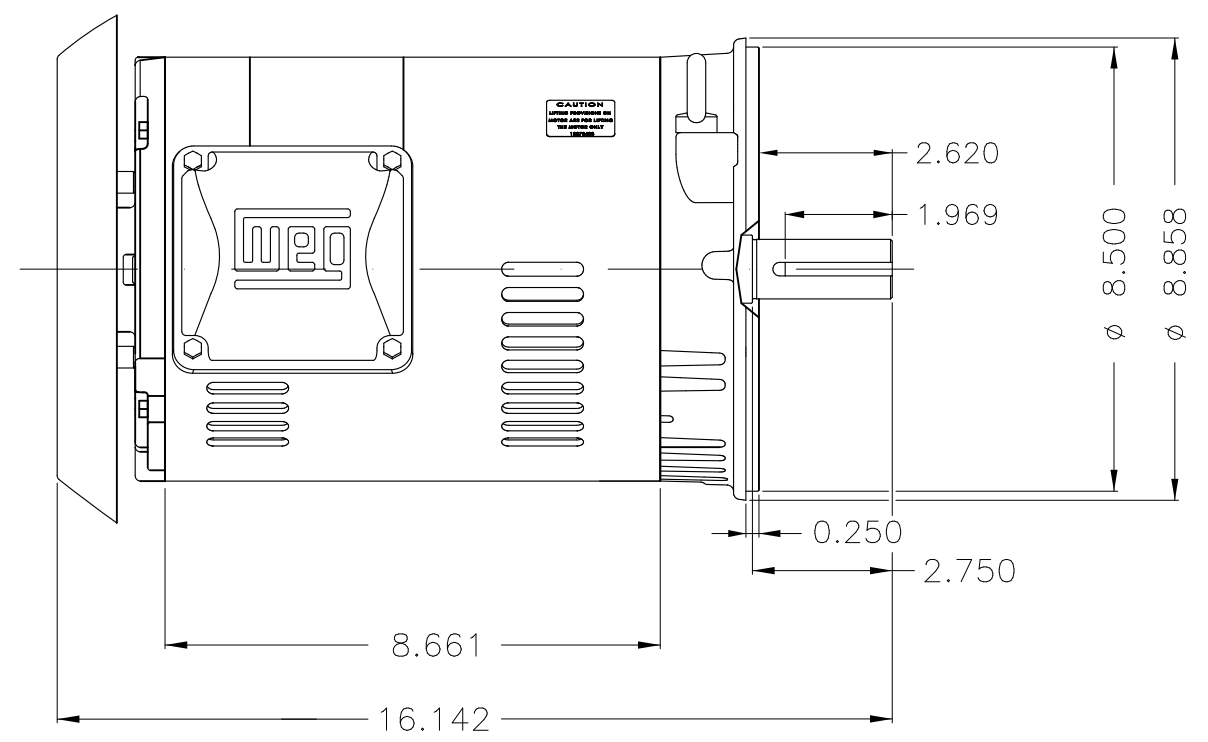
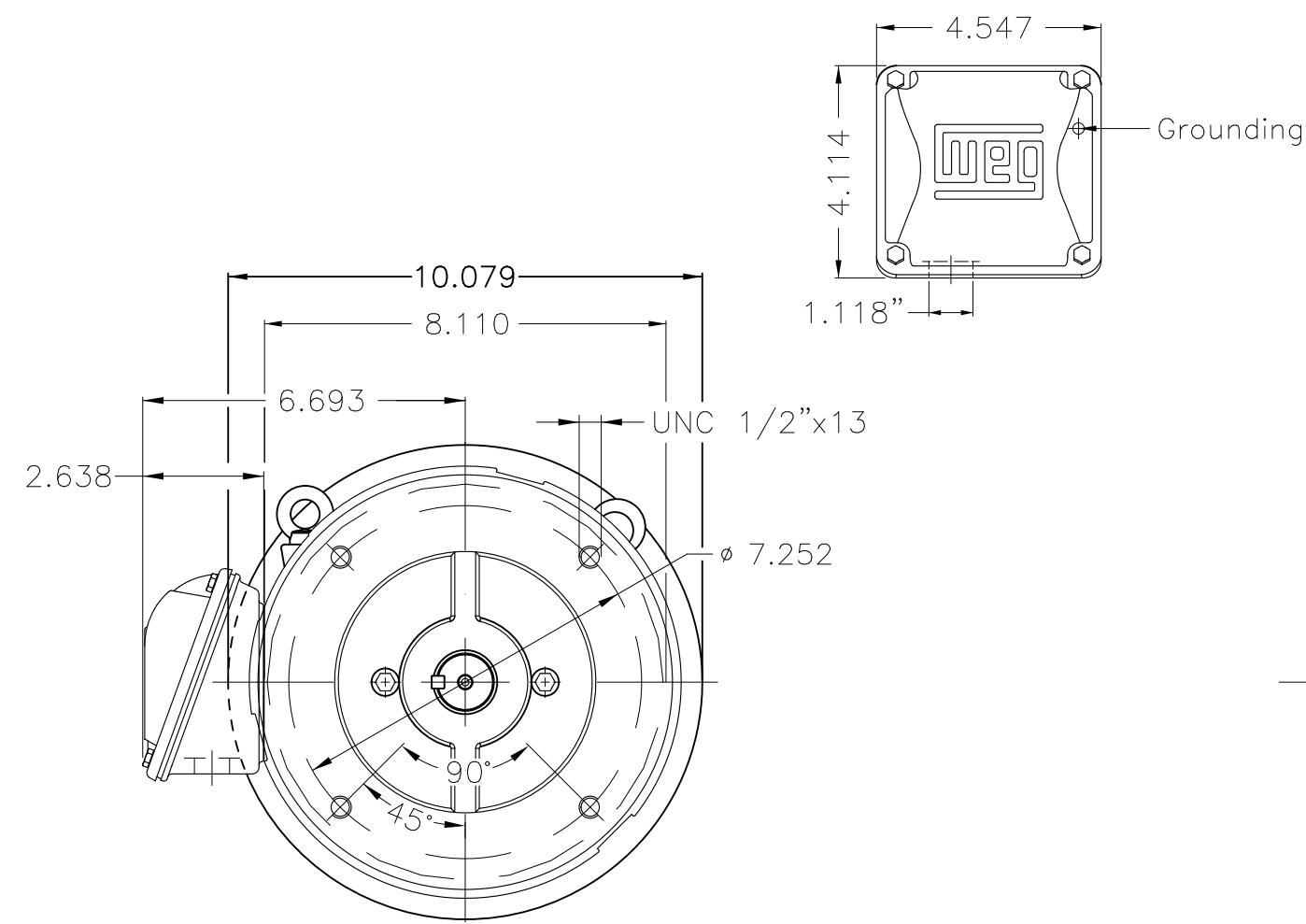
A

B

C

D

E



Color Munsell N 1 matte black						
Painting plan 207N						
Mounting W-6/V18R(D)						
					HYBRISUSER	00
ECM	LOC	SUMMARY OF MODIFICATIONS		EXECUTED	CHECKED	RELEASED
EXECUTED	HYBRISUSER	THREE PH. MOTOR ROLLED STEEL NEMA PREM. EFF.		EXECUTED	CHECKED	RELEASED
CHECKED		FRAME 182/4TC IP21 ODP		EXECUTED	CHECKED	RELEASED
RELEASED				EXECUTED	CHECKED	RELEASED
REL. DATE		WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1	

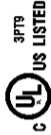
2 HP 06 Poles 60 Hz

A





**NEMA**  
**Premium**



MADE IN MEXICO

**MAT: 15608393 CC029A**

**W01.T00IC0X0N**

**MODEL 002120T3ER184TC-S**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 2.0</b>
<b>FR 182/4TC</b>		<b>KW 1.5</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 5.90/2.95</b>
<b>INS CL F AT 80K</b>		<b>SFA 6.79/3.39</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL ODP</b>	<b>CODE J</b>	<b>PF 0.73</b>
		<b>RPM 1165</b>
		<b>NEMA NOM. EFF 87.5%</b>

**ALTERNATE RATING: 2.0HP 50Hz 190-220/380-415V SF1.00**  
**6.96-6.34/3.48-3.36A 945RPM EFF 83.0% (IE3) IEC 60034-1**

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

**DE 6206-ZZ ODE 6205-ZZ MOBIL POLYREX EM**



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.

