

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: JM Pump NEMA Premium Efficiency Three-Phase	Product code :	13181453	
		Catalog # :	01536ET3E215JM-S	
Frame	: 213/5JM	Cooling method	: IC411 - TEFC	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 167 lb	
Protection degree	: IP55	Moment of inertia (J)	: 0.6341 sq.ft.lb	
Design	: A			
Output [HP]	15	10	10	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	34.0/17.0	28.8/14.4	26.2/13.9	
L. R. Amperes [A]	279/139	251/125	244/129	
LRC [A]	8.2x(Code J)	8.7x(Code K)	9.3x(Code K)	
No load current [A]	12.4/6.22	12.2/6.11	12.8/6.77	
Rated speed [RPM]	3520	2935	2940	
Slip [%]	2.22	2.17	2.00	
Rated torque [ft.lb]	22.4	17.9	17.9	
Locked rotor torque [%]	280	320	350	
Breakdown torque [%]	330	370	420	
Service factor	1.15	1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	19s (cold) 11s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)	
Noise level ²	70.0 dB(A)	67.0 dB(A)	67.0 dB(A)	
Efficiency (%)	25%	90.0	90.5	89.9
	50%	90.2	90.5	90.1
	75%	91.0	91.4	91.3
	100%	91.0	91.1	91.3
Power Factor	25%	0.49	0.44	0.39
	50%	0.76	0.71	0.66
	75%	0.85	0.82	0.78
	100%	0.89	0.87	0.85
Bearing type	: <u>Drive end</u> 6209 ZZ <u>Non drive end</u> 6206 ZZ	Foundation loads		
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 339 lb	
		Max. compression	: 507 lb	
Lubrication interval	: -			
Lubricant amount	: -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V 37.6A SF 1.00 SFA 37.6A				
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	13/04/2022		1 / 16	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



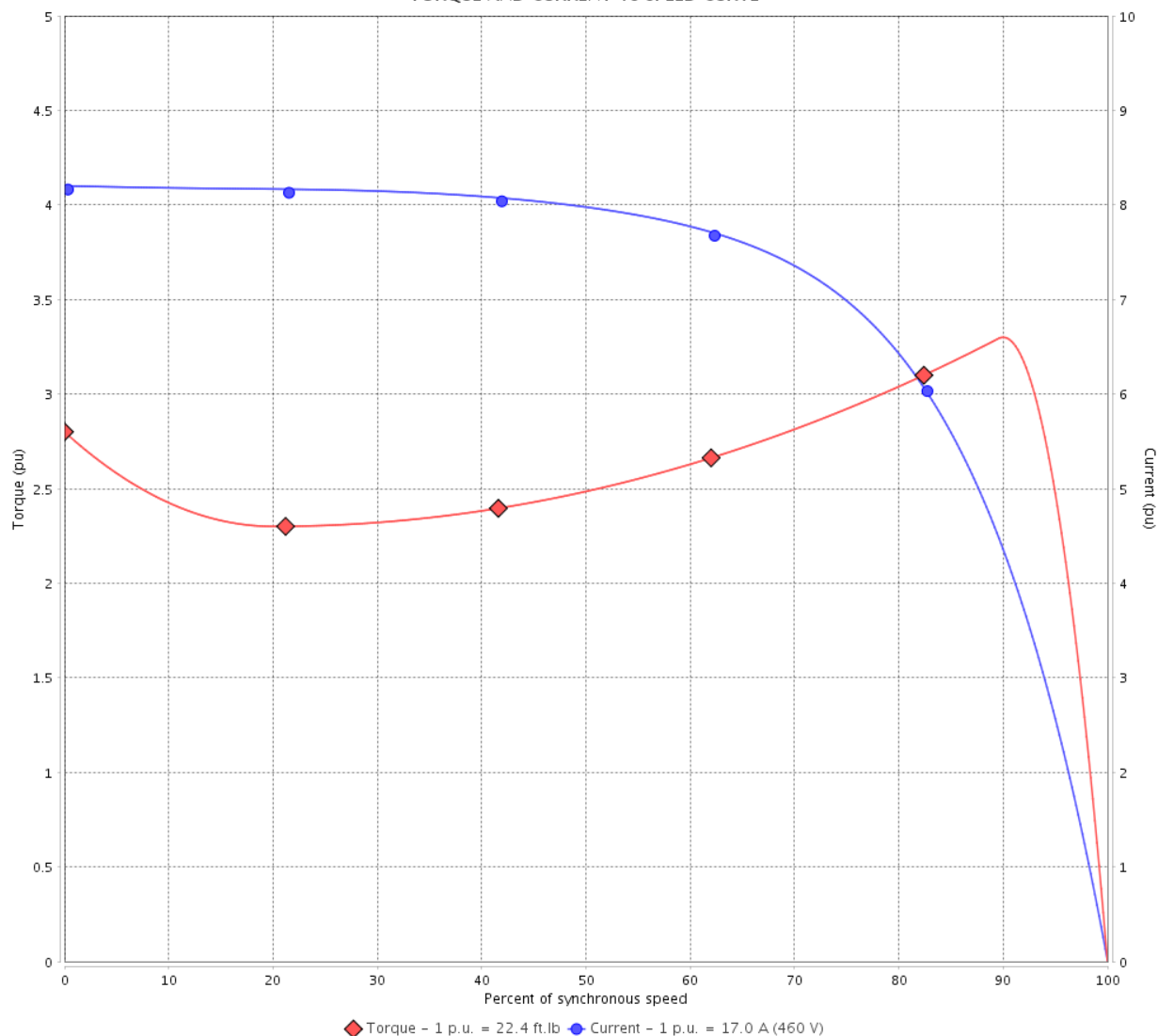
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 34.0/17.0 A
 LRC : 8.2
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Locked rotor time : 19s (cold) 11s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



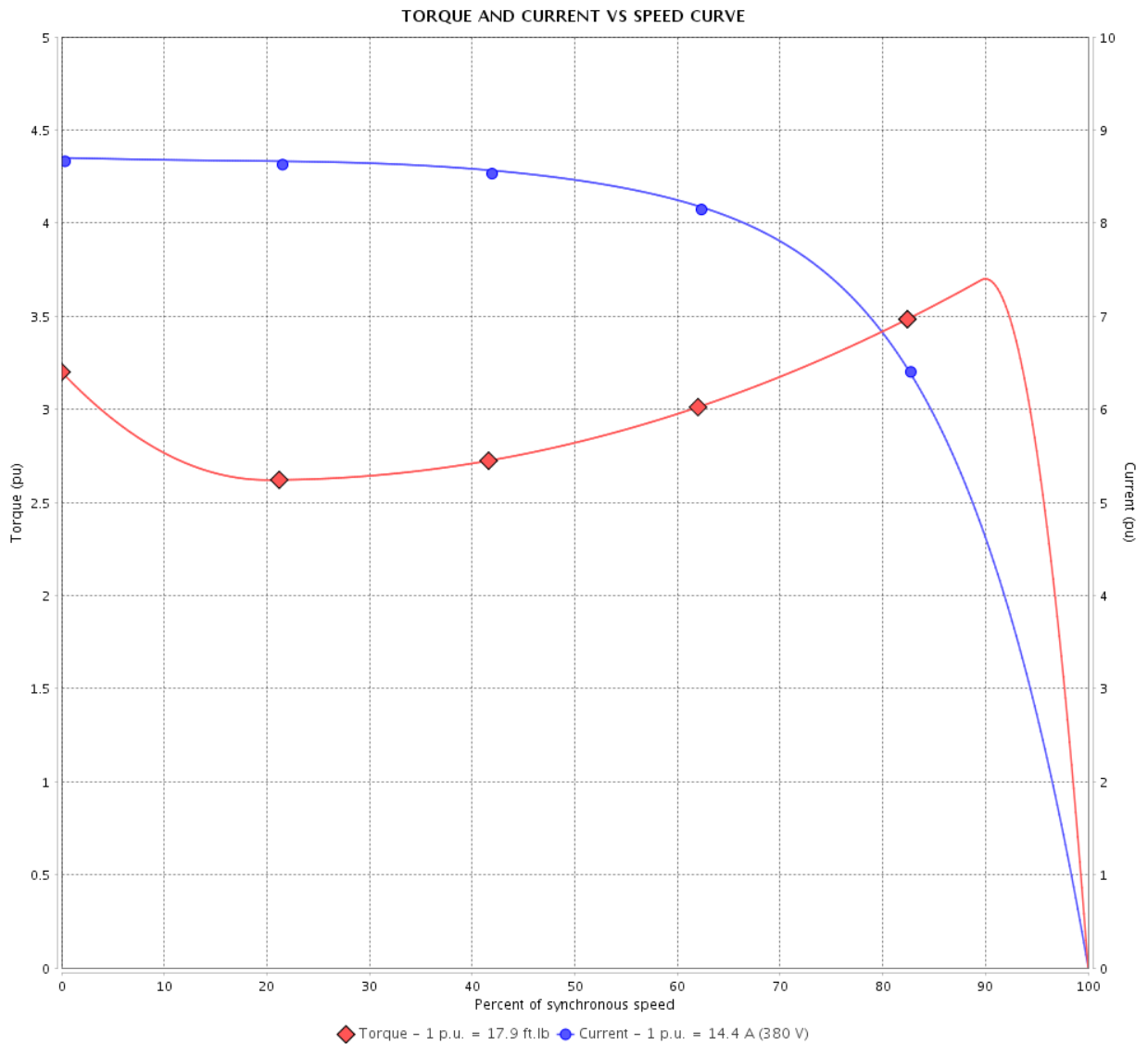
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S



Performance : 190/380 V 50 Hz 2P

Rated current : 28.8/14.4 A
 LRC : 8.7
 Rated torque : 17.9 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 370 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



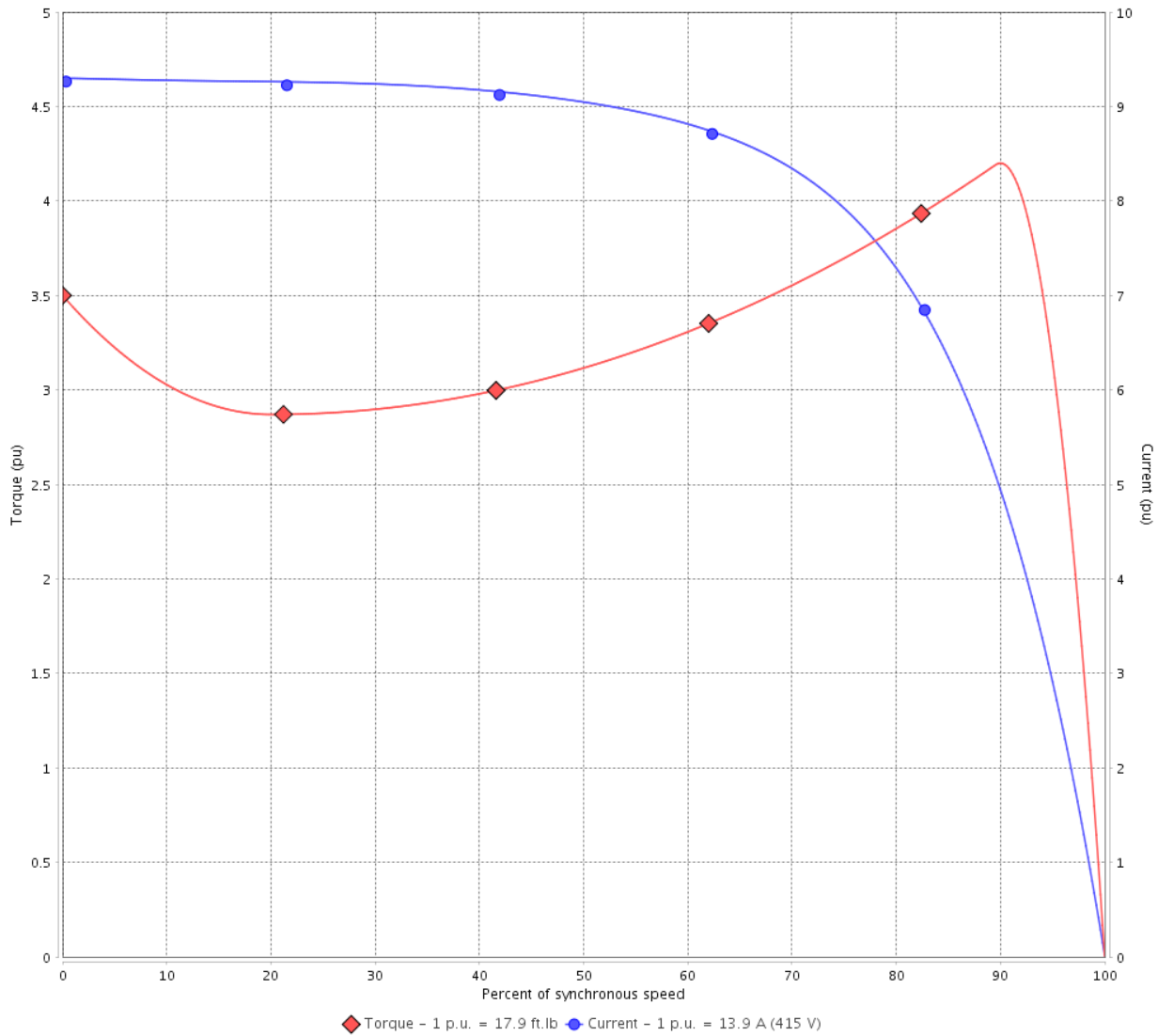
Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 26.2/13.9 A	Moment of inertia (J)	: 0.6341 sq.ft.lb
LRC	: 9.3	Duty cycle	: Cont.(S1)
Rated torque	: 17.9 ft.lb	Insulation class	: F
Locked rotor torque	: 350 %	Service factor	: 1.15
Breakdown torque	: 420 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: A

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

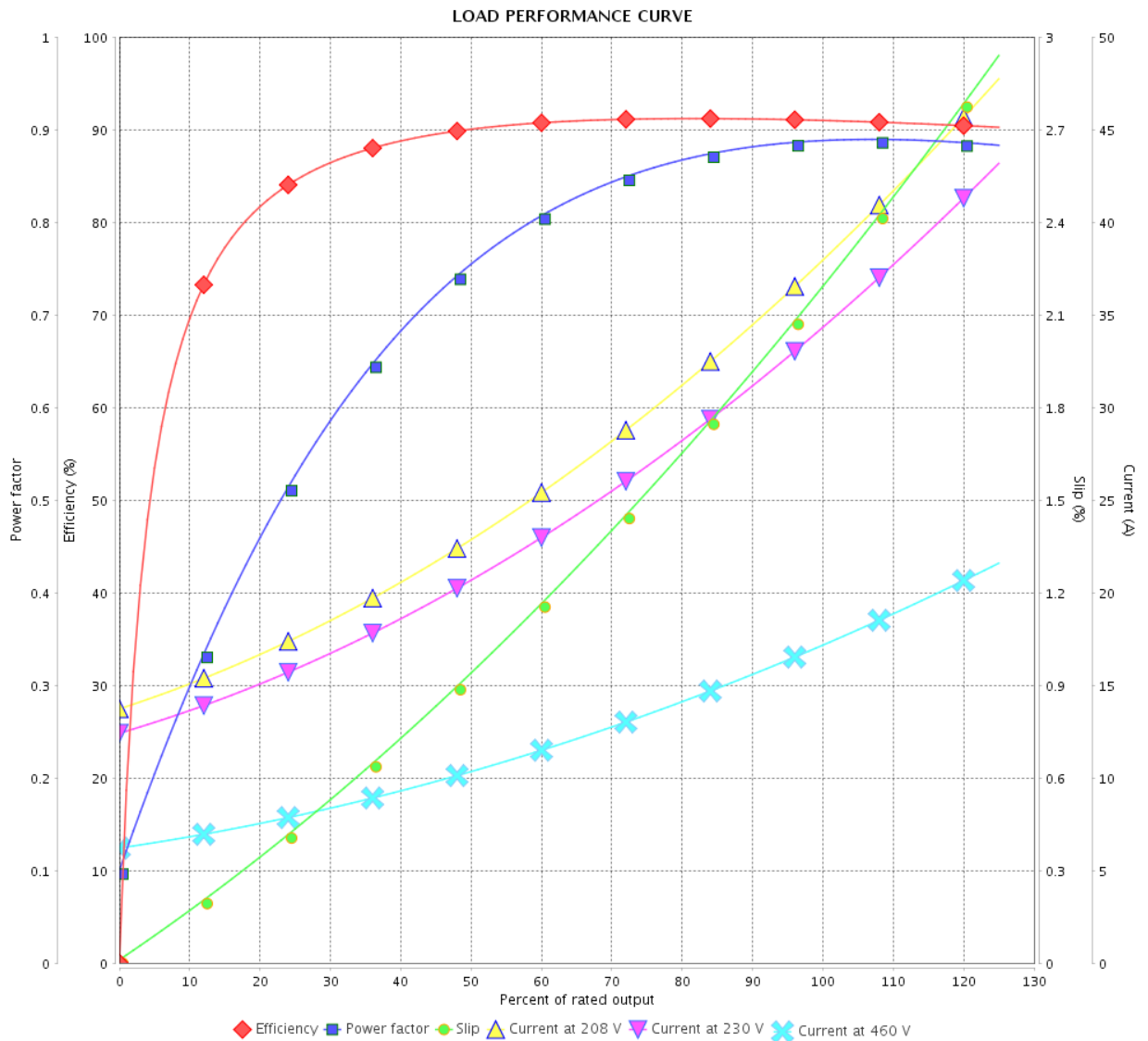


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S



Performance : 230/460 V 60 Hz 2P

Rated current : 34.0/17.0 A
 LRC : 8.2
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



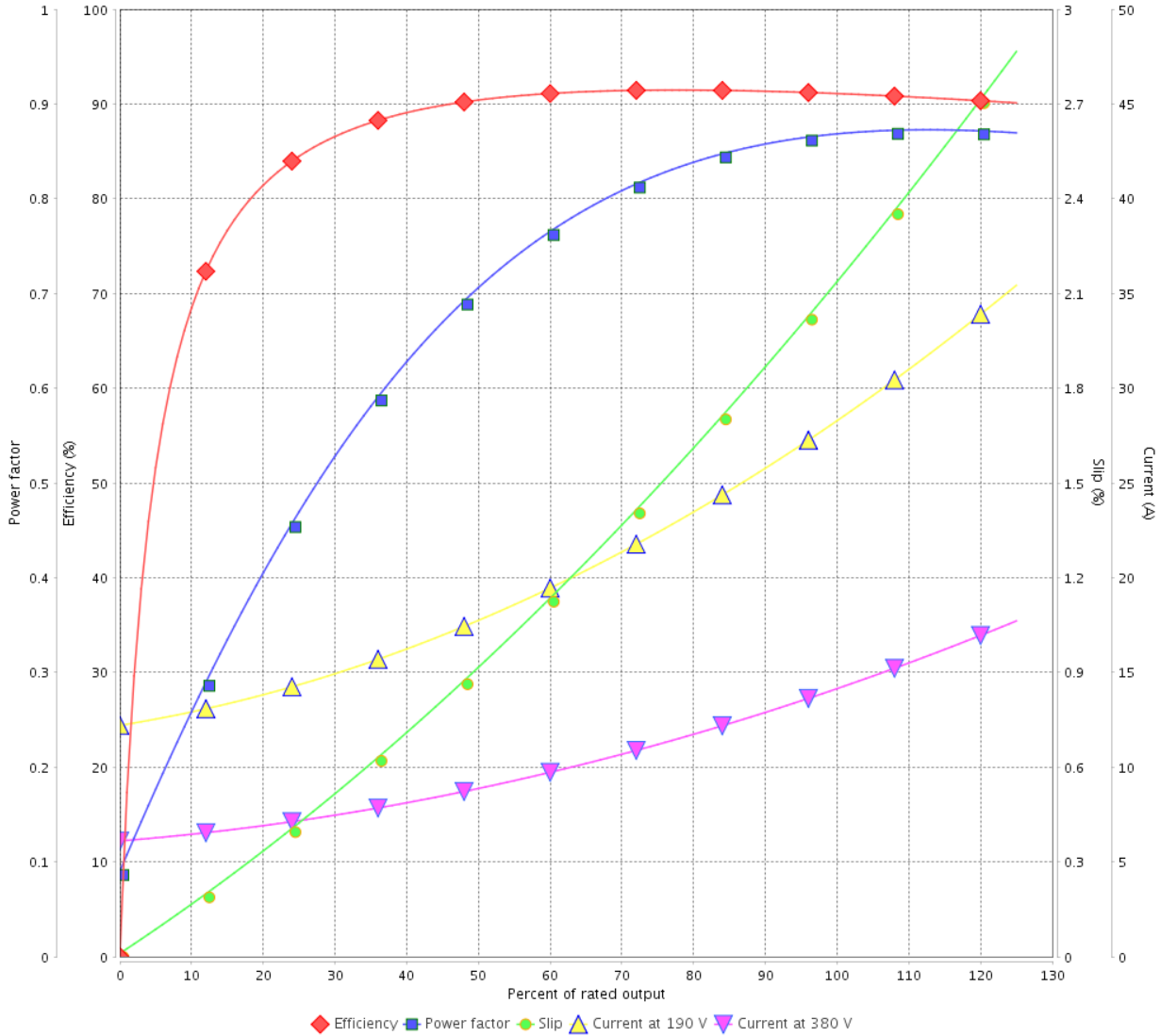
Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 28.8/14.4 A
 LRC : 8.7
 Rated torque : 17.9 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 370 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			6 / 16	
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

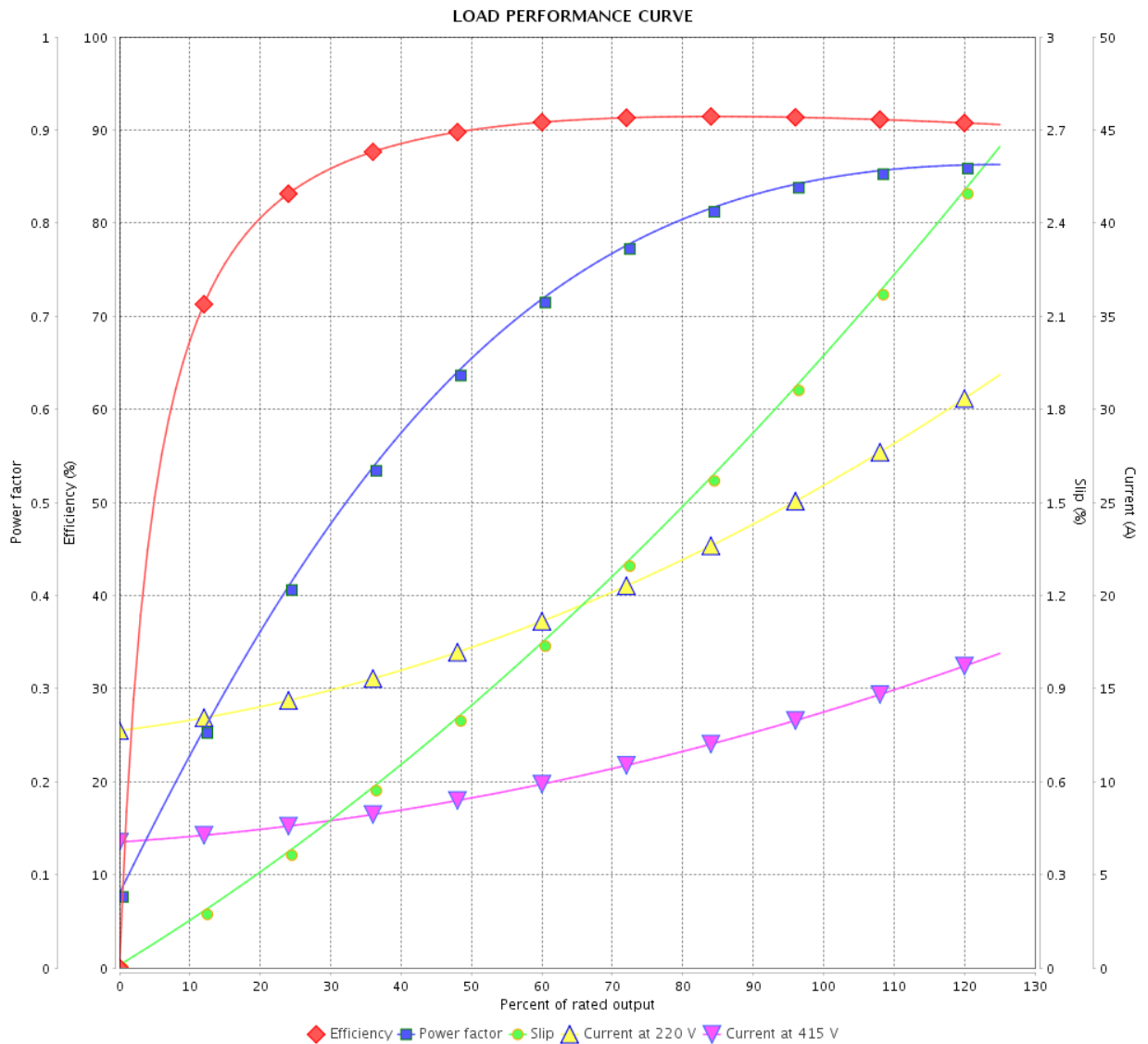


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S



Performance : 220/415 V 50 Hz 2P

Rated current : 26.2/13.9 A
 LRC : 9.3
 Rated torque : 17.9 ft.lb
 Locked rotor torque : 350 %
 Breakdown torque : 420 %
 Rated speed : 2940 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

Performance : 230/460 V 60 Hz 2P

Rated current : 34.0/17.0 A
LRC : 8.2
Rated torque : 22.4 ft.lb
Locked rotor torque : 280 %
Breakdown torque : 330 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : A

Heating constant

Cooling constant

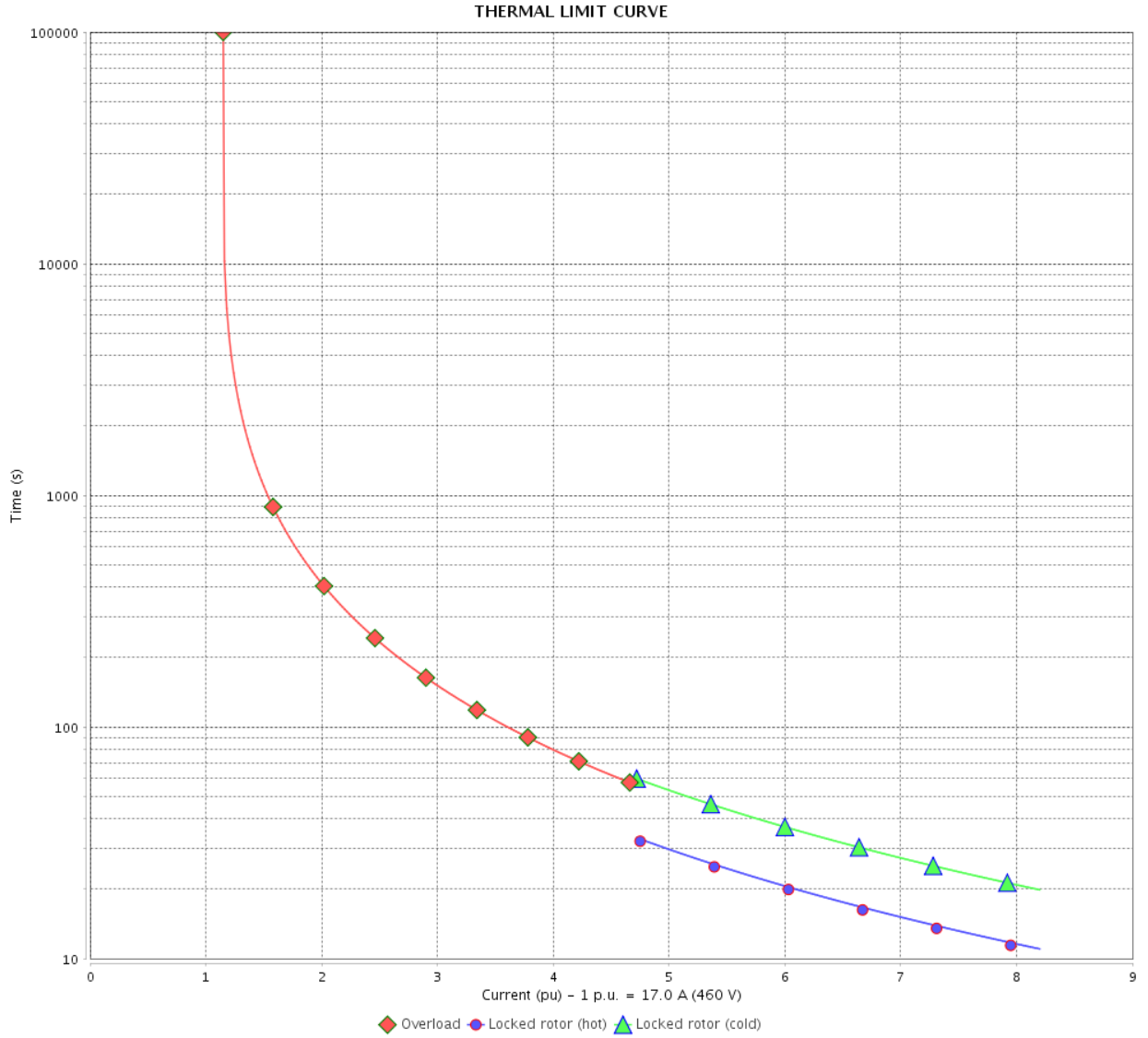
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		8 / 16	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		9 / 16		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

Performance : 190/380 V 50 Hz 2P

Rated current : 28.8/14.4 A
LRC : 8.7
Rated torque : 17.9 ft.lb
Locked rotor torque : 320 %
Breakdown torque : 370 %
Rated speed : 2935 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : A

Heating constant

Cooling constant

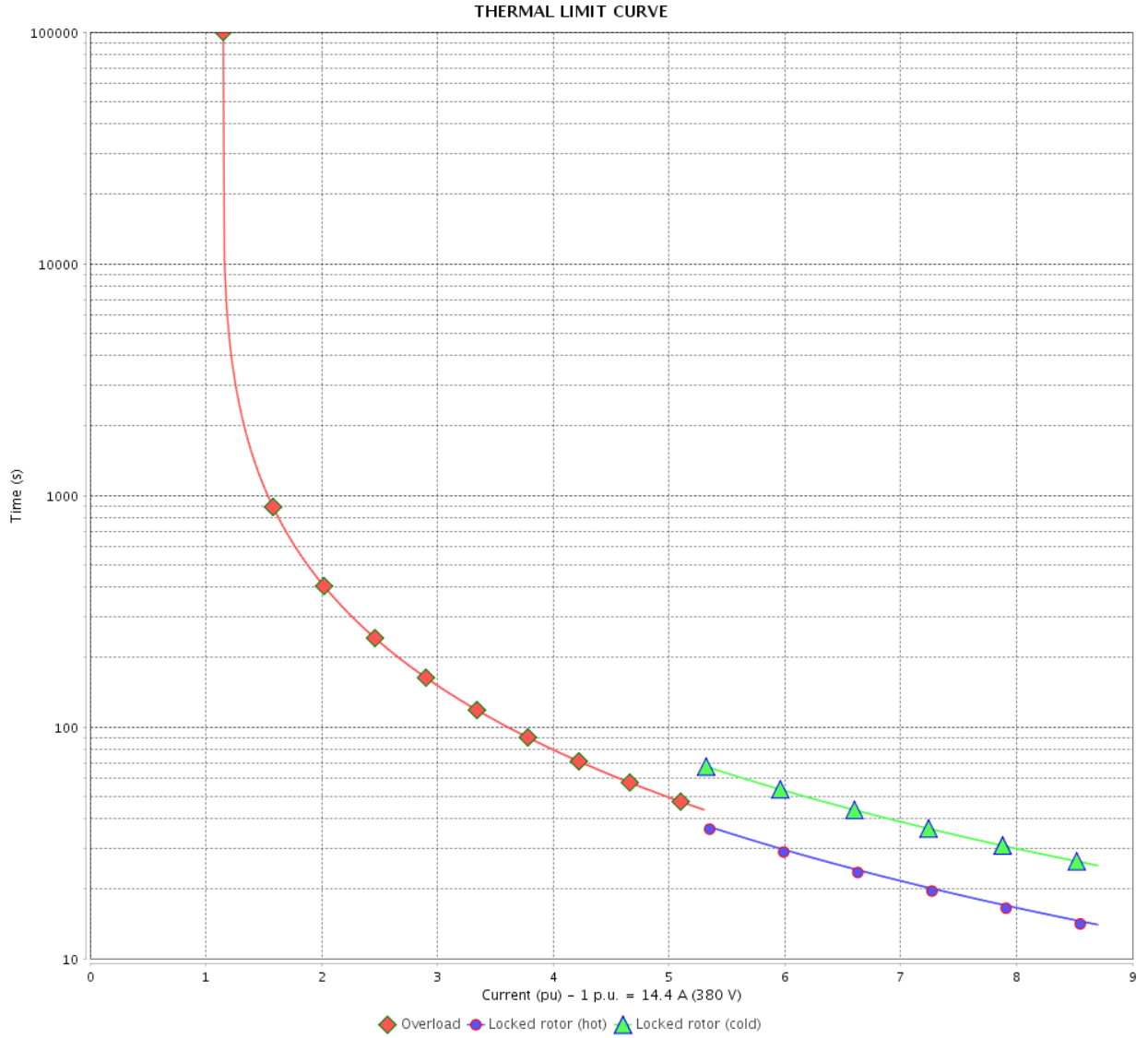
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 16	

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		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : JM Pump NEMA Premium
Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

Performance : 220/415 V 50 Hz 2P

Rated current : 26.2/13.9 A
LRC : 9.3
Rated torque : 17.9 ft.lb
Locked rotor torque : 350 %
Breakdown torque : 420 %
Rated speed : 2940 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : A

Heating constant

Cooling constant

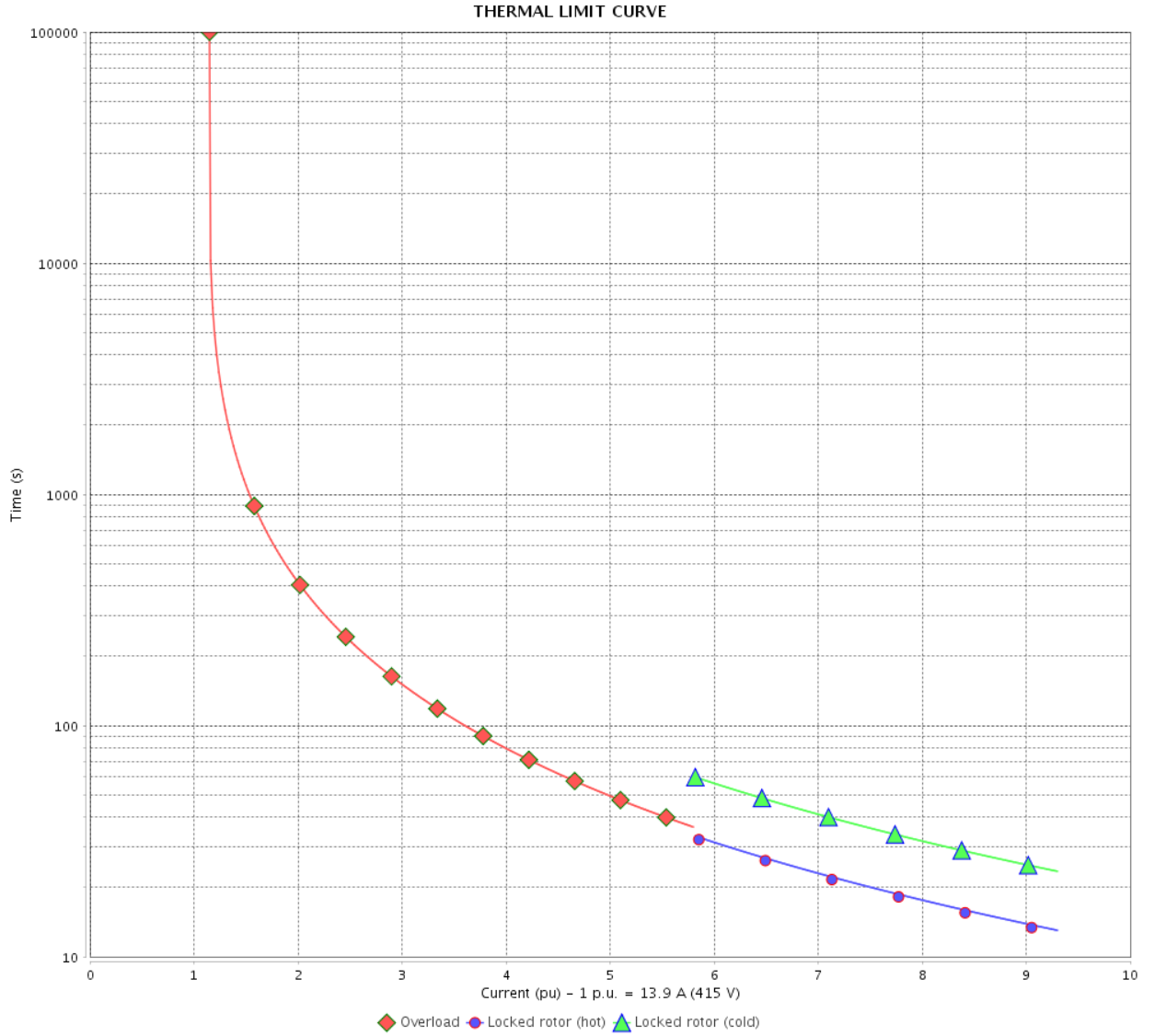
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 16	

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		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



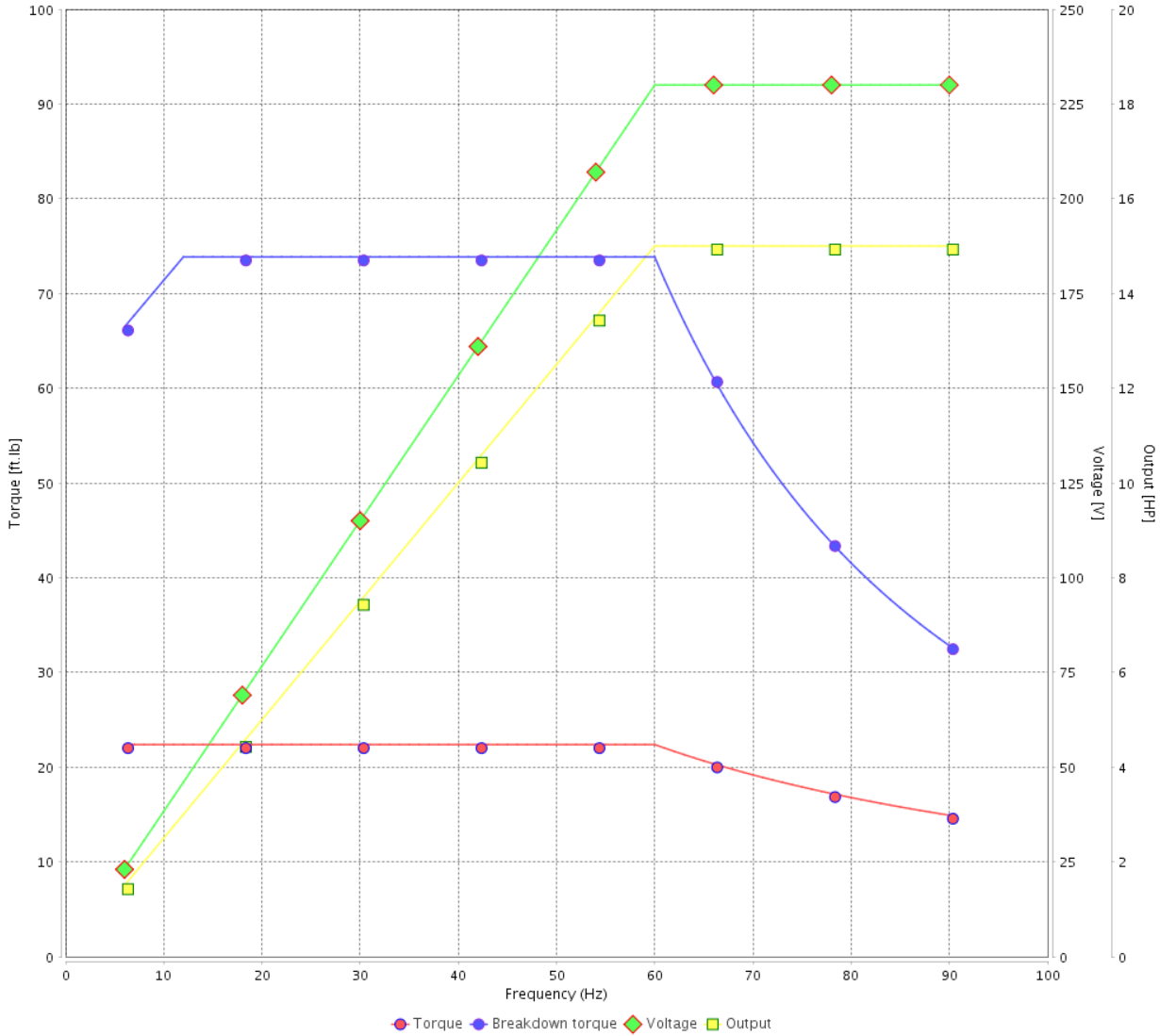
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 34.0/17.0 A
 LRC : 8.2
 Rated torque : 22.4 ft.lb
 Locked rotor torque : 280 %
 Breakdown torque : 330 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

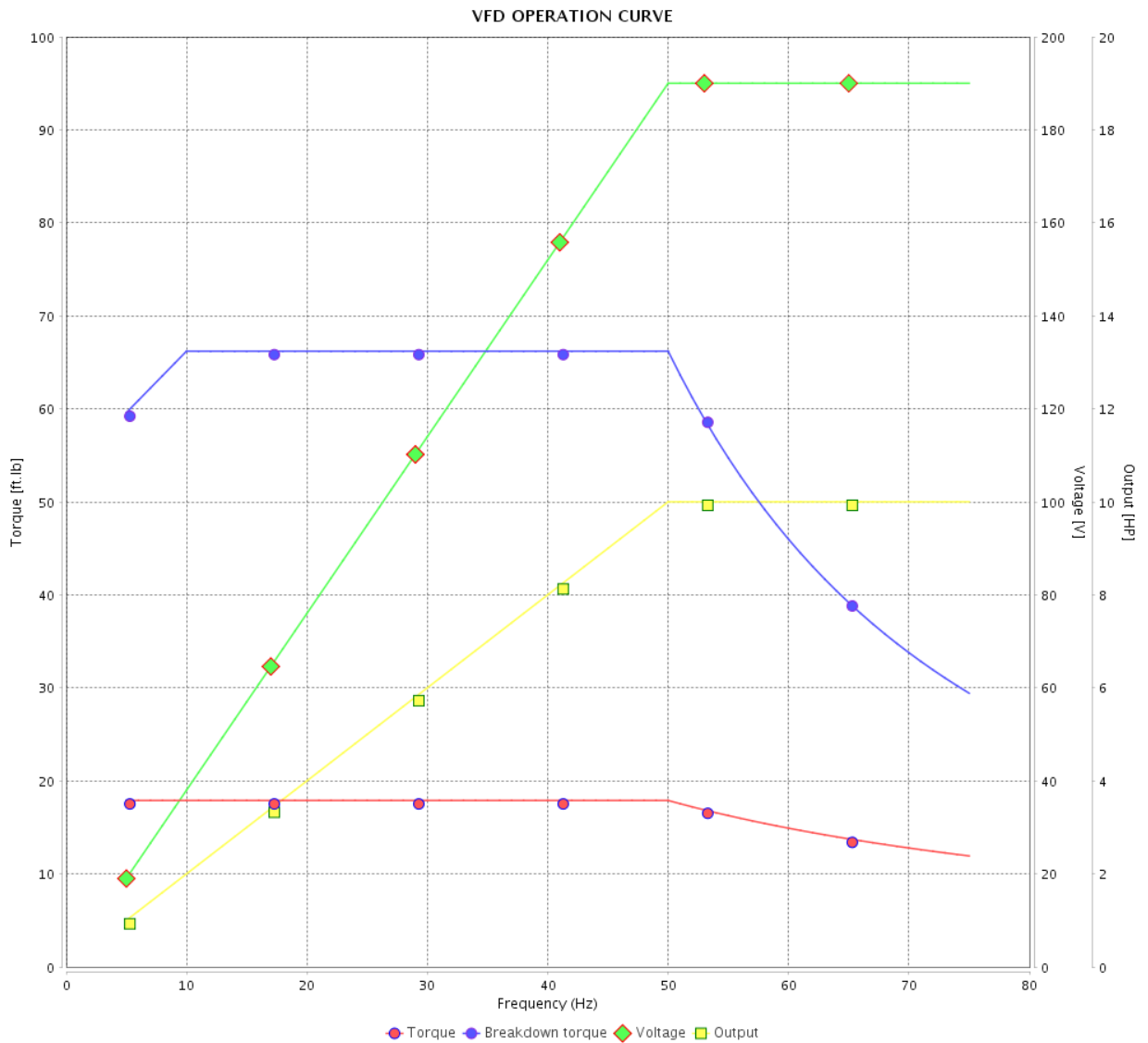


Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S



Performance : 190/380 V 50 Hz 2P

Rated current : 28.8/14.4 A
 LRC : 8.7
 Rated torque : 17.9 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 370 %
 Rated speed : 2935 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 16	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



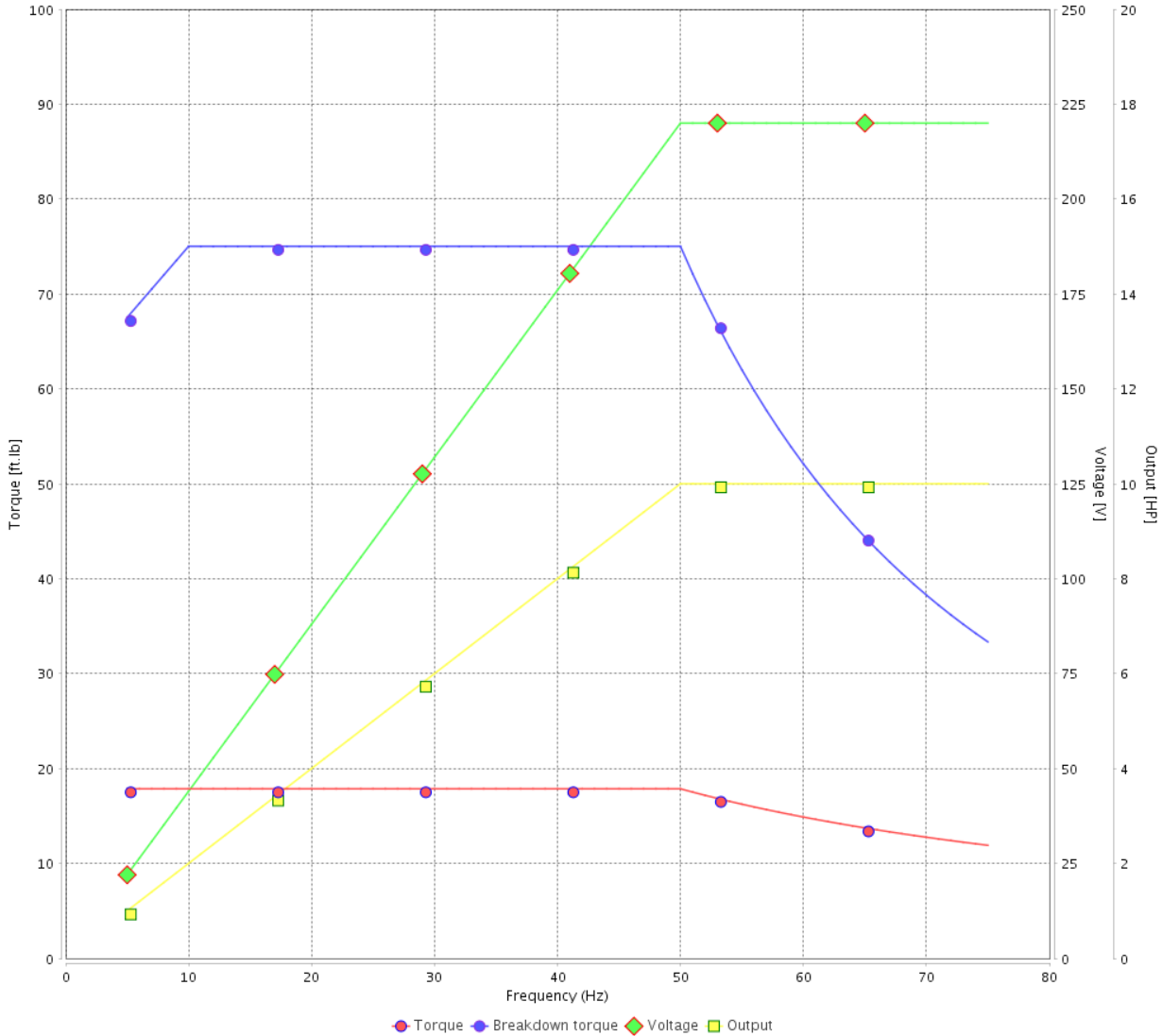
Customer :

Product line : JM Pump NEMA Premium Efficiency Three-Phase

Product code : 13181453

Catalog # : 01536ET3E215JM-S

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 2P

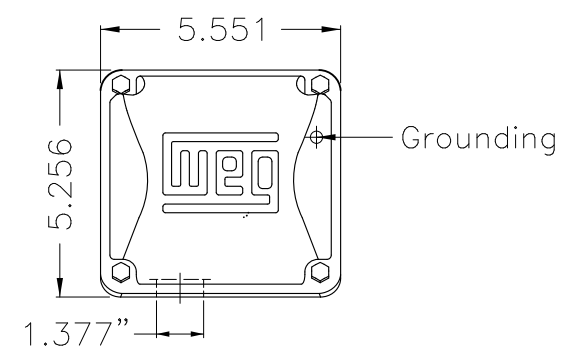
Rated current : 26.2/13.9 A
 LRC : 9.3
 Rated torque : 17.9 ft.lb
 Locked rotor torque : 350 %
 Breakdown torque : 420 %
 Rated speed : 2940 rpm

Moment of inertia (J) : 0.6341 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

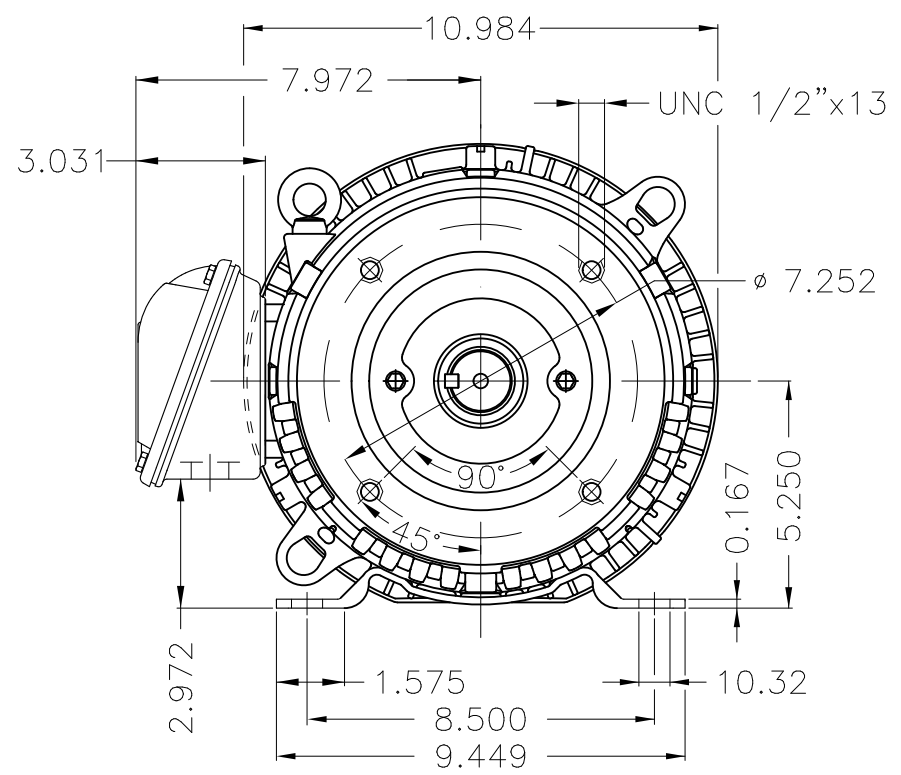
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

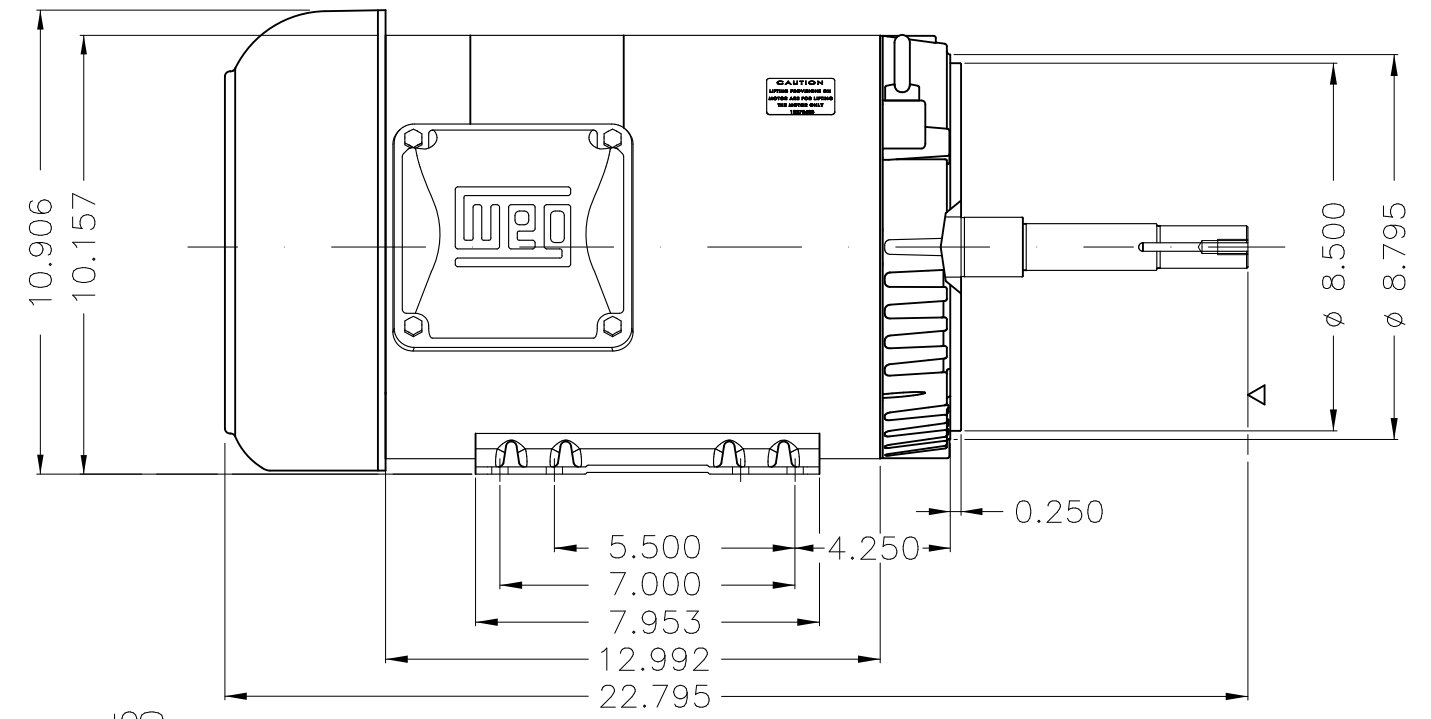
A



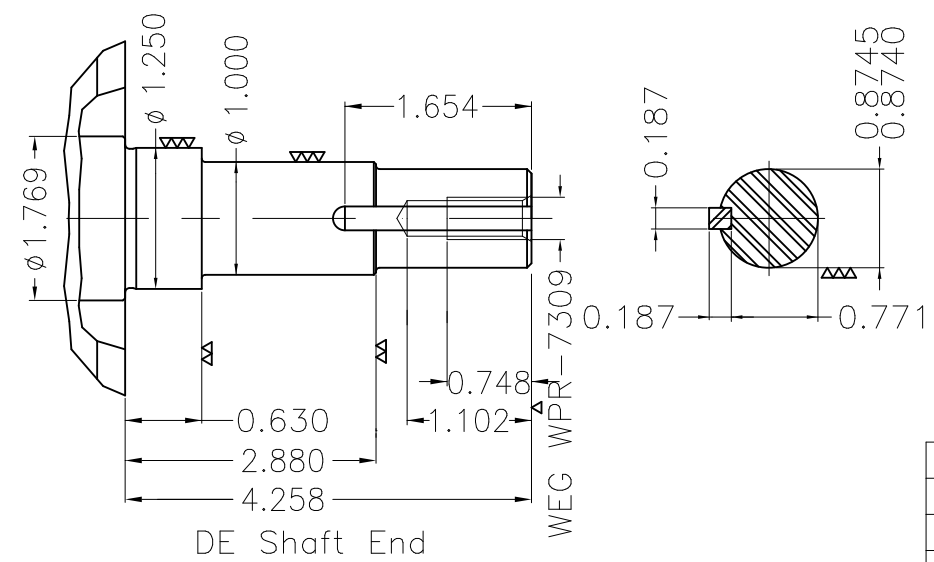
B



C



D



E

EUNC 3/8" - 16 WEG WPR-7309

DE Shaft End

Design A						
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	PIRBUSER		THREE PH. MOTOR ROLLED STEEL CLOSE COUPLED PUMP JN TYPE PSE 1/2"				<p style="text-align: center;">PREVIEW</p> <p style="text-align: center;">WDD</p>			
CHECKED			FRAME 213/5JM IP55 TEFC							
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

15 HP 02 Poles 60 Hz



NEMA
Premium



3PT9



Energy Verified

MADE IN MEXICO

MAT: 13181453 CC029A

W01.TE0IC0X0N

MODEL 01536ET3E215JM-S

21APR2022 S/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

PH 3	Hz 60	HP 15
FR 213/5JM		KW 11
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 34.0/17.0
INS CL F AT 80K	IP55	SFA 39.1/19.5
AMB 40°C	DES A	SF 1.15
ENCL TEFC	CODE J	PF 0.89
USABLE @ 208V 37.6A		RPM 3520
SF1.00		NEMA NOM. EFF 91.0%

ALTERNATE RATING: 10HP	50Hz	190-220/380-415V	SF1.15
28.8-26.2/14.4-13.9A	2935RPM	EFF 91.1%	(IE3) IEC 60034-1

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

DE 6209-ZZ	ODE 6206-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.

