

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11408295	
			Catalog # :	50018ET3G449T-W22	
Frame		: L447/9T	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	: 3468 lb	
Protection degree		: IP55	Moment of inertia (J)	: 160 sq.ft.lb	
Design		: B			
Output [HP]	500	450	450	450	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	568	606	589	582	
L. R. Amperes [A]	4998	4303	4712	5122	
LRC [A]	8.8x(Code J)	7.1x(Code G)	8.0x(Code J)	8.8x(Code K)	
No load current [A]	225	222	245	267	
Rated speed [RPM]	1789	1487	1489	1490	
Slip [%]	0.61	0.87	0.73	0.67	
Rated torque [ft.lb]	1470	1590	1590	1590	
Locked rotor torque [%]	300	270	300	320	
Breakdown torque [%]	280	260	290	310	
Service factor	1.00	1.00	1.00	1.00	
Temperature rise	105 K	125 K	125 K	105 K	
Locked rotor time	39s (cold) 22s (hot)	37s (cold) 21s (hot)	34s (cold) 19s (hot)	32s (cold) 18s (hot)	
Noise level ²	79.0 dB(A)	74.0 dB(A)	74.0 dB(A)	74.0 dB(A)	
Efficiency (%)	25%	95.3	95.7	95.0	
	50%	95.4	95.8	95.4	
	75%	96.2	96.2	95.8	
	100%	96.2	96.2	96.2	
Power Factor	25%	0.45	0.48	0.44	
	50%	0.72	0.74	0.70	
	75%	0.81	0.83	0.80	
	100%	0.85	0.86	0.84	
Bearing type		Drive end : 6322 C3	Non drive end : 6319 C3	Foundation loads	
Sealing		: WSeal	: WSeal	Max. traction : 11373 lb	
Lubrication interval		: 6000 h	: 8000 h	Max. compression : 14841 lb	
Lubricant amount		: 60 g	: 45 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
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	12/04/2022			1 / 21	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



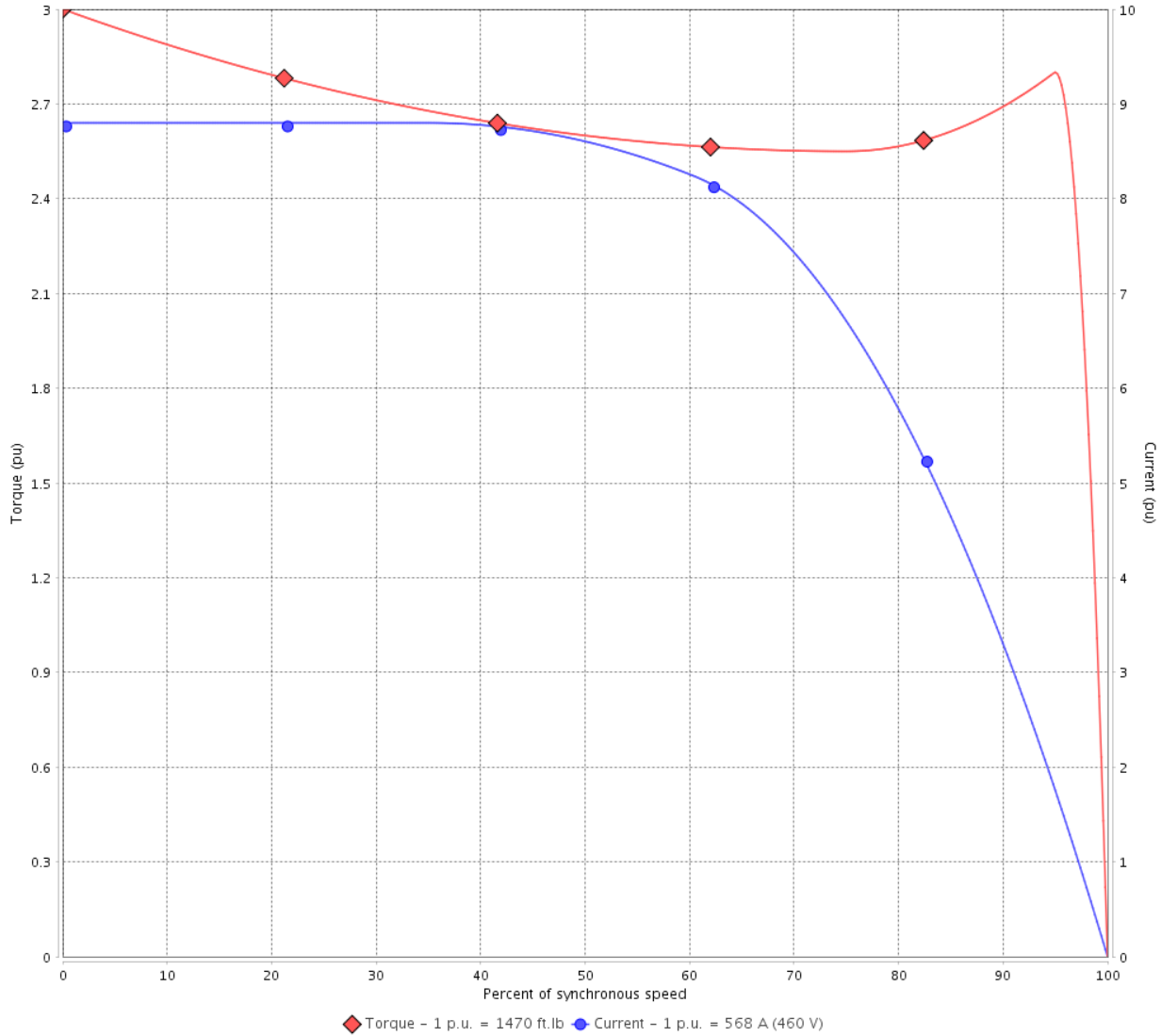
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 568 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.8	Duty cycle	: Cont.(S1)
Rated torque	: 1470 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1789 rpm	Design	: B

Locked rotor time : 39s (cold) 22s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



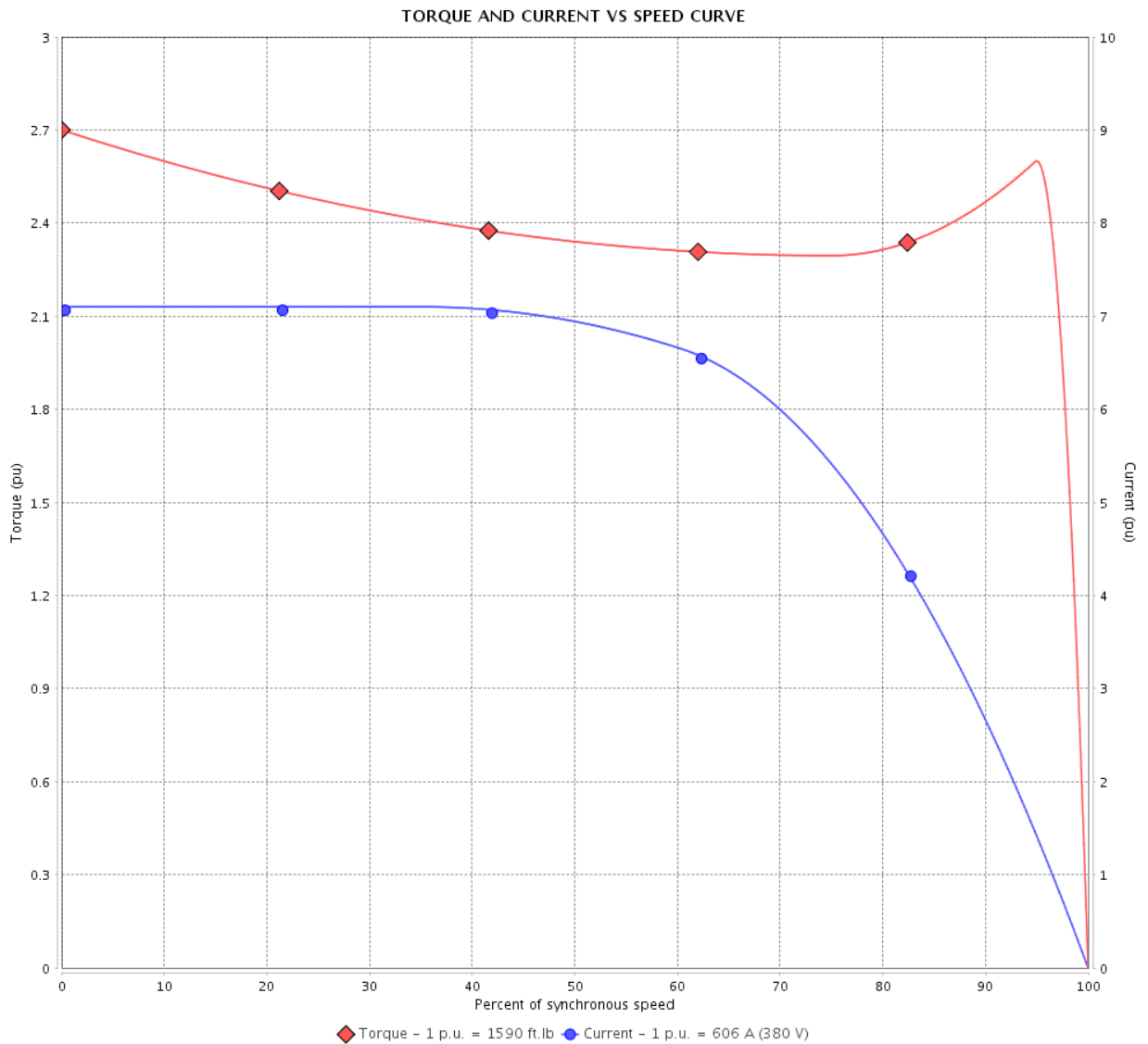
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 606 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 125 K
Rated speed	: 1487 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 21	
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



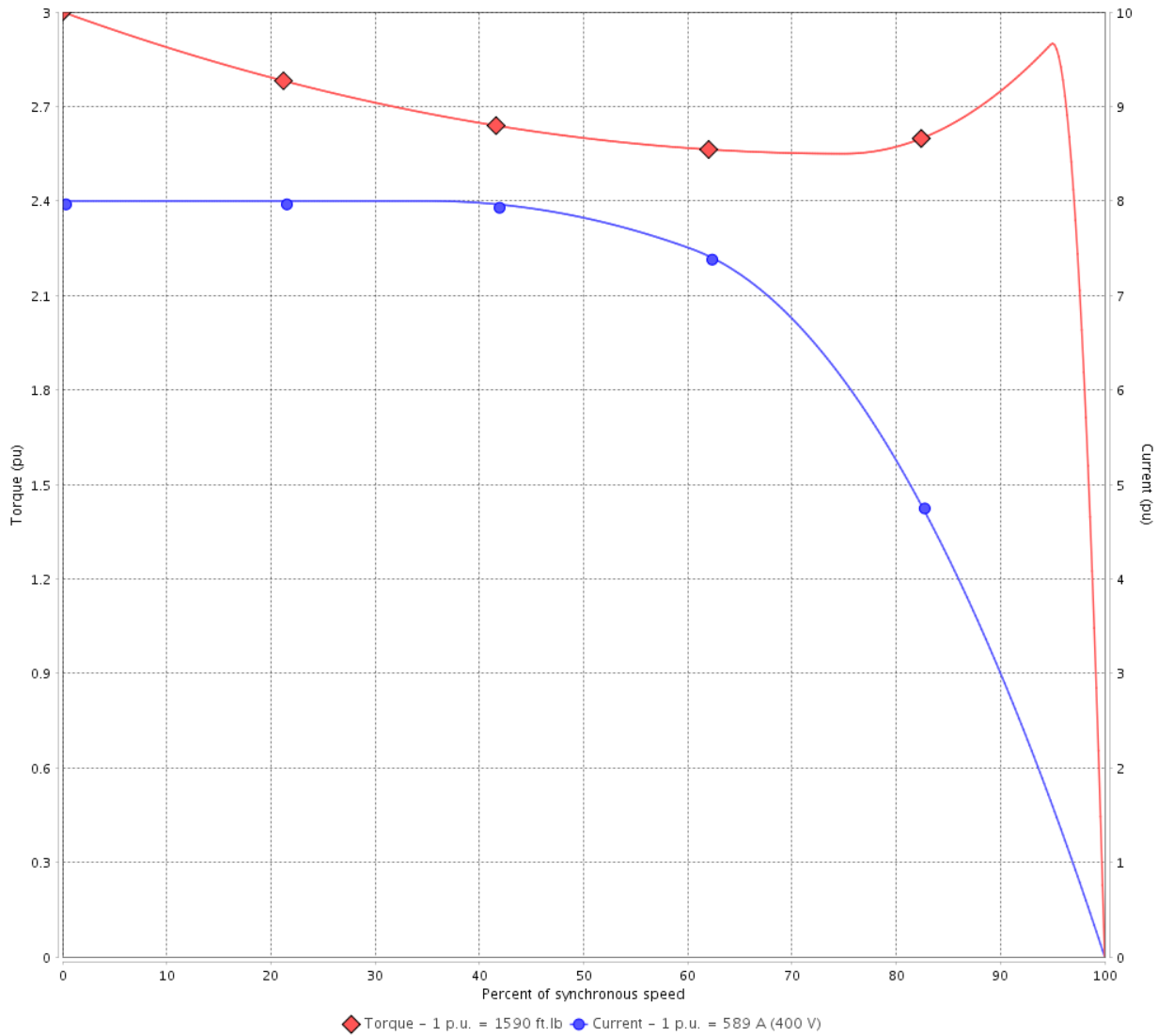
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 589 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 125 K
Rated speed	: 1489 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	12/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



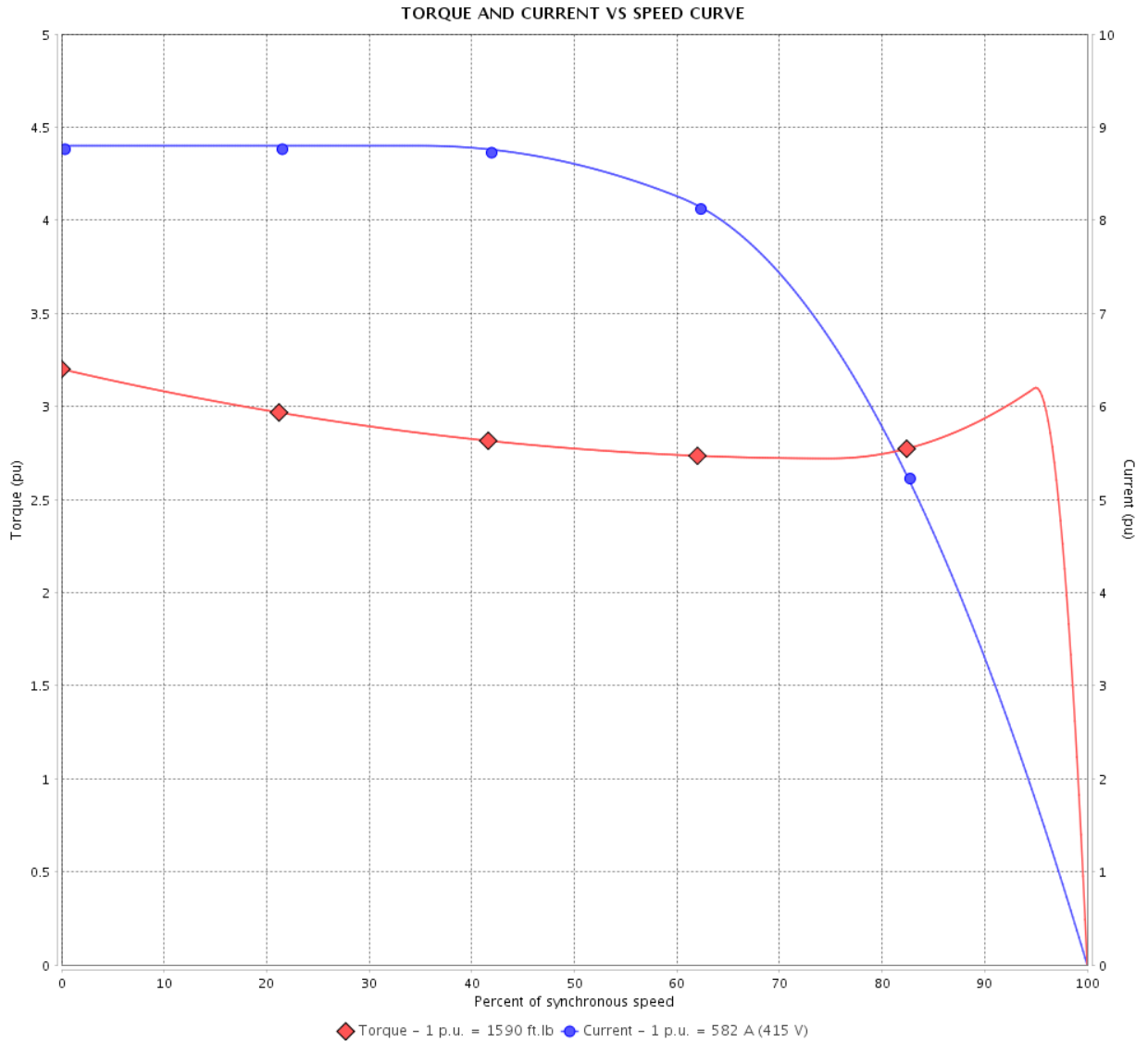
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current	: 582 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.8	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

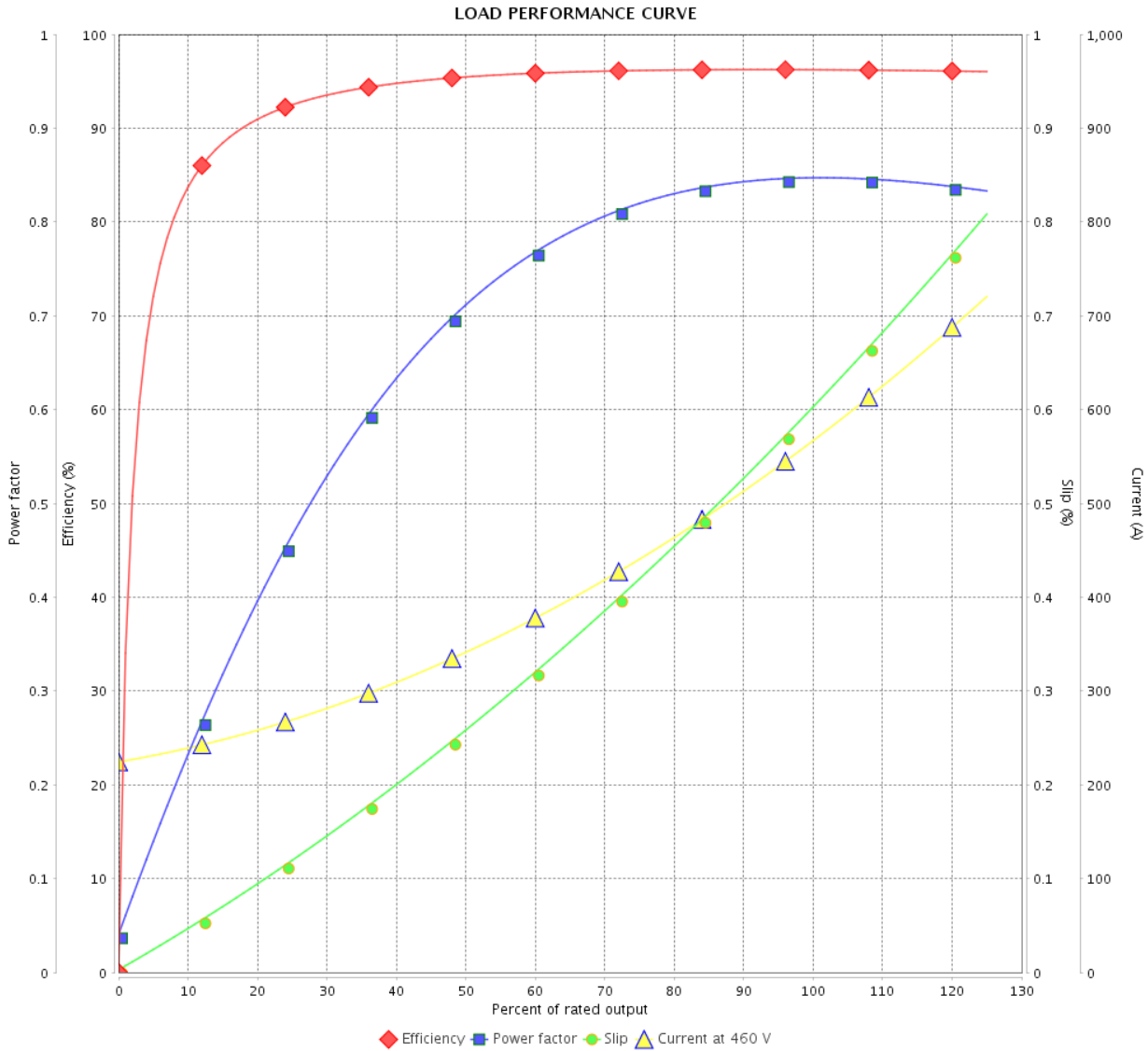


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 460 V 60 Hz 4P

Rated current : 568 A	Moment of inertia (J) : 160 sq.ft.lb
LRC : 8.8	Duty cycle : Cont.(S1)
Rated torque : 1470 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 105 K
Rated speed : 1789 rpm	Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 21	Revision
Checked by				
Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

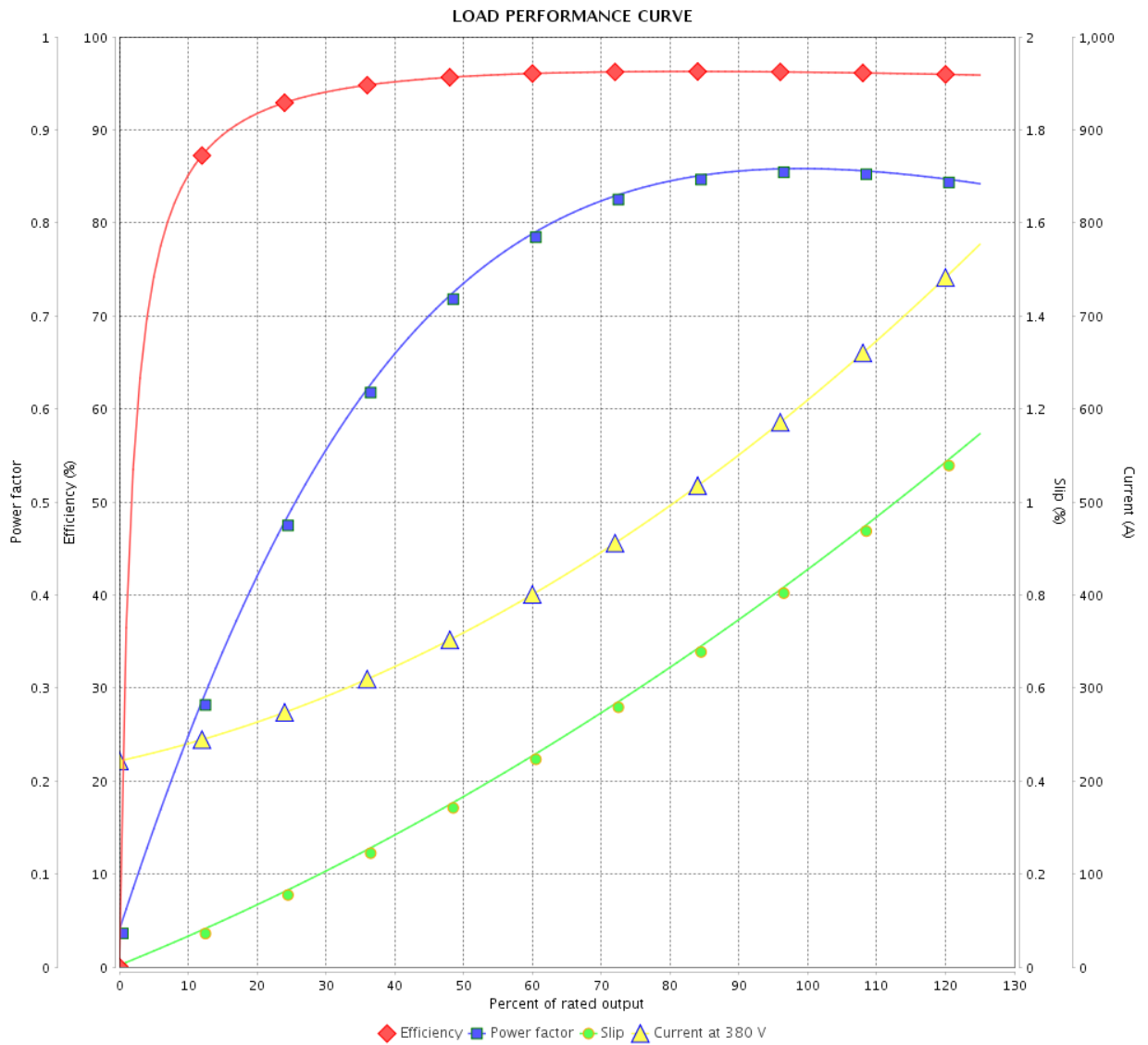


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 606 A
 LRC : 7.1
 Rated torque : 1590 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 260 %
 Rated speed : 1487 rpm

Moment of inertia (J) : 160 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 125 K
 Design : B

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

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

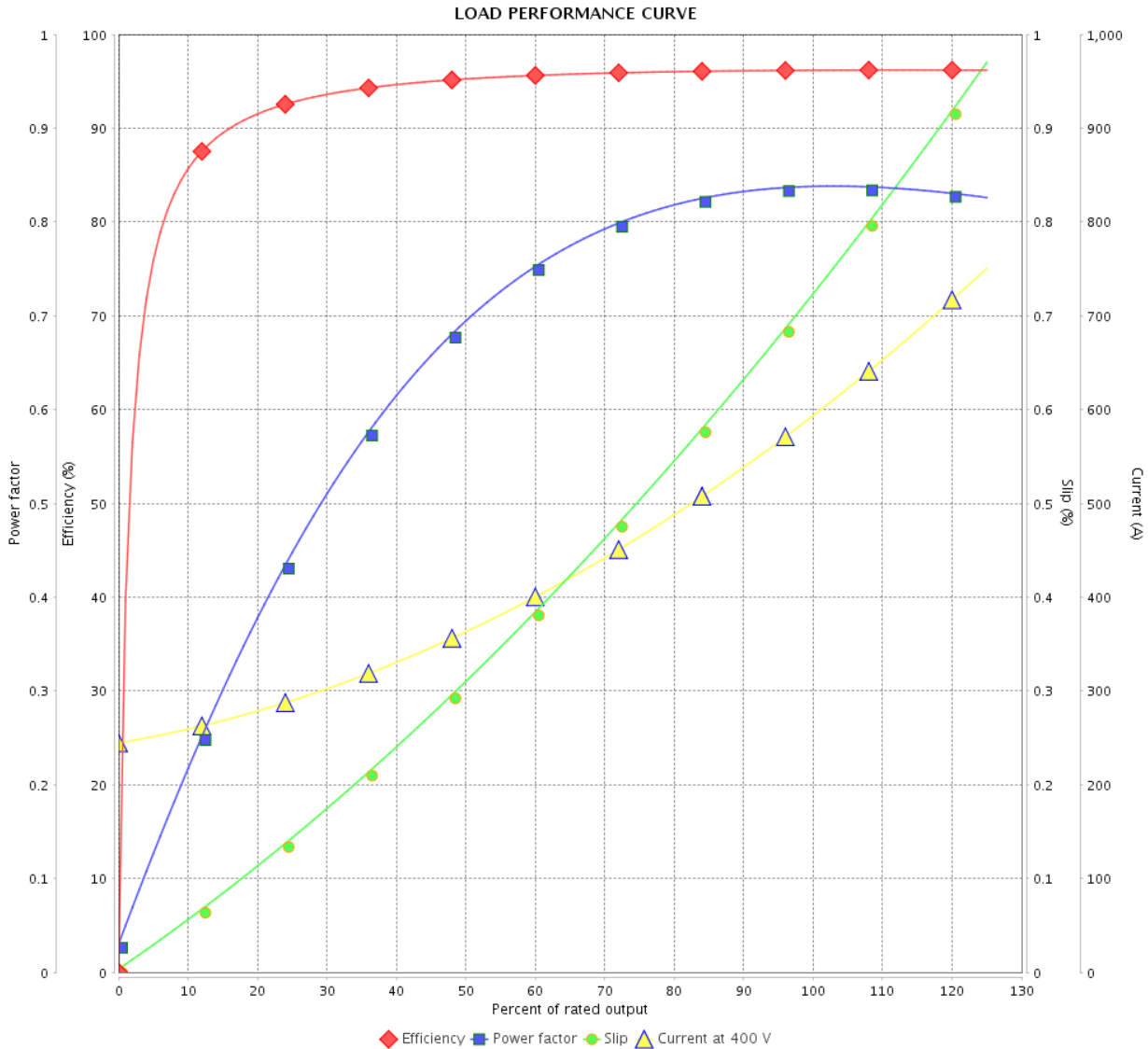


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 589 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 125 K
Rated speed	: 1489 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			8 / 21	
Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

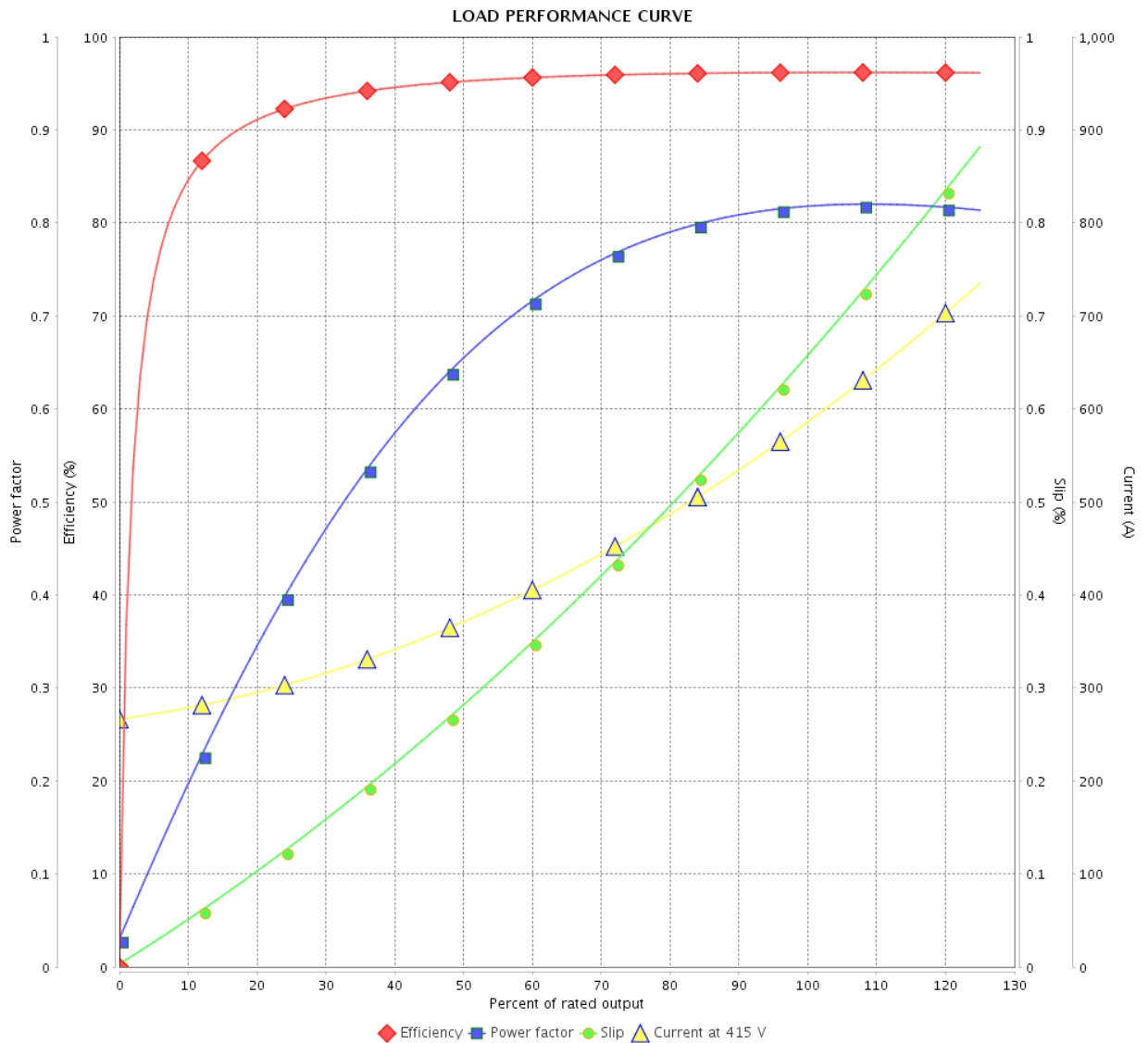


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 582 A
 LRC : 8.8
 Rated torque : 1590 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 310 %
 Rated speed : 1490 rpm

Moment of inertia (J) : 160 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		9 / 21		
Date		12/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 11408295
Catalog # : 50018ET3G449T-W22

Performance : 460 V 60 Hz 4P

Rated current : 568 A	Moment of inertia (J) : 160 sq.ft.lb
LRC : 8.8	Duty cycle : Cont.(S1)
Rated torque : 1470 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 280 %	Temperature rise : 105 K
Rated speed : 1789 rpm	Design : B

Heating constant

Cooling constant

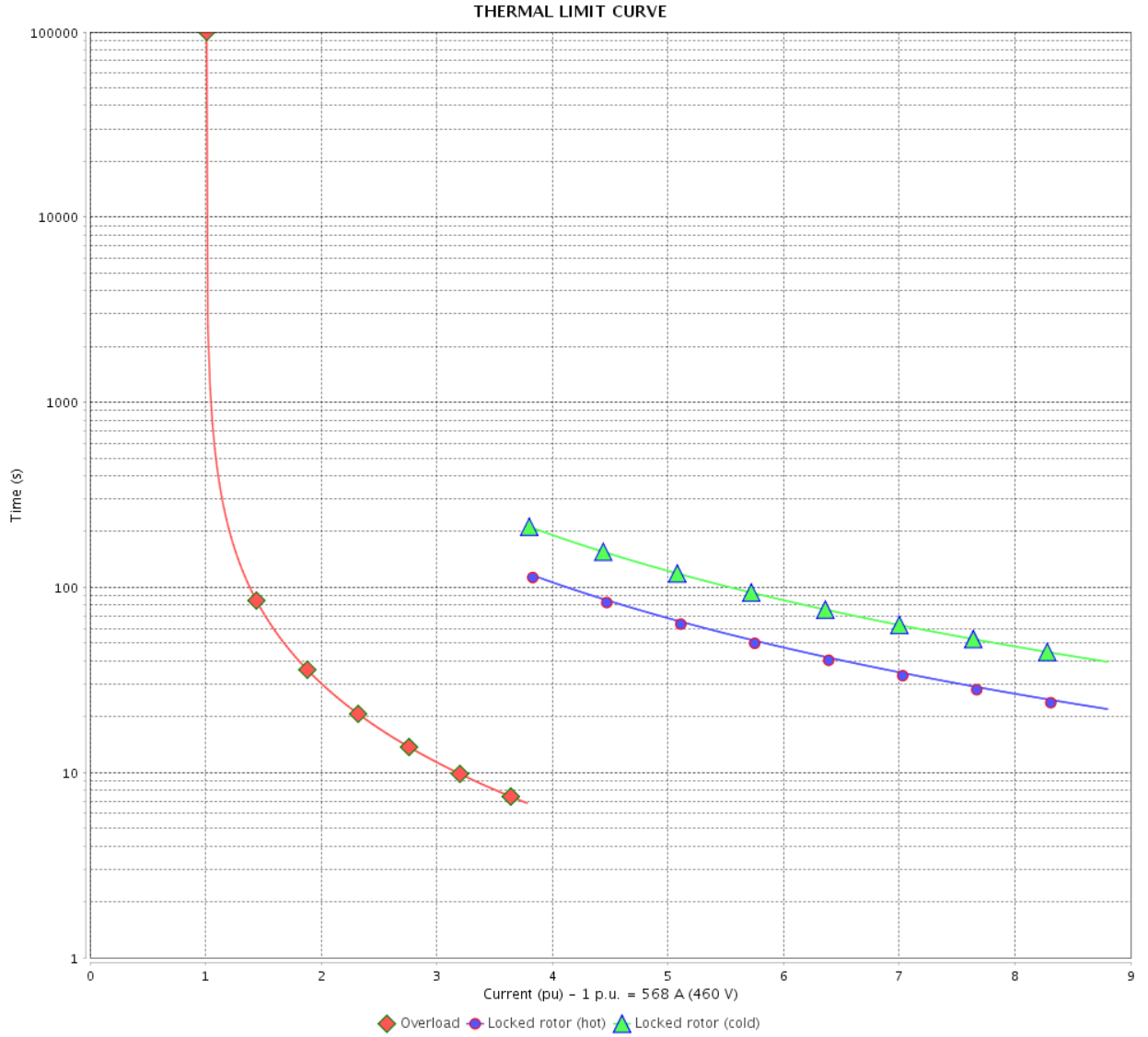
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		10 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date		12/04/2022		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 11408295
Catalog # : 50018ET3G449T-W22

Performance : 380 V 50 Hz 4P IE3

Rated current	: 606 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 125 K
Rated speed	: 1487 rpm	Design	: B

Heating constant

Cooling constant

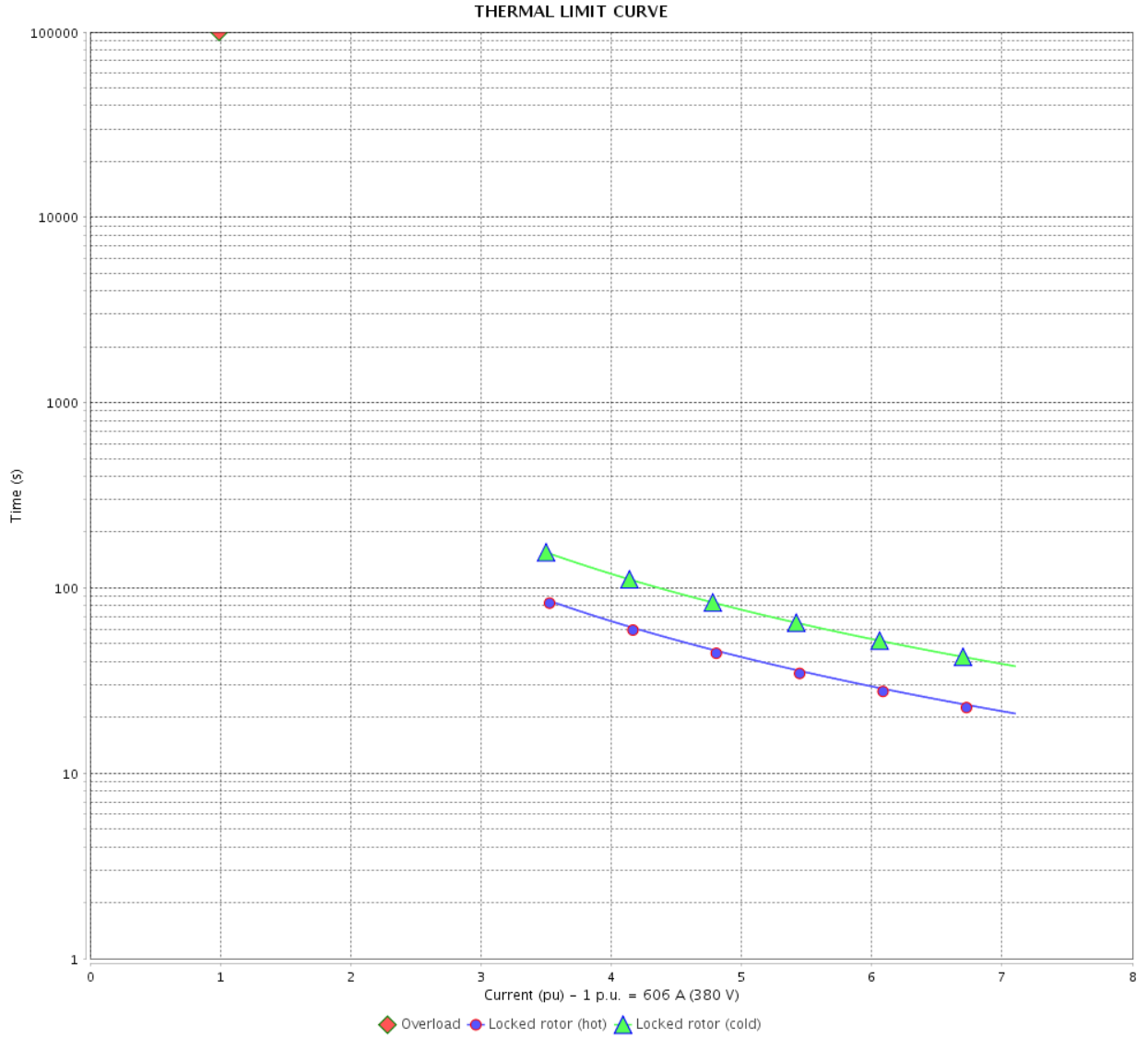
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		12 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
Date		12/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11408295
 Catalog # : 50018ET3G449T-W22

Performance : 400 V 50 Hz 4P IE3

Rated current : 589 A	Moment of inertia (J) : 160 sq.ft.lb
LRC : 8.0	Duty cycle : Cont.(S1)
Rated torque : 1590 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 125 K
Rated speed : 1489 rpm	Design : B

Heating constant

Cooling constant

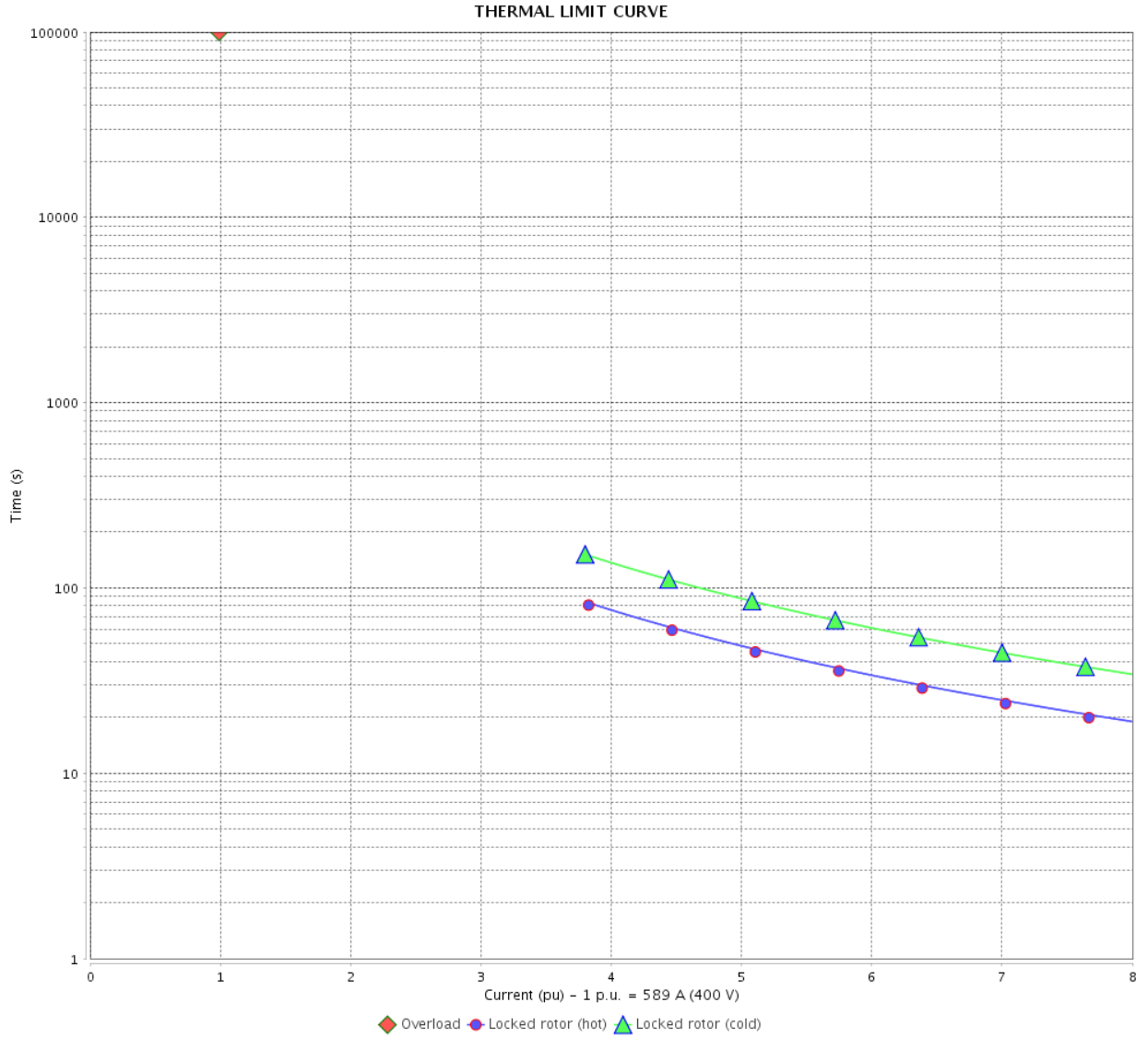
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 21	Revision
Checked by				
Date	12/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 21		
Date		12/04/2022		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 11408295
Catalog # : 50018ET3G449T-W22

Performance : 415 V 50 Hz 4P IE3

Rated current	: 582 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.8	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: B

Heating constant

Cooling constant

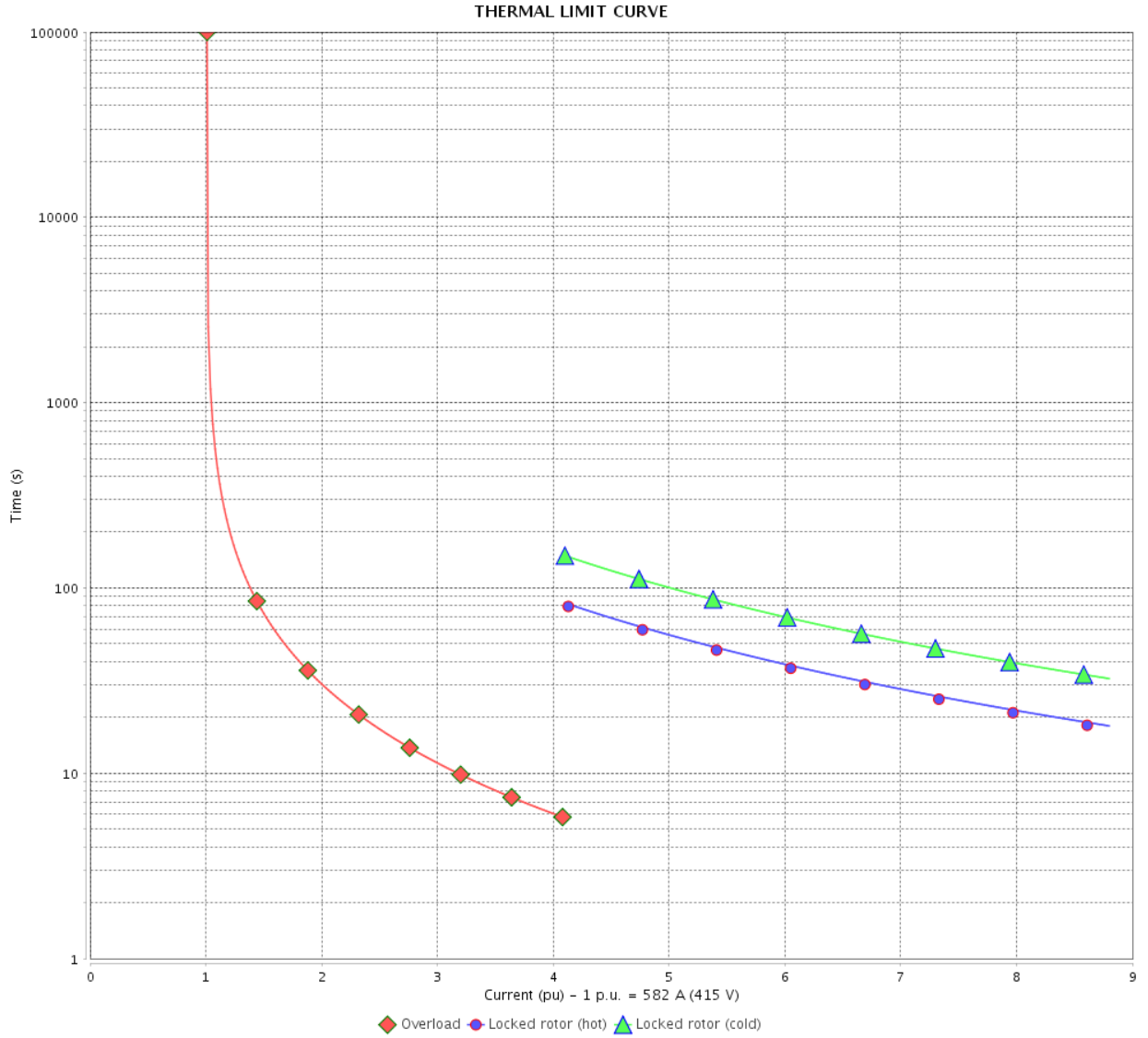
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		16 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		17 / 21		
Date		12/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



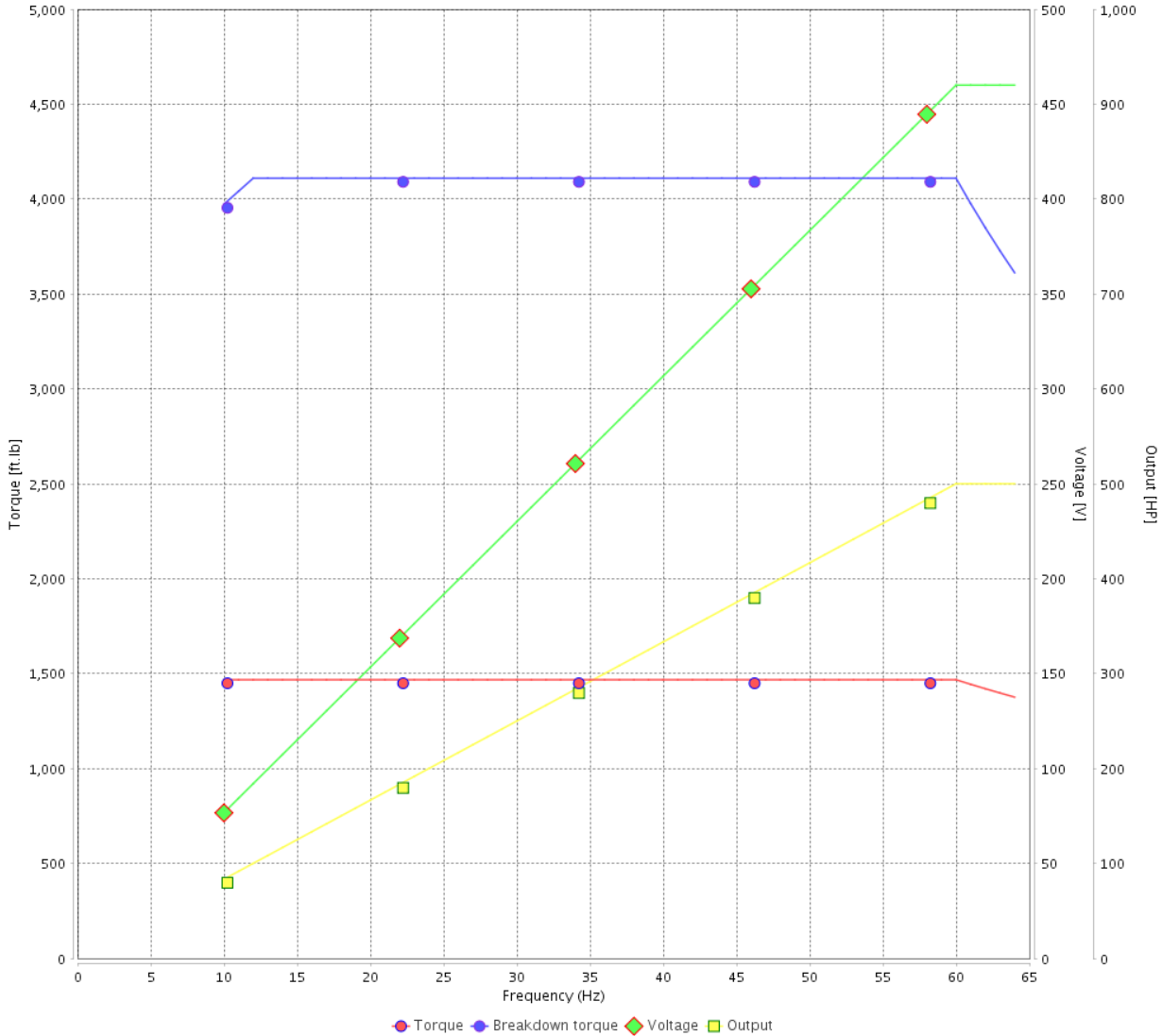
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22

VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 568 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.8	Duty cycle	: Cont.(S1)
Rated torque	: 1470 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1789 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		18 / 21		
Date	12/04/2022			

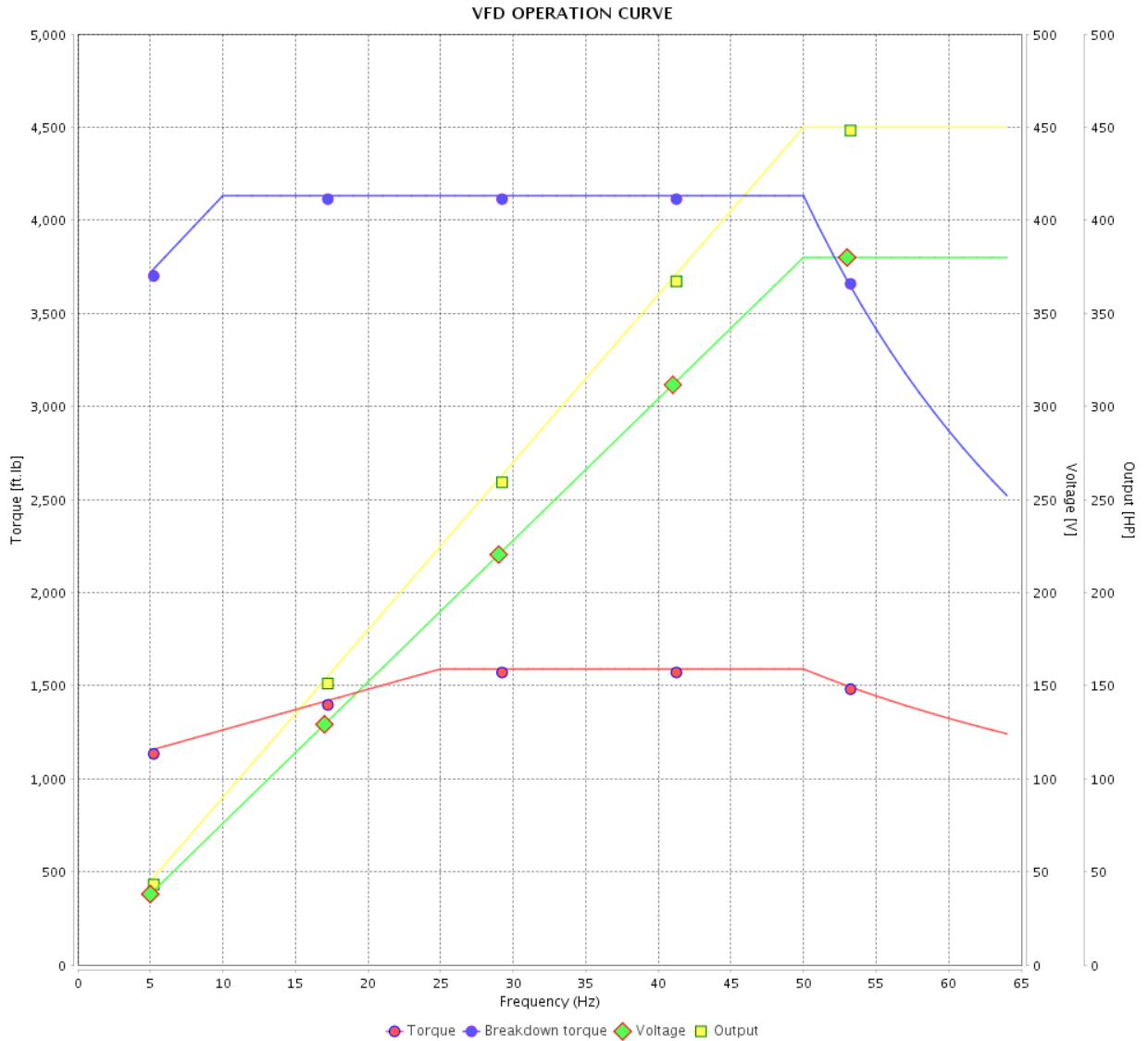
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : NEMA Premium Efficiency Three-Phase Product code : 11408295
 Catalog # : 50018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 606 A
 LRC : 7.1
 Rated torque : 1590 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 260 %
 Rated speed : 1487 rpm

Moment of inertia (J) : 160 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 125 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

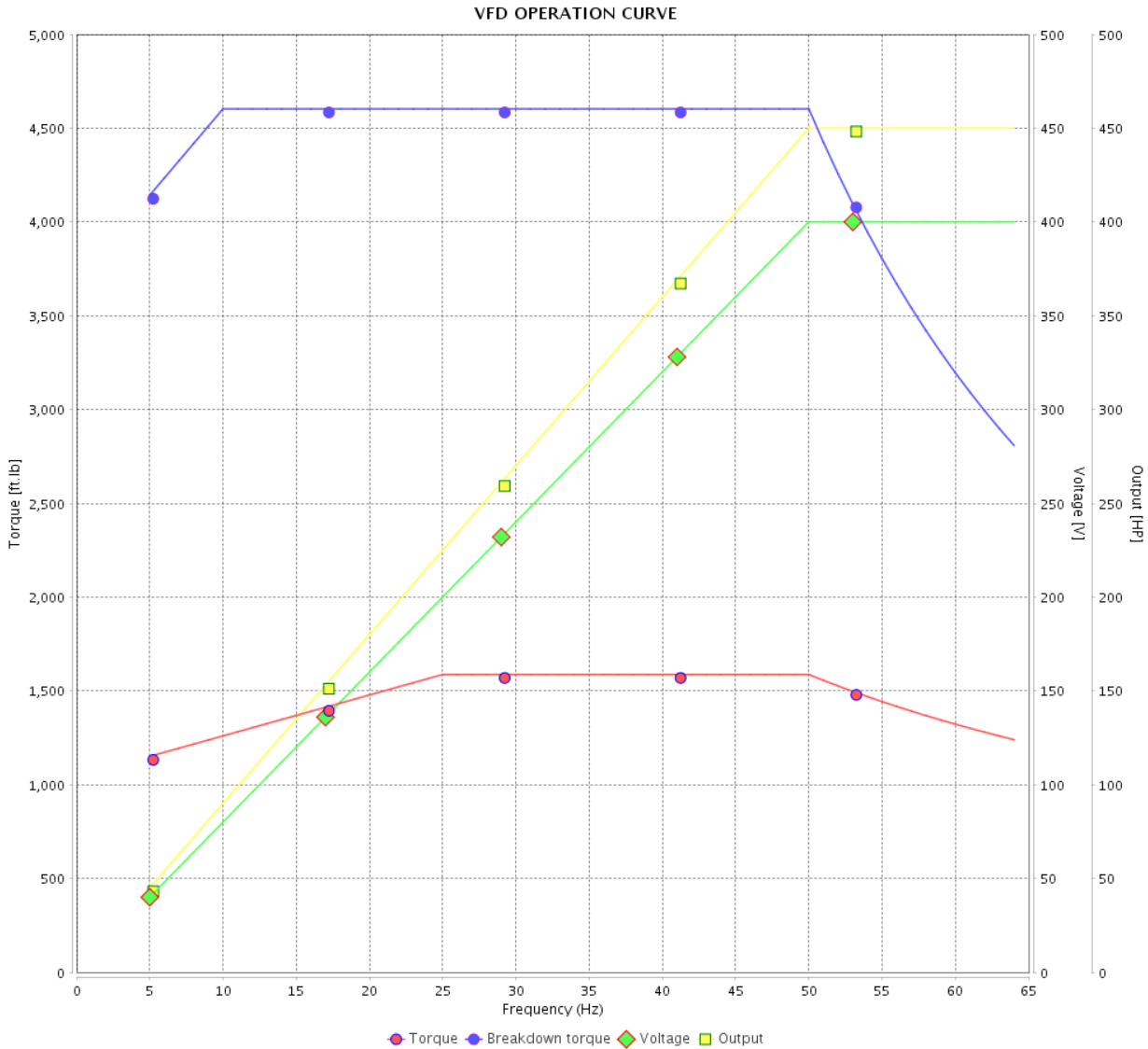


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 589 A	Moment of inertia (J)	: 160 sq.ft.lb
LRC	: 8.0	Duty cycle	: Cont.(S1)
Rated torque	: 1590 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 125 K
Rated speed	: 1489 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	12/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

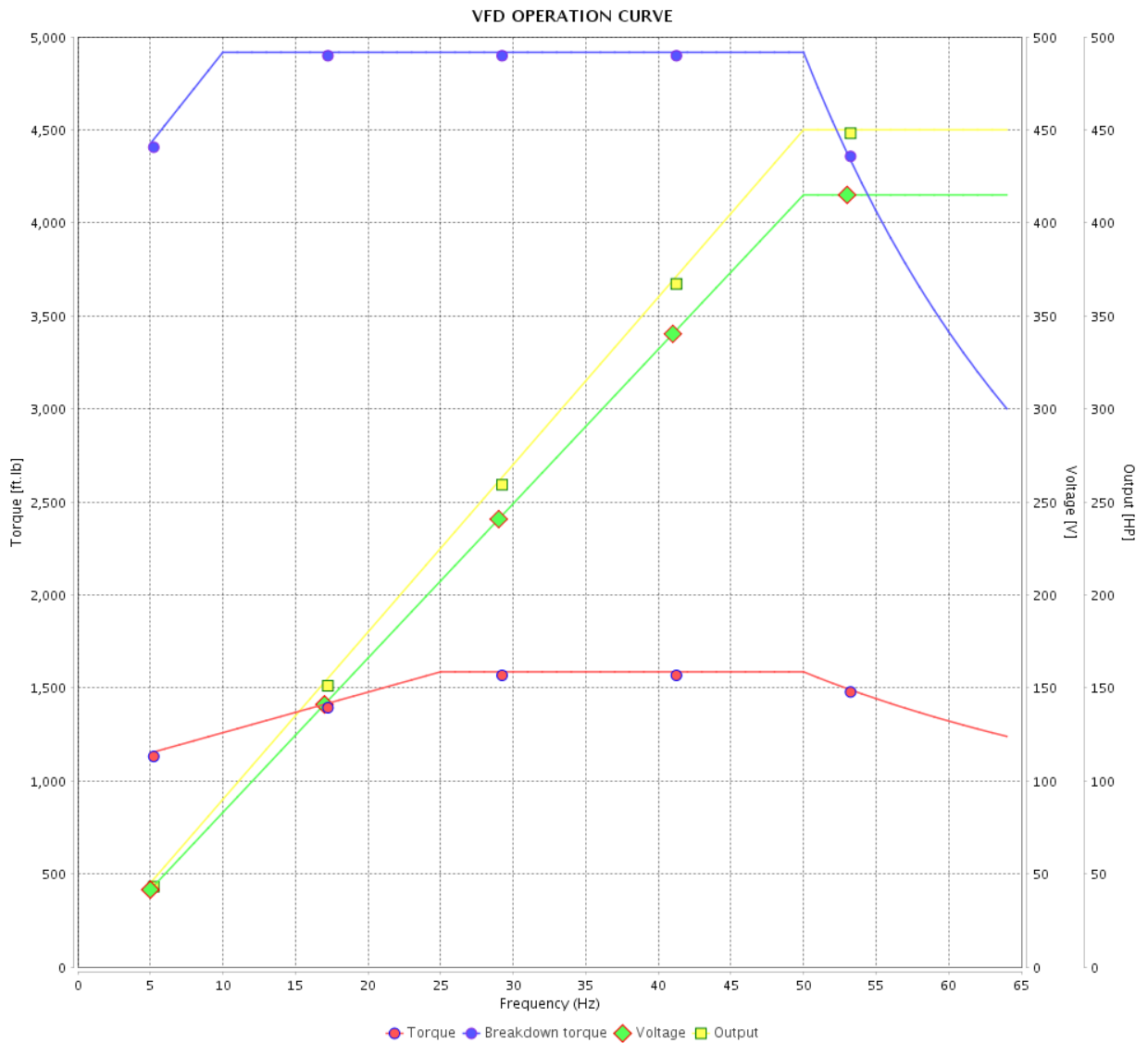


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408295

Catalog # : 50018ET3G449T-W22

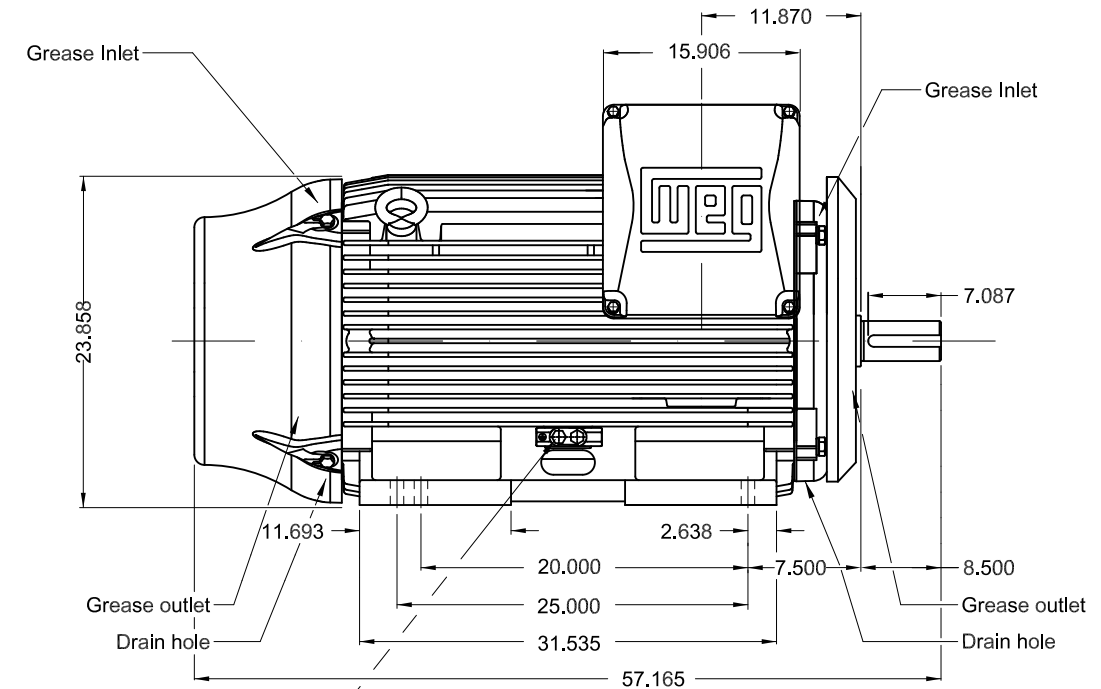
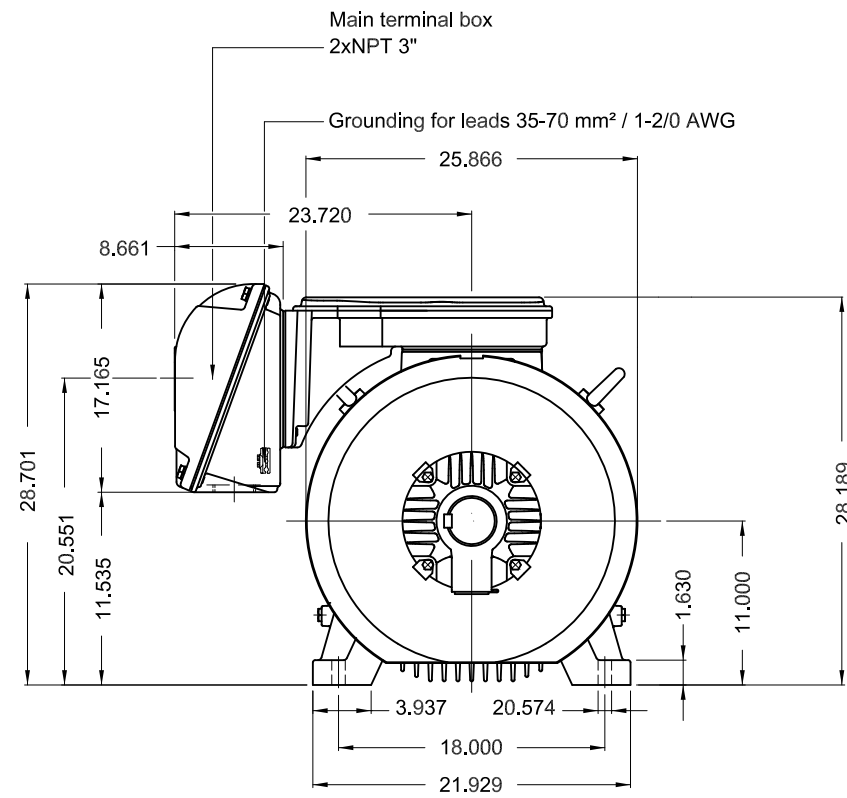


Performance : 415 V 50 Hz 4P IE3

Rated current : 582 A
 LRC : 8.8
 Rated torque : 1590 ft.lb
 Locked rotor torque : 320 %
 Breakdown torque : 310 %
 Rated speed : 1490 rpm

Moment of inertia (J) : 160 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				

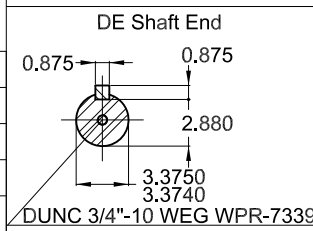


Grounding for leads 25-185 mm² / 3AWG-350MCM

500 HP 04 Poles 60 Hz

Dimensions in inches

- NDE endshield with electrically insulated bearing hub
- Drive-End Air Deflector
- Color RAL 5009
- Painting plan 203A
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER		THREE PH. MOTOR W22 PREM. EFF.				PREVIEW WDD		SHEET	1 / 1
CHECKED			FRAME L447/9T IP55 TEFC							
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering						

MADE IN MEXICO
11408295



NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A

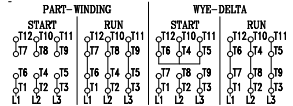


Class I, Div 2, Gr A, B, C and D - T2D
Class I, Zone 2, IIC - T2D
Class II, Div 2, Gr F and G - T4

MODEL 50018ET3G449T-W22

Electric Motor
Severe Duty

PH3	60Hz	Fr. L447/9T	1000m.a.s.l.	IP55	TEFC	3464lb
V 460				A 568		
HP 500				kW 370		
SF 1.00				SFA -		
RPM 1789				PF 0.85		
AMB 40°C				INS cl. F	NEMA NOM EFF 96.2%	
DUTY CONT.				DES B Code J		



→ 6322-C3 (60g)
→ 6319-C3 (45g)



MOBIL POLYREX EM (6000h)

