

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer		:	
Product line	: Rolled Steel NEMA Premium Efficiency Three-Phase	Product code :	12675349
		Catalog # :	00236ET3E145TC-S
Frame	: 143/5TC	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	: 40.9 lb
Protection degree	: IP55	Moment of inertia (J)	: 0.1279 sq.ft.lb
Design	: B		
Output [HP]	2	2	2
Poles	2	2	2
Frequency [Hz]	60	50	50
Rated voltage [V]	230/460	190/380	220/415
Rated current [A]	4.94/2.47	5.94/2.97	5.39/2.86
L. R. Amperes [A]	48.9/24.5	44.0/22.0	44.2/23.5
LRC [A]	9.9x(Code L)	7.4x(Code J)	8.2x(Code K)
No load current [A]	2.13/1.06	2.10/1.05	2.14/1.13
Rated speed [RPM]	3520	2875	2890
Slip [%]	2.22	4.17	3.67
Rated torque [ft.lb]	2.98	3.65	3.63
Locked rotor torque [%]	250	229	260
Breakdown torque [%]	300	280	310
Service factor		1.15	1.15
Temperature rise	80 K	80 K	80 K
Locked rotor time	23s (cold) 13s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)
Noise level ²	68.0 dB(A)	65.0 dB(A)	65.0 dB(A)
Efficiency (%)	25%	82.1	84.0
	50%	82.5	83.7
	75%	85.5	84.9
	100%	85.5	84.1
Power Factor	25%	0.45	0.48
	50%	0.73	0.76
	75%	0.83	0.86
	100%	0.89	0.90
Bearing type	: <u>Drive end</u> 6205 ZZ <u>Non drive end</u> 6203 ZZ	Foundation loads	
Sealing	: V'Ring V'Ring	Max. traction	: 77 lb
Lubrication interval	: - -	Max. compression	: 118 lb
Lubricant amount	: - -		
Lubricant type	: Mobil Polyrex EM		
Notes			
USABLE @208V 5.46A SF 1.00 SFA 5.46A			
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
Date	21/08/2020		Revision
			1 / 16

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

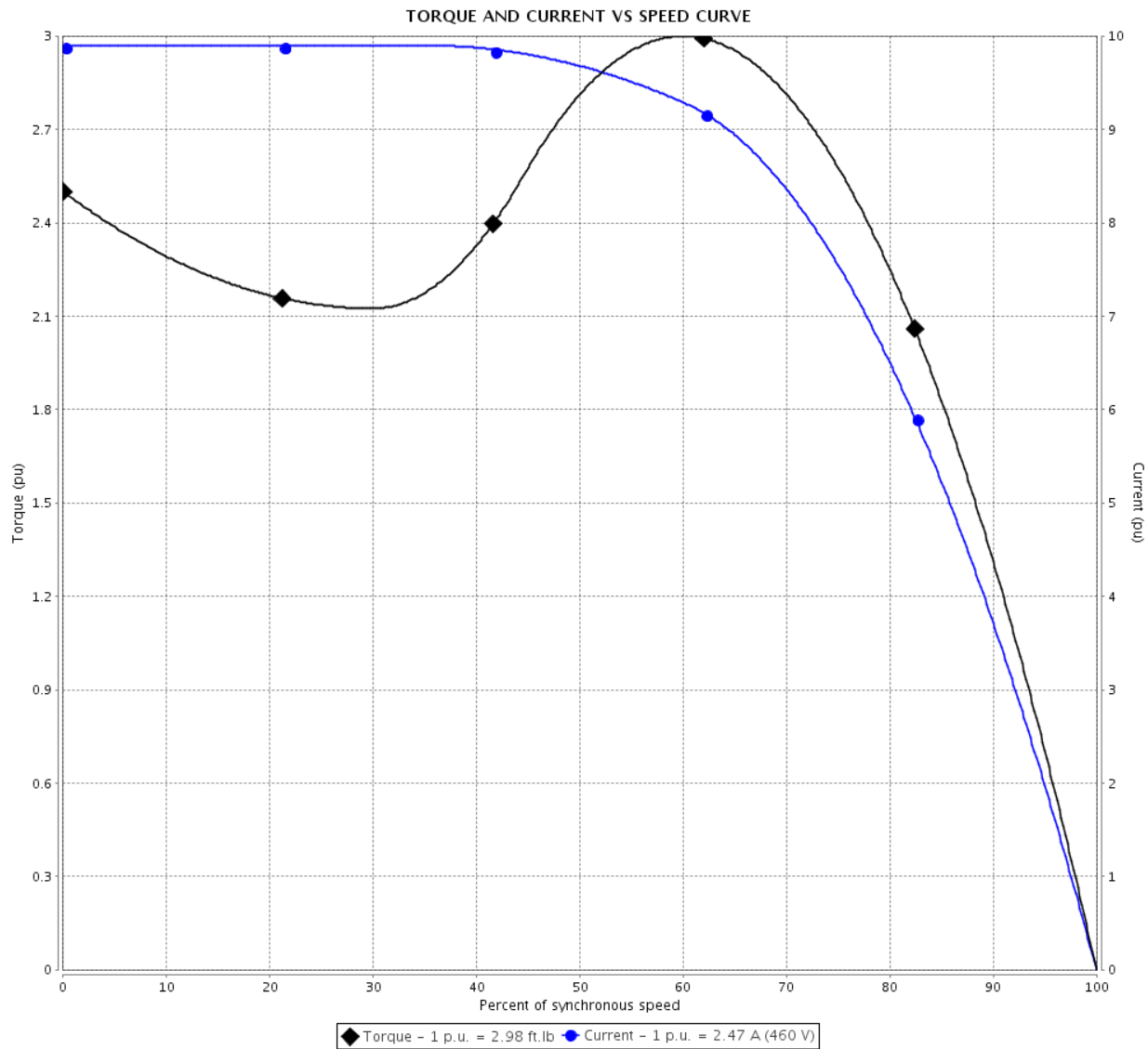


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current	: 4.94/2.47 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 9.9	Duty cycle	: Cont.(S1)
Rated torque	: 2.98 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3520 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	21/08/2020			

TORQUE AND CURRENT VS SPEED CURVE



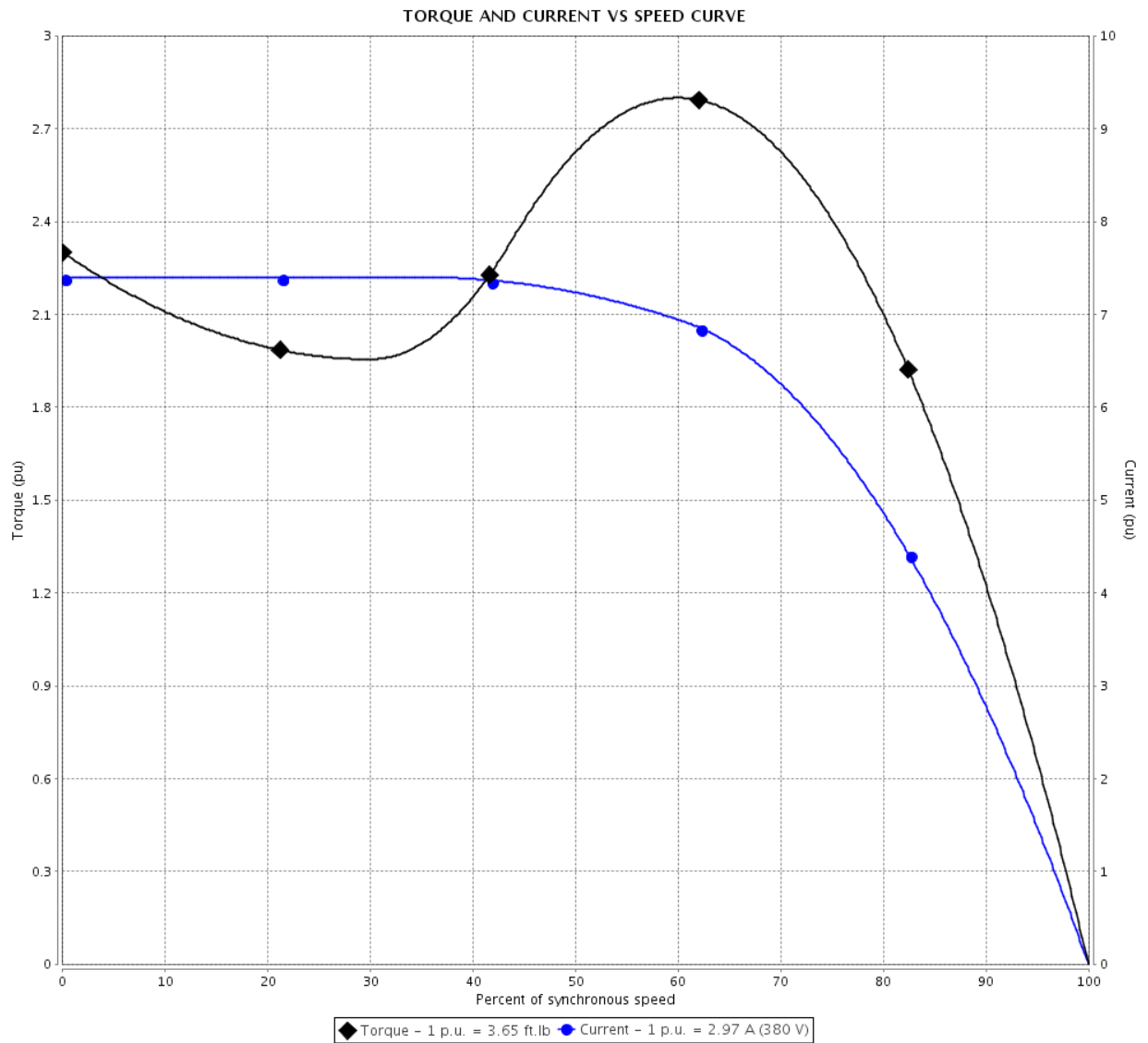
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A
 LRC : 7.4
 Rated torque : 3.65 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 280 %
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 16	
Date	21/08/2020			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

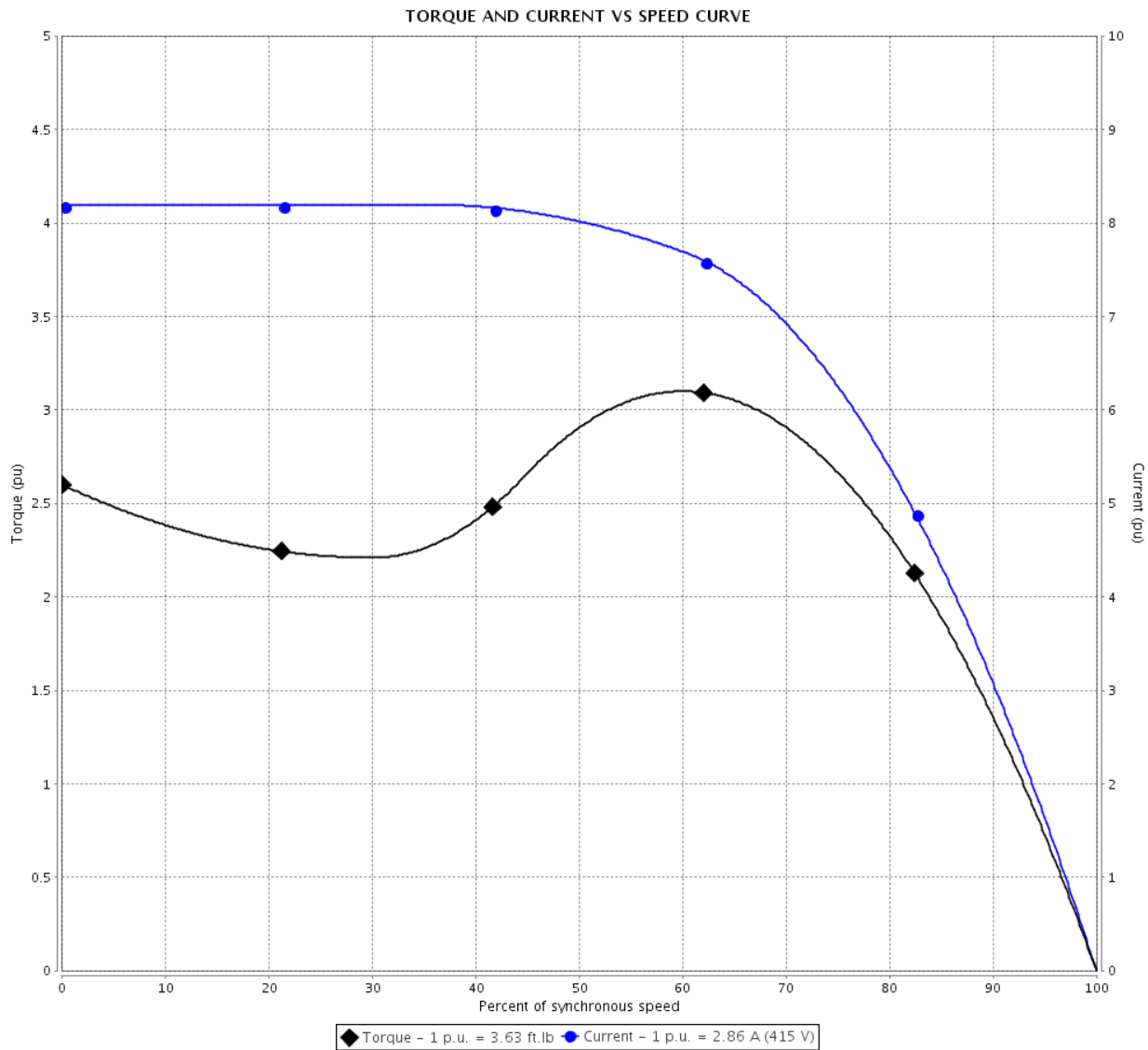


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 220/415 V 50 Hz 2P

Rated current	: 5.39/2.86 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 3.63 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2890 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	21/08/2020			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

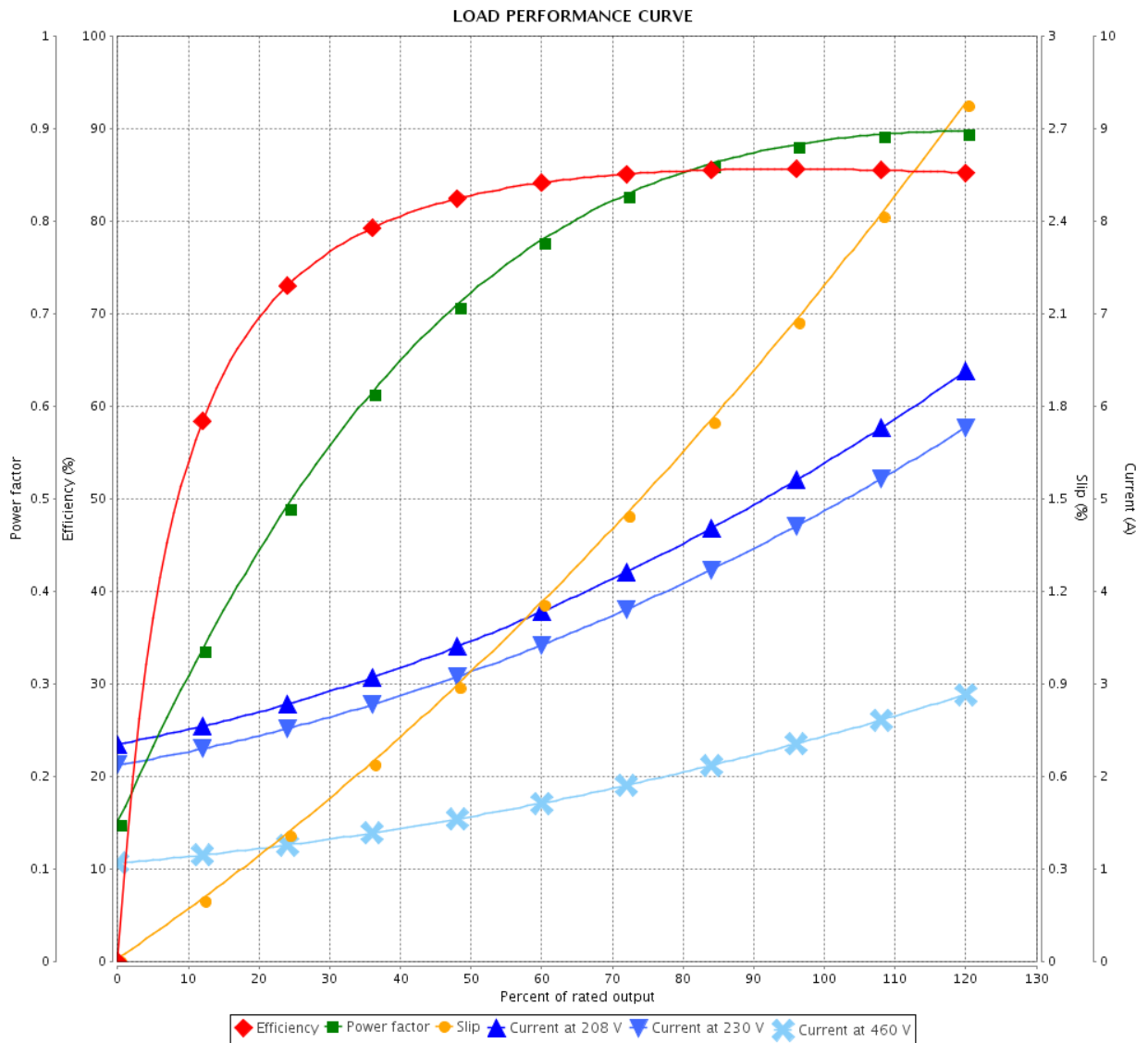


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A
 LRC : 9.9
 Rated torque : 2.98 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 / 16		
Date		21/08/2020		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

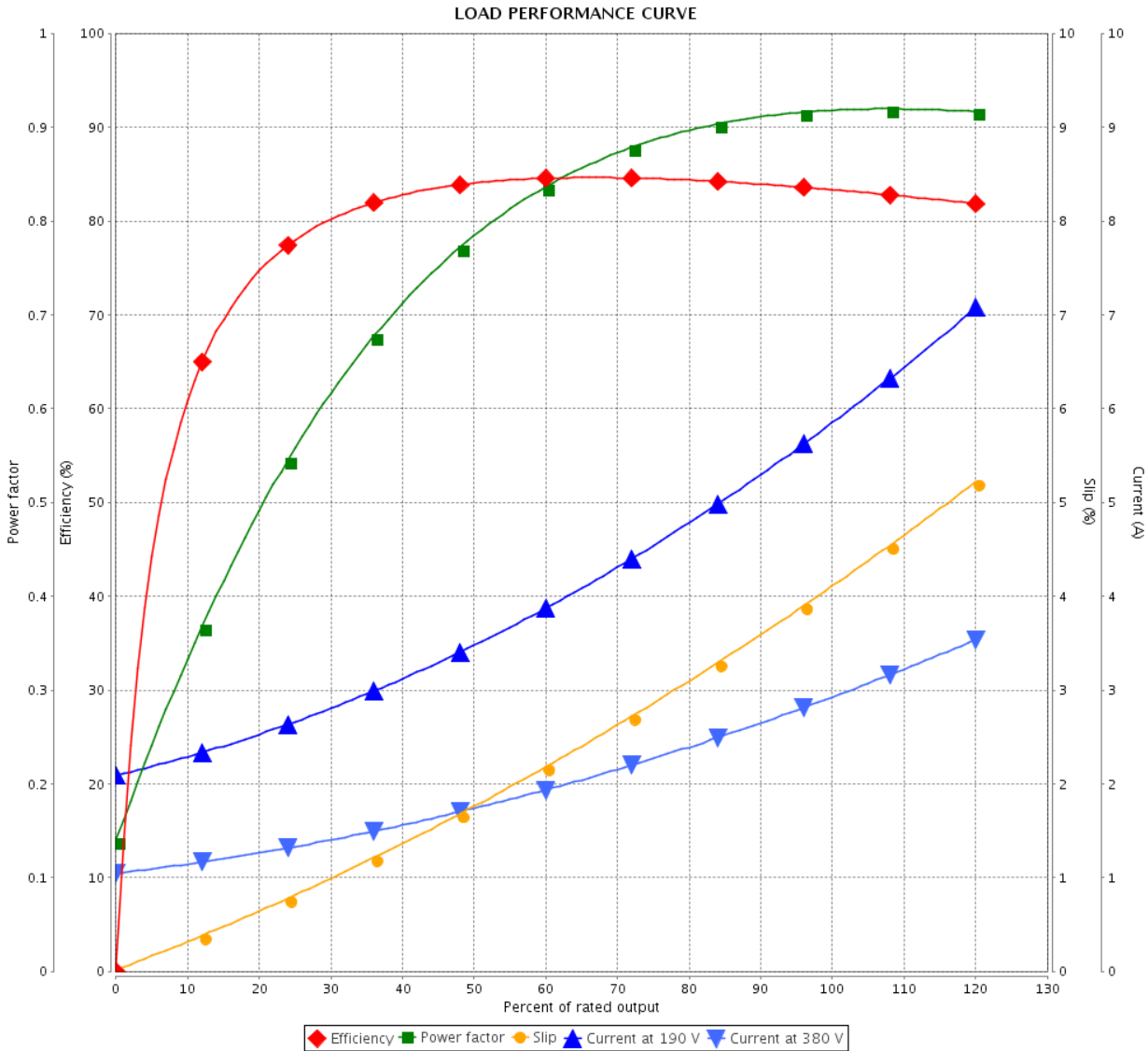


Customer : _____

Product line : Rolled Steel NEMA Premium
Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A
 LRC : 7.4
 Rated torque : 3.65 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 280 %
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		6 / 16		
Date	21/08/2020			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

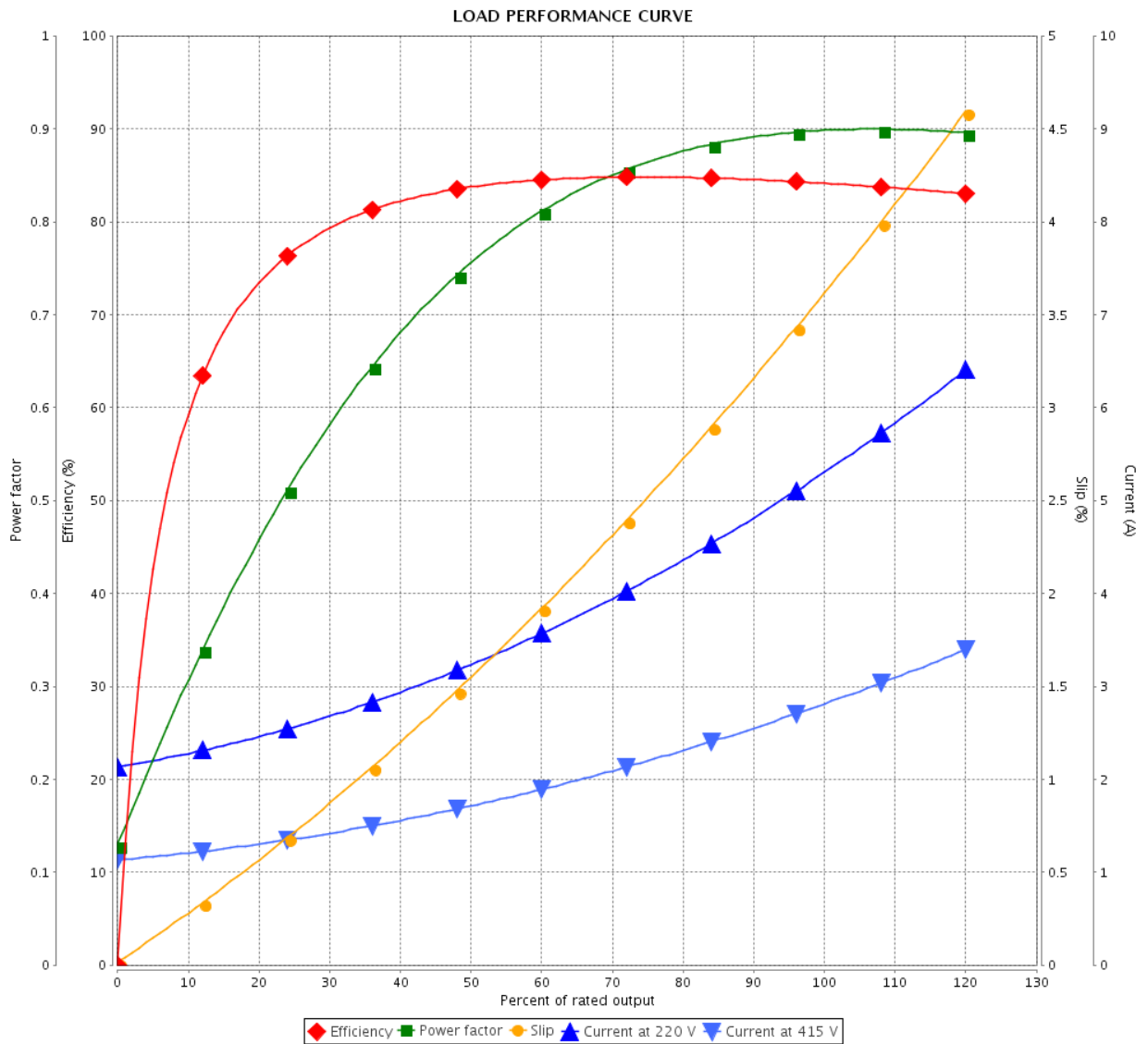


Customer : _____

Product line : Rolled Steel NEMA Premium
Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A
 LRC : 8.2
 Rated torque : 3.63 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 310 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 16		
Date		21/08/2020		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium
Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S

Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A
LRC : 9.9
Rated torque : 2.98 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 300 %
Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor :
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

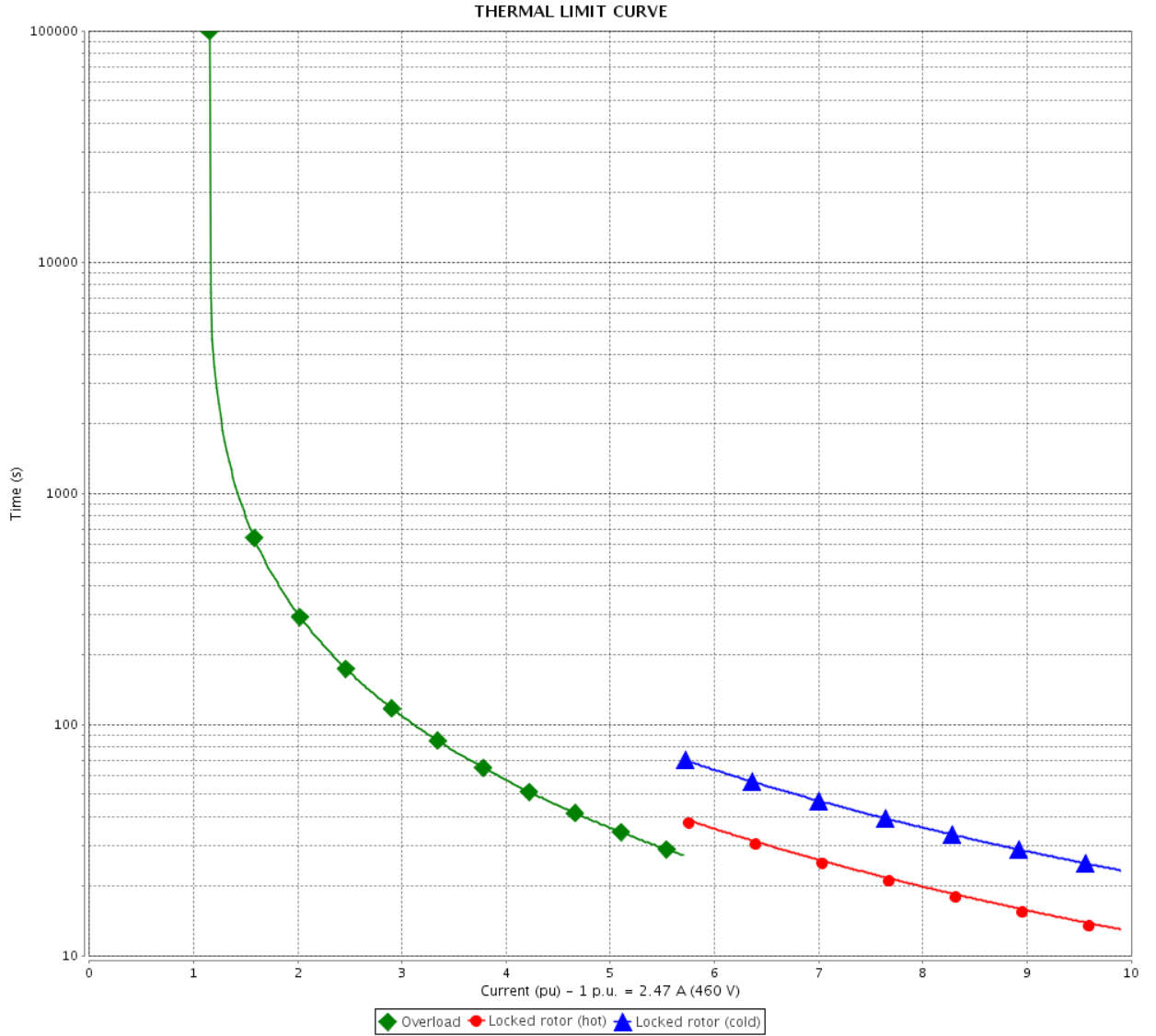
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	21/08/2020		8 / 16	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium
Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S

Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A
LRC : 7.4
Rated torque : 3.65 ft.lb
Locked rotor torque : 229 %
Breakdown torque : 280 %
Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

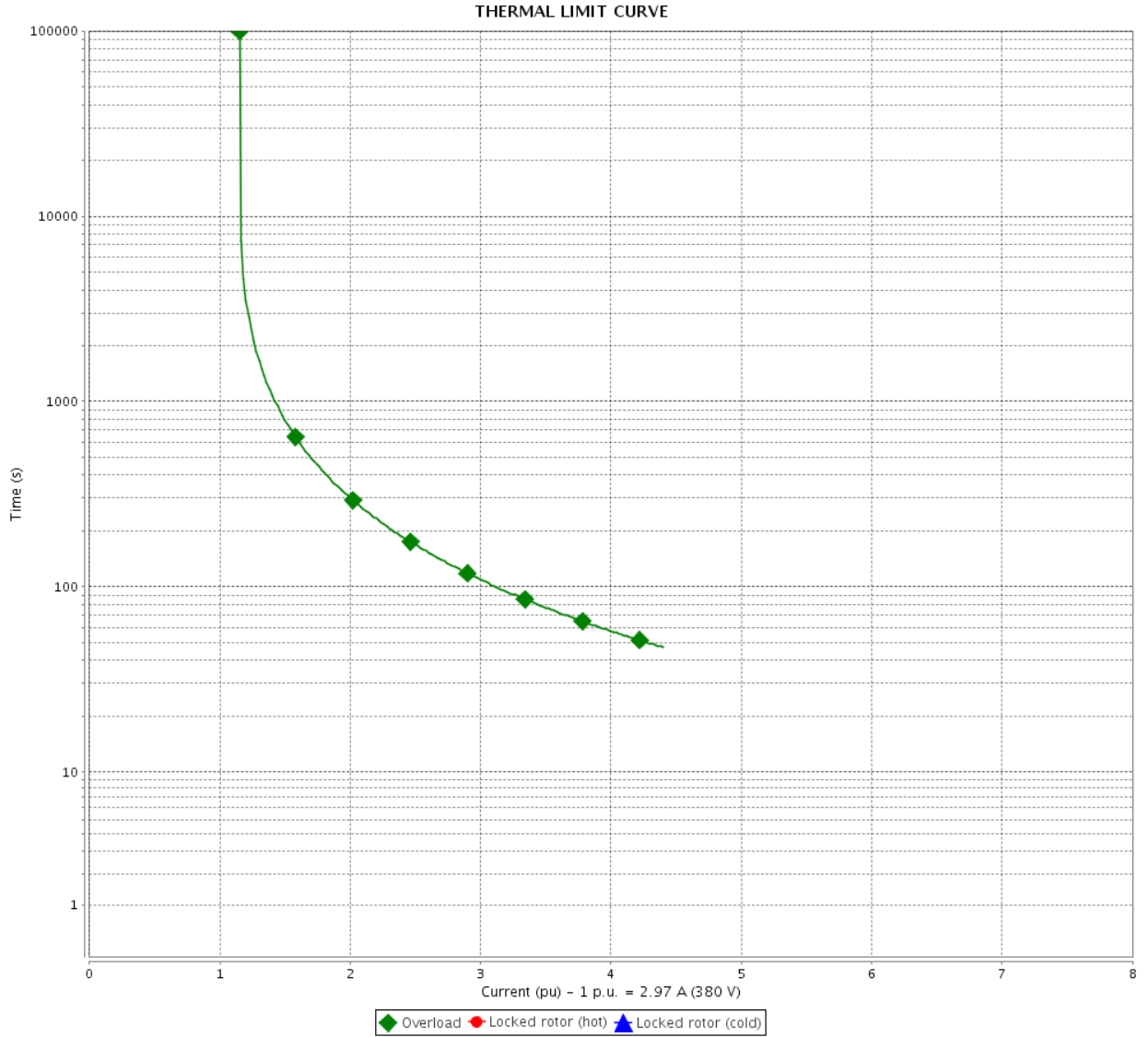
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	21/08/2020		10 / 16	

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		21/08/2020		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel NEMA Premium
Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S

Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A
LRC : 8.2
Rated torque : 3.63 ft.lb
Locked rotor torque : 260 %
Breakdown torque : 310 %
Rated speed : 2890 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

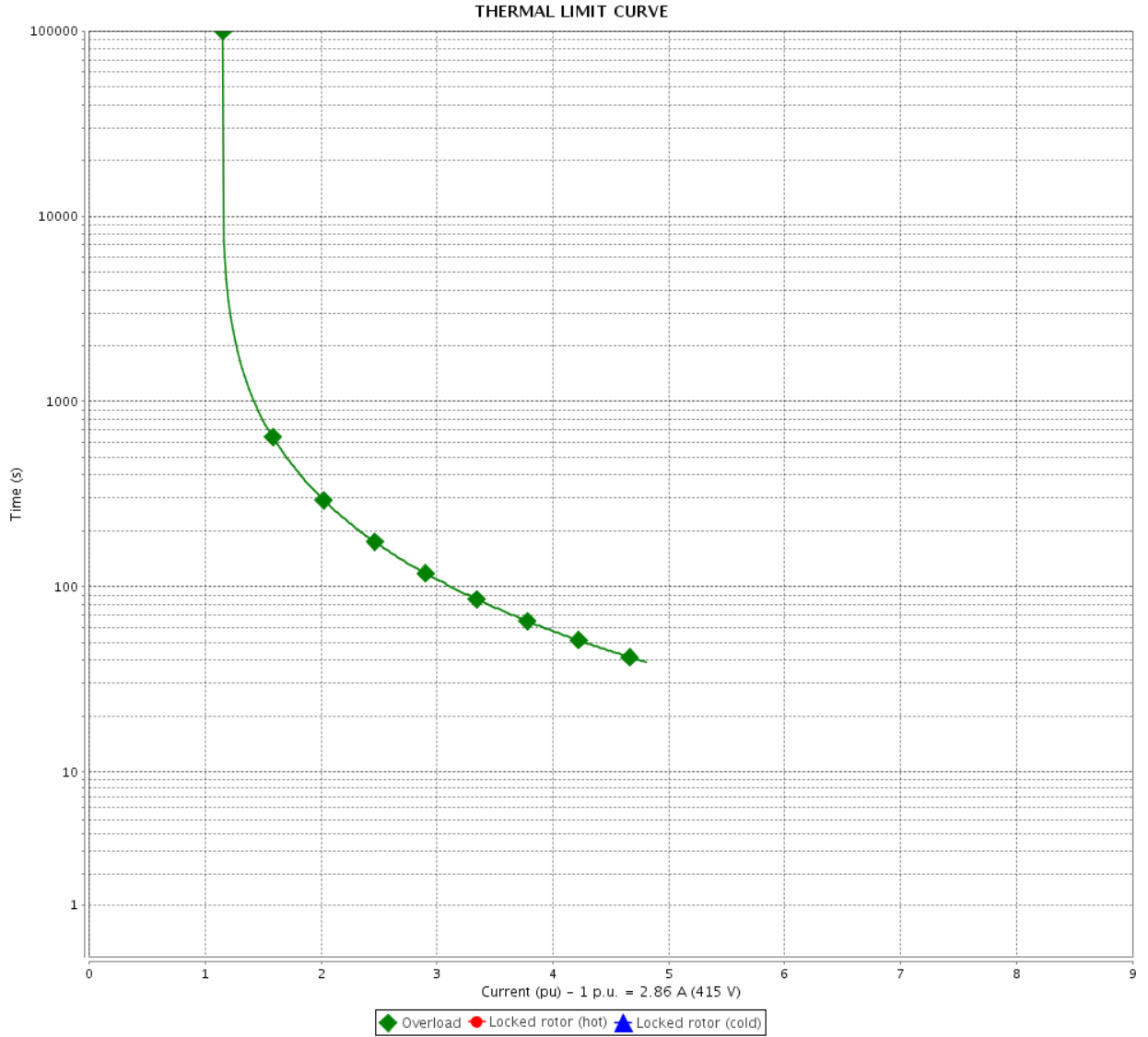
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	21/08/2020		12 / 16	

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		21/08/2020		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

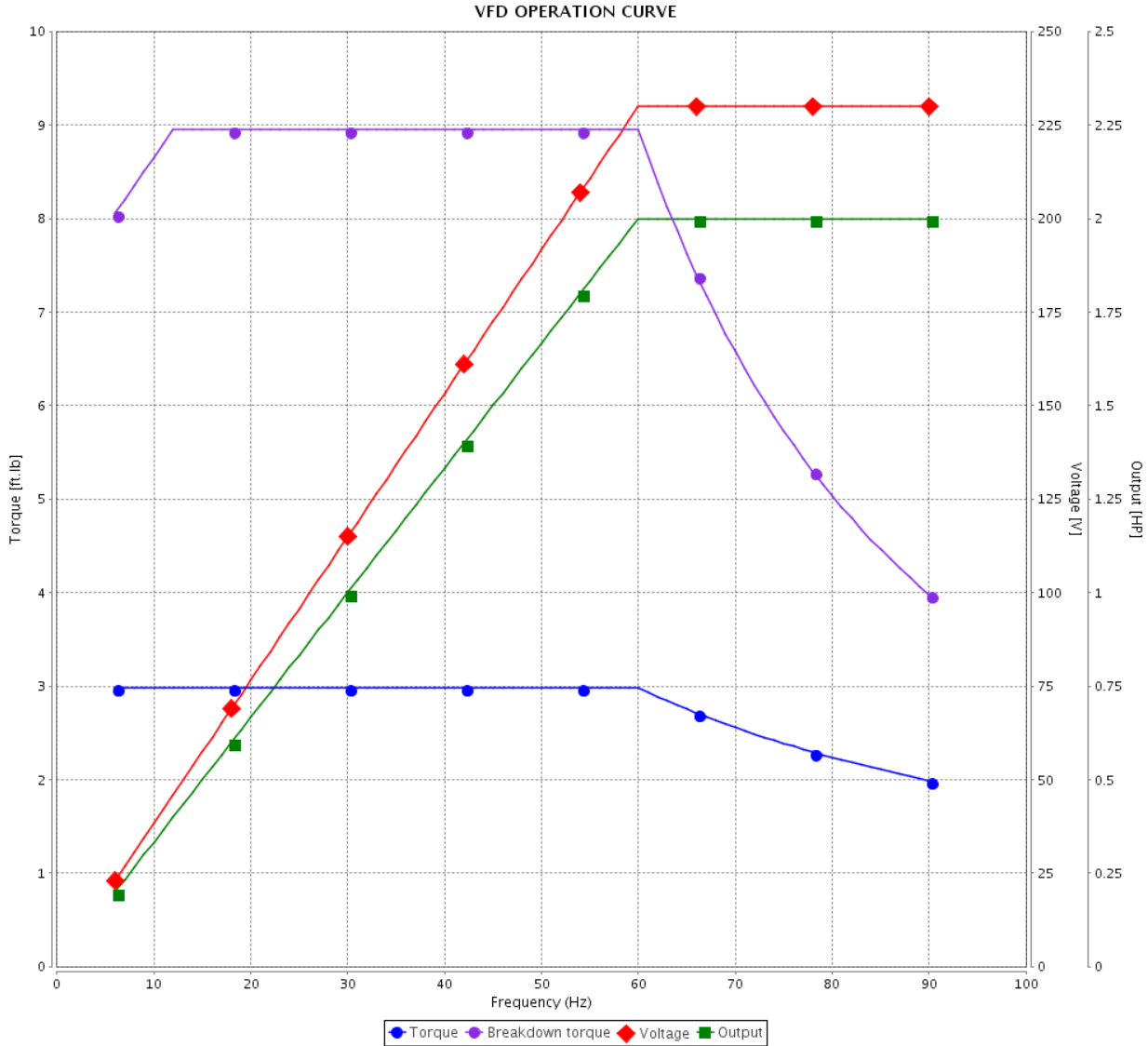


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A
 LRC : 9.9
 Rated torque : 2.98 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 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

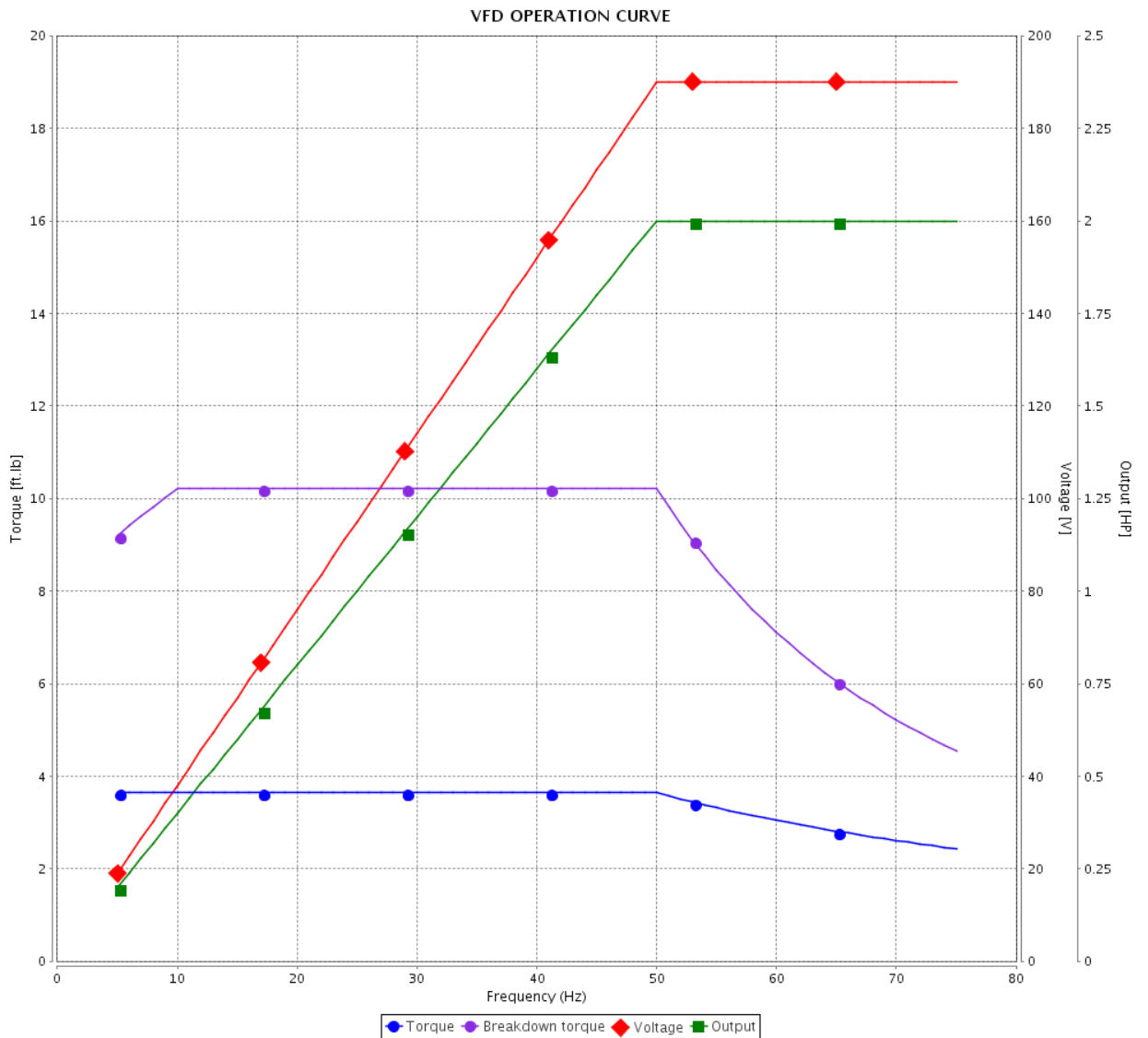


Customer :

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A
 LRC : 7.4
 Rated torque : 3.65 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 280 %
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 16		
Date	21/08/2020			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

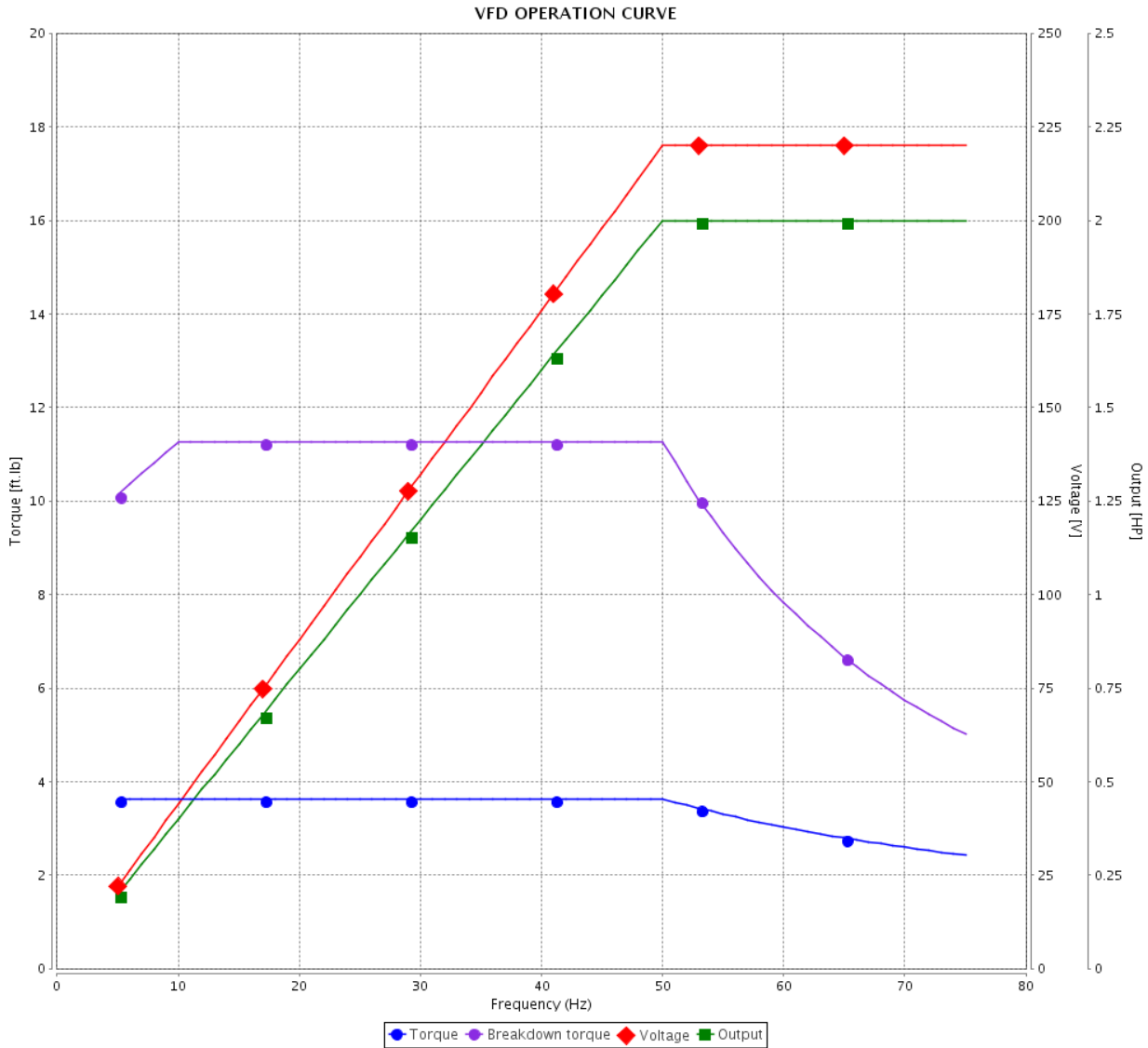


Customer : _____

Product line : Rolled Steel NEMA Premium Efficiency Three-Phase

Product code : 12675349

Catalog # : 00236ET3E145TC-S



Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A
 LRC : 8.2
 Rated torque : 3.63 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 310 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	21/08/2020			