

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		12821684
			Catalog # :		00118ET3ER143TC-W22
Frame		: 143TC	Cooling method		: IC411 - TEFC
Insulation class		: F	Mounting		: W-6
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		: 43.3 lb
Protection degree		: IP55	Moment of inertia (J)		: 0.1172 sq.ft.lb
Design		: B			
Output [HP]	1	1	1	1	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	2.94/1.47	1.71	1.65	1.63	
L. R. Amperes [A]	25.3/12.6	10.9	11.5	12.1	
LRC [A]	8.6x(Code M)	6.4x(Code J)	7.0x(Code K)	7.4x(Code K)	
No load current [A]	1.88/0.940	0.930	1.00	1.08	
Rated speed [RPM]	1760	1450	1455	1455	
Slip [%]	2.22	3.33	3.00	3.00	
Rated torque [ft.lb]	2.98	3.62	3.61	3.61	
Locked rotor torque [%]	290	220	240	260	
Breakdown torque [%]	350	250	290	310	
Service factor	1.25	1.25	1.25	1.25	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	
Noise level ²	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)	
Efficiency (%)	25%	78.4	79.6	78.4	78.4
	50%	80.0	80.0	80.0	80.0
	75%	84.0	82.5	82.5	82.5
	100%	85.5	82.5	84.0	84.0
Power Factor	25%	0.31	0.36	0.33	0.31
	50%	0.55	0.62	0.58	0.55
	75%	0.68	0.74	0.71	0.69
	100%	0.75	0.81	0.78	0.76
Bearing type		Drive end : 6205 ZZ	Non drive end : 6204 ZZ	Foundation loads	
Sealing		: V'Ring	: V'Ring	Max. traction : 75 lb	
Lubrication interval		: -	: -	Max. compression : 119 lb	
Lubricant amount		: -	: -		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 3.07A SF 1.15 SFA 3.54A					
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	14/04/2022			1 / 21	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



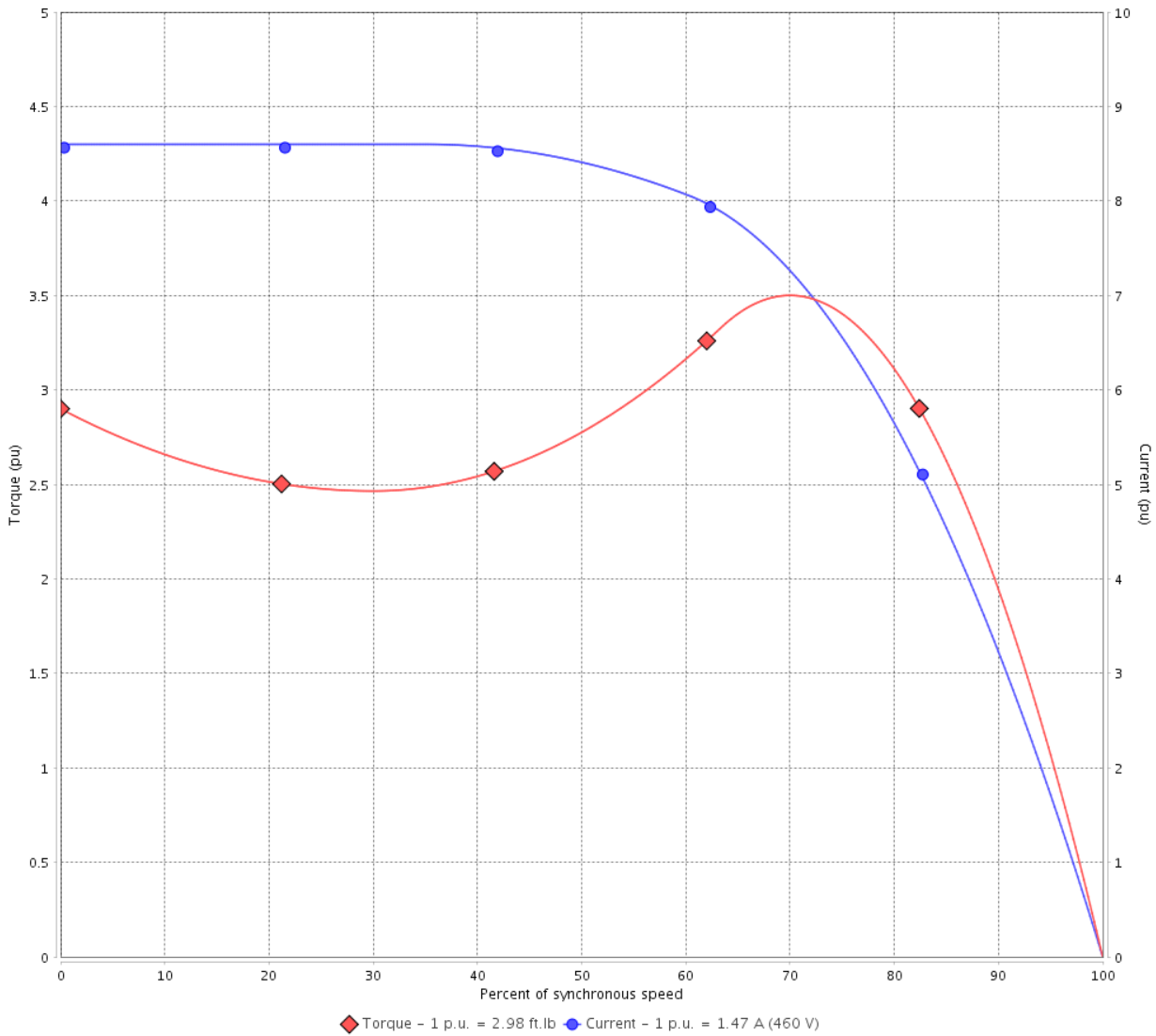
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821684

Catalog # : 00118ET3ER143TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 2.94/1.47 A	Moment of inertia (J)	: 0.1172 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 2.98 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.25
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 1760 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



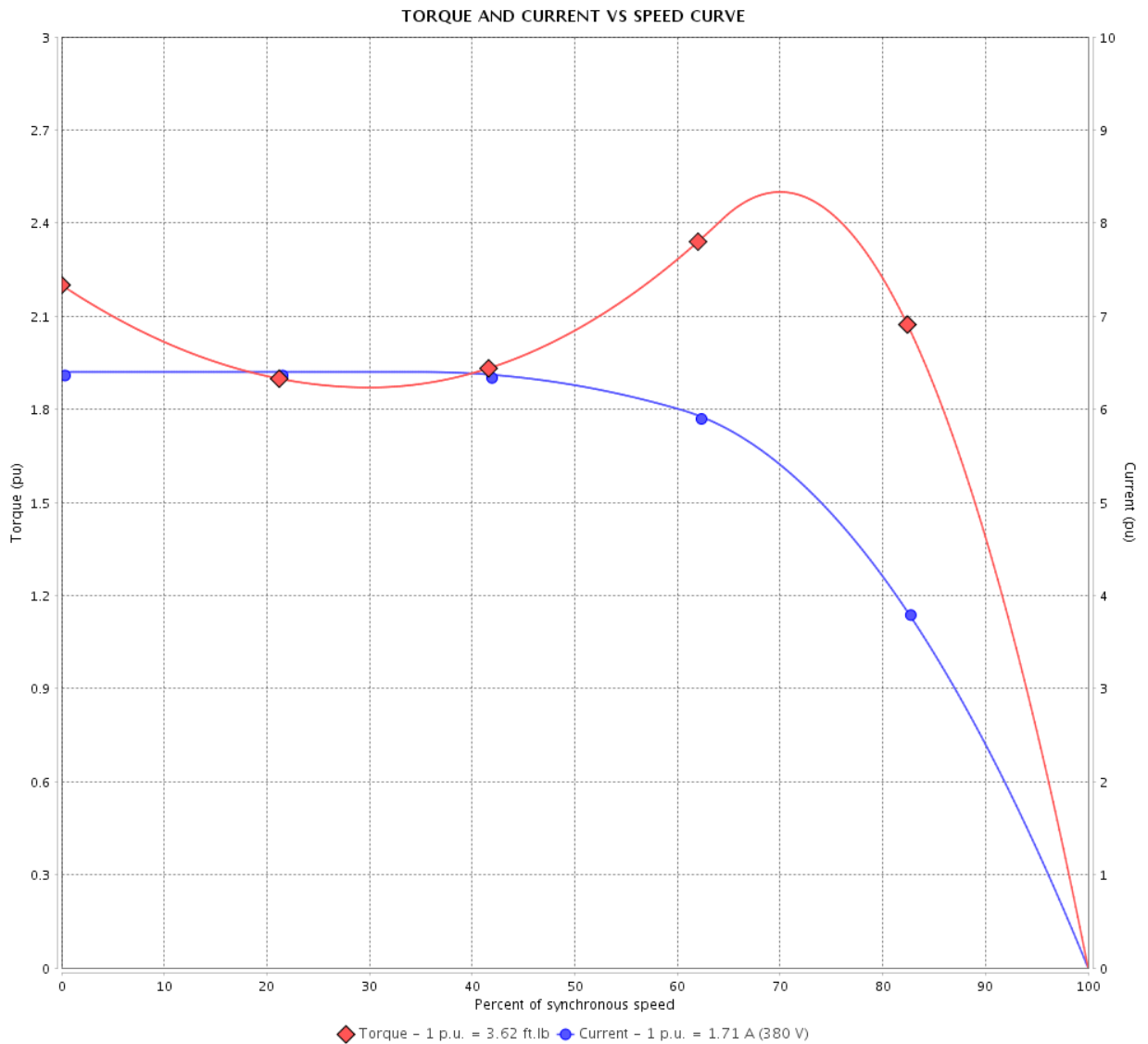
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12821684

Catalog # : 00118ET3ER143TC-W22



Performance : 380 V 50 Hz 4P IE3

Rated current : 1.71 A
 LRC : 6.4
 Rated torque : 3.62 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.1172 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 21	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



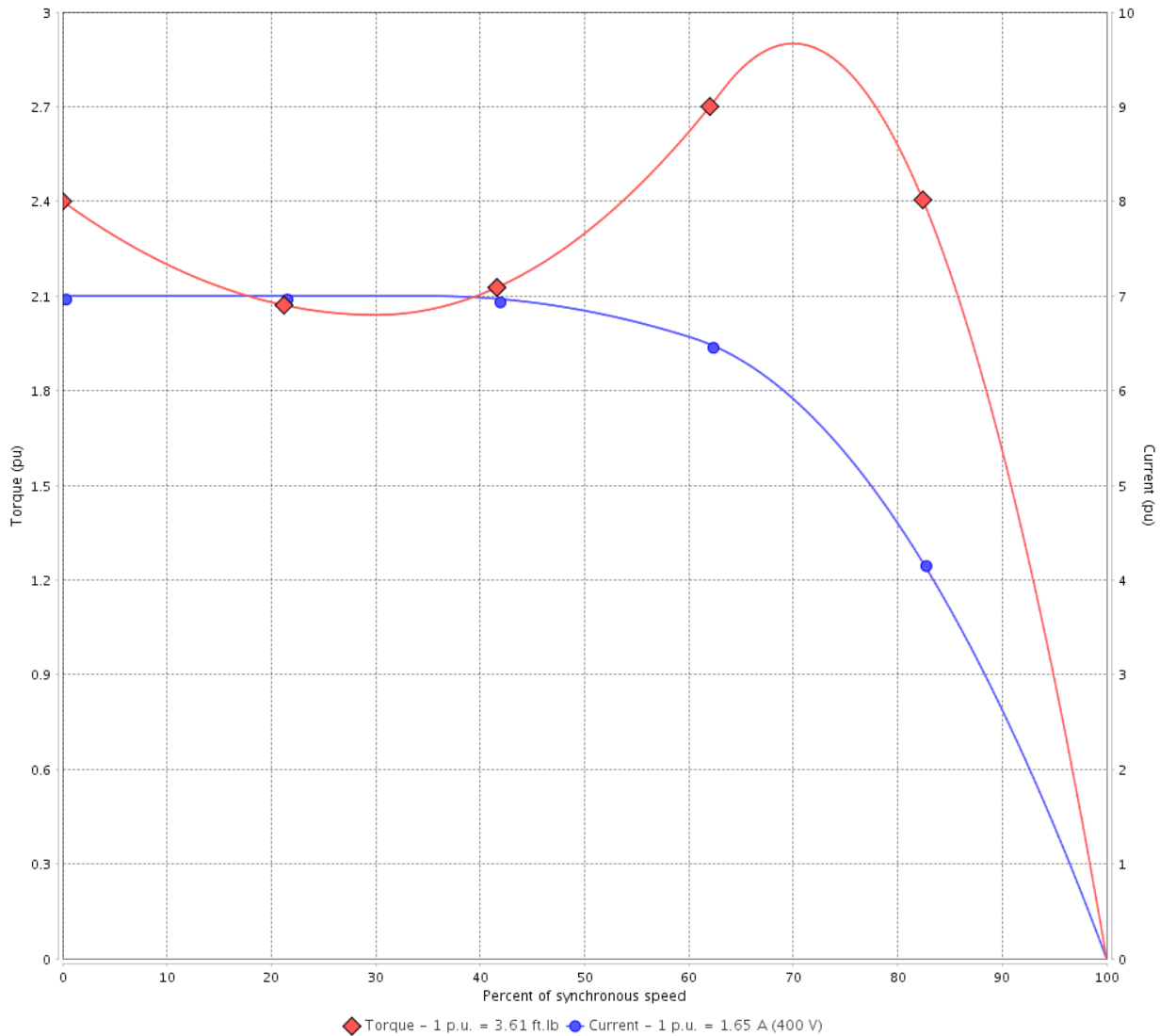
Customer :

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Catalog # : 00118ET3ER143TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 1.65 A	Moment of inertia (J)	: 0.1172 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 3.61 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



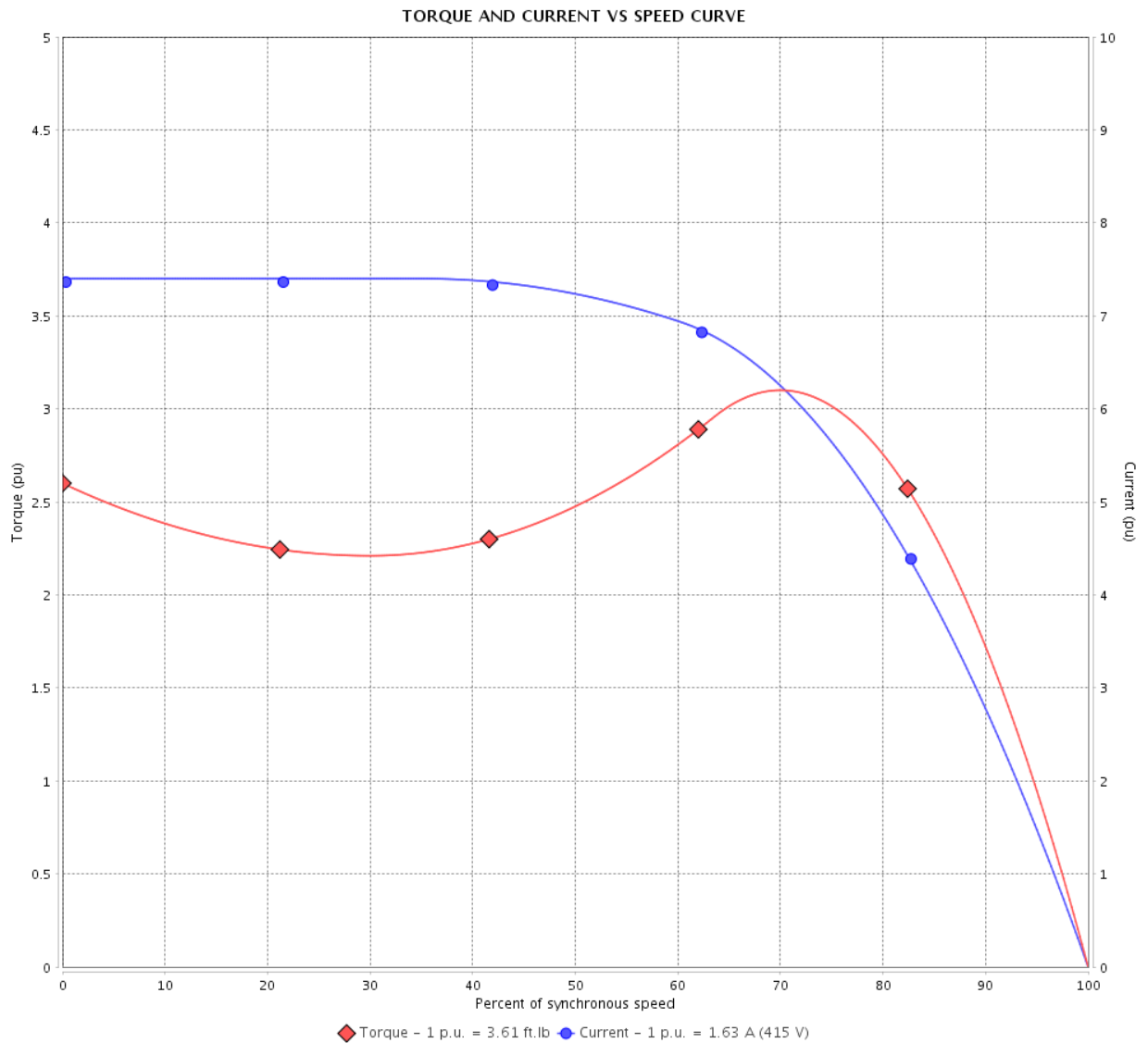
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 Locked rotor torque : 260 %
 Breakdown torque : 310 %
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	14/04/2022			

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Three Phase Induction Motor - Squirrel Cage



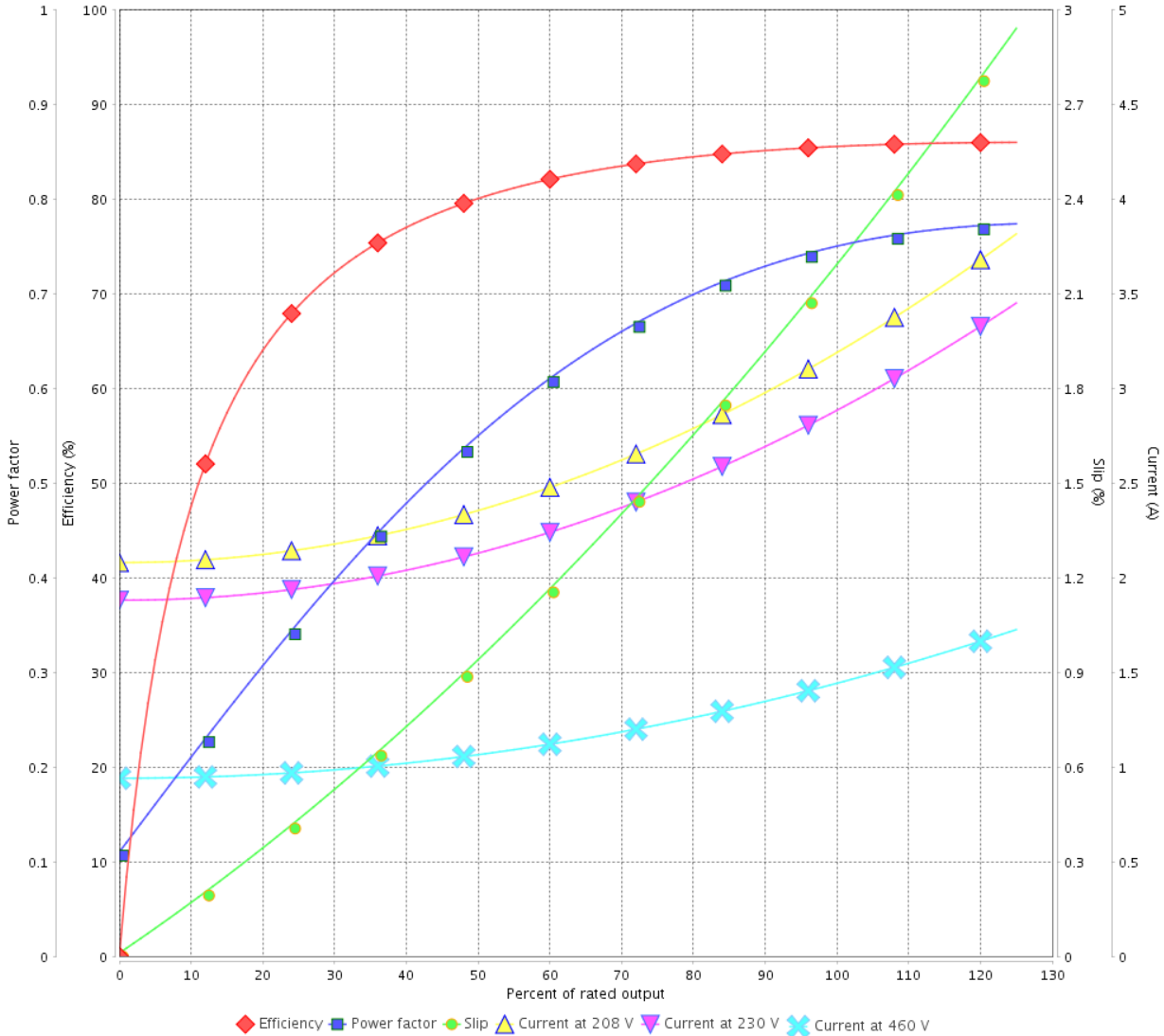
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Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A
 LRC : 8.6
 Rated torque : 2.98 ft.lb
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 Breakdown torque : 350 %
 Rated speed : 1760 rpm

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 Insulation class : F
 Service factor : 1.25
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 21	Revision
Checked by				
Date	14/04/2022			

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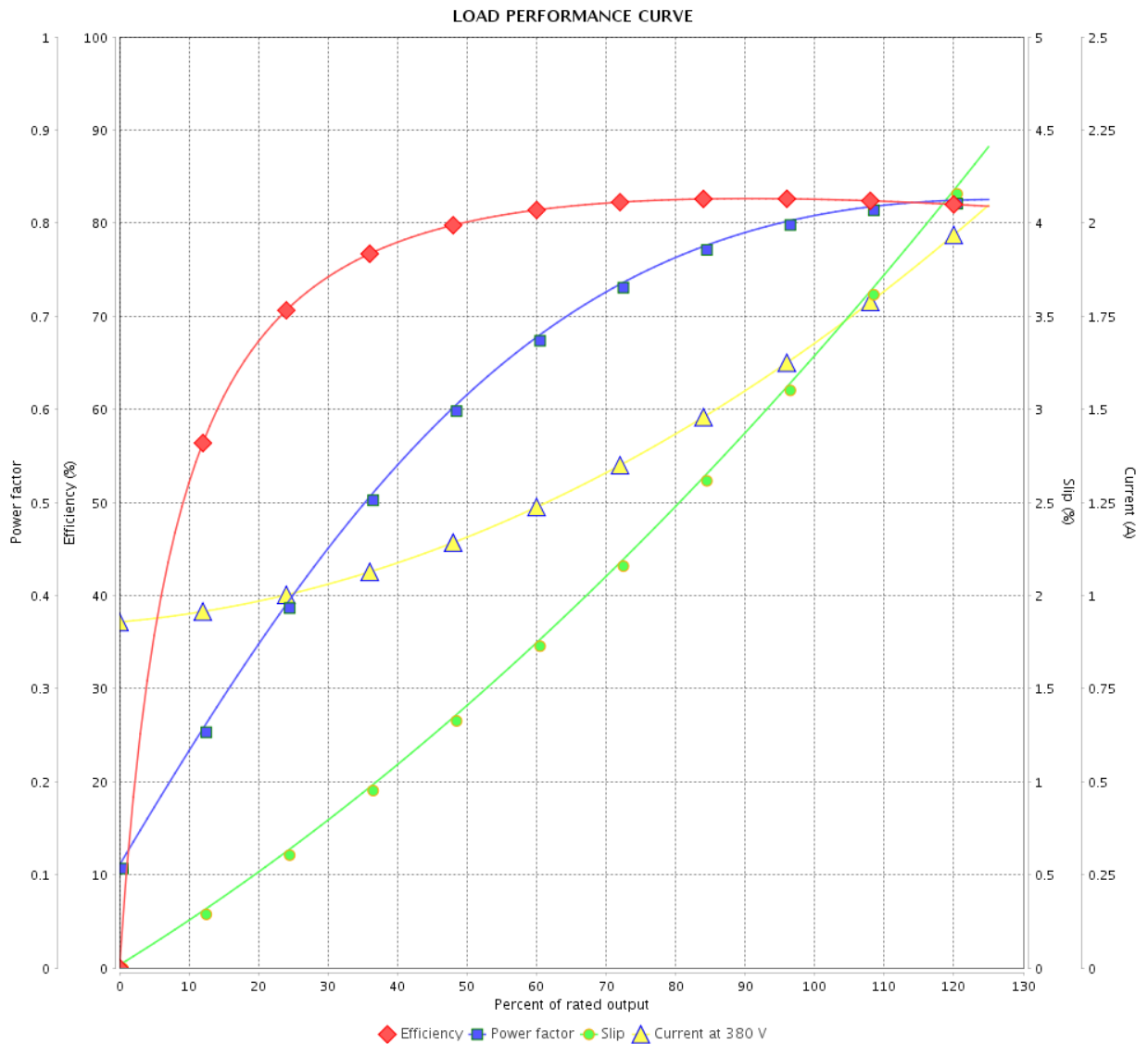


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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 21		
Date		14/04/2022		

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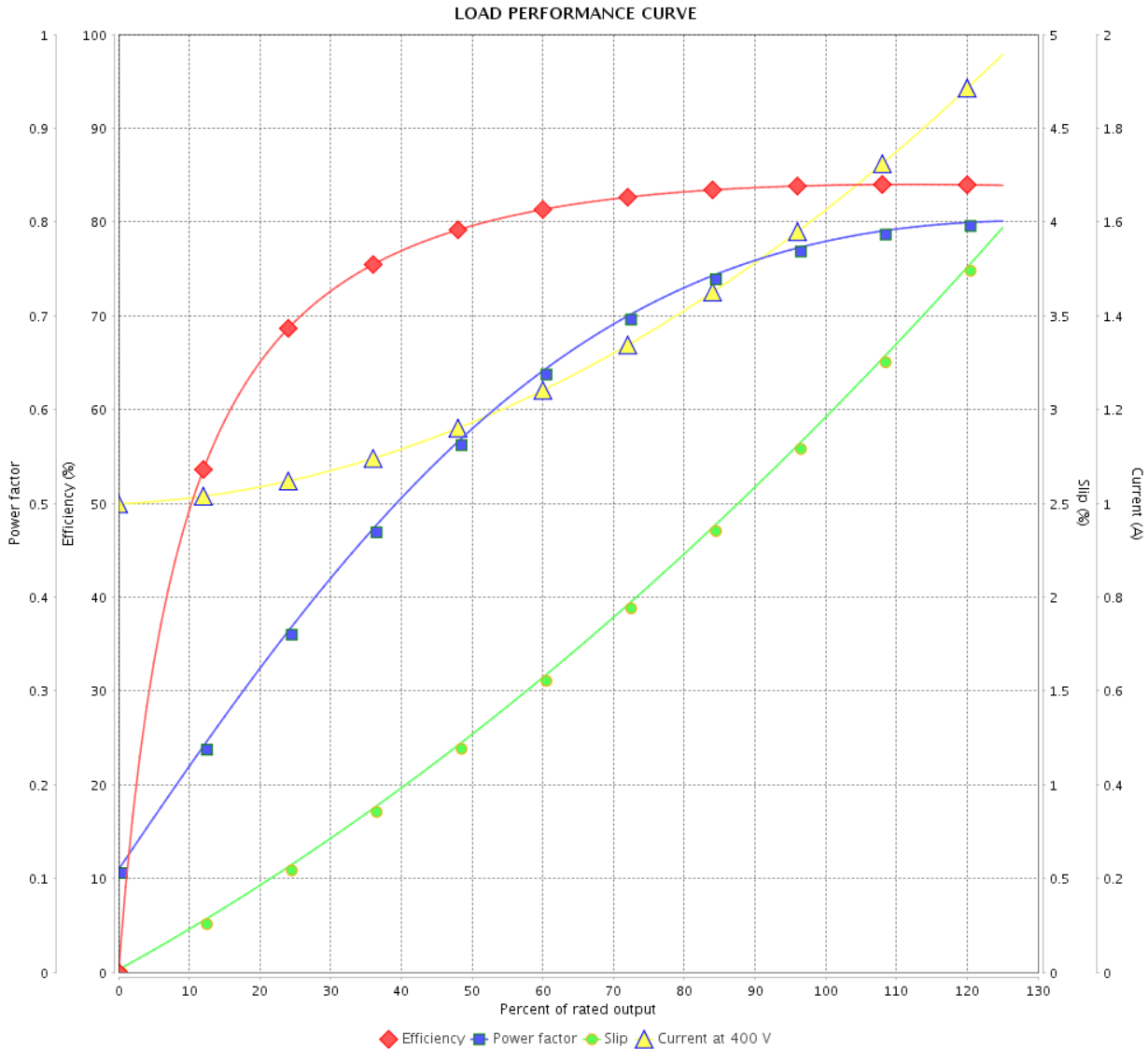


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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		8 / 21		
Date	14/04/2022			

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Three Phase Induction Motor - Squirrel Cage

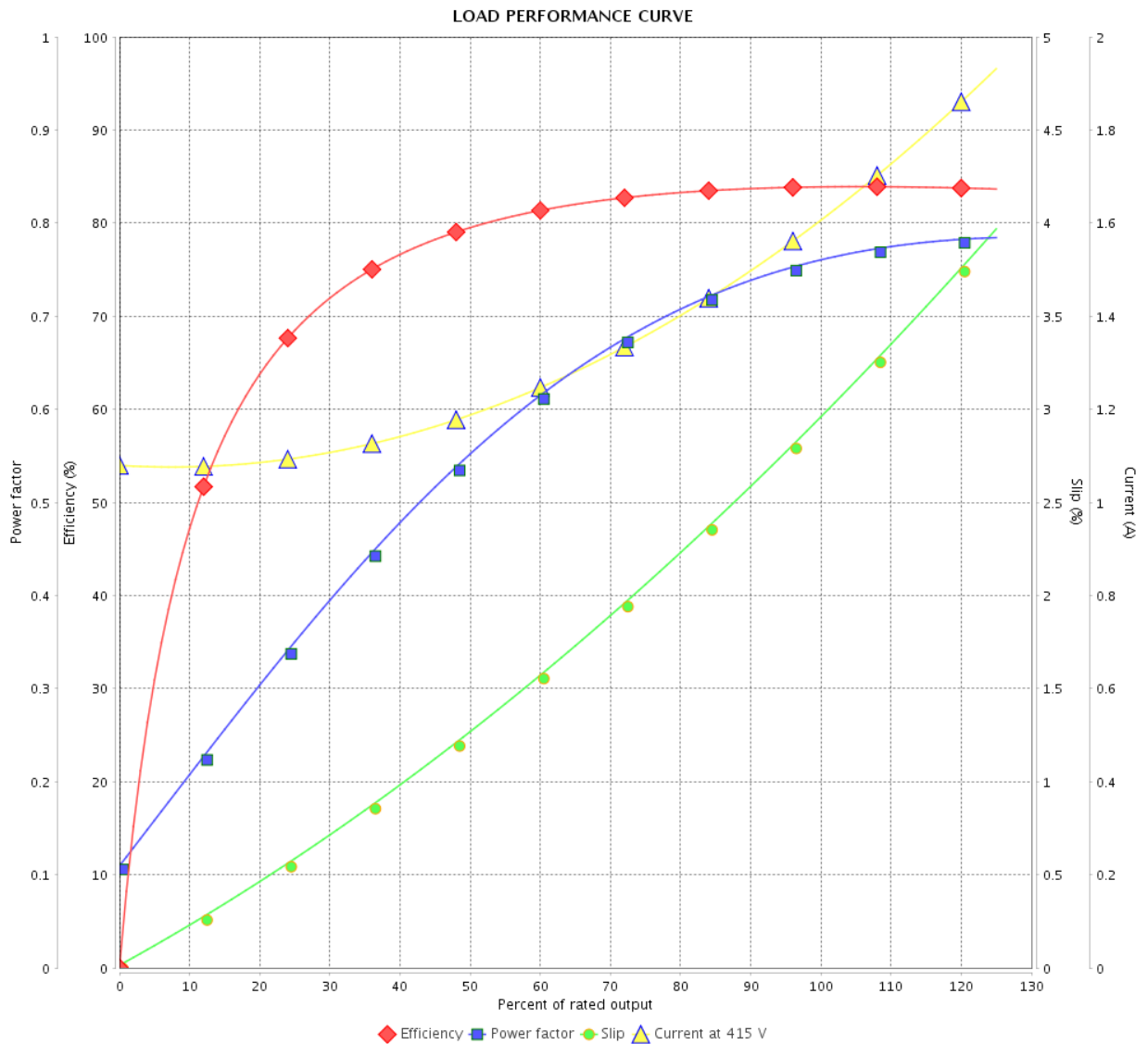


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

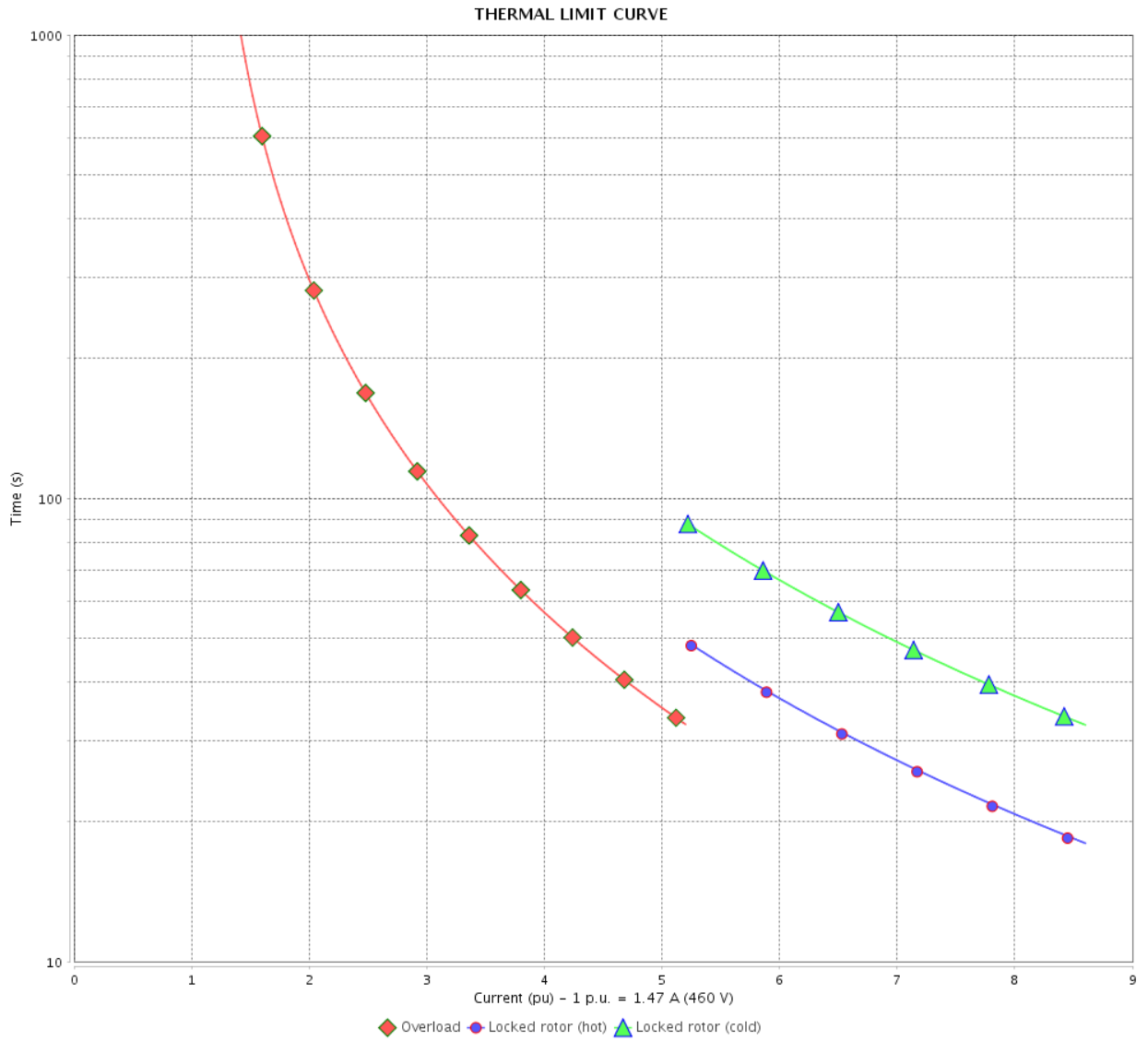
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		10 / 21	

THERMAL LIMIT CURVE

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Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 21		
Date	14/04/2022			

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Locked rotor torque : 220 %	Service factor : 1.25
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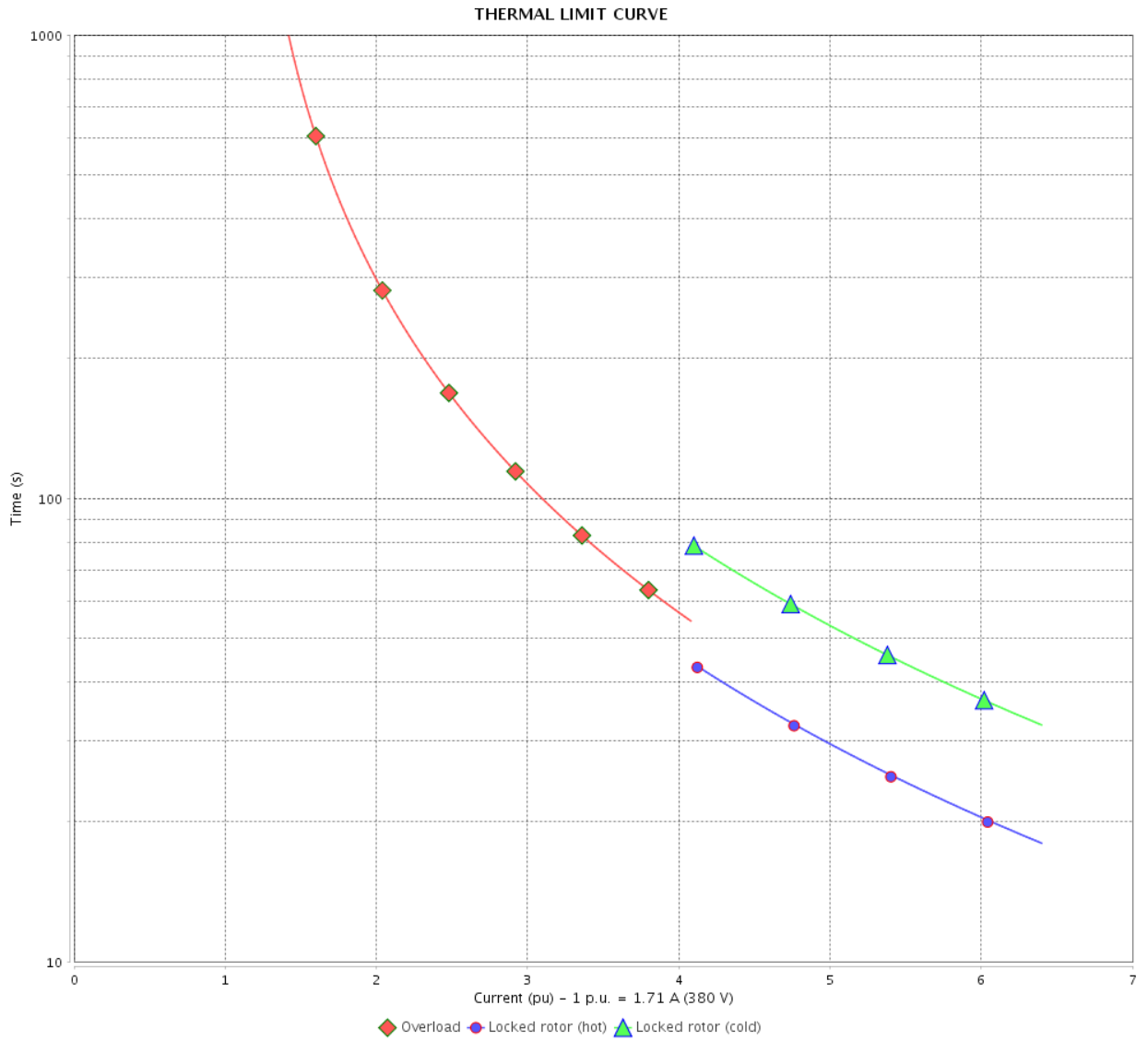
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 21	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE

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

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Locked rotor torque	: 240 %	Service factor	: 1.25
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Cooling constant

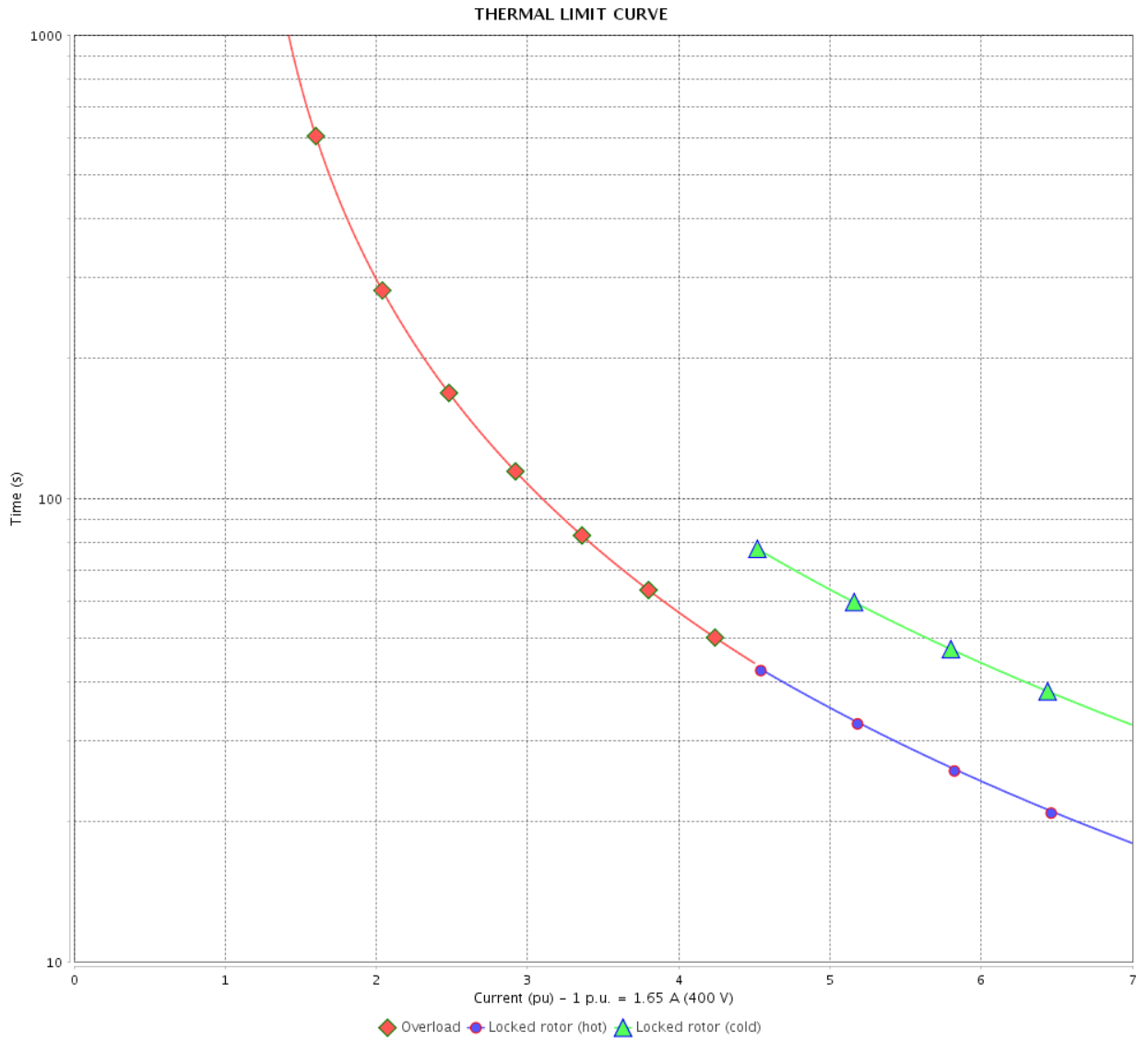
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		14 / 21	

THERMAL LIMIT CURVE

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

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Breakdown torque	: 310 %	Temperature rise	: 80 K
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Cooling constant

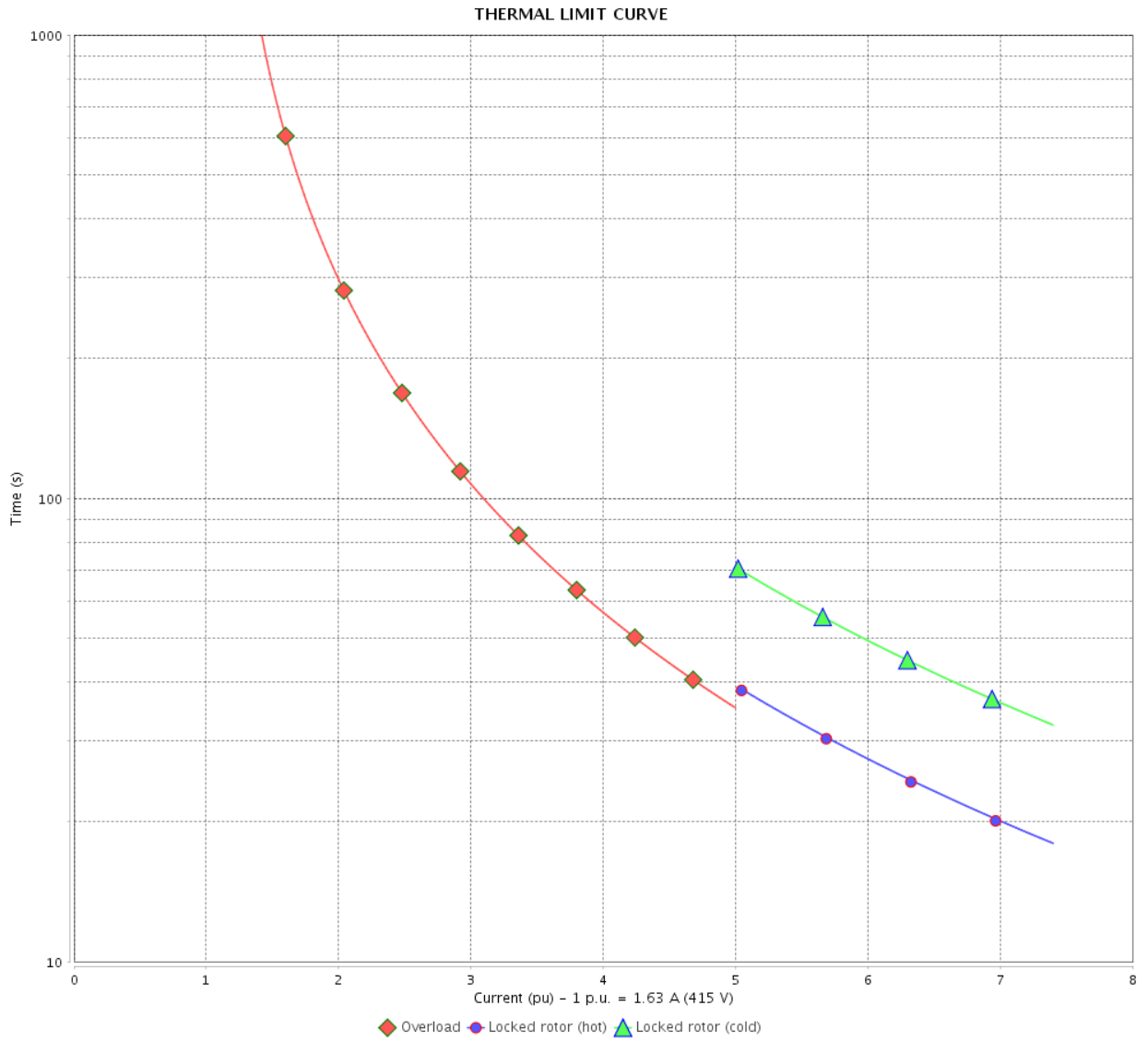
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	14/04/2022		16 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

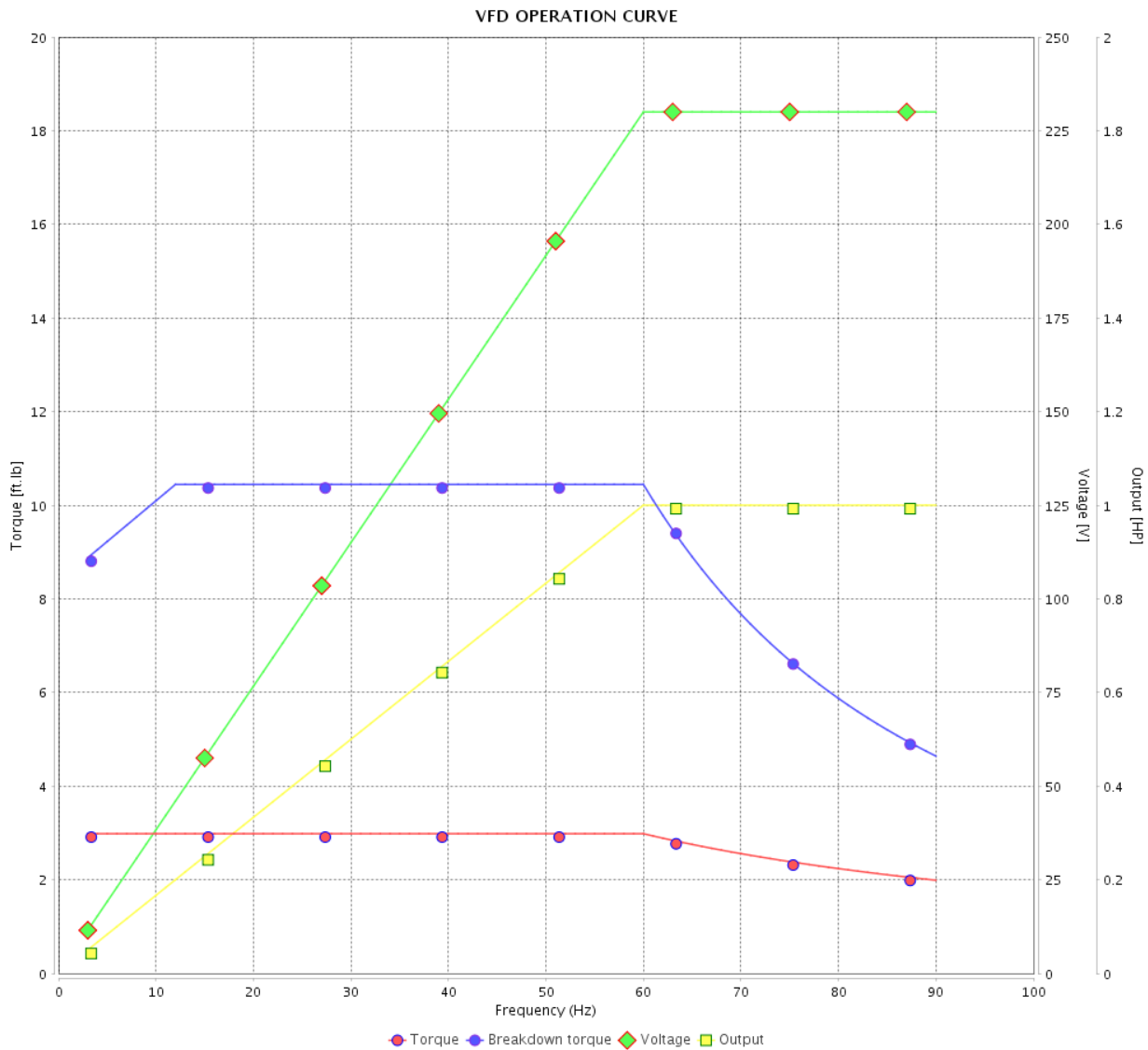


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Performed by			Page	Revision
Checked by				
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VFD OPERATION CURVE

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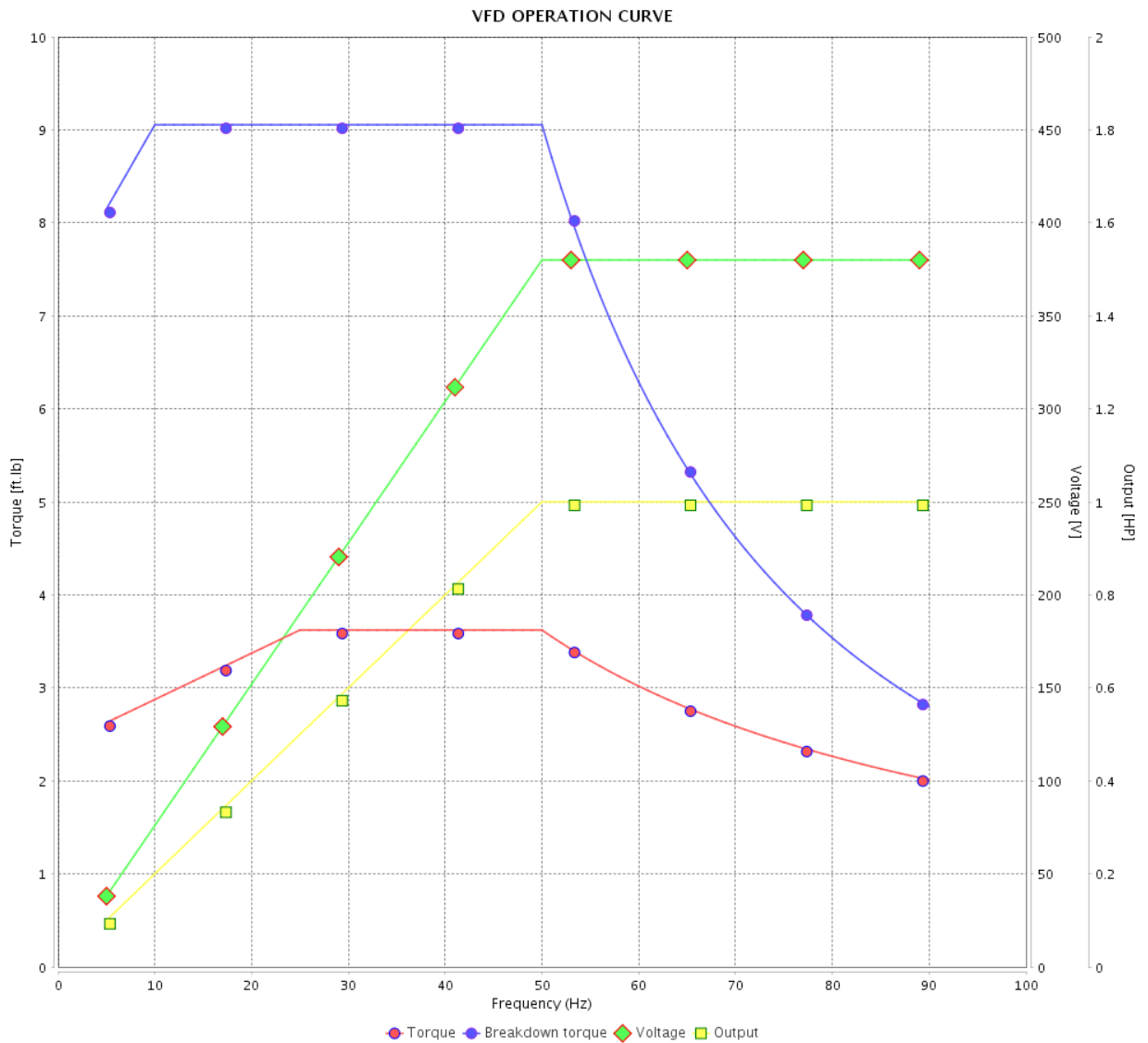


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			19 / 21	
Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



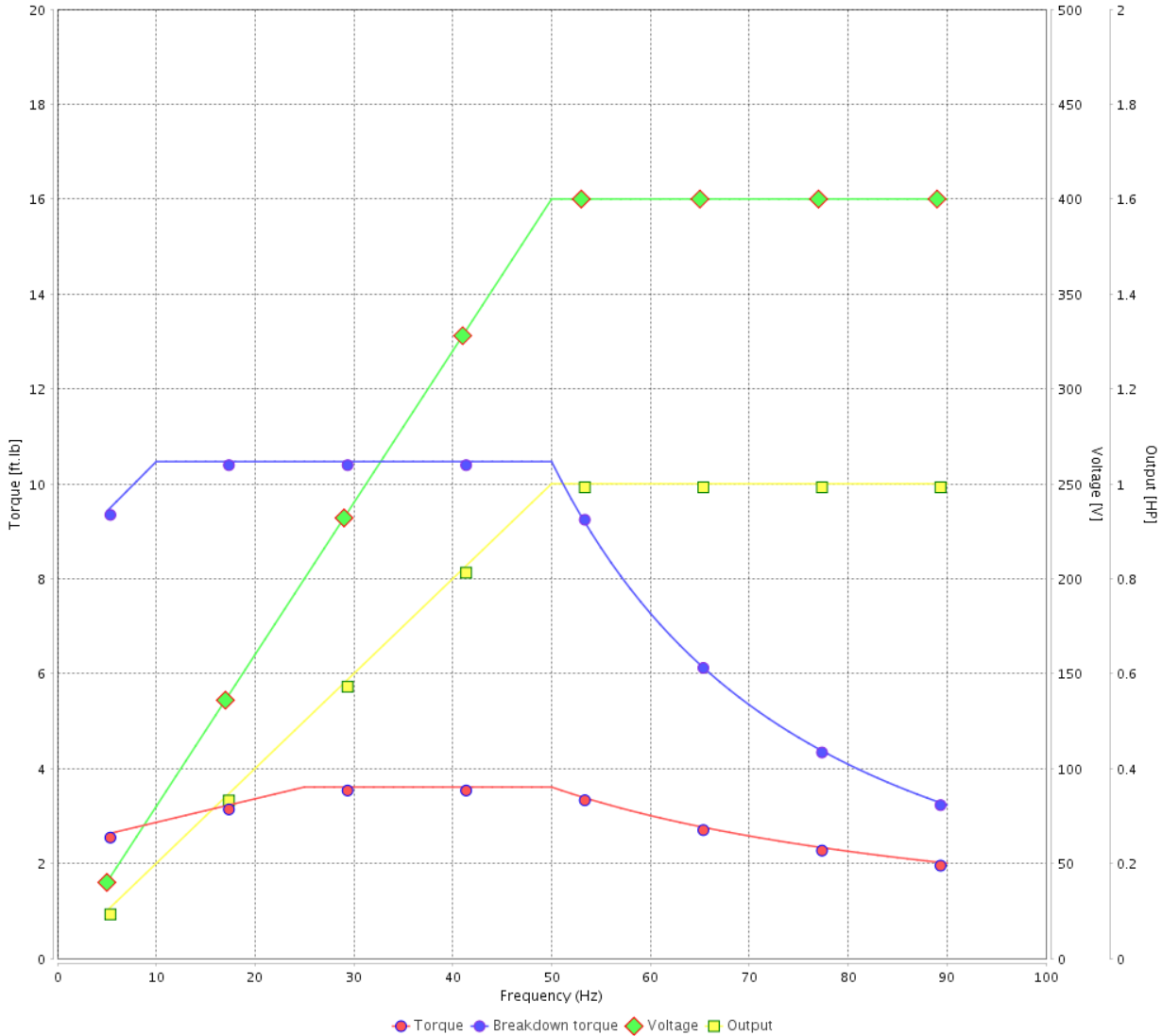
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Performed by			Page 20 / 21	Revision
Checked by				
Date	14/04/2022			

VFD OPERATION CURVE

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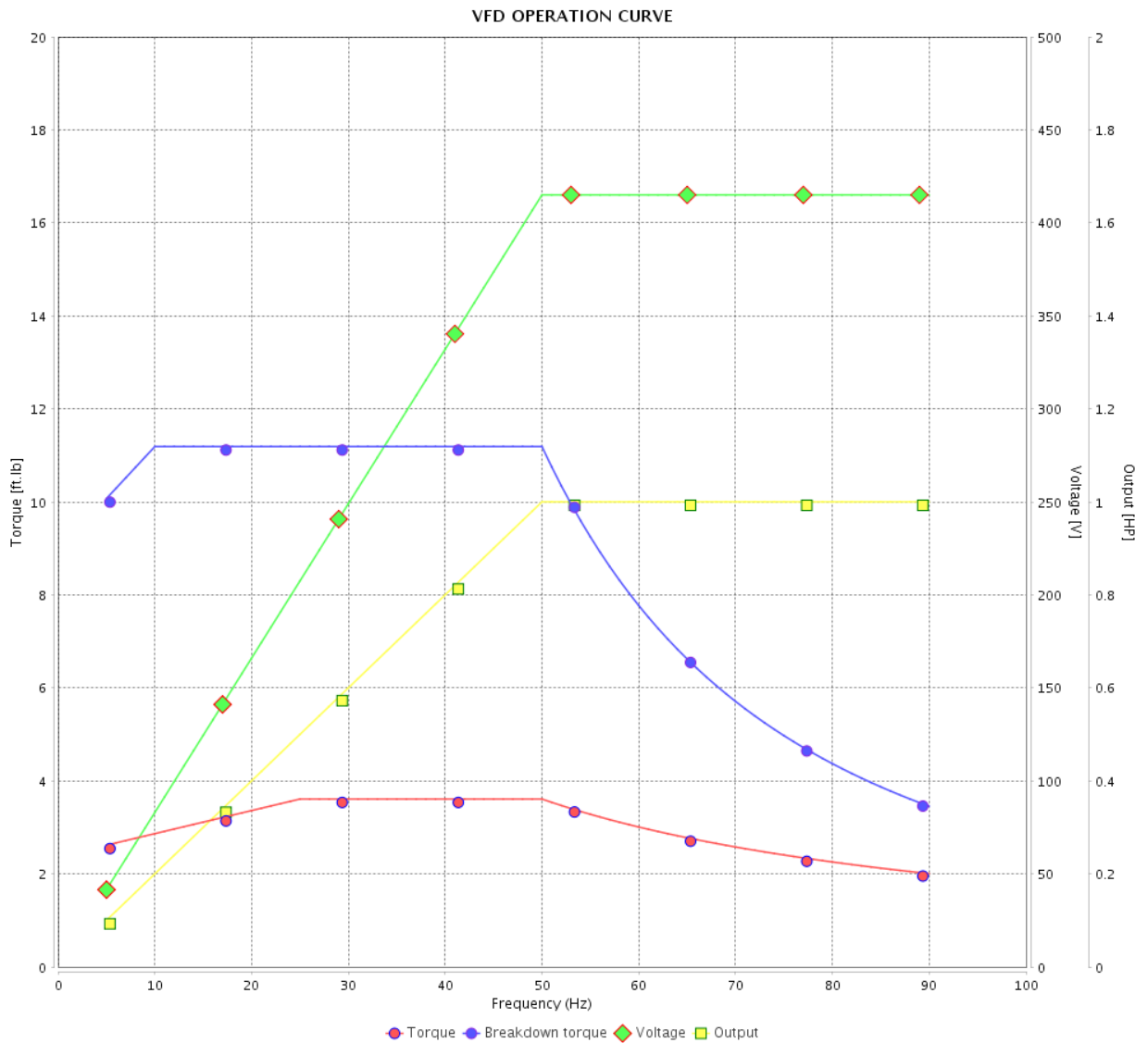


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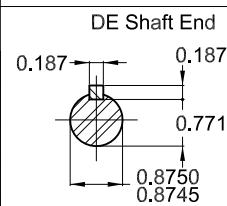
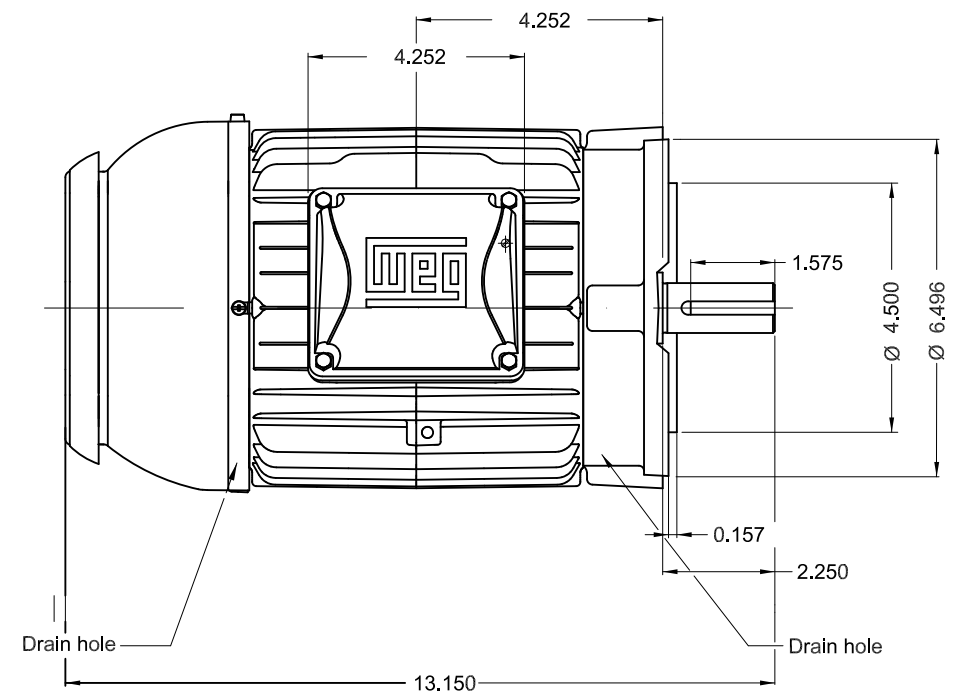
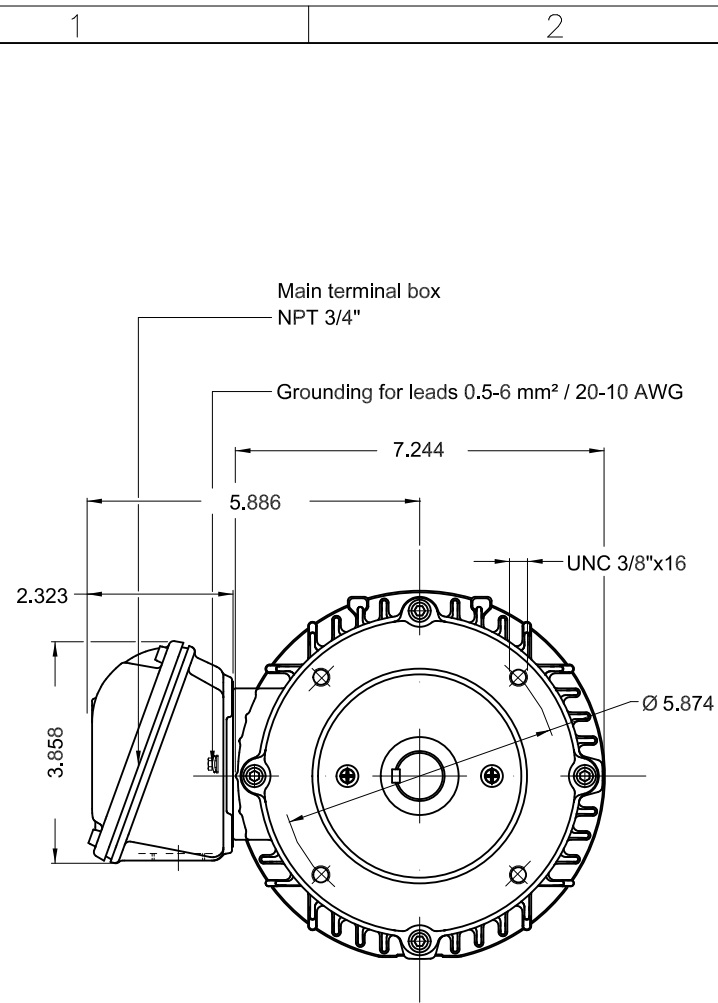


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			21 / 21	
Date	14/04/2022			



Bearing cap
Color RAL 5009
Painting plan 207A
Mounting NEMA W-6
Mounting V18

1 HP 04 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W22 PREM. EFF.					
CHECKED		FRAME 143TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD

