

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 12408387	
				Catalog # : 45018XT3G586/7	
Frame		: 586/7T		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 : 4387 lb	
Protection degree		: IP55		Moment of inertia (J) : 213 sq.ft.lb	
Design		: B			
Output [HP]	450	350	350	350	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	501	477	459	442	
L. R. Amperes [A]	3257	3005	3259	3403	
LRC [A]	6.5x(Code G)	6.3x(Code G)	7.1x(Code H)	7.7x(Code H)	
No load current [A]	121	120	129	136	
Rated speed [RPM]	1787	1488	1489	1490	
Slip [%]	0.72	0.80	0.73	0.67	
Rated torque [ft.lb]	1320	1240	1230	1230	
Locked rotor torque [%]	180	180	200	210	
Breakdown torque [%]	200	210	229	250	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	105 K	105 K	105 K	105 K	
Locked rotor time	43s (cold) 24s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	
Noise level ²	83.0 dB(A)	79.0 dB(A)	79.0 dB(A)	79.0 dB(A)	
Efficiency (%)	25%	95.7	95.7	95.7	95.7
	50%	95.8	95.8	95.8	95.8
	75%	96.2	96.2	96.2	96.2
	100%	96.2	96.2	96.2	96.2
Power Factor	25%	0.59	0.57	0.54	0.51
	50%	0.81	0.80	0.78	0.75
	75%	0.85	0.85	0.83	0.82
	100%	0.86	0.86	0.85	0.85
Bearing type		Drive end : 6322 C3	Non drive end : 6319 C3	Foundation loads	
Sealing		: Viton Oil Seal		Max. traction : 4241 lb	
				Max. compression : 8627 lb	
Lubrication interval		: 5138 h 7038 h			
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 / 22	

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Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



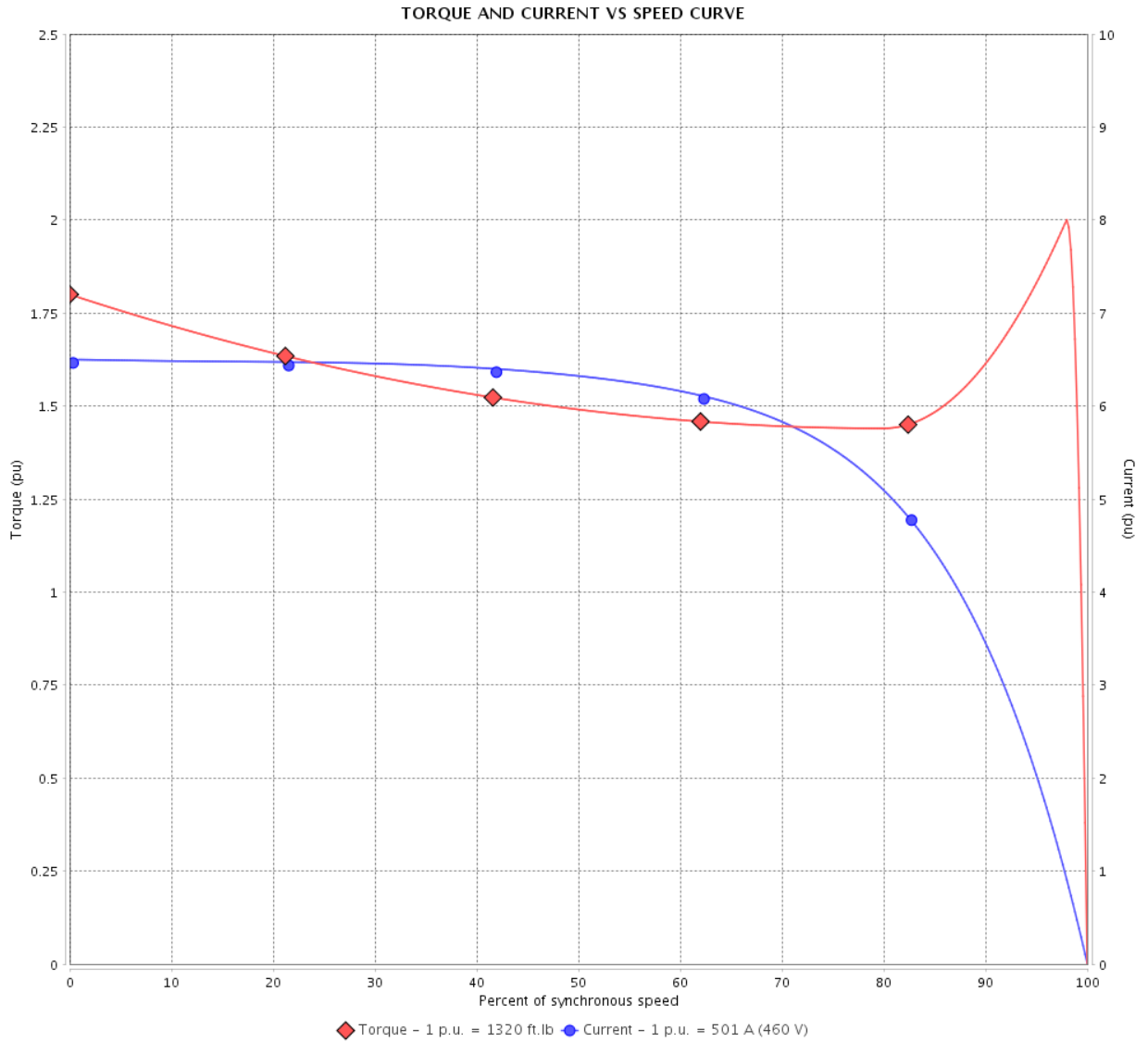
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408387

Catalog # : 45018XT3G586/7



Performance : 460 V 60 Hz 4P

Rated current	: 501 A	Moment of inertia (J)	: 213 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1787 rpm	Design	: B

Locked rotor time : 43s (cold) 24s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



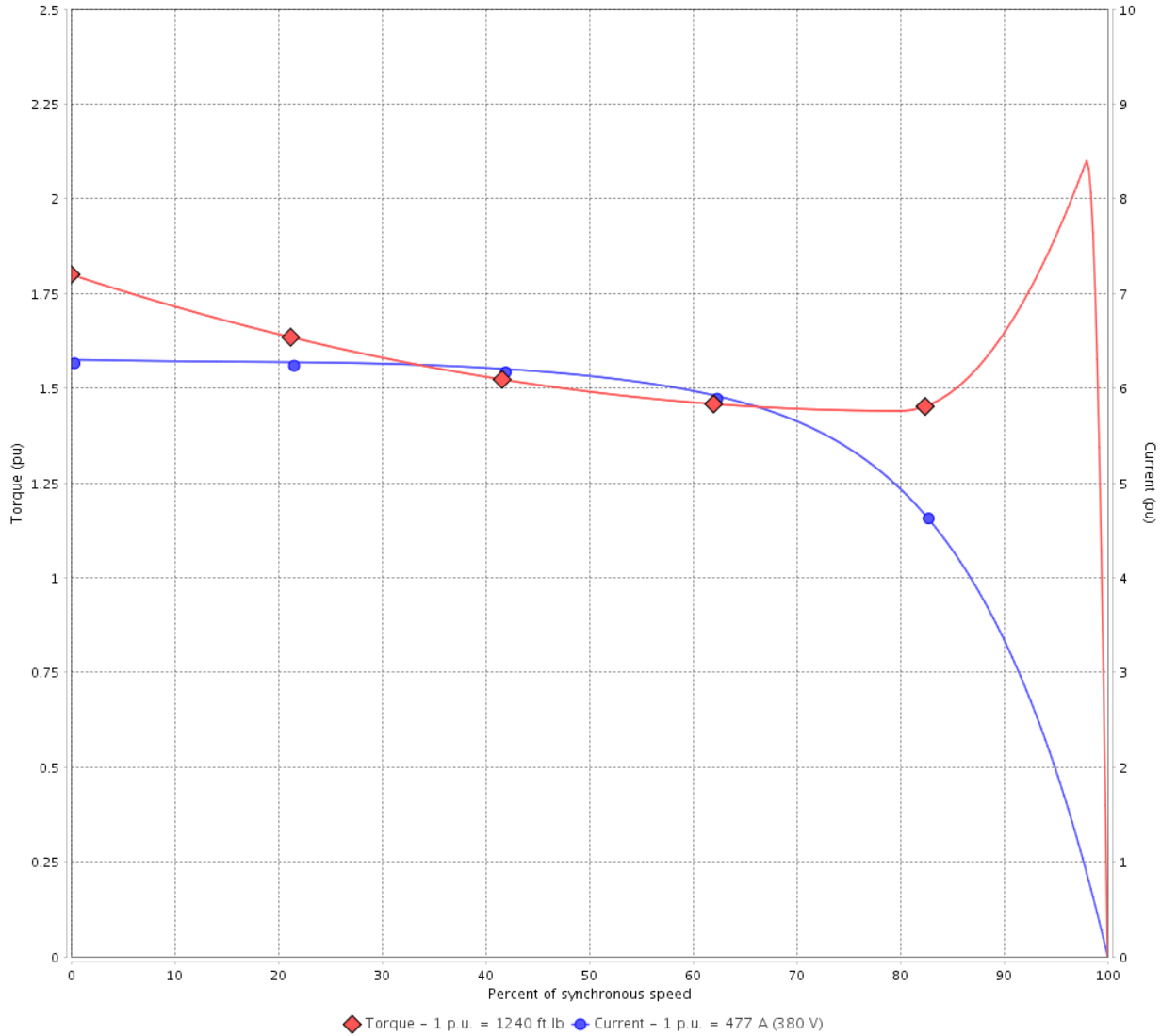
Customer :

Product line : NEMA Premium Efficiency Three-Phase

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Catalog # : 45018XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 477 A	Moment of inertia (J)	: 213 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1488 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



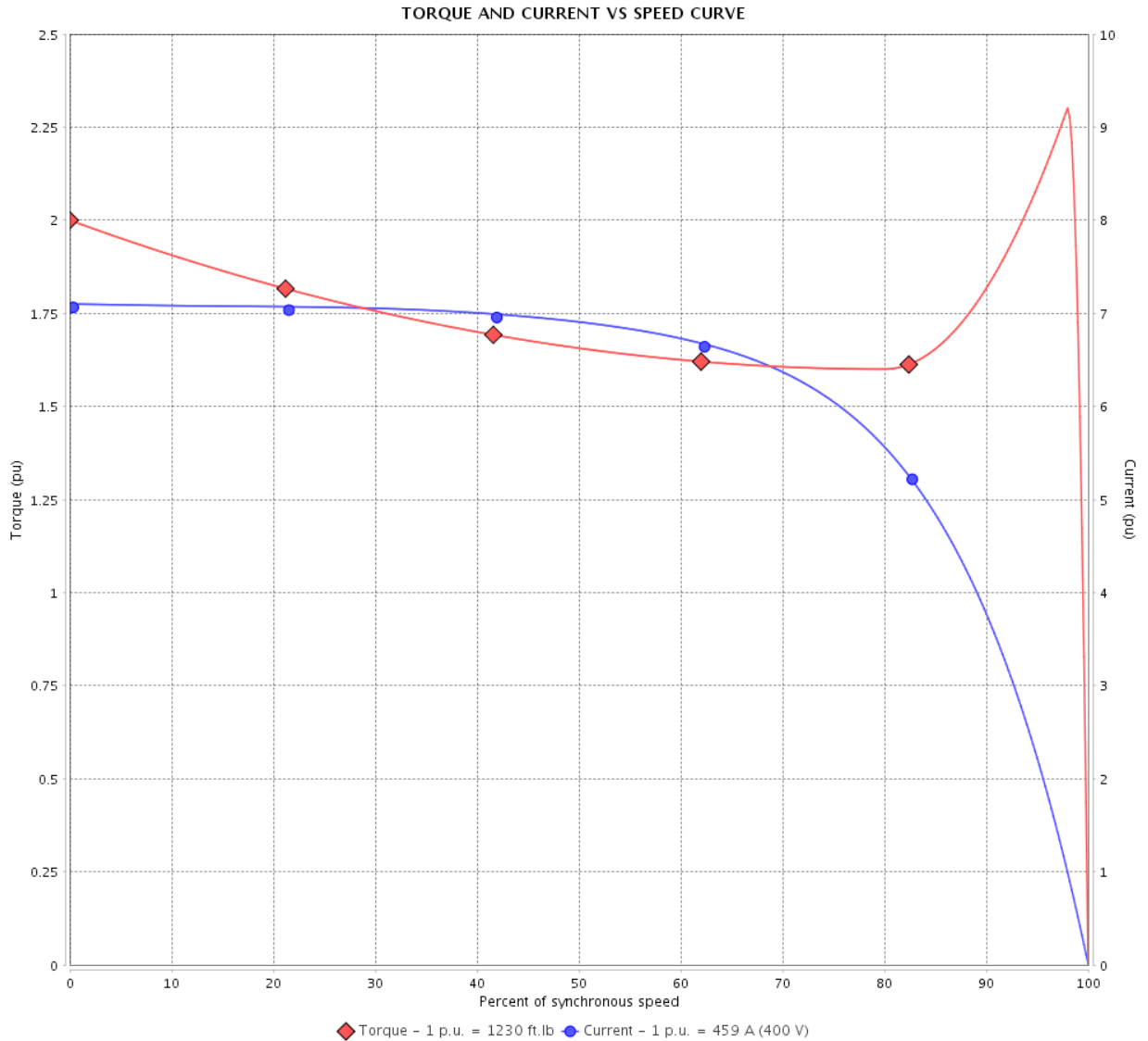
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408387

Catalog # : 45018XT3G586/7



Performance : 400 V 50 Hz 4P IE3

Rated current	: 459 A	Moment of inertia (J)	: 213 sq.ft.lb
LRC	: 7.1	Duty cycle	: Cont.(S1)
Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 105 K
Rated speed	: 1489 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



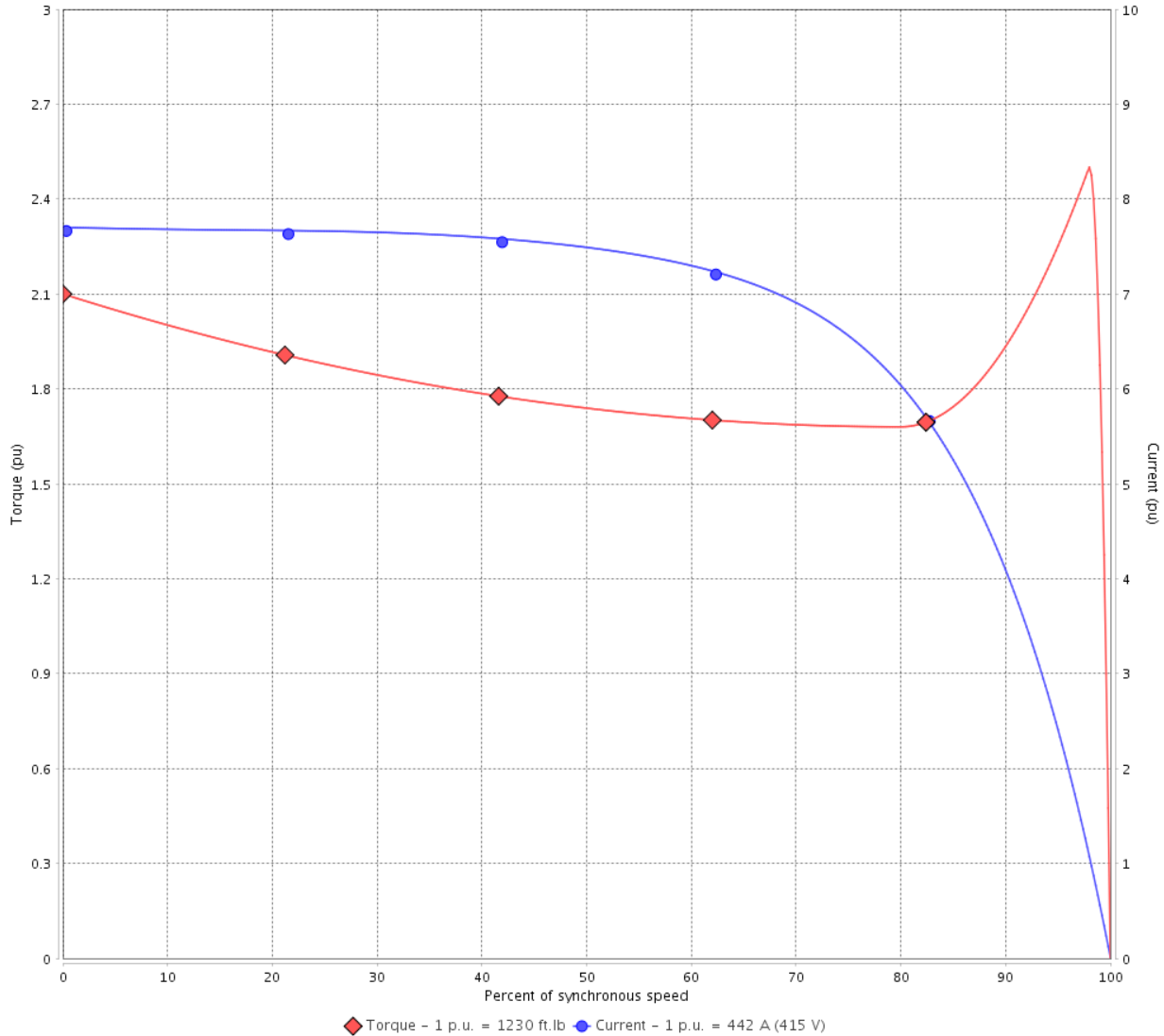
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Catalog # : 45018XT3G586/7

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE3

Rated current	: 442 A	Moment of inertia (J)	: 213 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 1230 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 105 K
Rated speed	: 1490 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022			
			6 / 22	

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

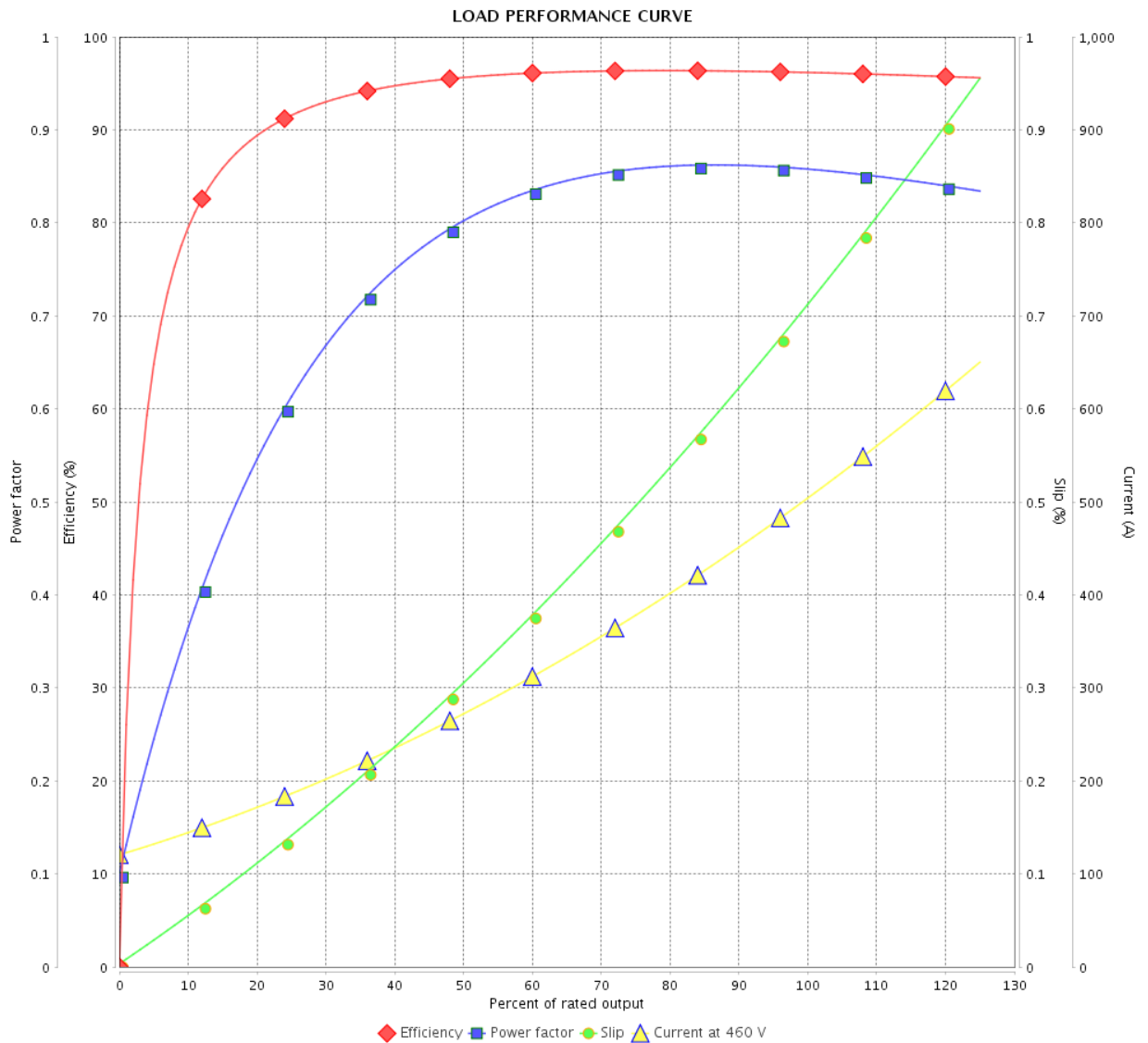


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408387

Catalog # : 45018XT3G586/7



Performance : 460 V 60 Hz 4P

Rated current : 501 A
 LRC : 6.5
 Rated torque : 1320 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 200 %
 Rated speed : 1787 rpm

Moment of inertia (J) : 213 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 105 K
 Design : B

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

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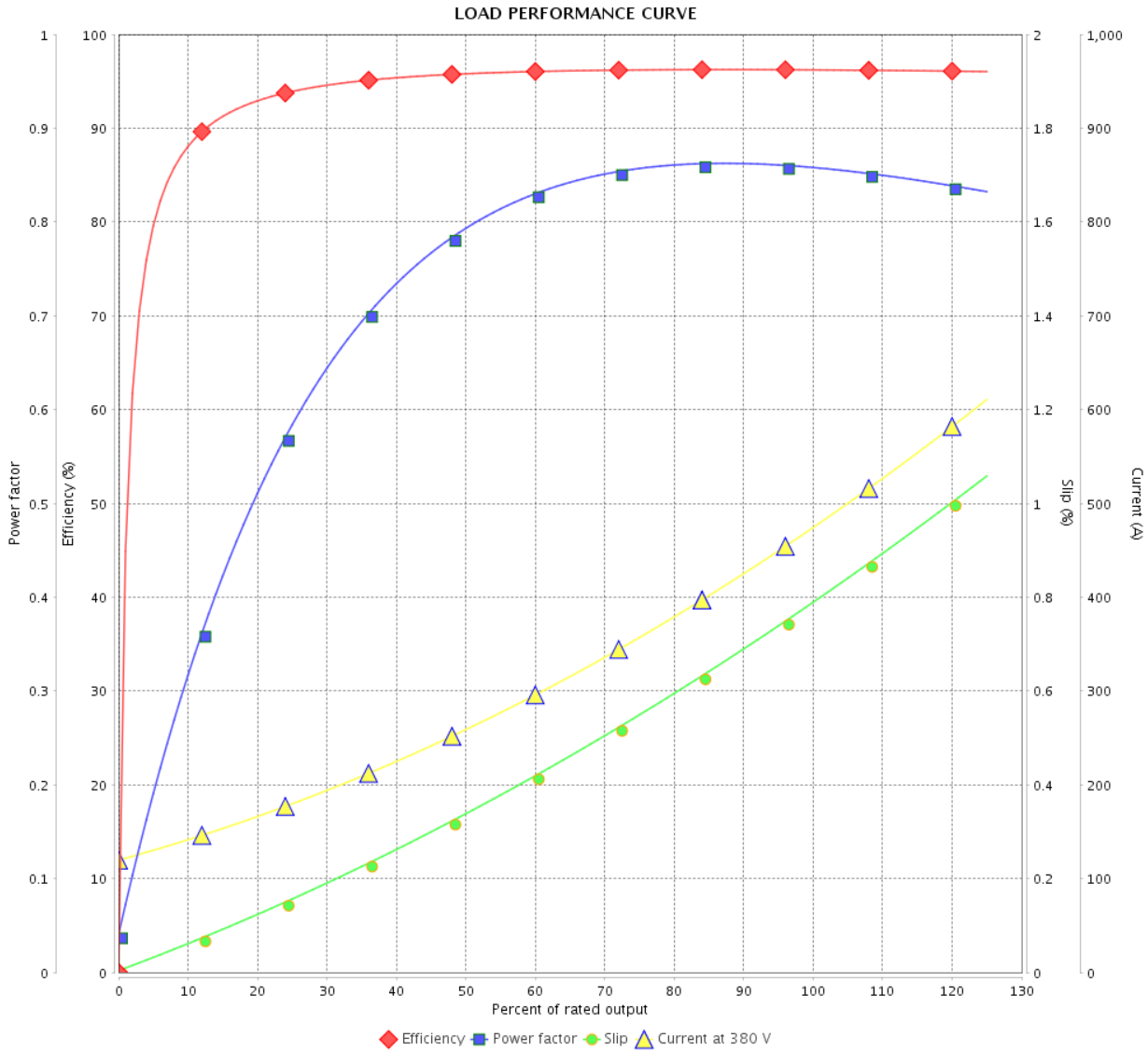


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Performance : 380 V 50 Hz 4P IE3

Rated current	: 477 A	Moment of inertia (J)	: 213 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1488 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 22	Revision
Checked by				
Date	13/04/2022			

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Three Phase Induction Motor - Squirrel Cage

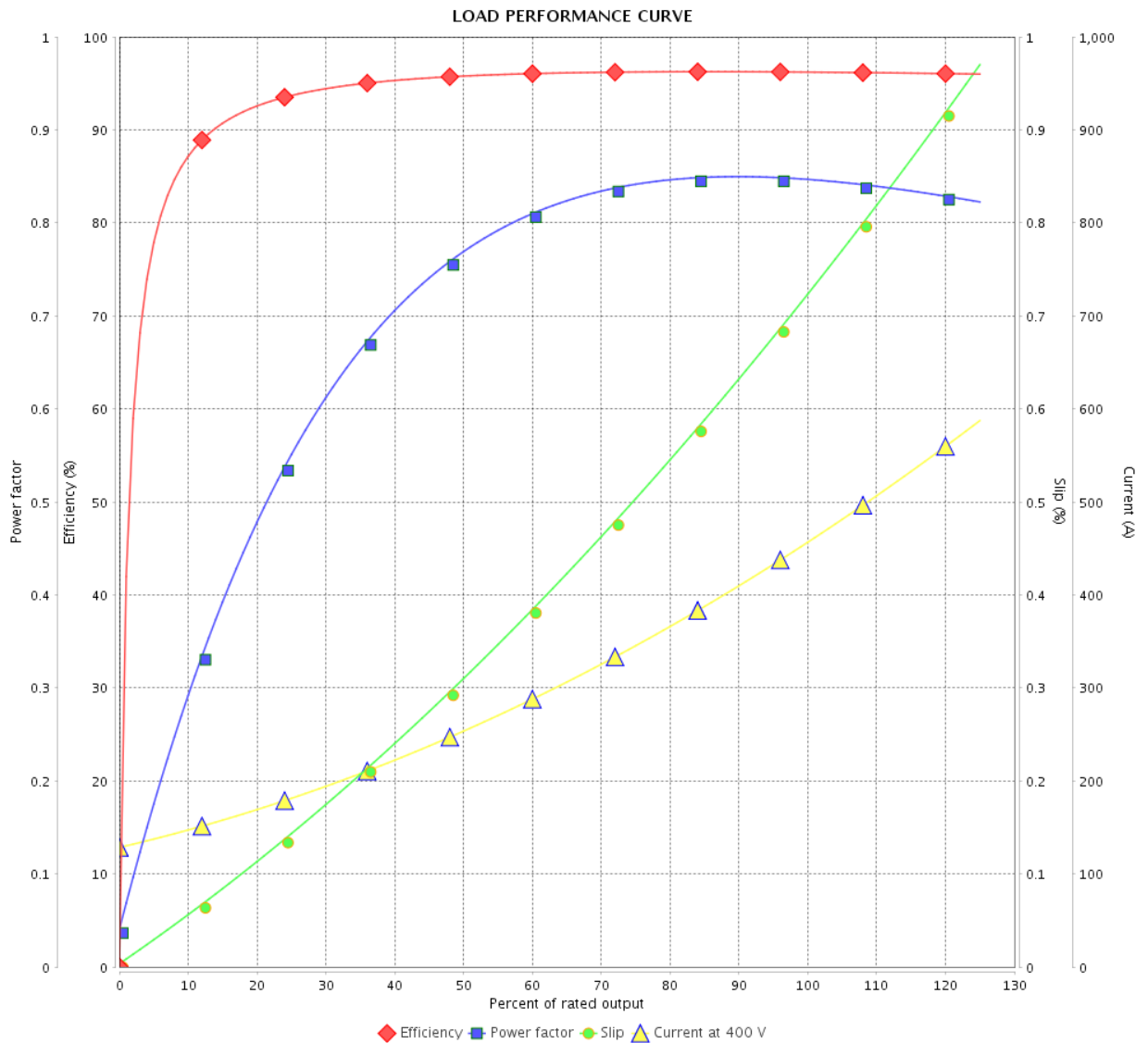


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Performance : 400 V 50 Hz 4P IE3

Rated current : 459 A
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 Rated torque : 1230 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1489 rpm

Moment of inertia (J) : 213 sq.ft.lb
 Duty cycle : Cont.(S1)
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 Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
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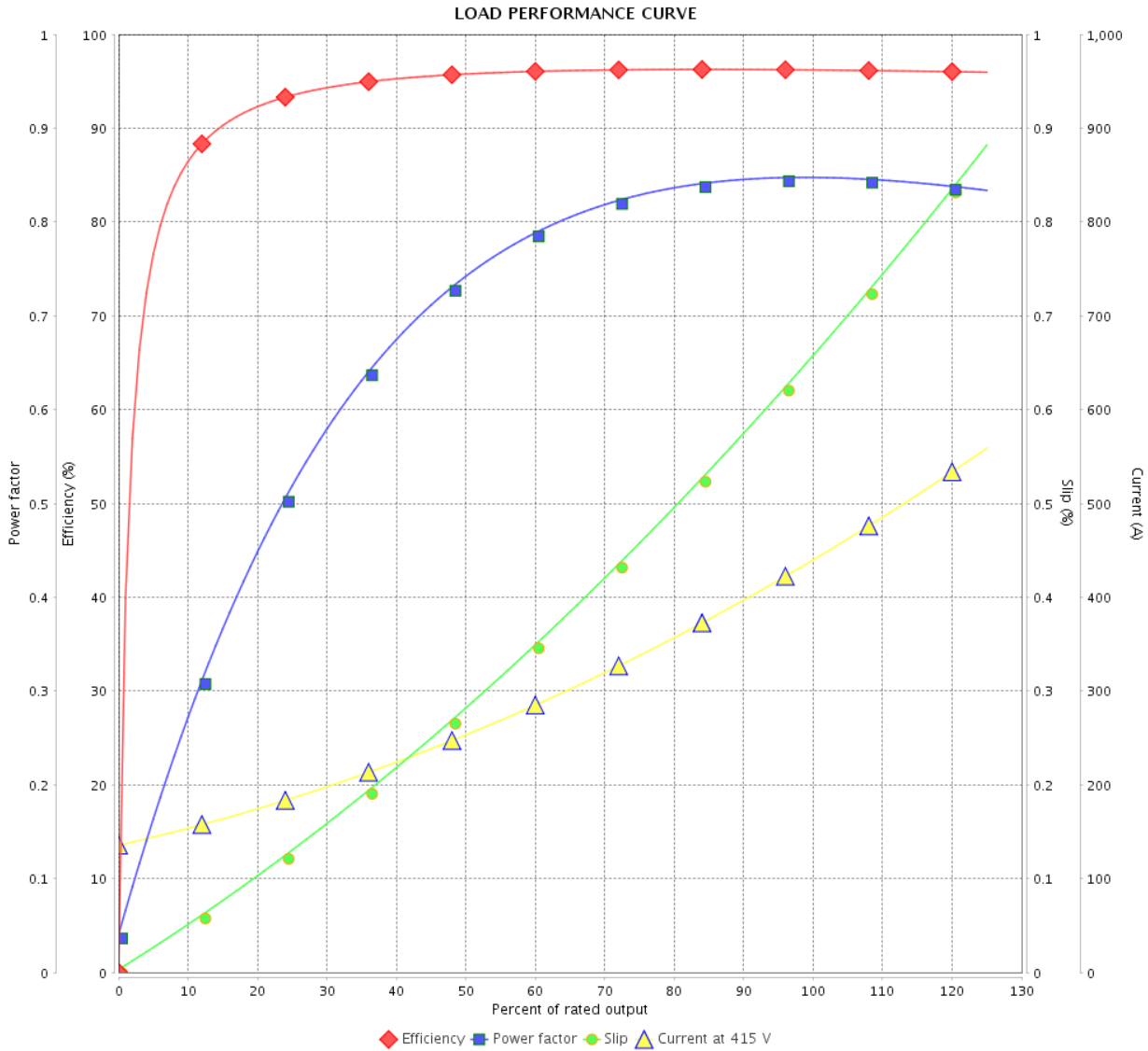


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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE



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Heating constant

Cooling constant

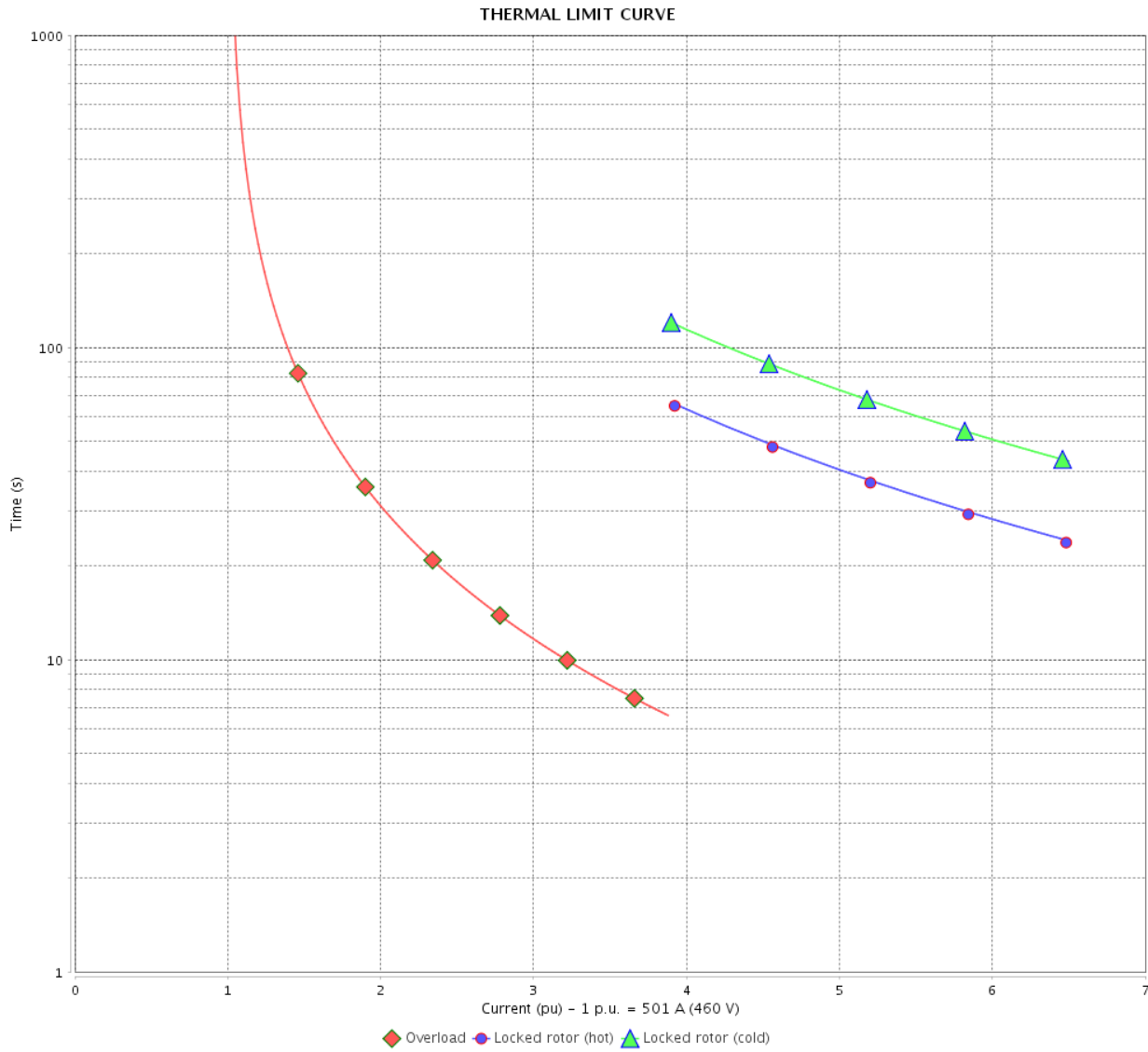
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 11 / 22	Revision
Checked by				
Date	13/04/2022			

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Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
		Page 12 / 22	Revision	

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Rated speed : 1488 rpm	Design : B

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Cooling constant

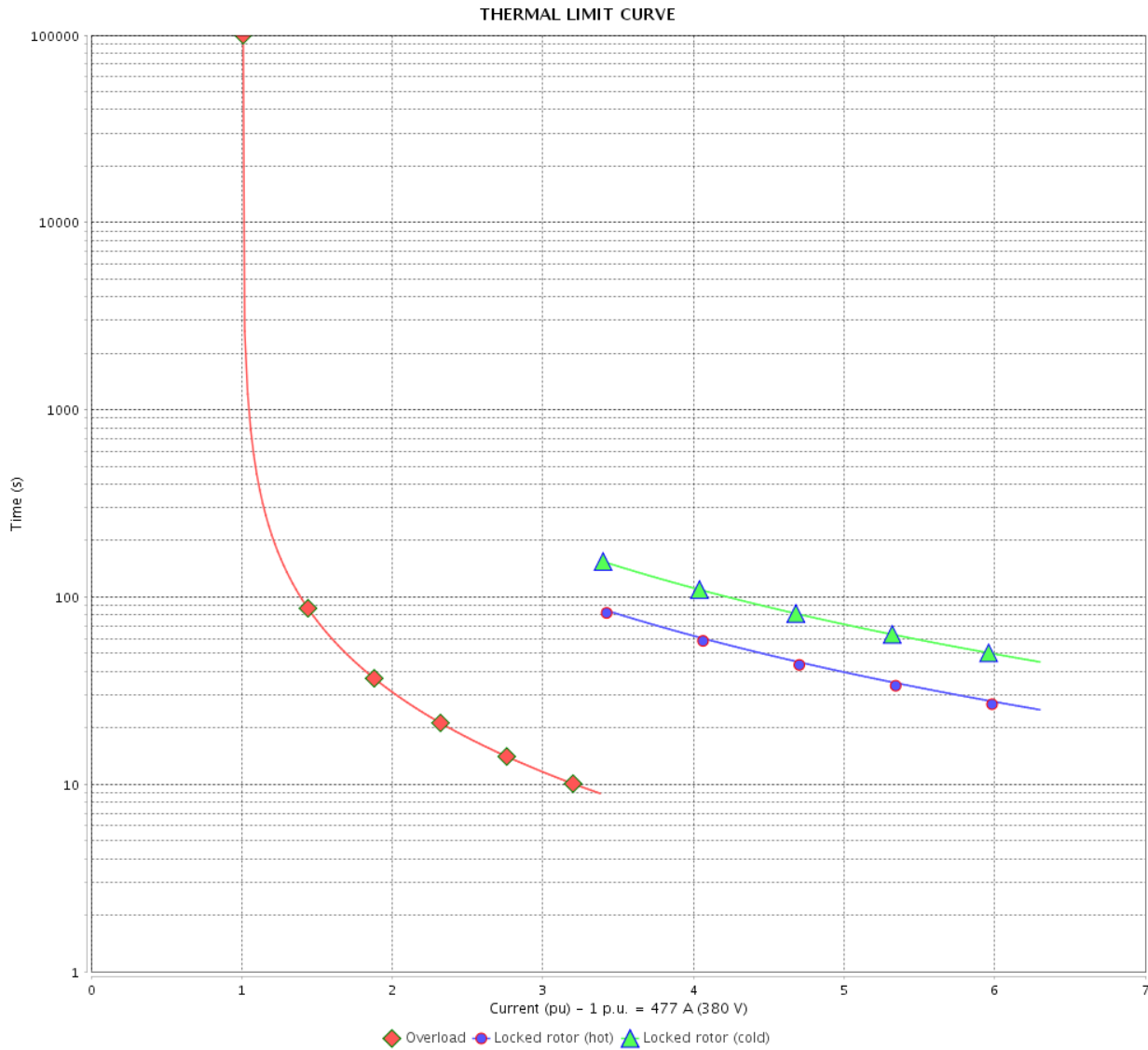
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 14 / 22		Revision
Checked by				
Date				

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Heating constant

Cooling constant

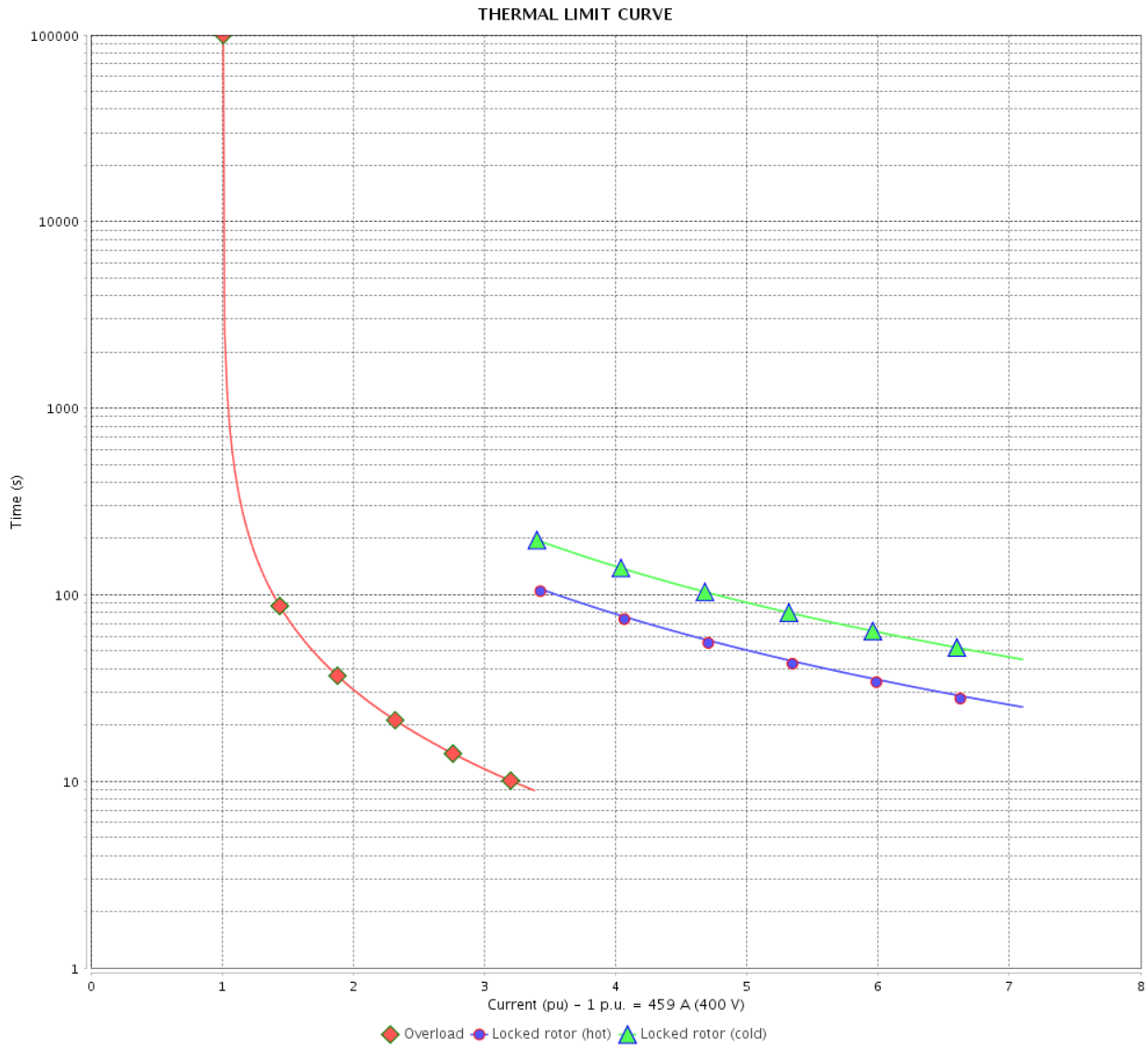
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022	15 / 22		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 16 / 22		Revision
Checked by				
Date				

THERMAL LIMIT CURVE



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Performance : 415 V 50 Hz 4P IE3

Rated current : 442 A	Moment of inertia (J) : 213 sq.ft.lb
LRC : 7.7	Duty cycle : Cont.(S1)
Rated torque : 1230 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 105 K
Rated speed : 1490 rpm	Design : B

Heating constant

Cooling constant

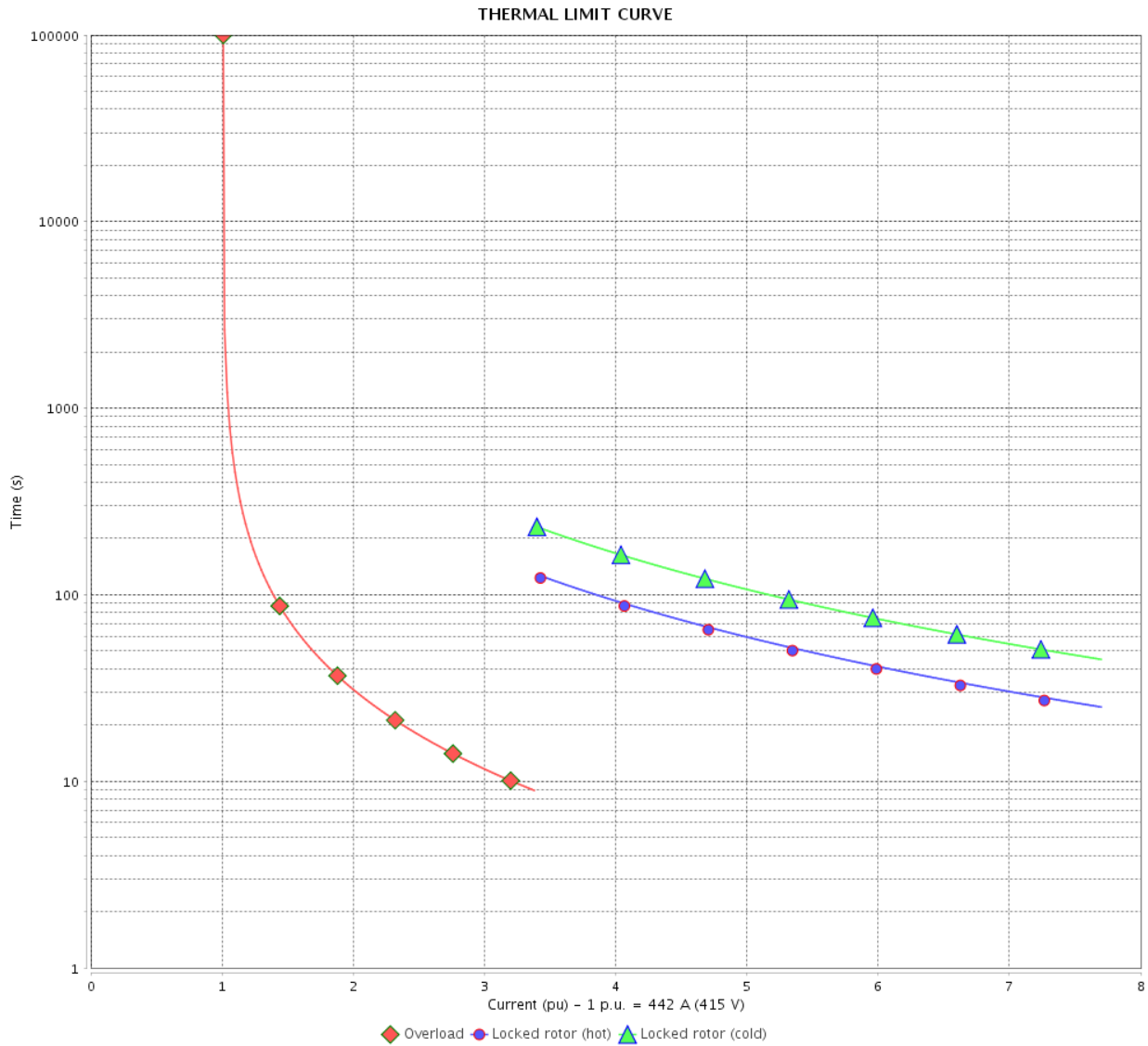
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

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Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 18 / 22		Revision
Checked by				
Date				

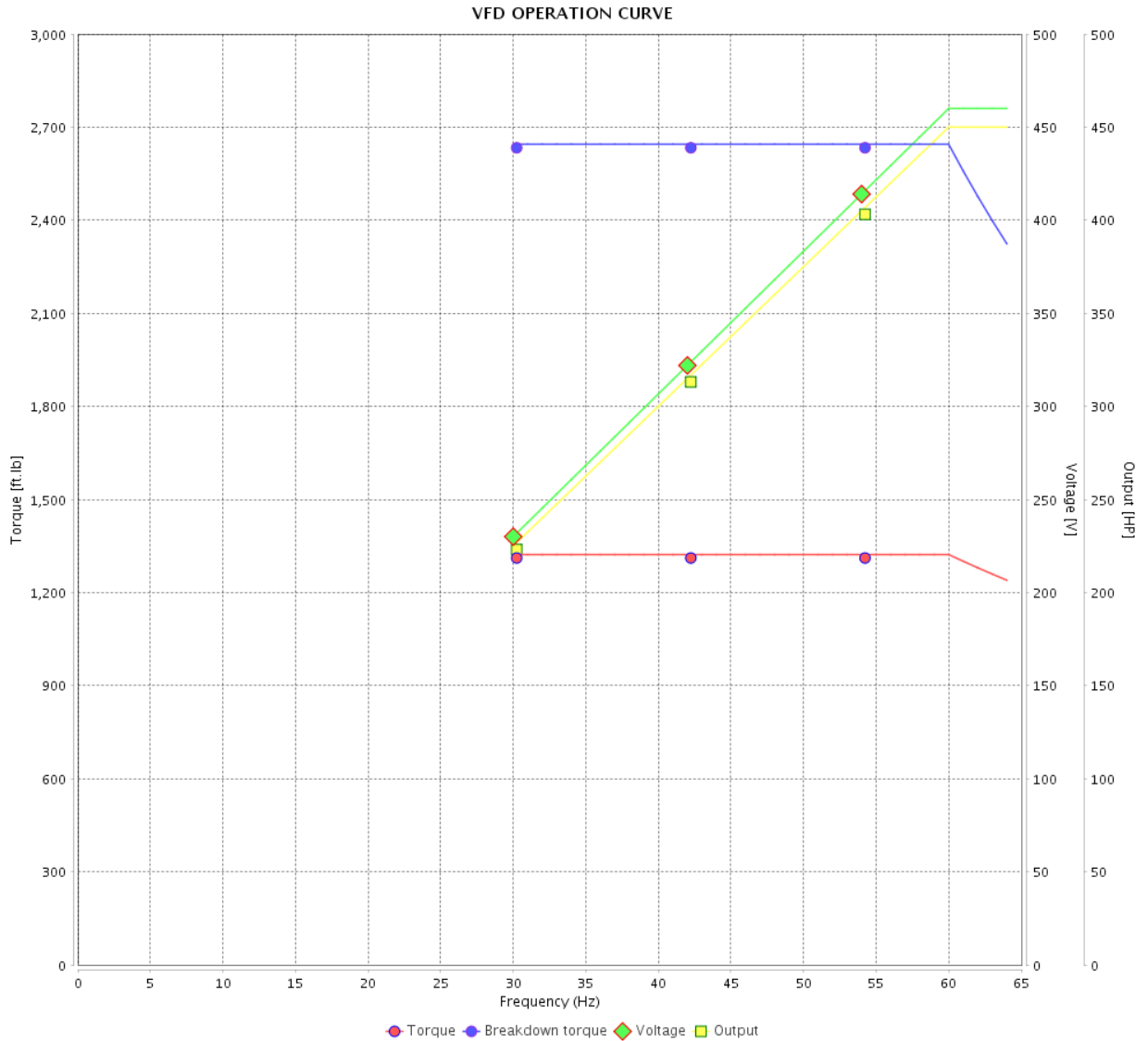
VFD OPERATION CURVE

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Rated torque	: 1320 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 1787 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 19 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



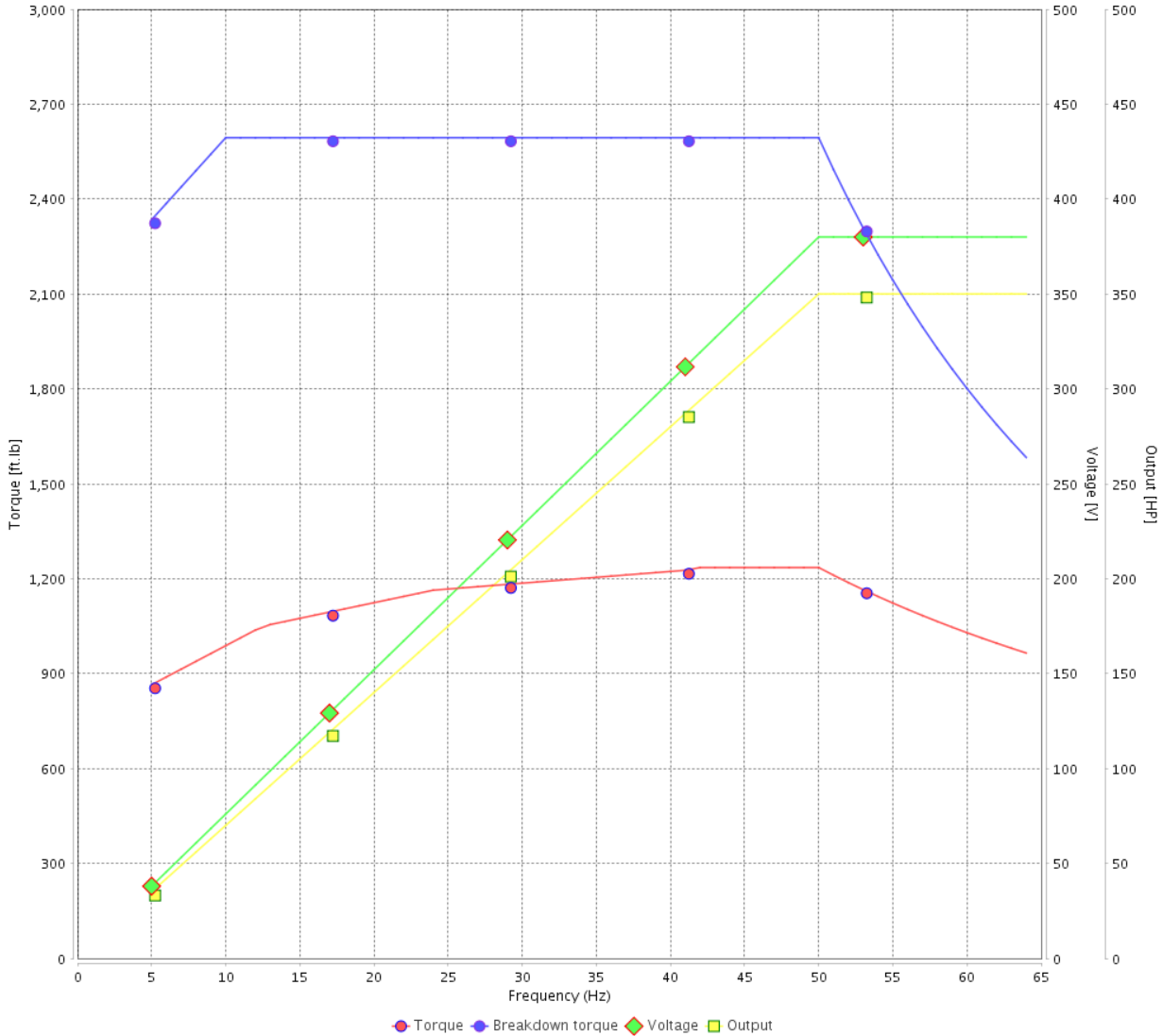
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE3

Rated current	: 477 A	Moment of inertia (J)	: 213 sq.ft.lb
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Rated torque	: 1240 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 105 K
Rated speed	: 1488 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

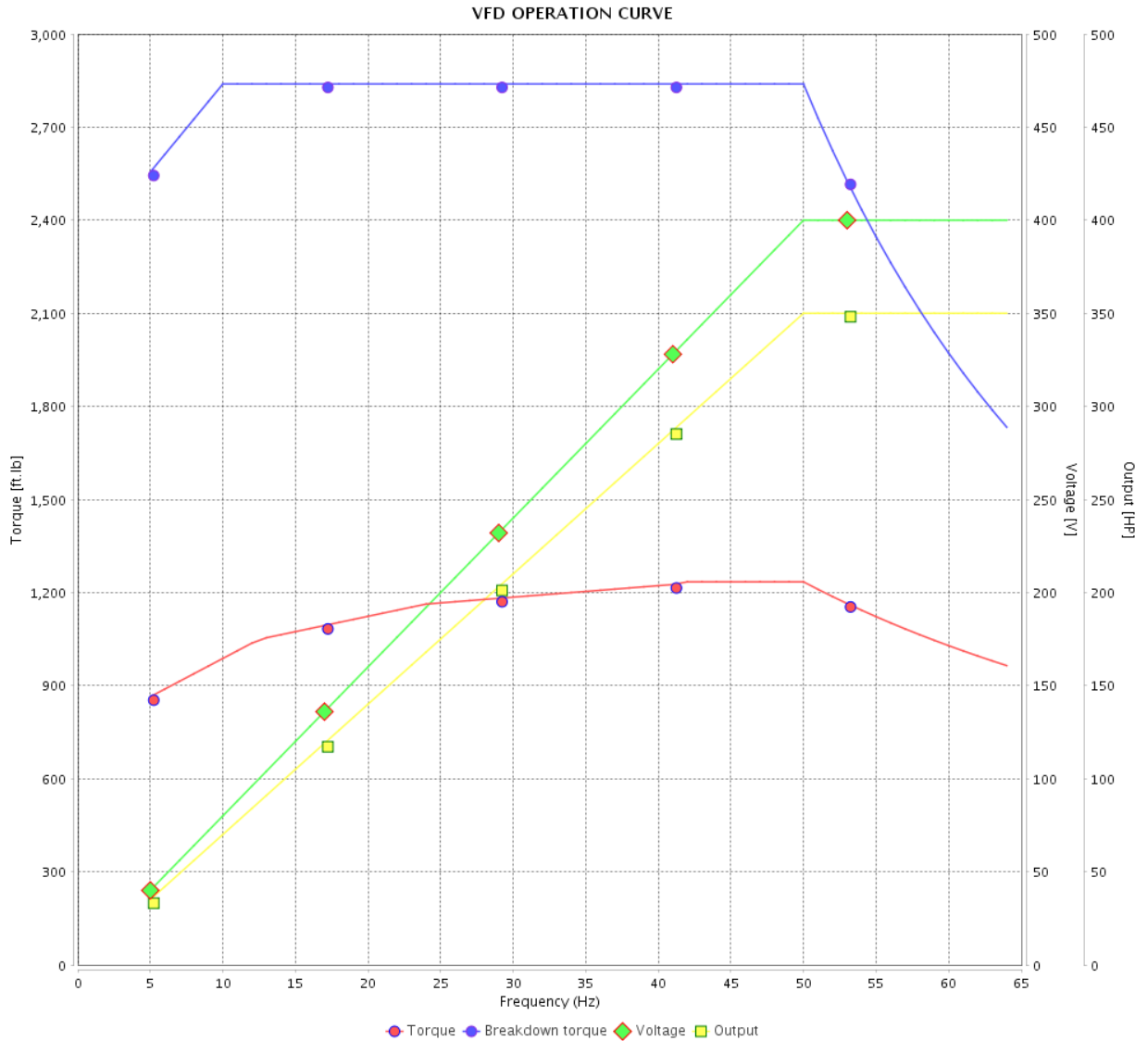


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Checked by				
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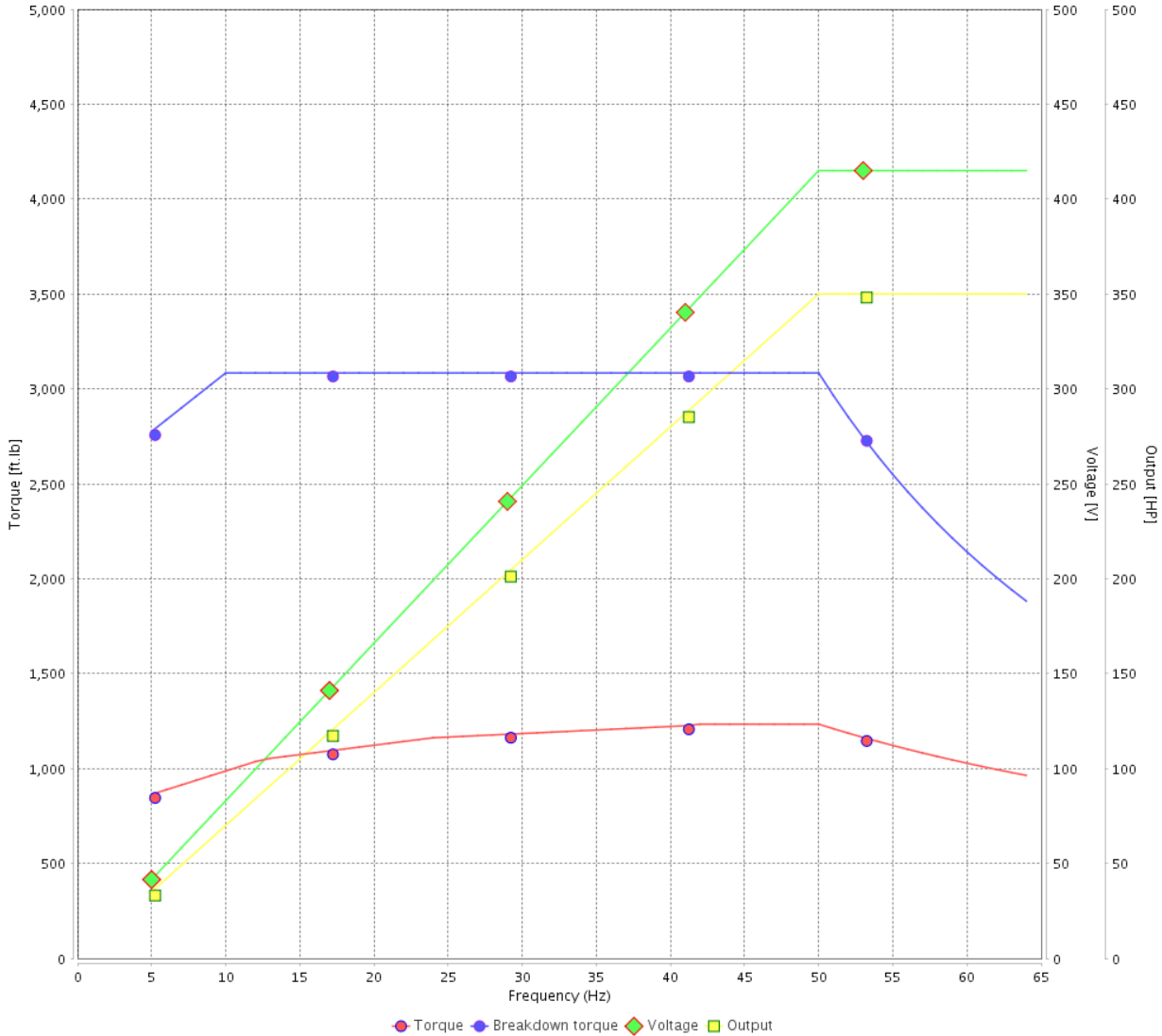
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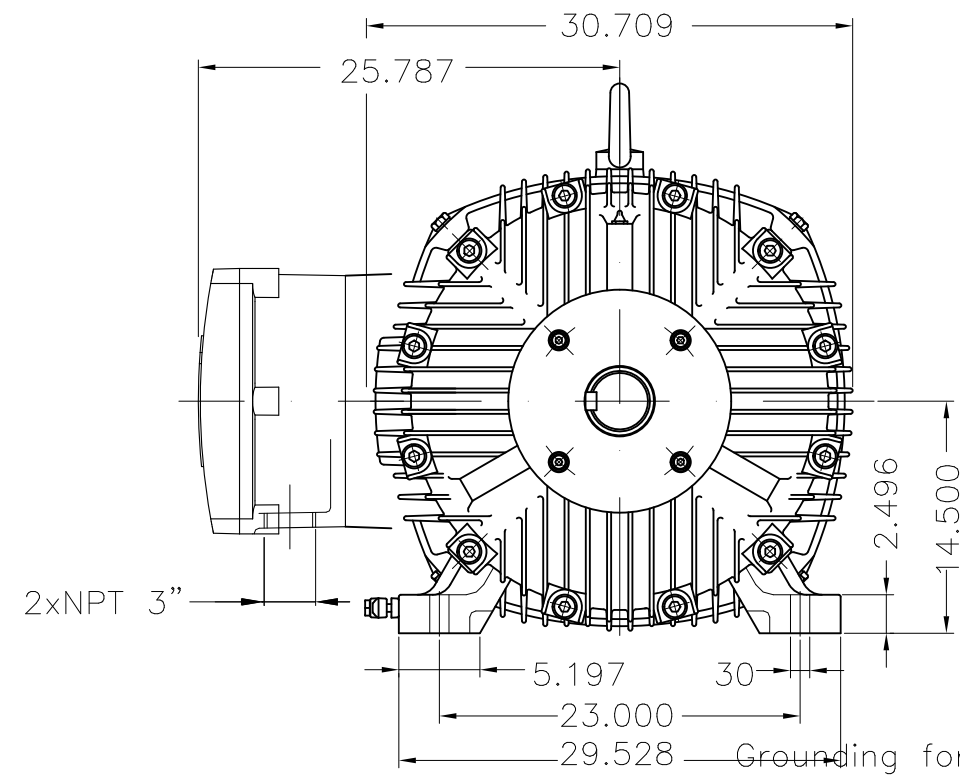
VFD OPERATION CURVE



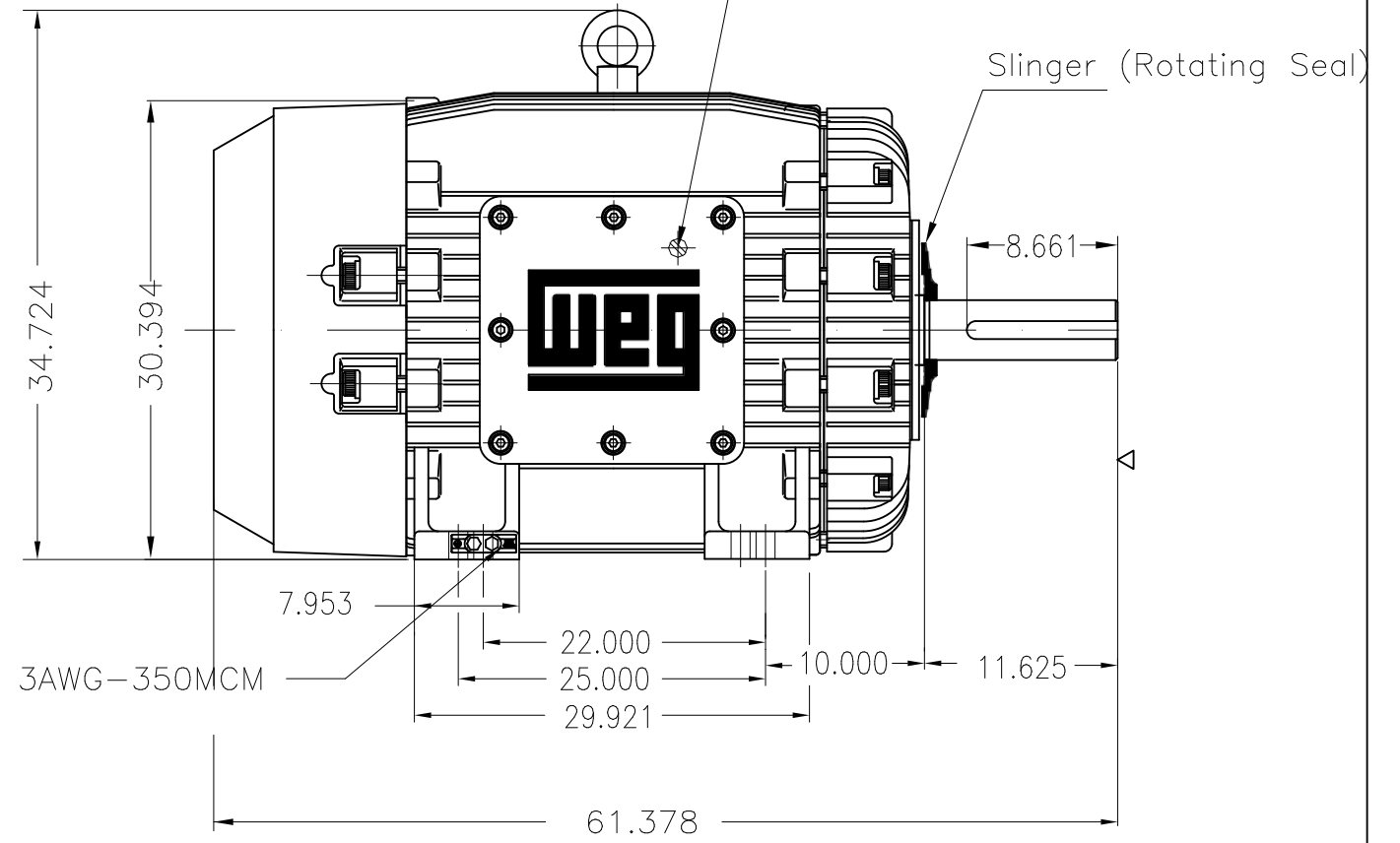
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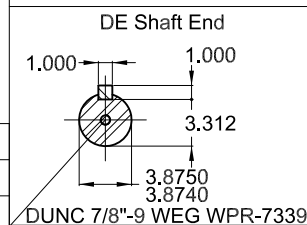
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 22 / 22	Revision
Checked by				
Date	13/04/2022			



Grounding for leads 35-120 mm² / 1-4/0 AWG



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



Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

450 HP 04 Poles 60 Hz

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 586/7T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches

XME A3