

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	11408292
			Catalog # :	45018ET3G449T-W22
Frame	: L447/9T	Cooling method	: IC411 - TEFC	
Insulation class	: F	Mounting	: F-1	
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>	: 3492 lb	
Protection degree	: IP55	Moment of inertia (J)	: 152 sq.ft.lb	
Design	: A			
Output [HP]	450	400	400	400
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	460	380	400	415
Rated current [A]	513	564	549	542
L. R. Amperes [A]	4566	4456	4721	4986
LRC [A]	8.9x(Code K)	7.9x(Code J)	8.6x(Code K)	9.2x(Code K)
No load current [A]	215	215	232	255
Rated speed [RPM]	1791	1489	1490	1490
Slip [%]	0.50	0.73	0.67	0.67
Rated torque [ft.lb]	1320	1410	1410	1410
Locked rotor torque [%]	320	270	300	370
Breakdown torque [%]	330	280	320	350
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	105 K	105 K	105 K
Locked rotor time	39s (cold) 22s (hot)	37s (cold) 21s (hot)	36s (cold) 20s (hot)	32s (cold) 18s (hot)
Noise level <sup>2</sup>	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%	0.41	0.45	0.40
	50%	0.66	0.70	0.65
	75%	0.78	0.80	0.77
	100%	0.84	0.84	0.82
Bearing type	: <u>Drive end</u> 6322 C3	<u>Non drive end</u> 6319 C3	Foundation loads	
Sealing	: WSeal	WSeal	Max. traction	: 11408 lb
Lubrication interval	: 6000 h	8000 h	Max. compression	: 14900 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	13/04/2022		1 / 21	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



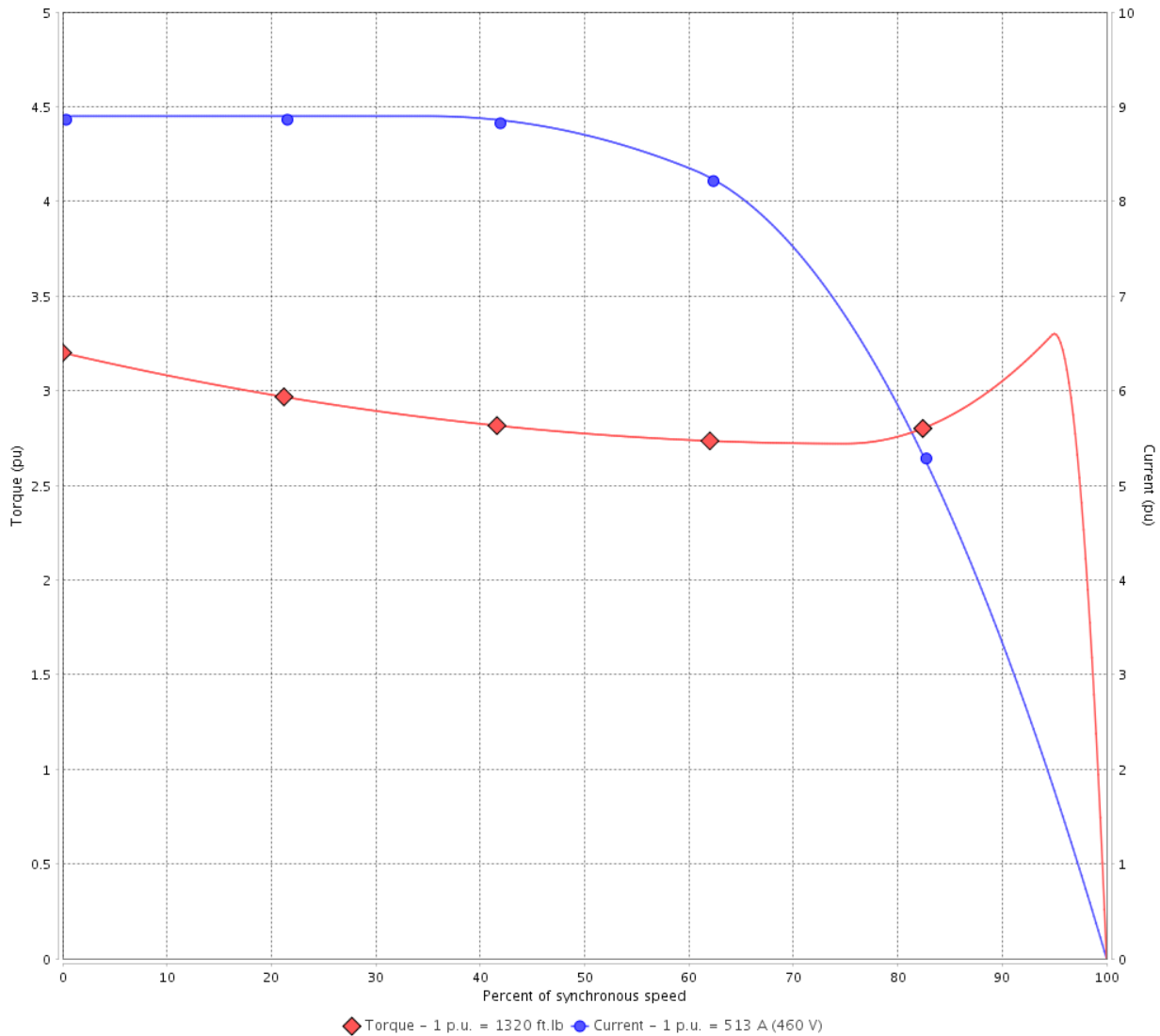
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 513 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1791 rpm	Design	: A

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



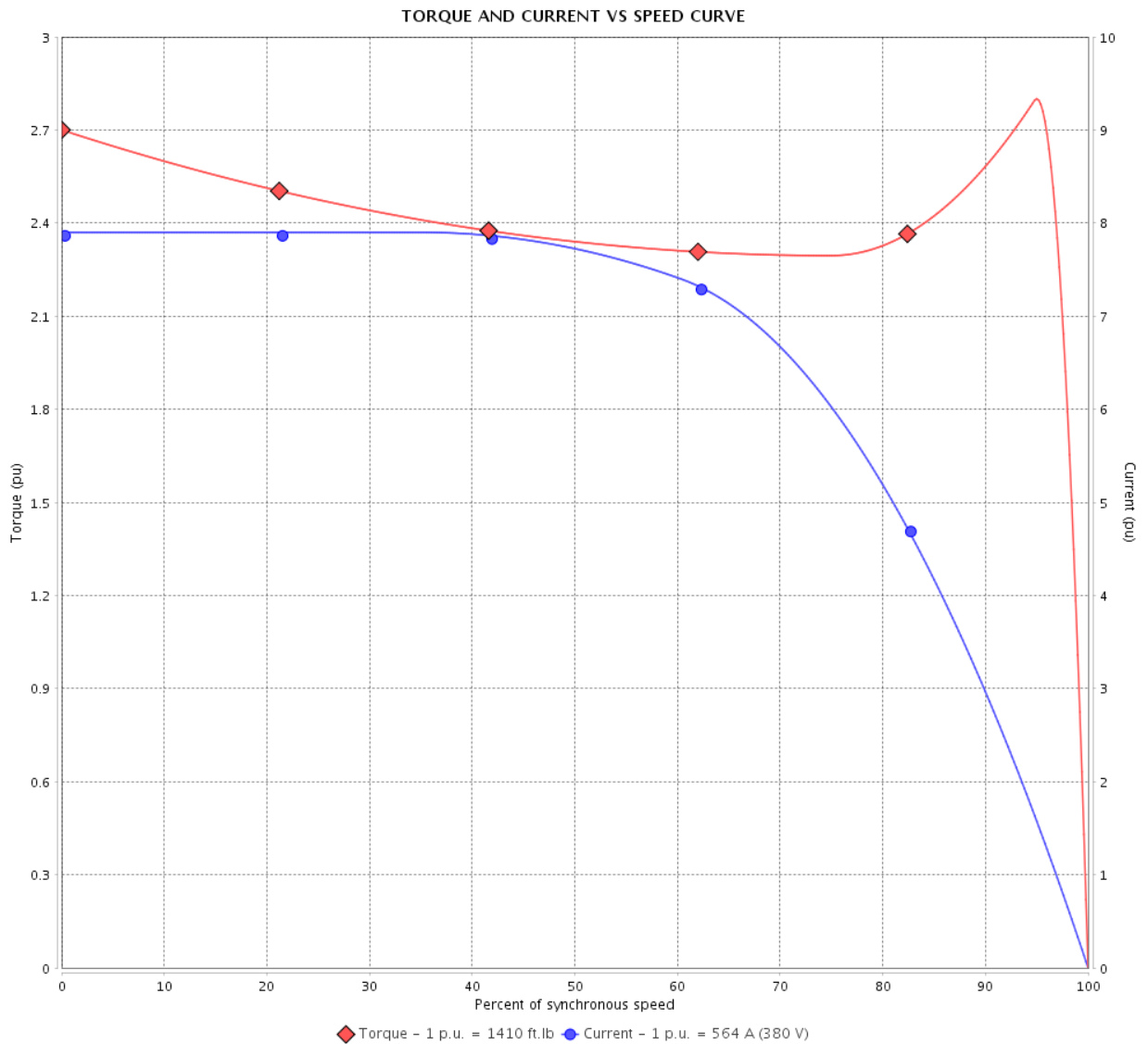
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current	: 564 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1489 rpm	Design	: A

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 21	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



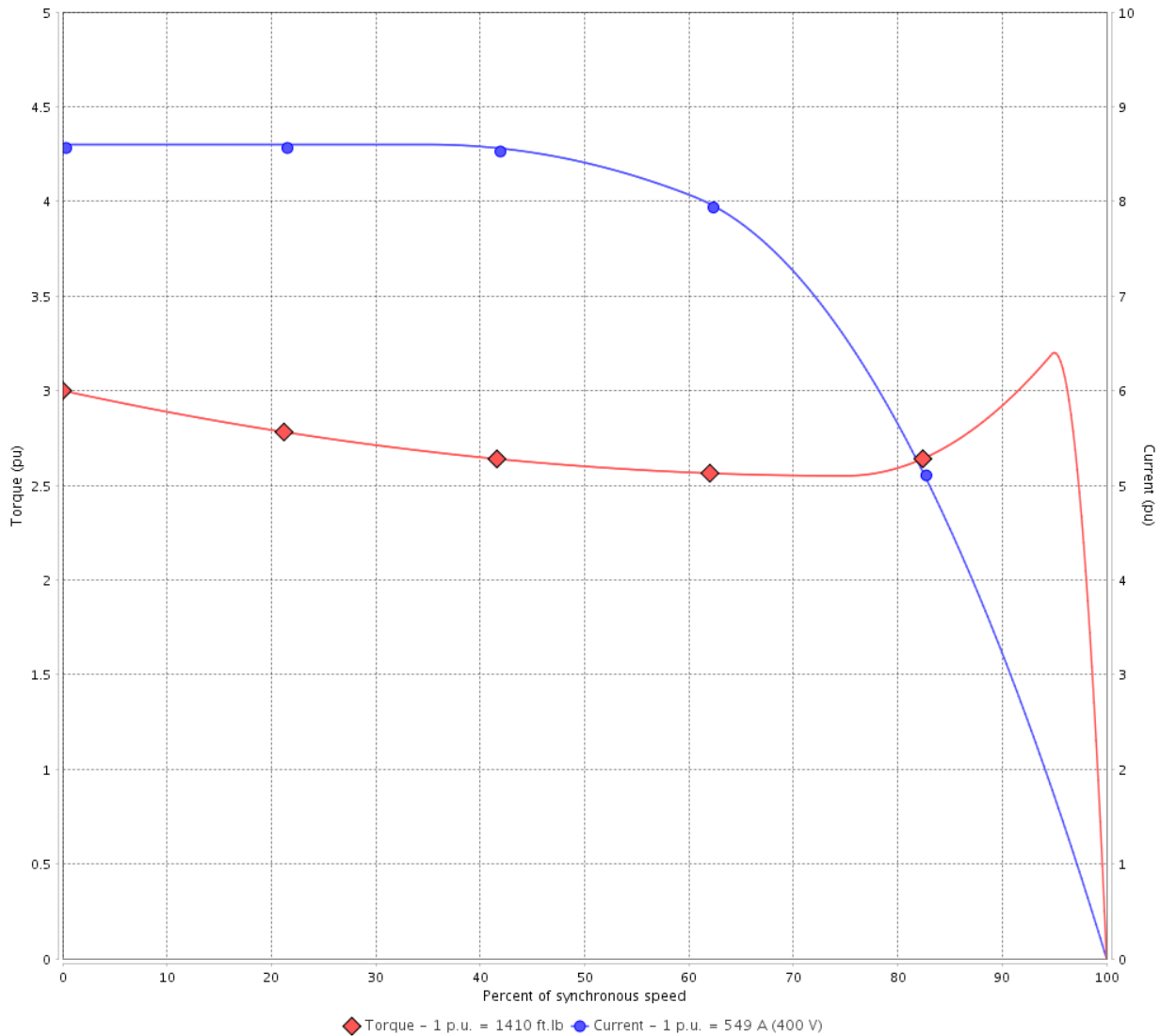
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 549 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	13/04/2022			

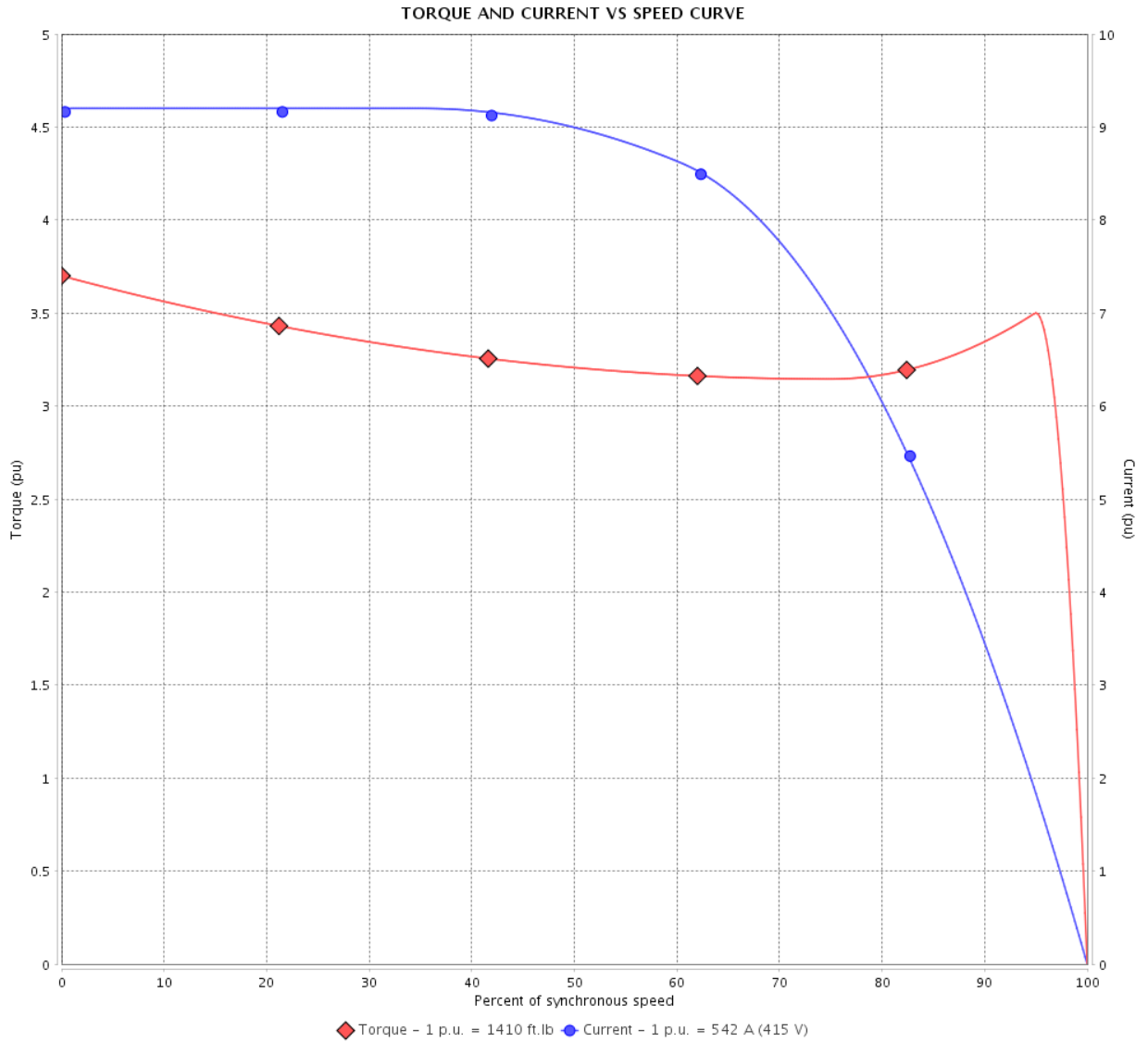
# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase      Product code : 11408292  
 Catalog # : 45018ET3G449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 542 A	Moment of inertia (J) : 152 sq.ft.lb
LRC : 9.2	Duty cycle : Cont.(S1)
Rated torque : 1410 ft.lb	Insulation class : F
Locked rotor torque : 370 %	Service factor : 1.00
Breakdown torque : 350 %	Temperature rise : 105 K
Rated speed : 1490 rpm	Design : A

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



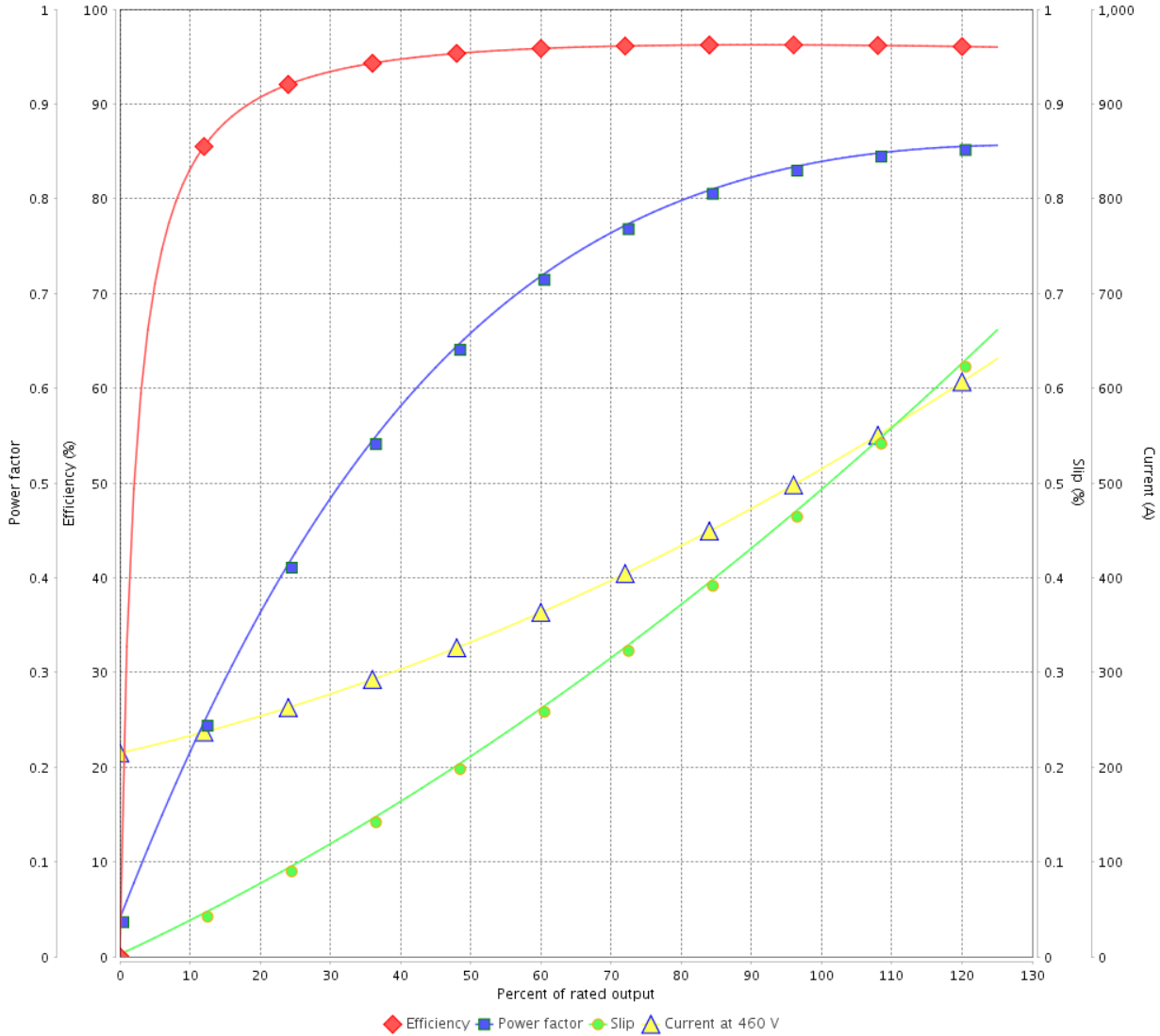
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 513 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1791 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 21	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

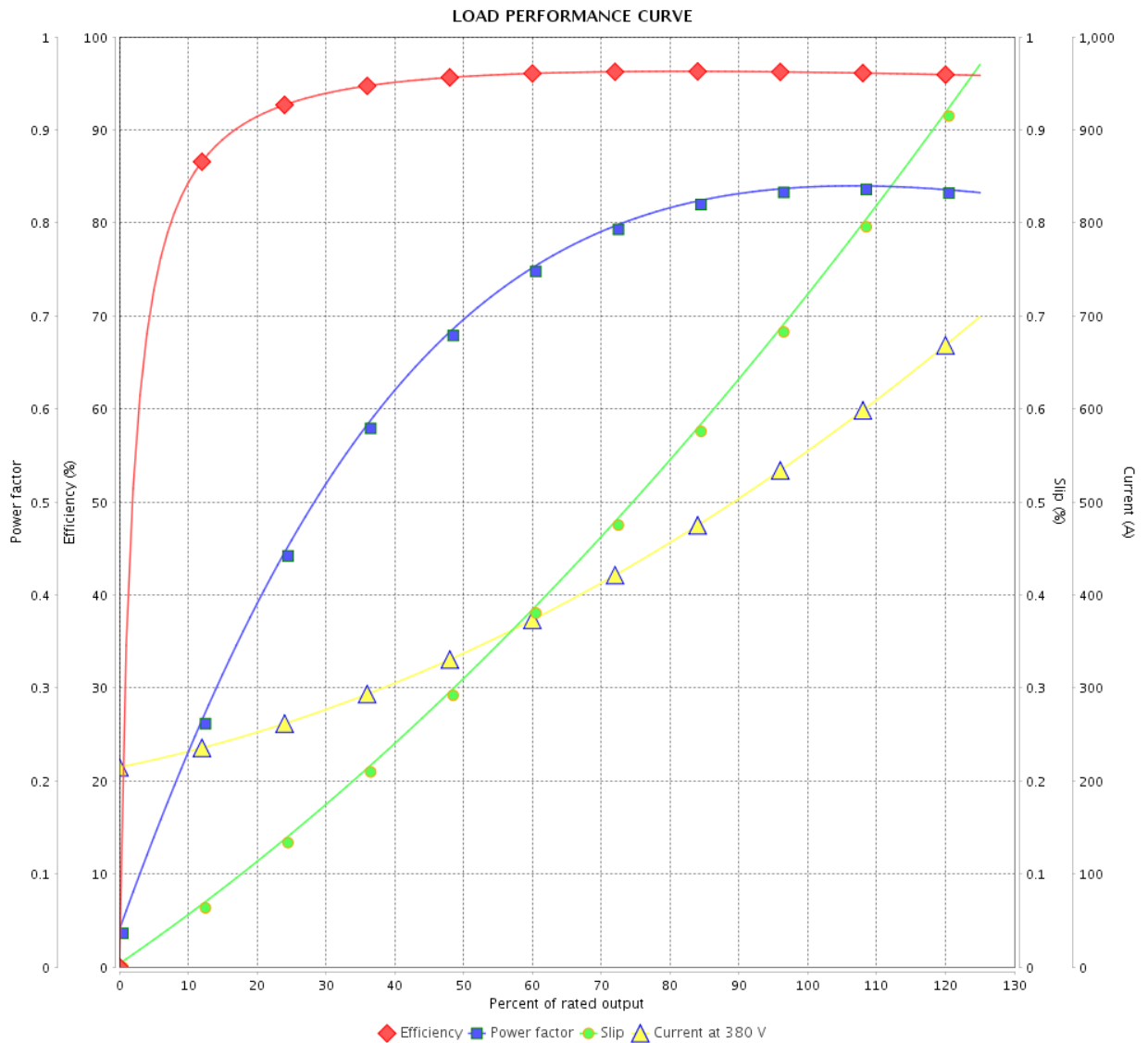


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 564 A  
 LRC : 7.9  
 Rated torque : 1410 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 280 %  
 Rated speed : 1489 rpm

Moment of inertia (J) : 152 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		7 / 21		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

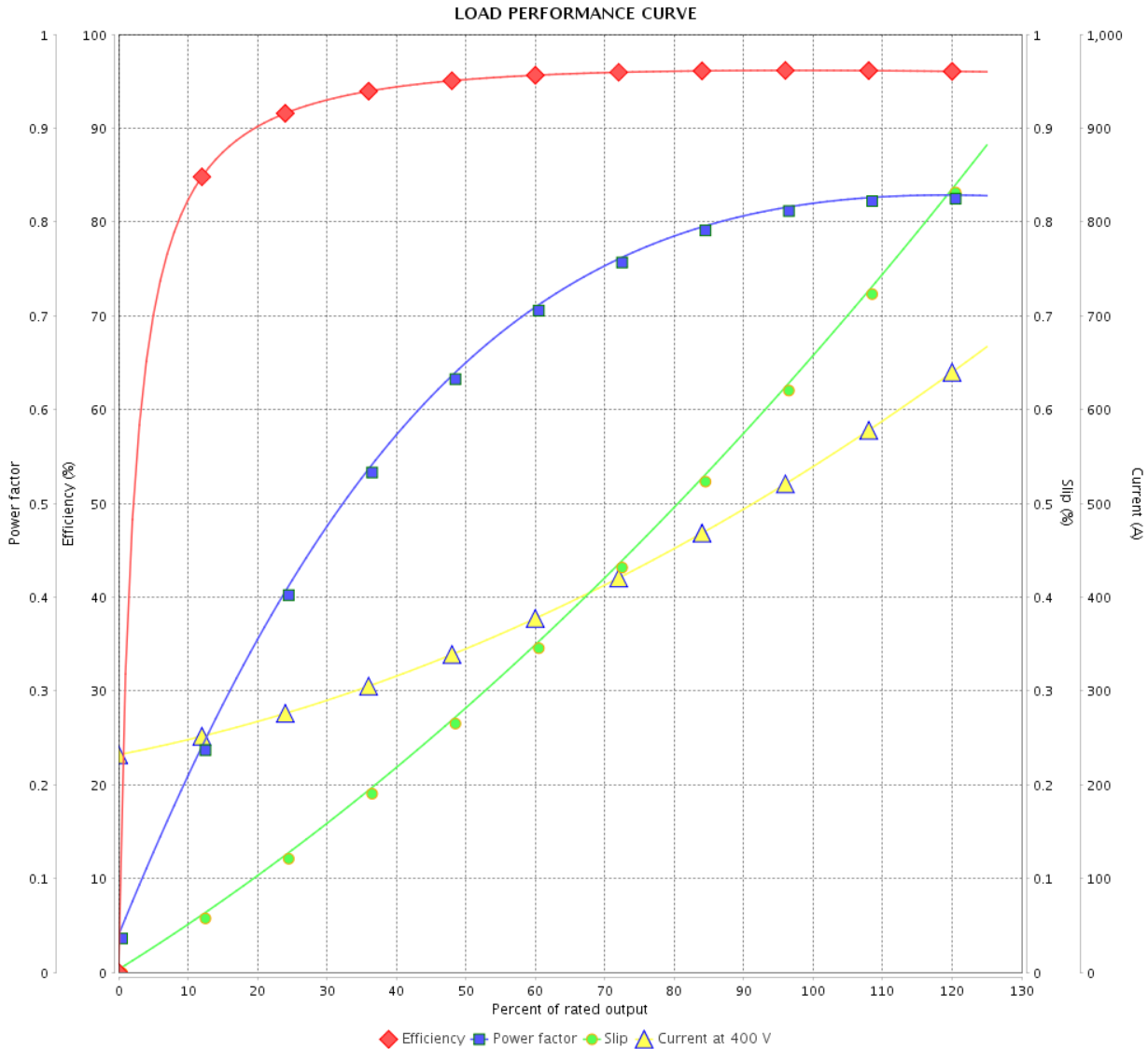


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22



Performance : 400 V 50 Hz 4P IE3

Rated current	: 549 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		8 / 21		
Date	13/04/2022			



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

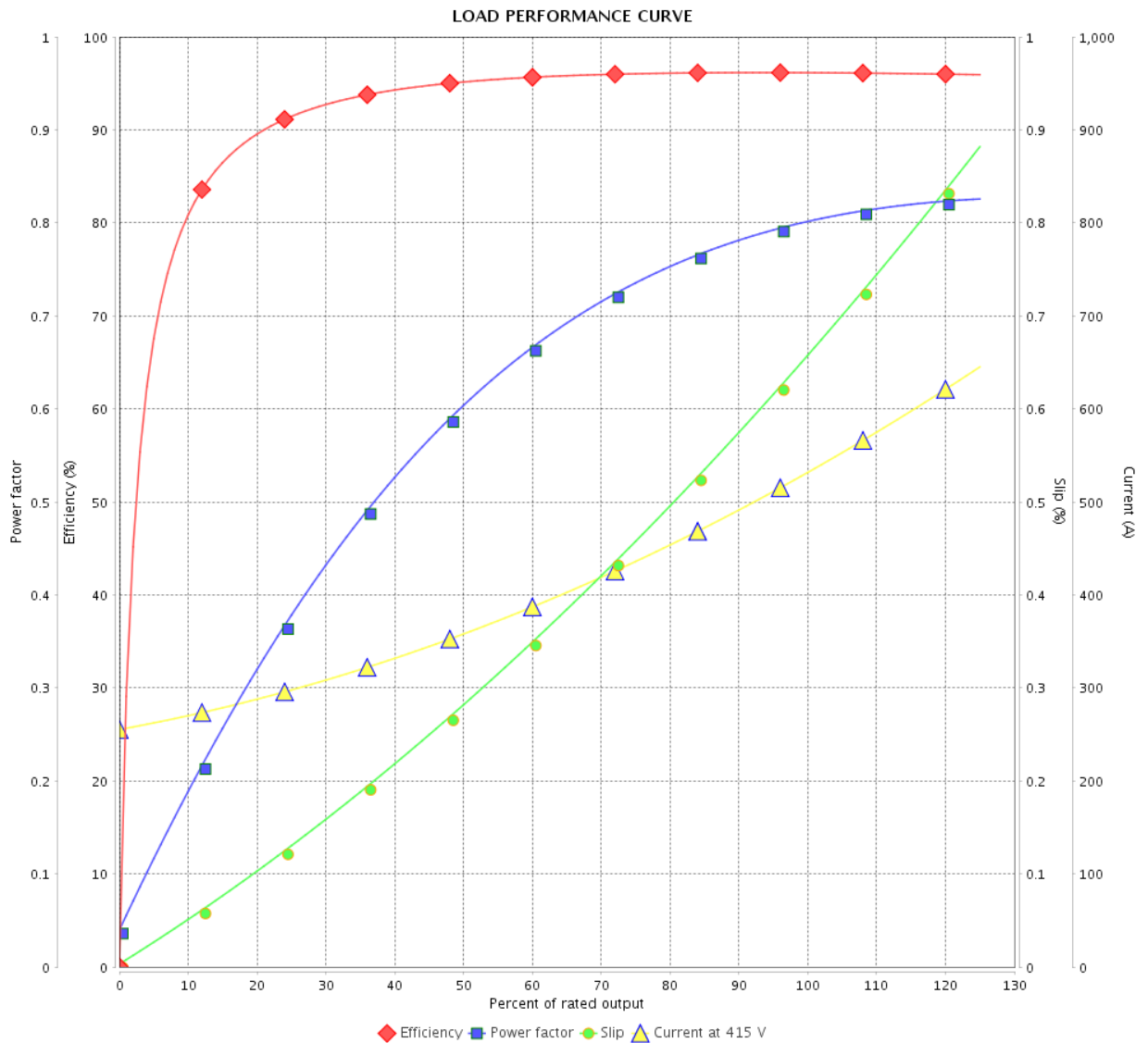


Customer : \_\_\_\_\_

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11408292

Catalog # : 45018ET3G449T-W22



Performance : 415 V 50 Hz 4P IE3

Rated current : 542 A  
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 Locked rotor torque : 370 %  
 Breakdown torque : 350 %  
 Rated speed : 1490 rpm

Moment of inertia (J) : 152 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page	Revision	
		9 / 21		

# THERMAL LIMIT CURVE



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Locked rotor torque : 320 %	Service factor : 1.15
Breakdown torque : 330 %	Temperature rise : 80 K
Rated speed : 1791 rpm	Design : A

Heating constant

Cooling constant

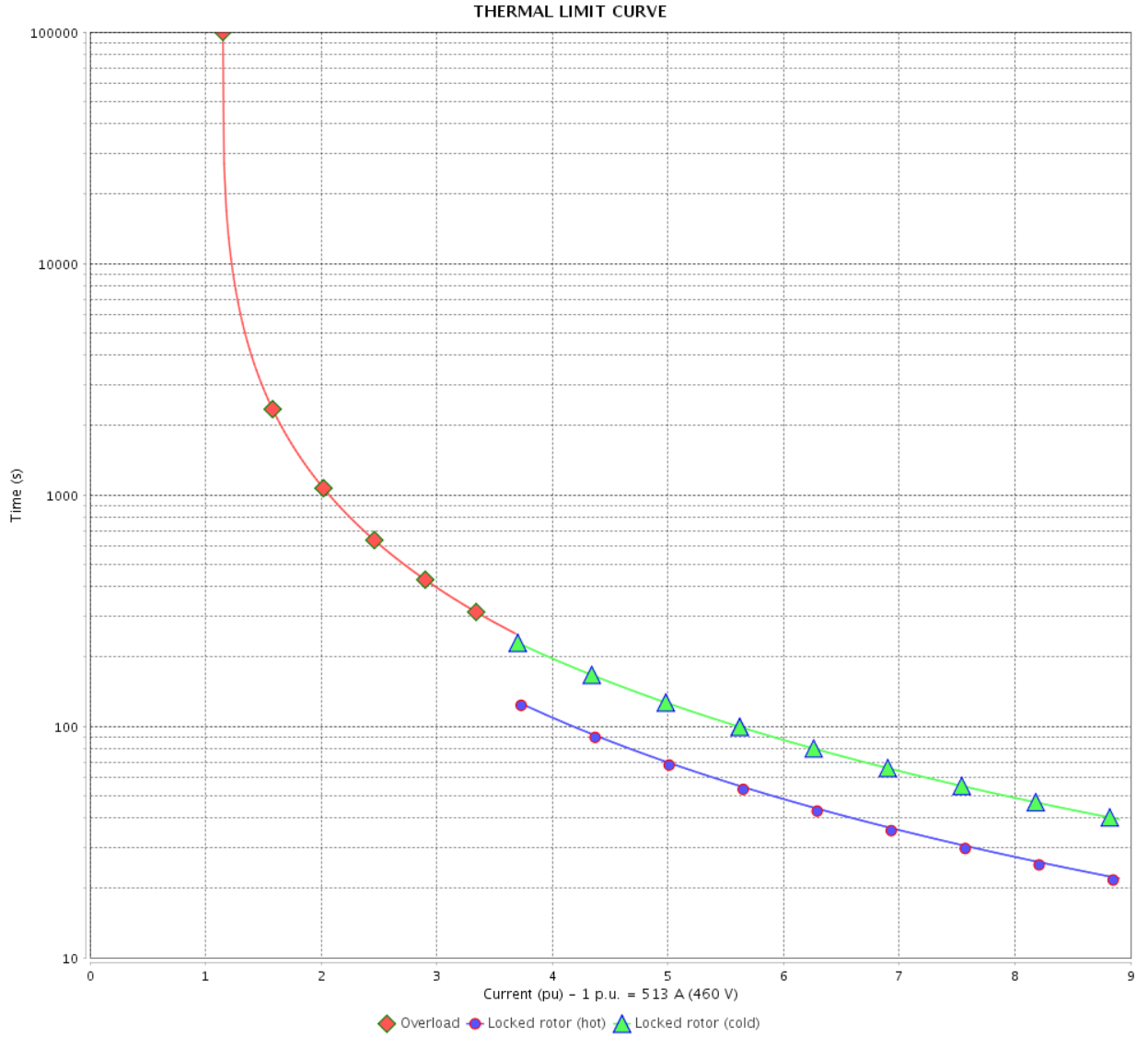
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 21	Revision
Checked by				
Date	13/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date		13/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

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Performance : 380 V 50 Hz 4P IE3

Rated current	: 564 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1489 rpm	Design	: A

Heating constant

Cooling constant

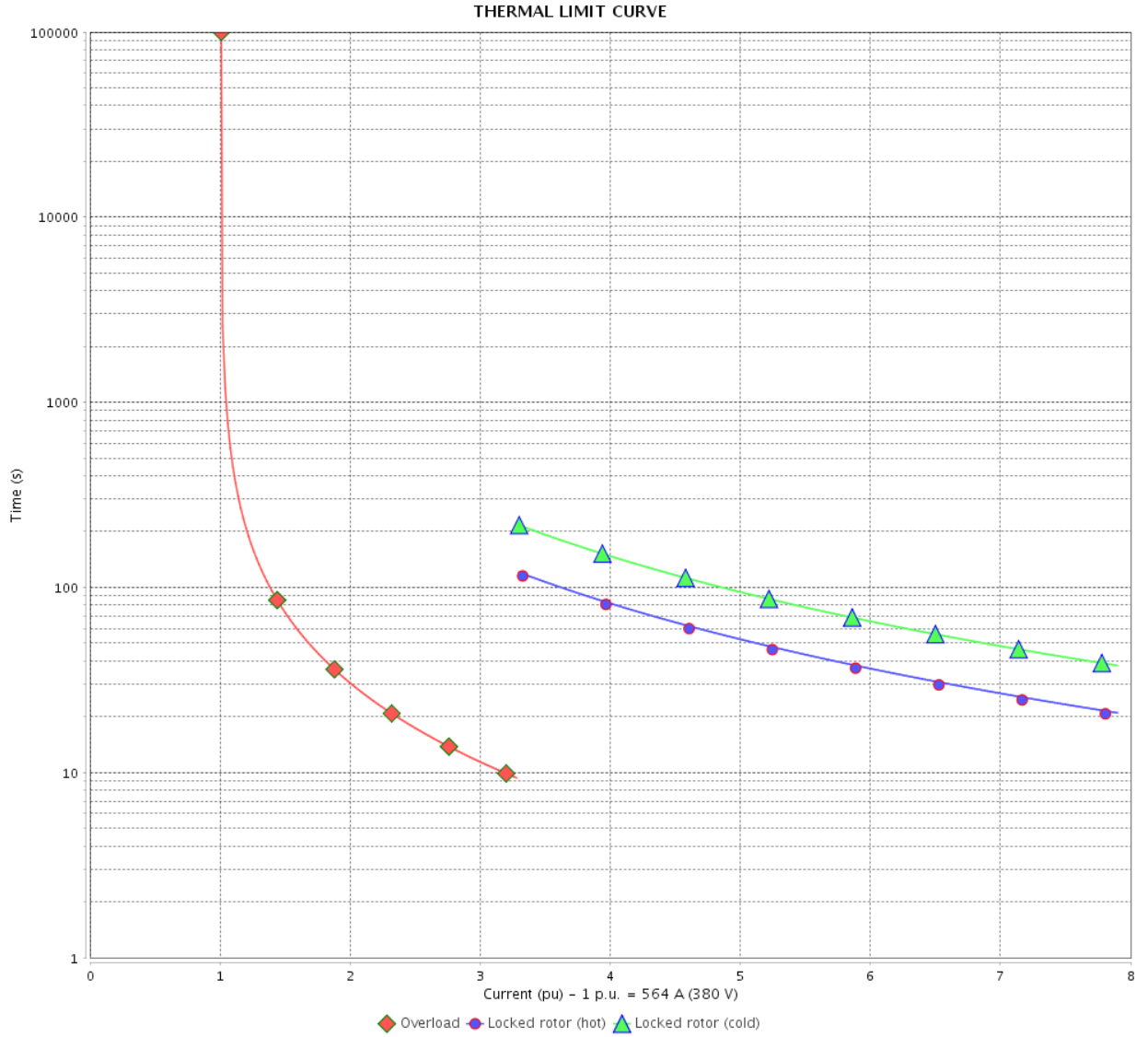
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 21	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
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Rated current	: 549 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Heating constant

Cooling constant

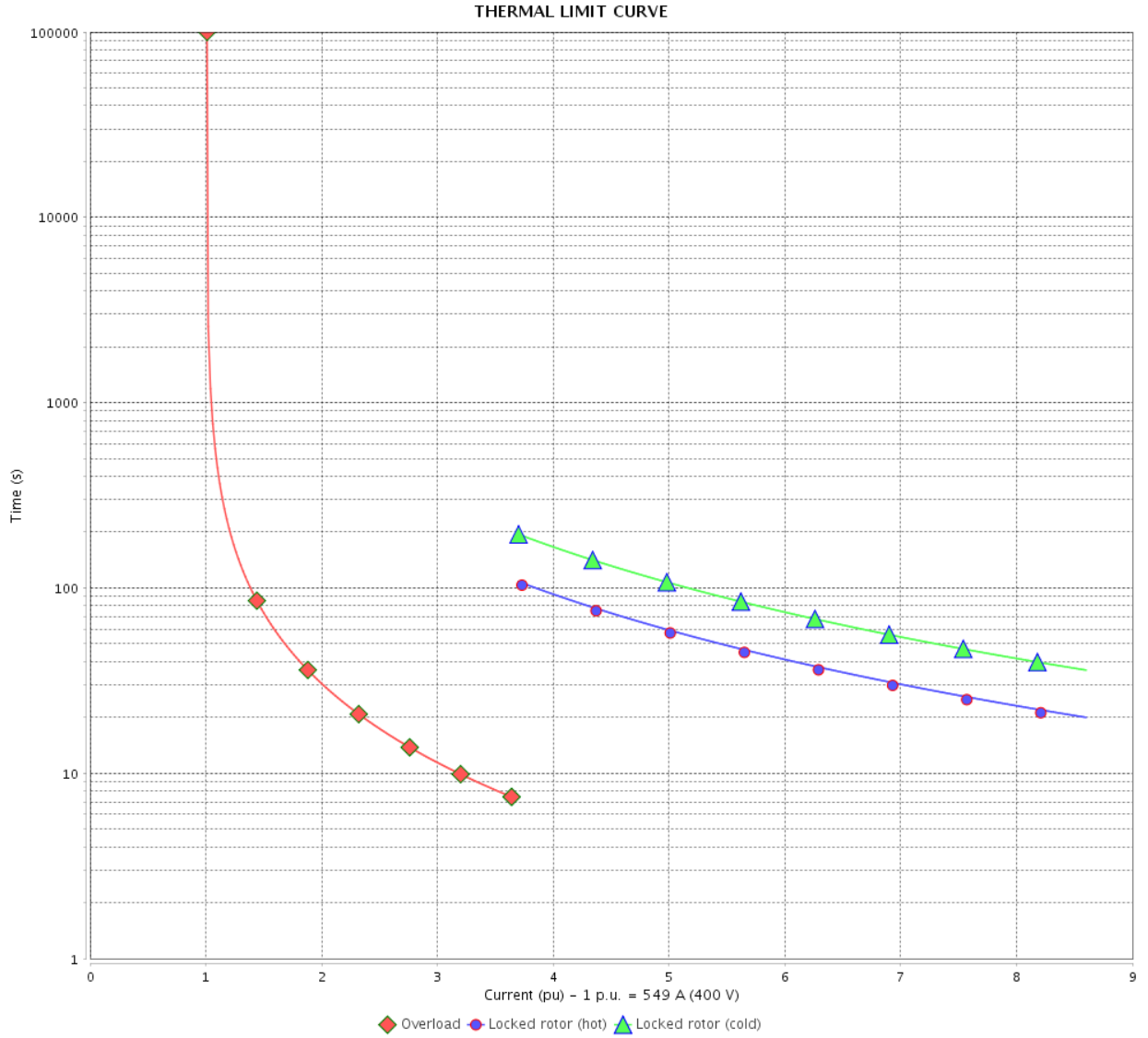
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		14 / 21	

# 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		13/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 11408292  
Catalog # : 45018ET3G449T-W22

Performance : 415 V 50 Hz 4P IE3

Rated current	: 542 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 9.2	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 370 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 21	

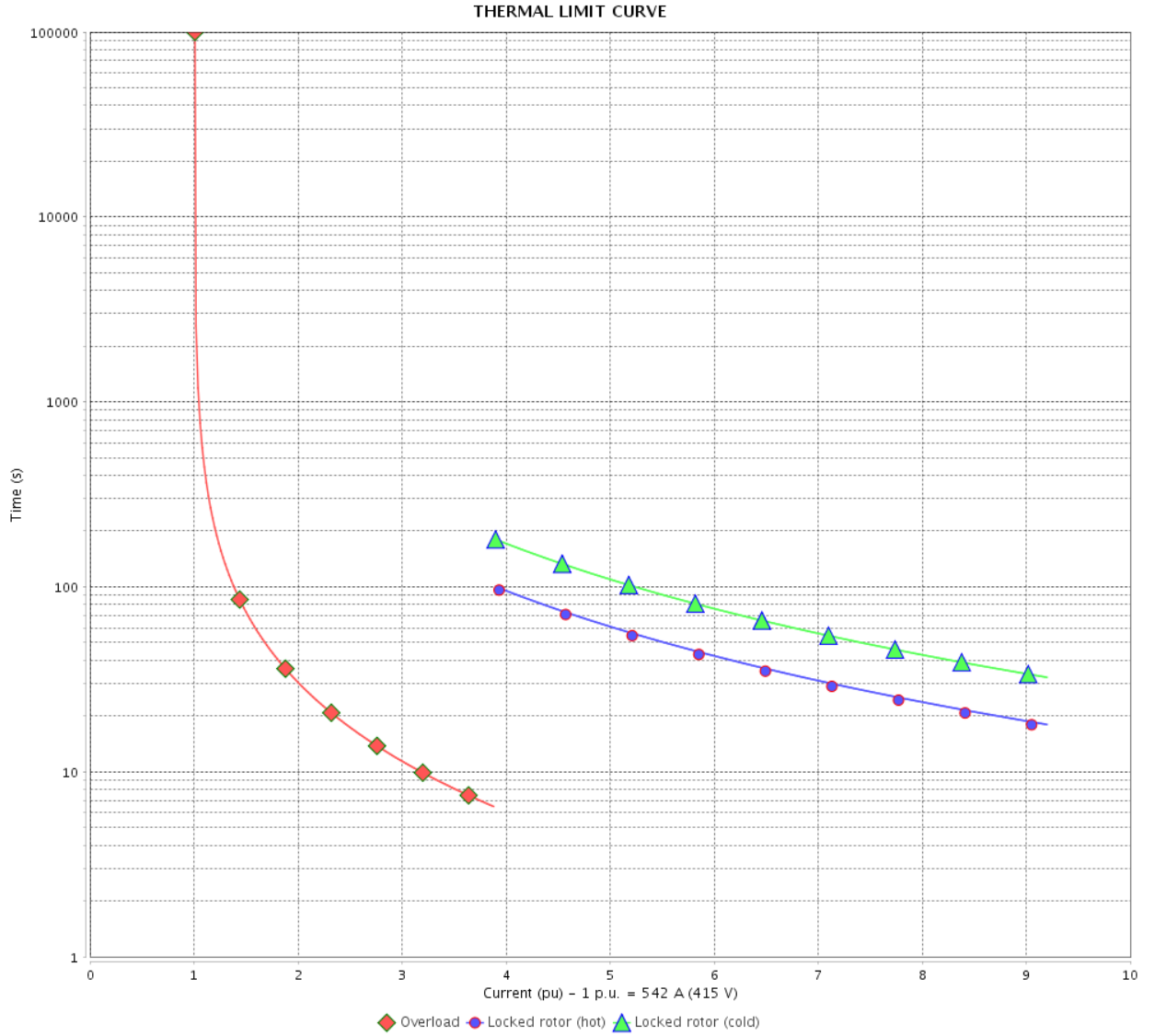


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

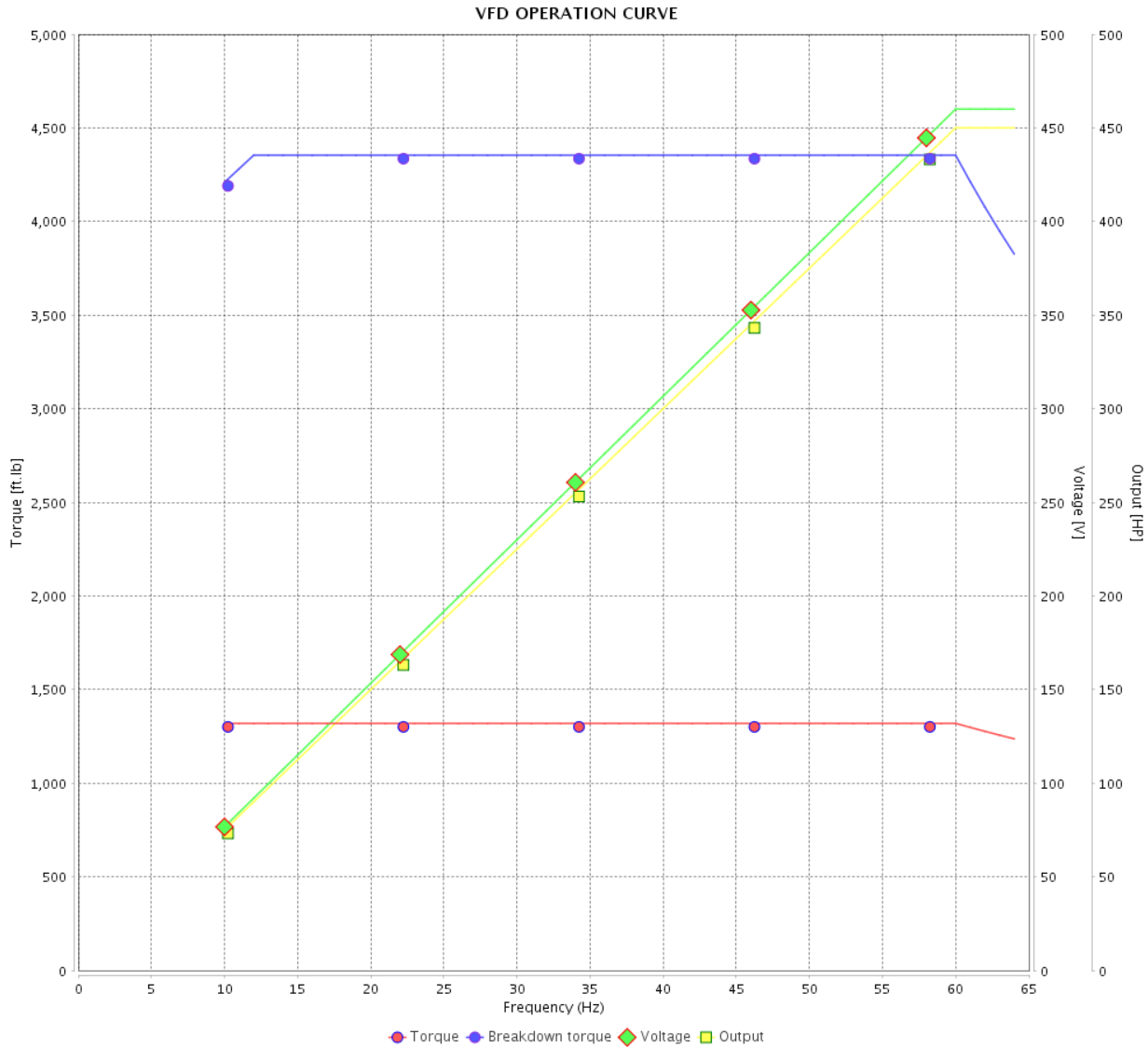


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Performance : 460 V 60 Hz 4P

Rated current	: 513 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.9	Duty cycle	: Cont.(S1)
Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 320 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 1791 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 18 / 21	Revision
Checked by				
Date	13/04/2022			

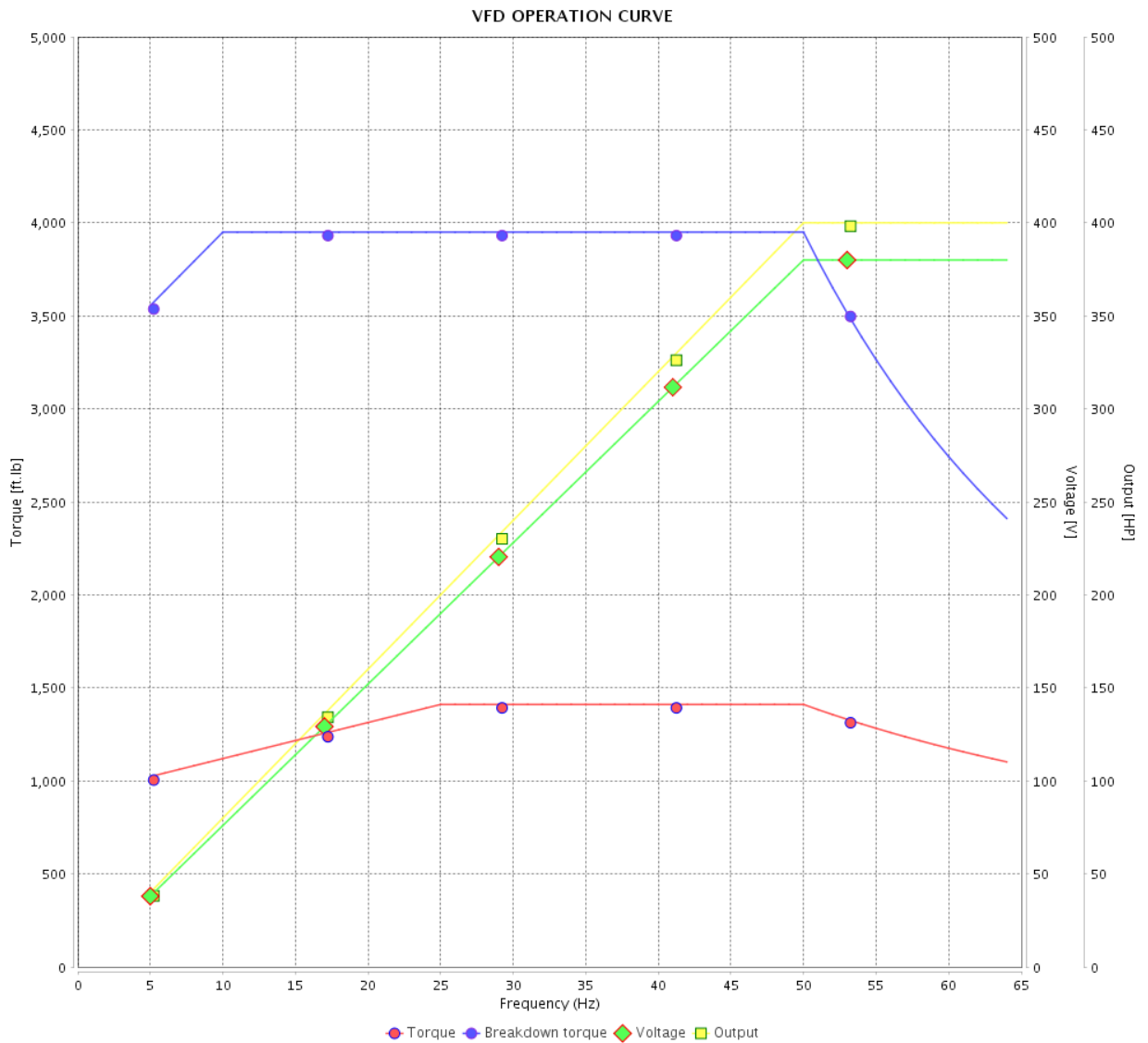
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 11408292  
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Performance : 380 V 50 Hz 4P IE3

Rated current	: 564 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 105 K
Rated speed	: 1489 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			19 / 21	
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



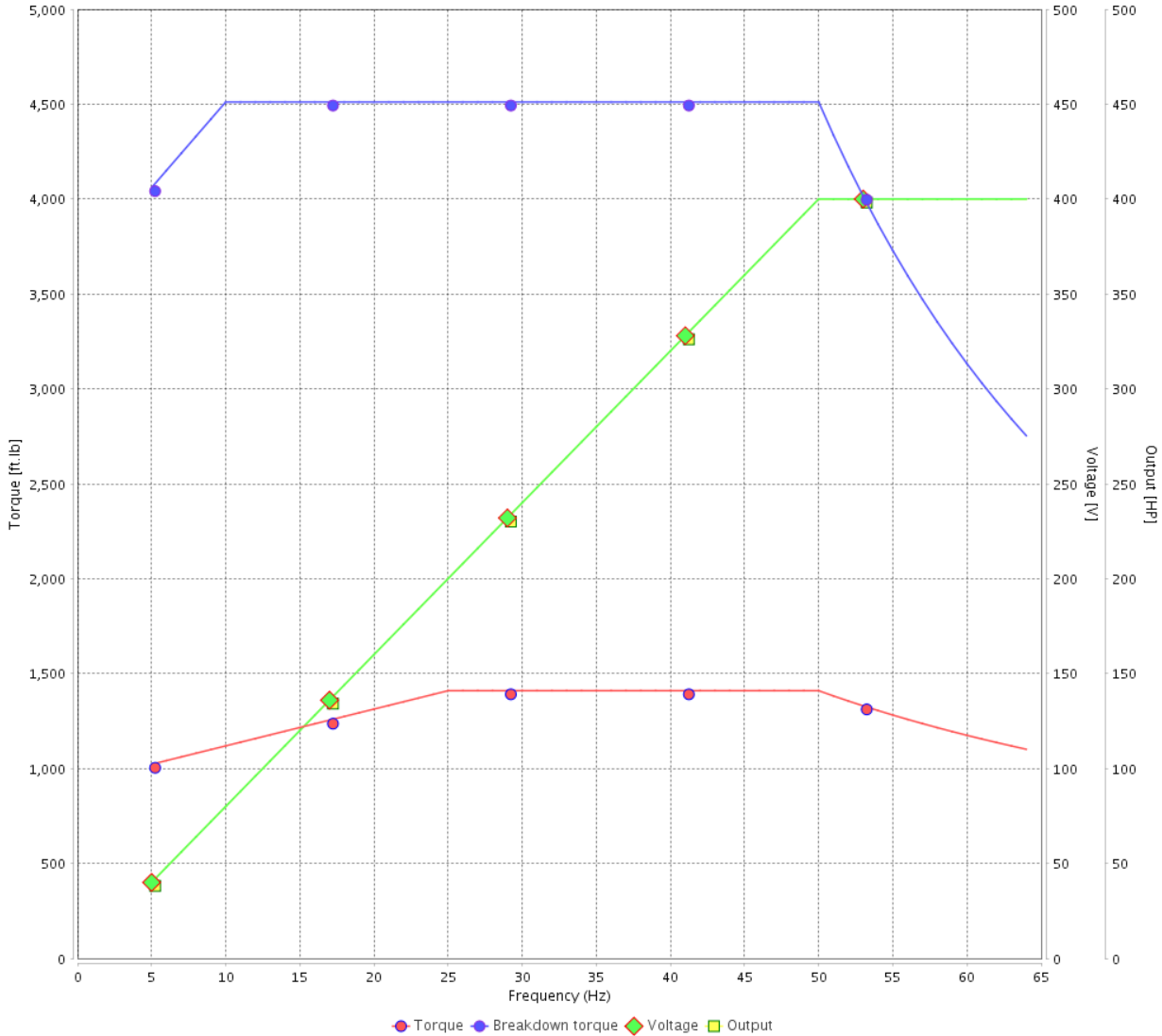
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 549 A	Moment of inertia (J)	: 152 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 1410 ft.lb	Insulation class	: F
Locked rotor torque	: 300 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

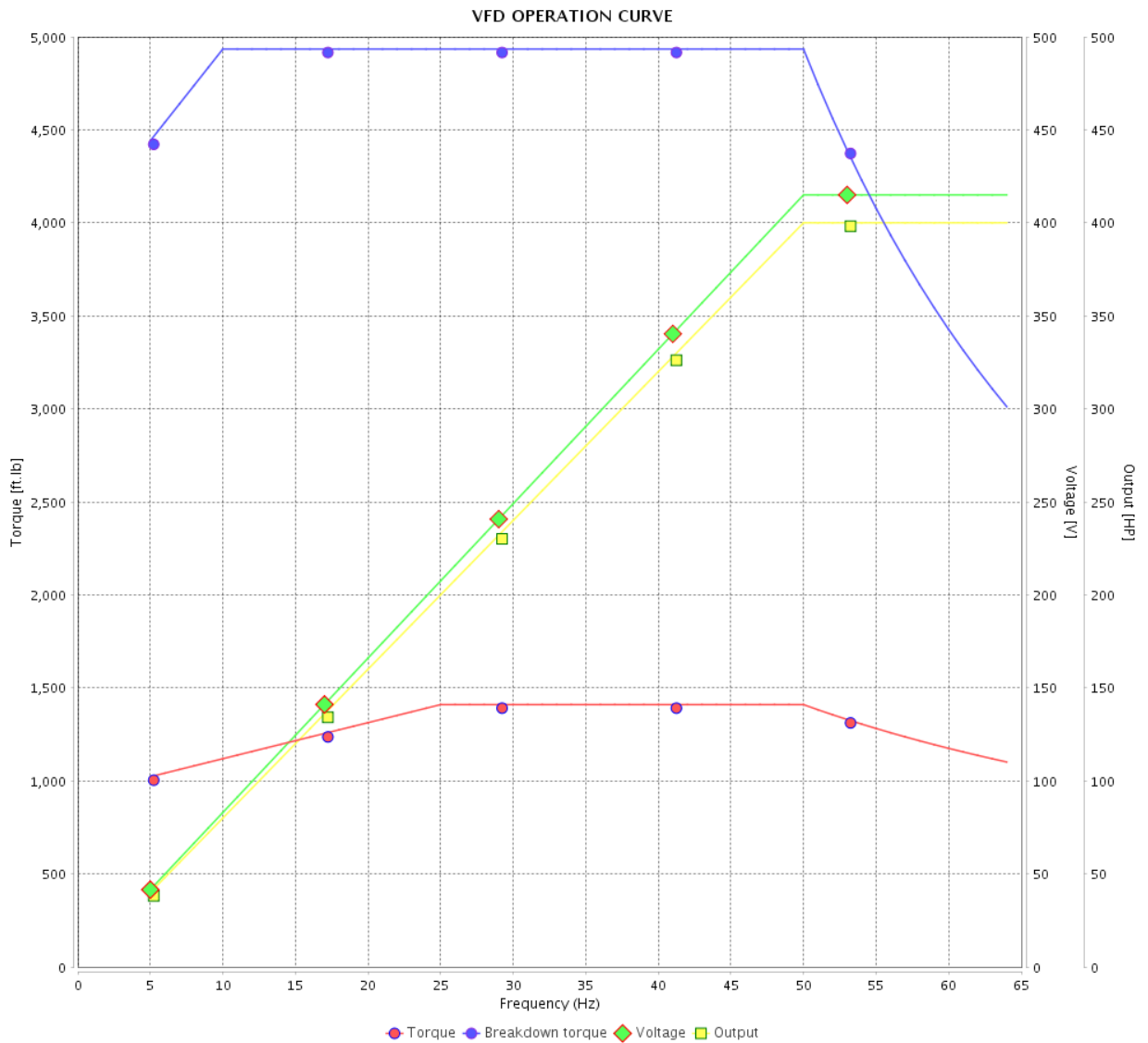


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 Locked rotor torque : 370 %  
 Breakdown torque : 350 %  
 Rated speed : 1490 rpm

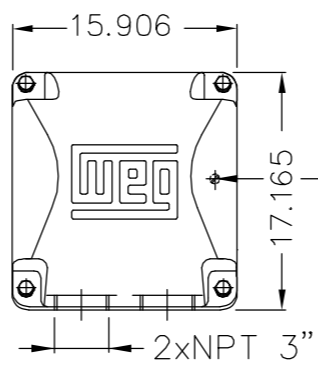
Moment of inertia (J) : 152 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 105 K  
 Design : A

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

EIXO/SHAFT	
PADRÃO/STANDARD	X
OPCIONAL/OPTIONAL	
ESPECIAL/SPECIAL	

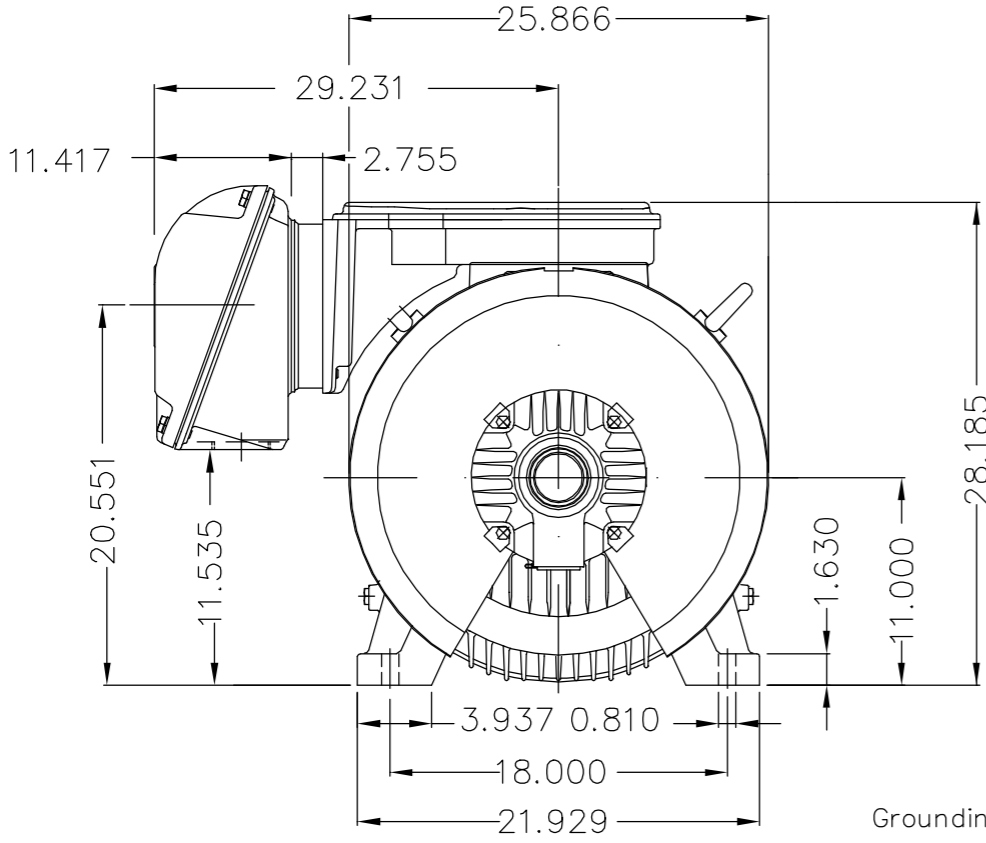
Dimensões em polegada  
Dimensions in inches

THIS IS AN UPDATED REVISION, THE PREVIOUS ONE MUST BE DISREGARDED.

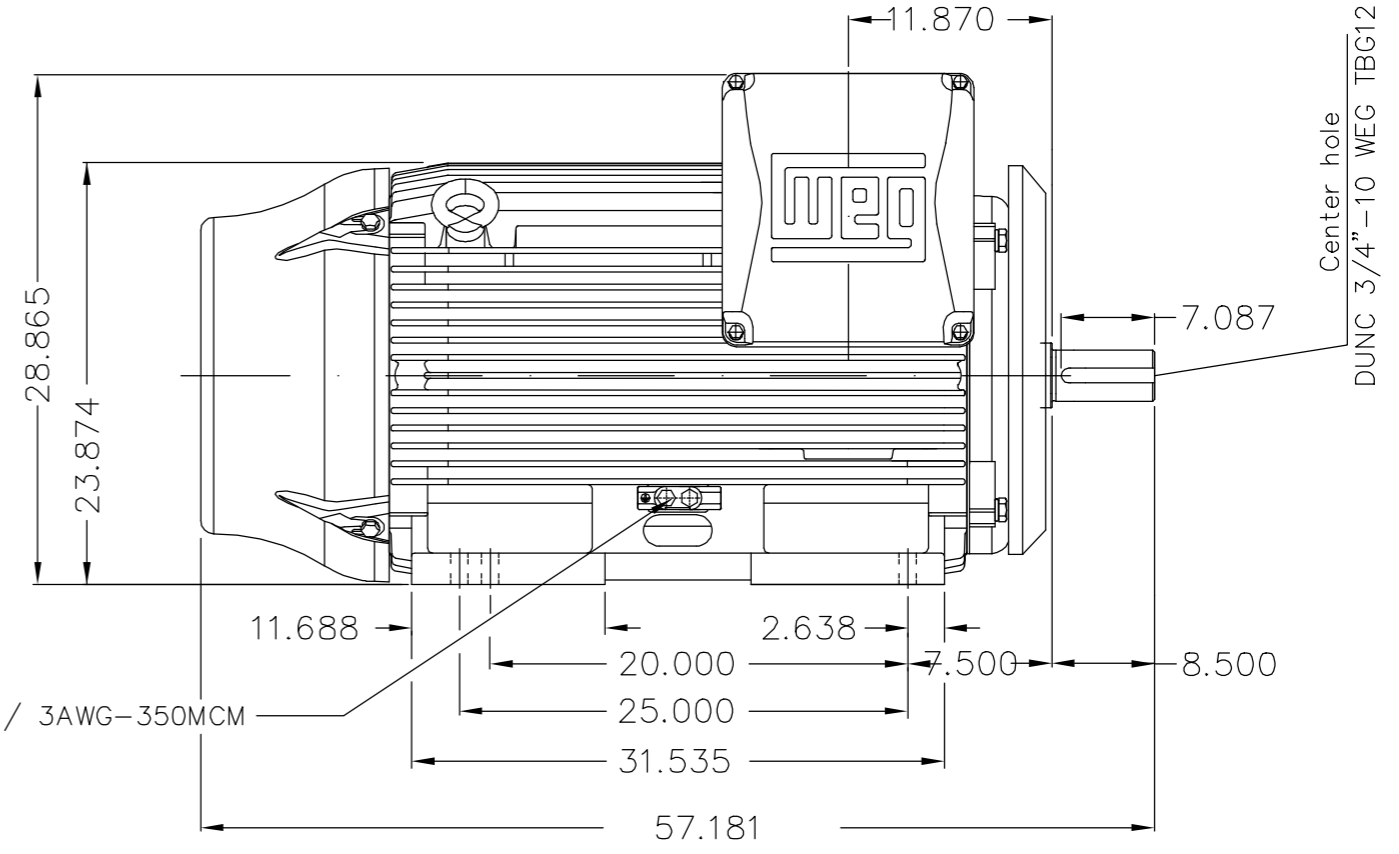


Grounding for leads 35-70 mm<sup>2</sup> / 1-2/0 AWG

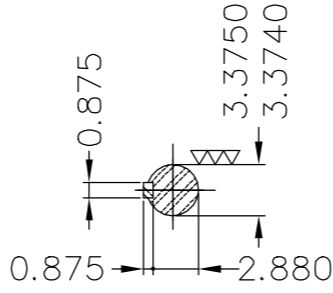
Main terminal box



Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM



Center hole  
DUNC 3/4"-10 WEG TBG12



DE Shaft End

Tampa traseira com mancal eletricamente isolado /  
NDE endshield with electrically insulated bearing hub  
Cor RAL 5009 / Color RAL 5009  
Plano de pintura 203A / Painting plan 203A  
Forma construtiva B3D / Mounting B3R(D)

WEG ELECTRIC CORPORATION - WEC

OV: 4831692

500001456474	DOCUMENTO NOVO	SAORIN	ERIC	ERIC	24.05.2018	00
ECM ECM	LOC LOC	EXECUTADO EXECUTED	VERIFICADO CHECKED	LIBERADO RELEASED	DATA DATE	VER VER
EXEC. /EXECUTED	SAORIN	THREE PHASE W22 MOTOR - NEMA PREMIUM EFF		10005777993		
VERIF. /CHECKED	ERIC	FRAME L447/9T IP55 TEFC		000   00		
LIBER. /RELEASED	ERIC					
DATA LB /REL DT	24.05.2018	WMO	Jaragua do Sul	Product Engineering	FOLHA/SHEET	1 / 1

450 HP 04 Poles 60Hz

UNCONTROLLED COPY

RELEASED

ZME A3

MADE IN BRAZIL  
11408292



FOR SAFE AREA  
Mod.TE1BFOXON  
CC029A

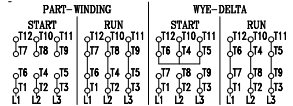


Class I, Div 2, Gr A, B, C and D - T3  
Class I, Zone 2, IIC - T3  
Class II, Div 2, Gr F and G - T3C  
For use on PWM: Gr. A, B, C and D,  
VT 1000:1, CT 6:1, 1.00SF - T2B

MODEL 45018ET3G449T-W22

Inverter Duty Motor  
Severe Duty

PH3	60Hz	Fr. L447/9T	1000m.a.s.l.	IP55	TEFC	3492lb
V 460				A 513		
HP 450				kW 330		
SF 1.15				SFA 590		
RPM 1791				PF 0.84		
AMB 40°C				INS cl. F DT80K	NEMA NOM EFF 96.2%	
DUTY CONT.				DES A Code K		



- 6322-C3 (60g)
- 6319-C3 (45g)

MOBIL POLYREX EM (6000h)