

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14786494		
		Catalog # :	02512OT3E324TC-W40		
Frame	: 324TC	Cooling method	: IC01 - ODP		
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	: 469 lb		
Protection degree	: IP23	Moment of inertia (J)	: 7.69 sq.ft.lb		
Design	: B				
Output [HP]	25	20	20	20	20
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	61.6/30.8	30.5	30.1	29.7	29.7
L. R. Amperes [A]	382/191	201	205	205	205
LRC [A]	6.2x(Code G)	6.6x(Code H)	6.8x(Code H)	6.9x(Code J)	6.9x(Code J)
No load current [A]	28.4/14.2	14.0	15.5	16.7	16.7
Rated speed [RPM]	1183	980	985	985	985
Slip [%]	1.42	2.00	1.50	1.50	1.50
Rated torque [ft.lb]	111	107	107	107	107
Locked rotor torque [%]	210	170	229	210	210
Breakdown torque [%]	250	250	290	310	310
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	32s (cold) 18s (hot)	23s (cold) 13s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level ²	62.0 dB(A)				
Efficiency (%)	25%	91.0	90.6	90.9	90.1
	50%	91.7	90.8	91.0	90.3
	75%	92.4	91.2	91.2	91.2
	100%	93.0	91.2	91.2	91.2
Power Factor	25%	0.39	0.39	0.35	0.32
	50%	0.65	0.65	0.60	0.56
	75%	0.76	0.76	0.73	0.70
	100%	0.81	0.82	0.79	0.77
Bearing type	: <u>Drive end</u> 6312 Z C3	<u>Non drive end</u> 6211 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction		
	Bearing Seal	Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 21 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 68.1A SF 1.15 SFA 78.3A					
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



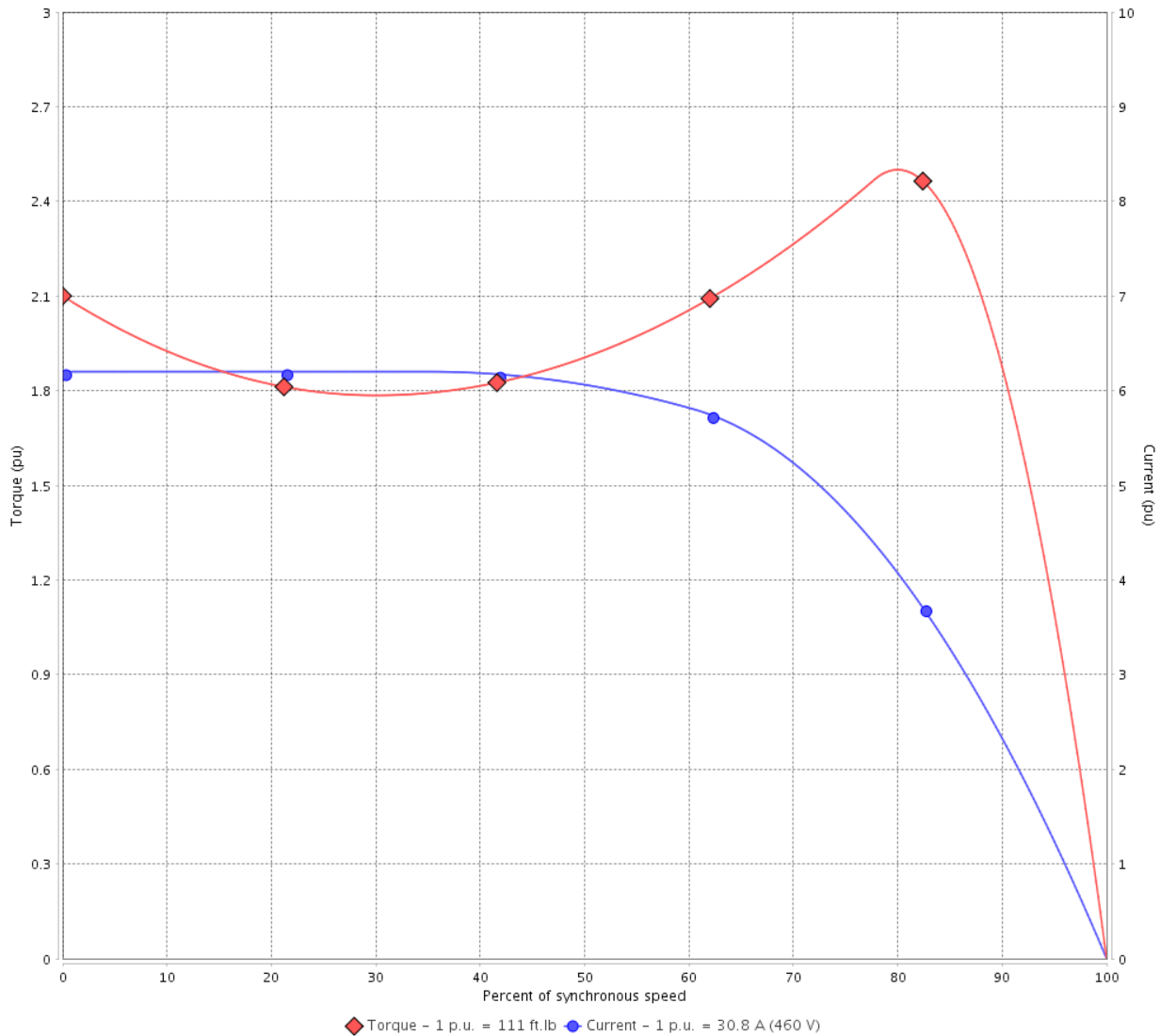
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 61.6/30.8 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 111 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.25
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1183 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	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



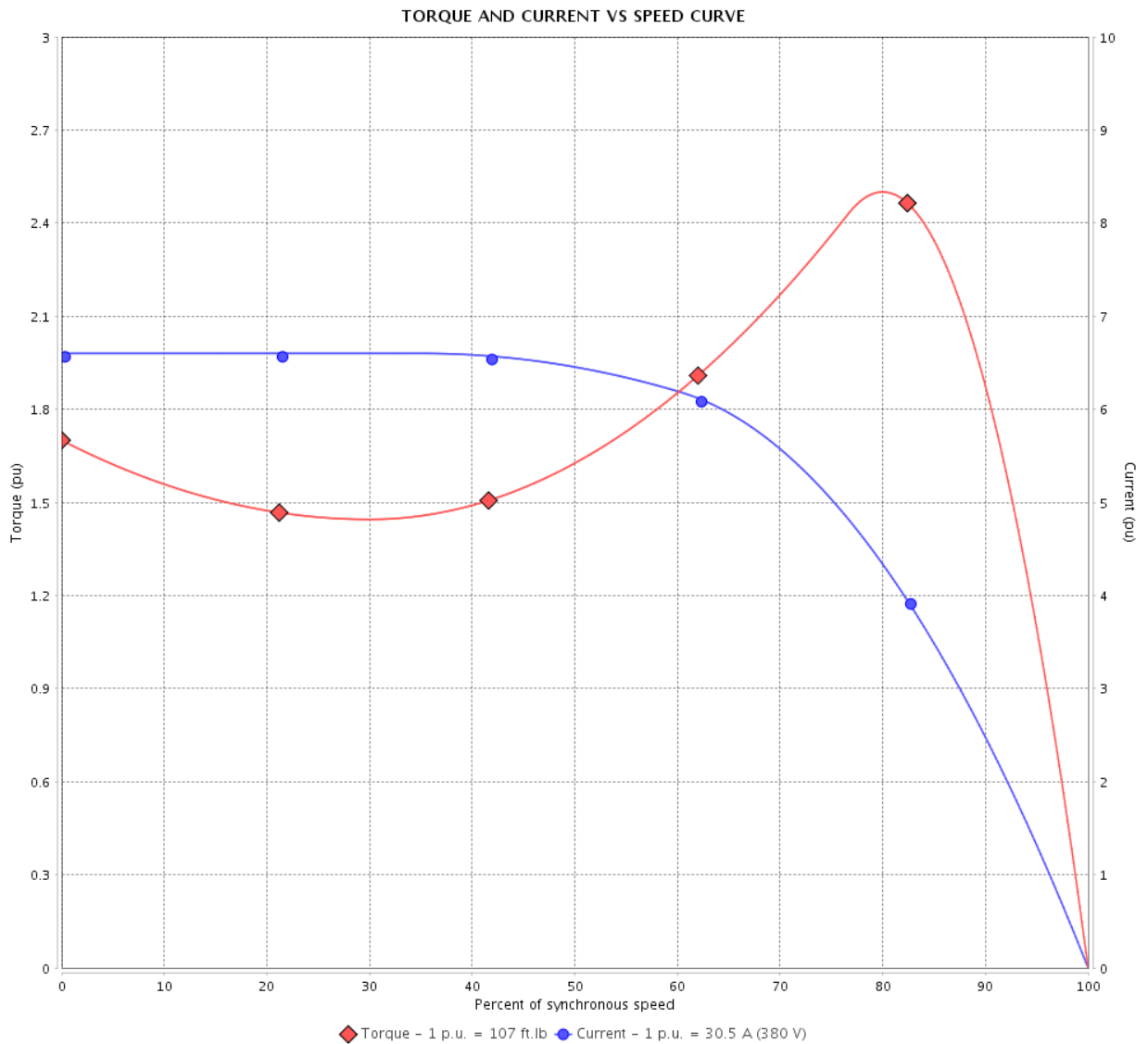
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 30.5 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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



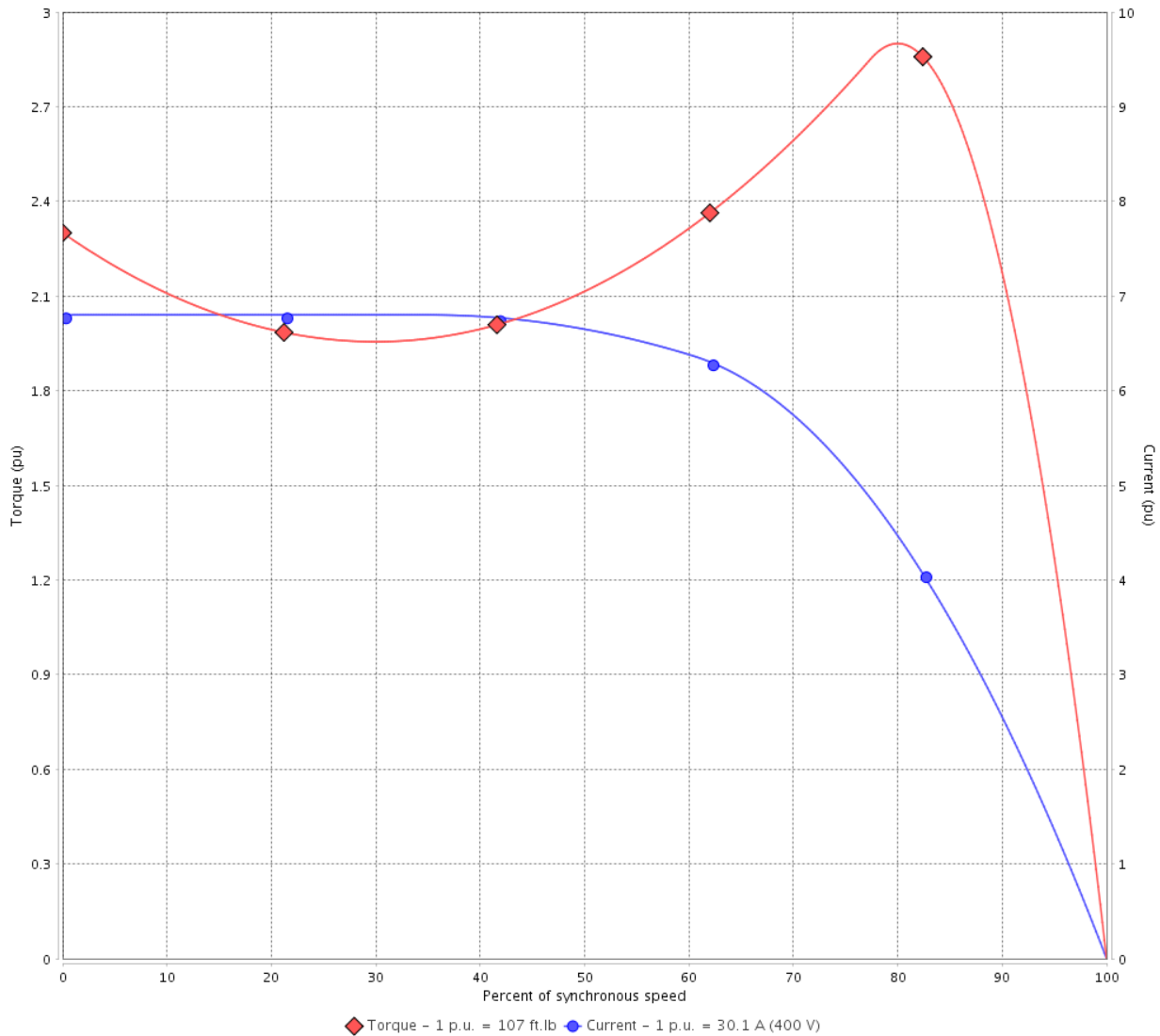
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 30.1 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (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



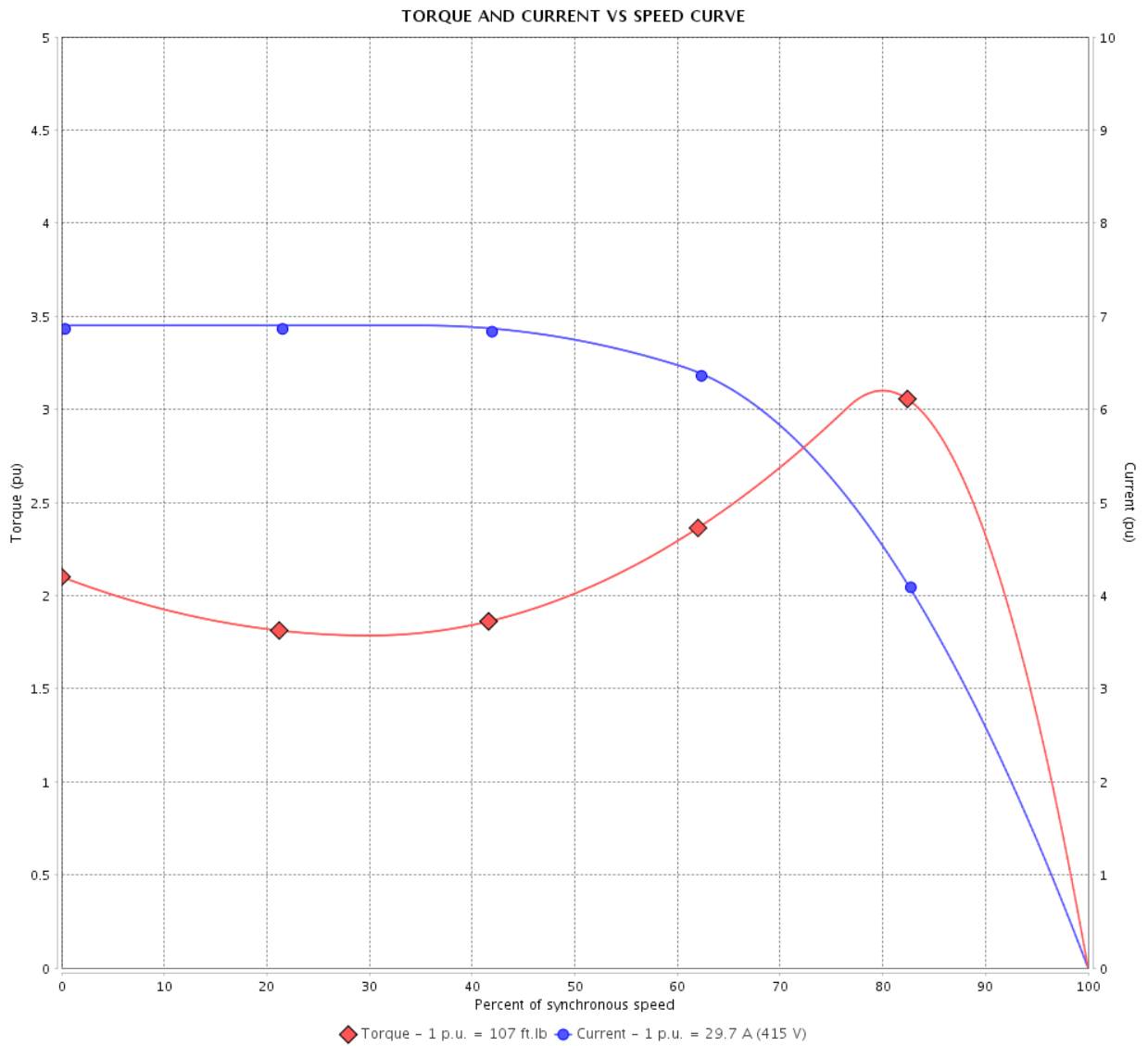
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 29.7 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (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



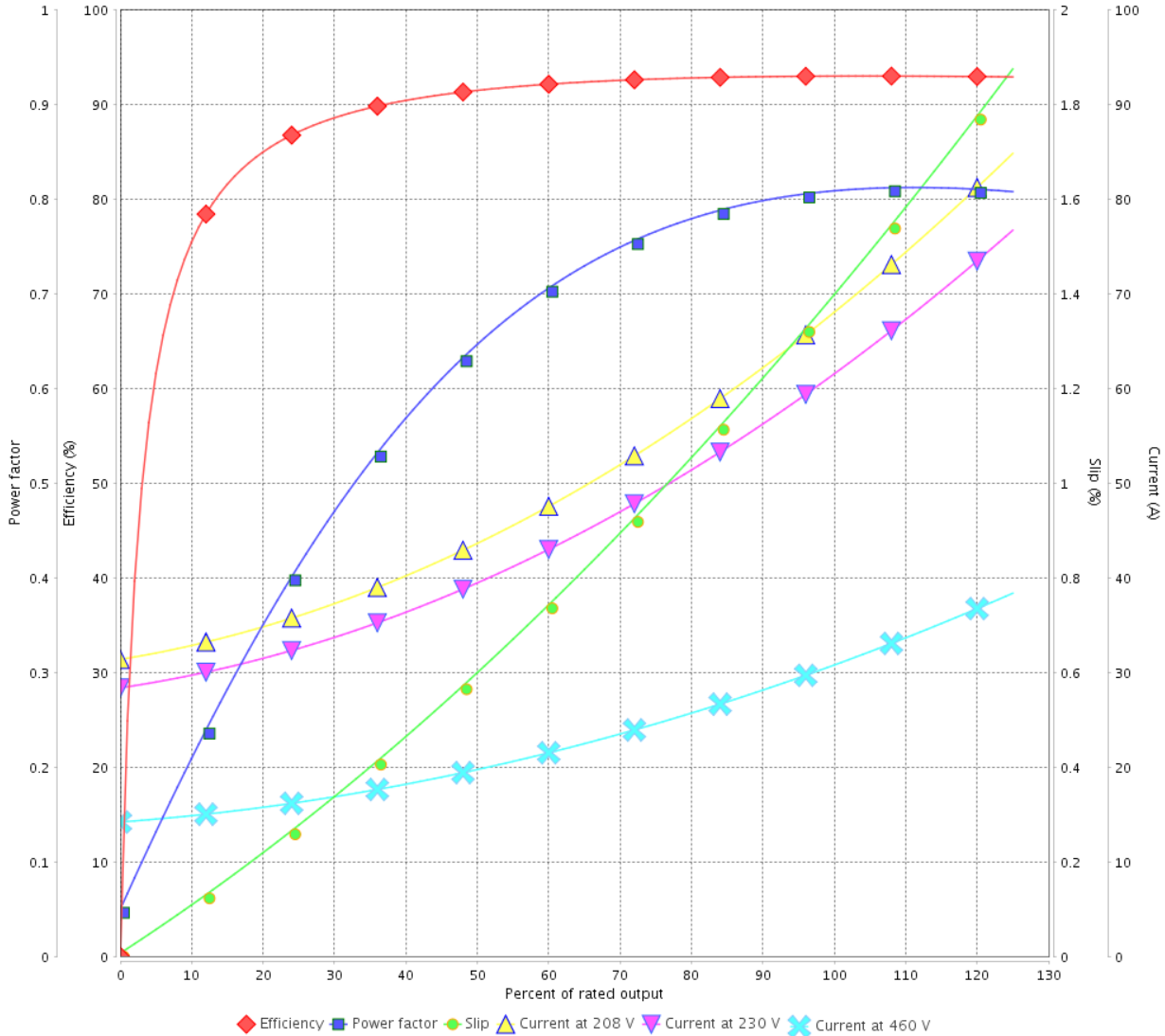
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 61.6/30.8 A
 LRC : 6.2
 Rated torque : 111 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 250 %
 Rated speed : 1183 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

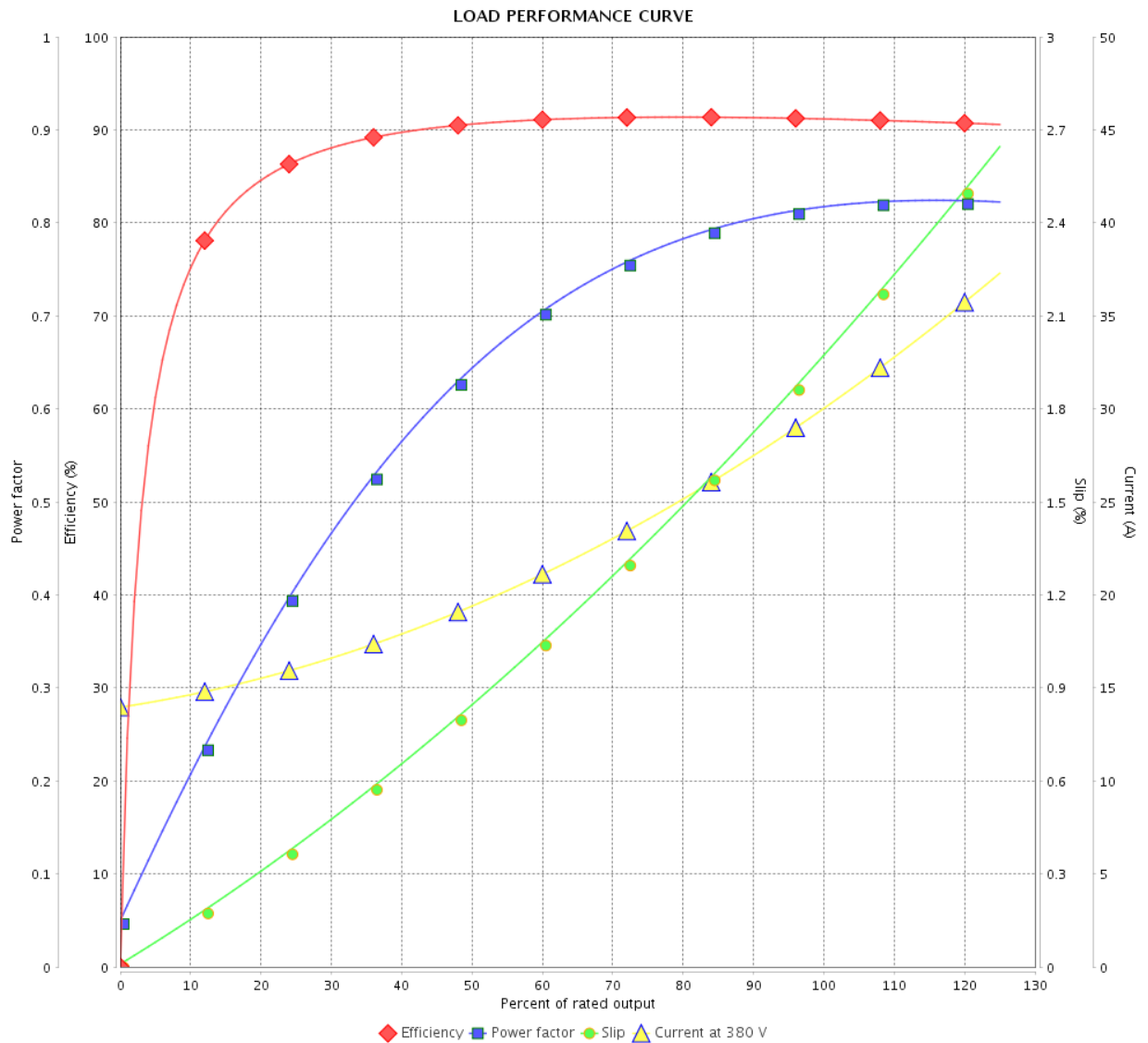


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 30.5 A
 LRC : 6.6
 Rated torque : 107 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 250 %
 Rated speed : 980 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date	
Performed by					
Checked by					
Date					13/04/2022
		Page	Revision		
		7 / 21			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



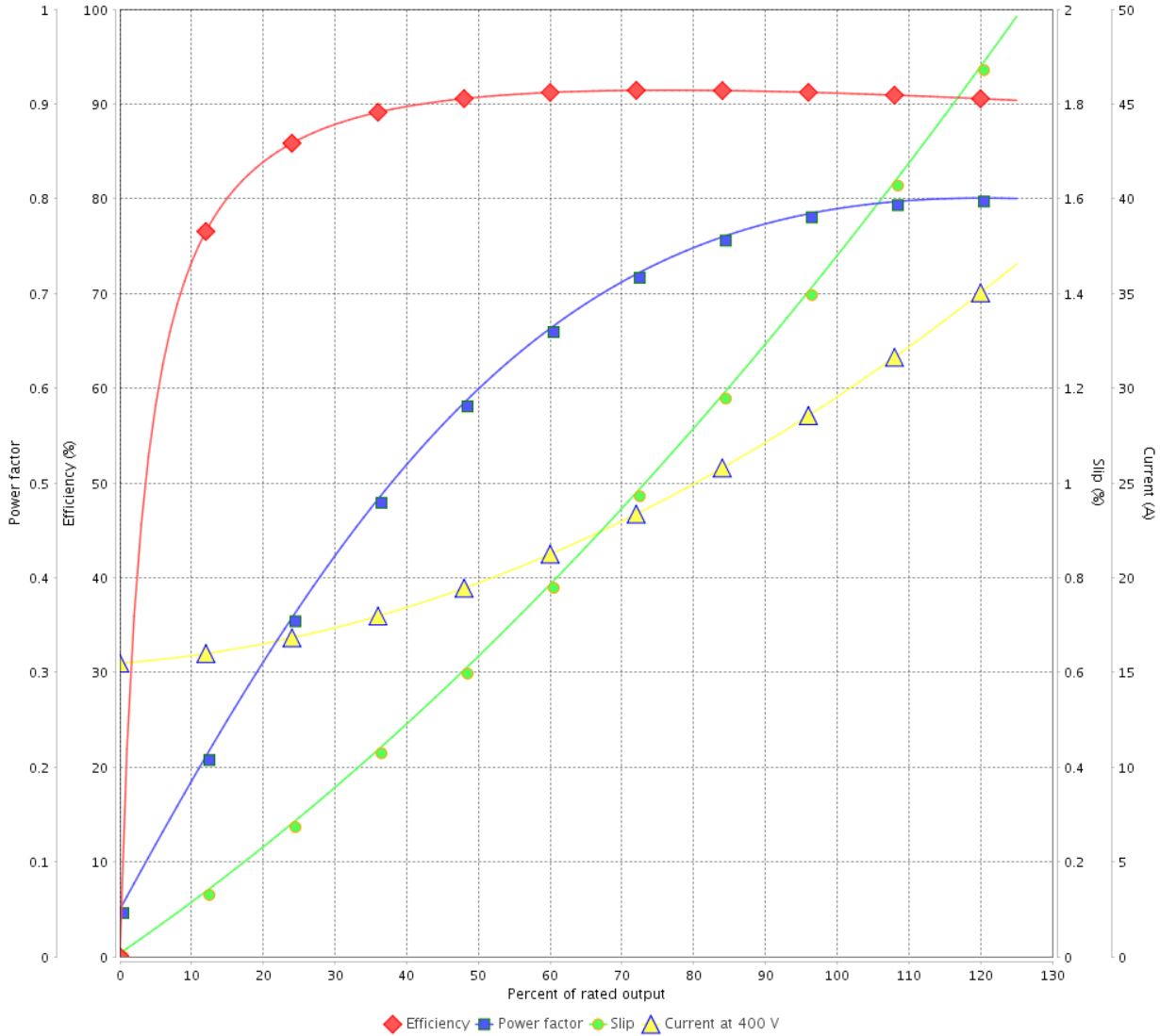
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 30.1 A
 LRC : 6.8
 Rated torque : 107 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 290 %
 Rated speed : 985 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40

Performance : 230/460 V 60 Hz 6P

Rated current : 61.6/30.8 A
LRC : 6.2
Rated torque : 111 ft.lb
Locked rotor torque : 210 %
Breakdown torque : 250 %
Rated speed : 1183 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

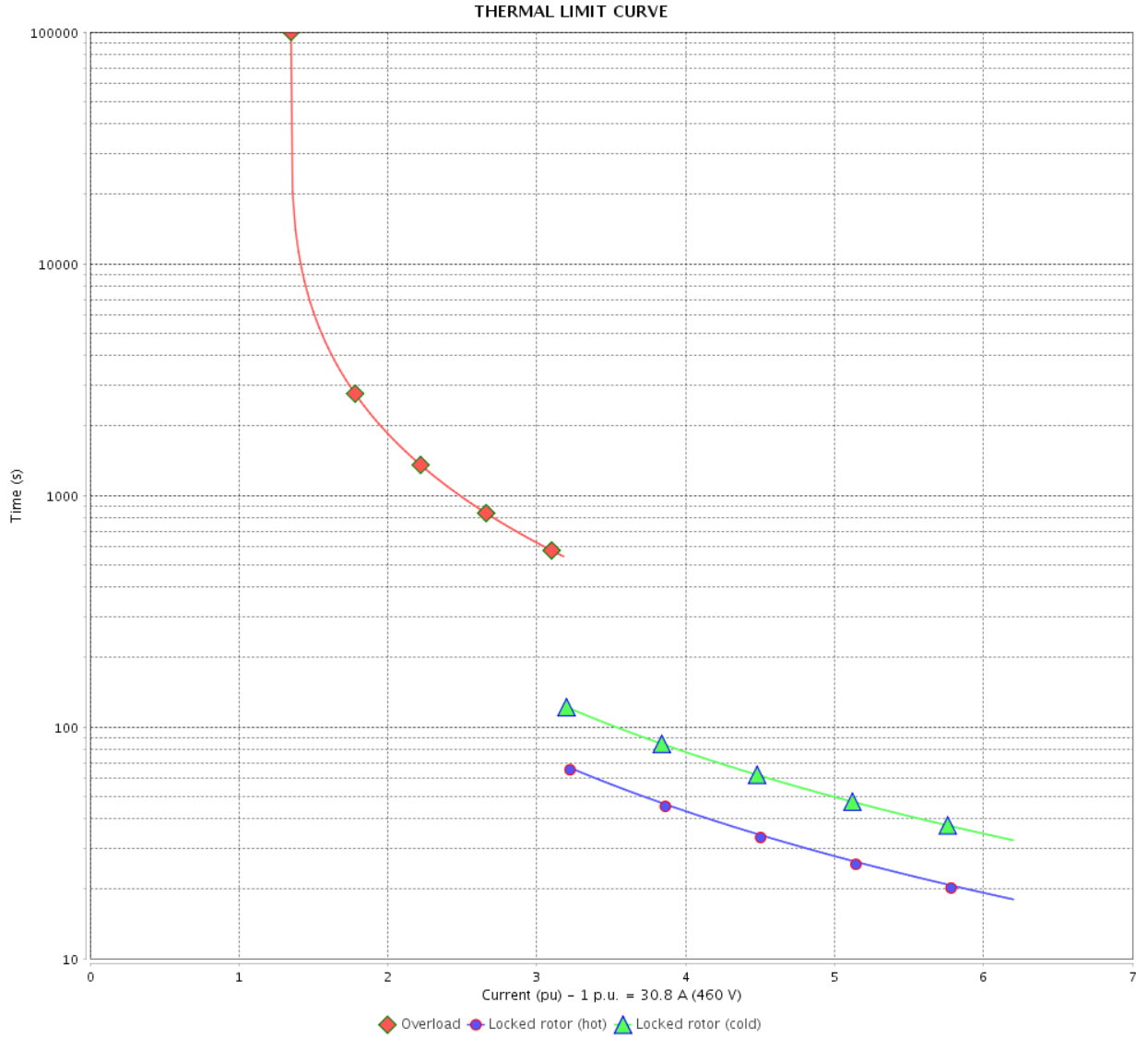
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 21	

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		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40

Performance : 380 V 50 Hz 6P IE3

Rated current	: 30.5 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

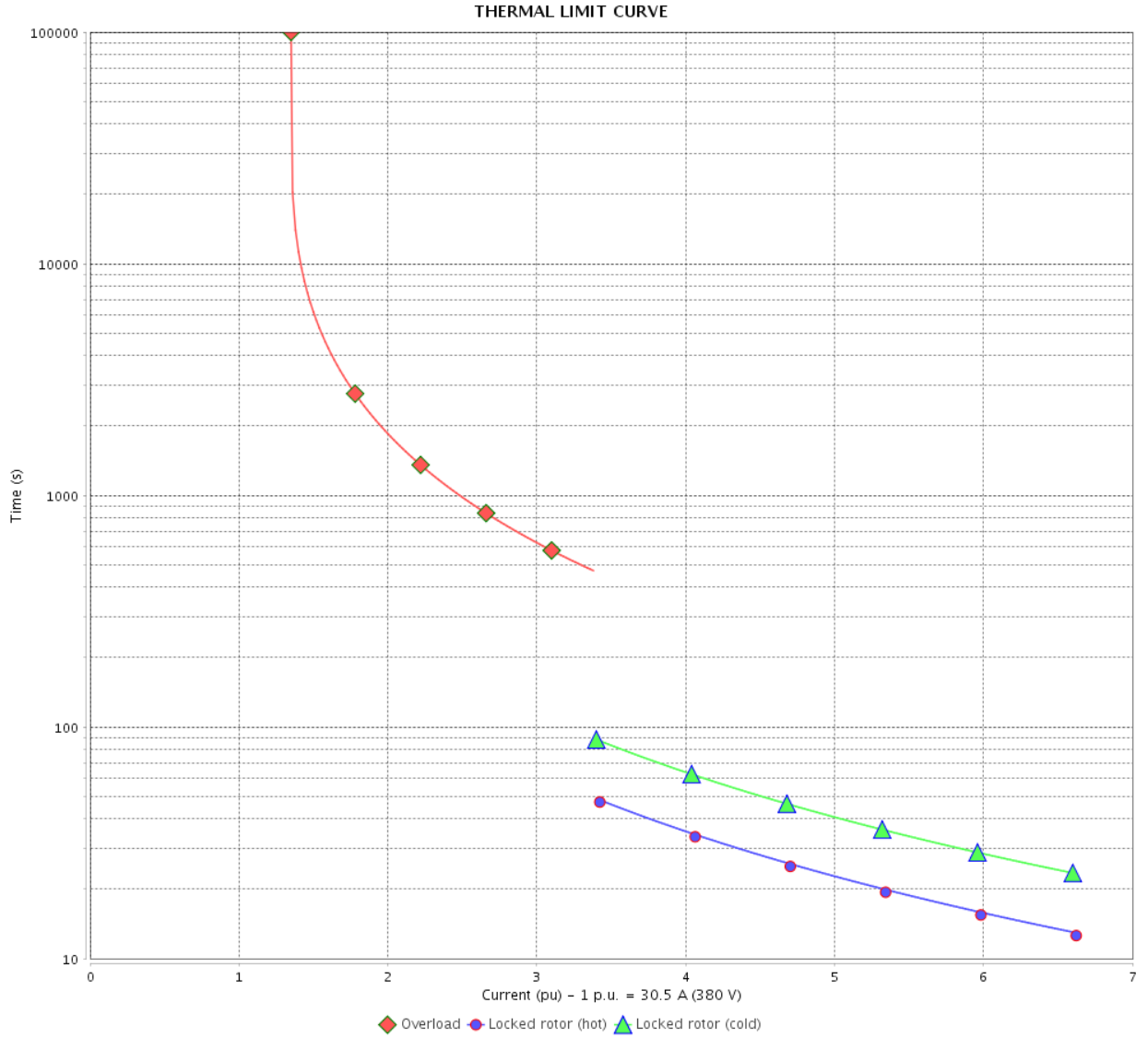
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 21	

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		13/04/2022		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40

Performance : 400 V 50 Hz 6P IE3

Rated current	: 30.1 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

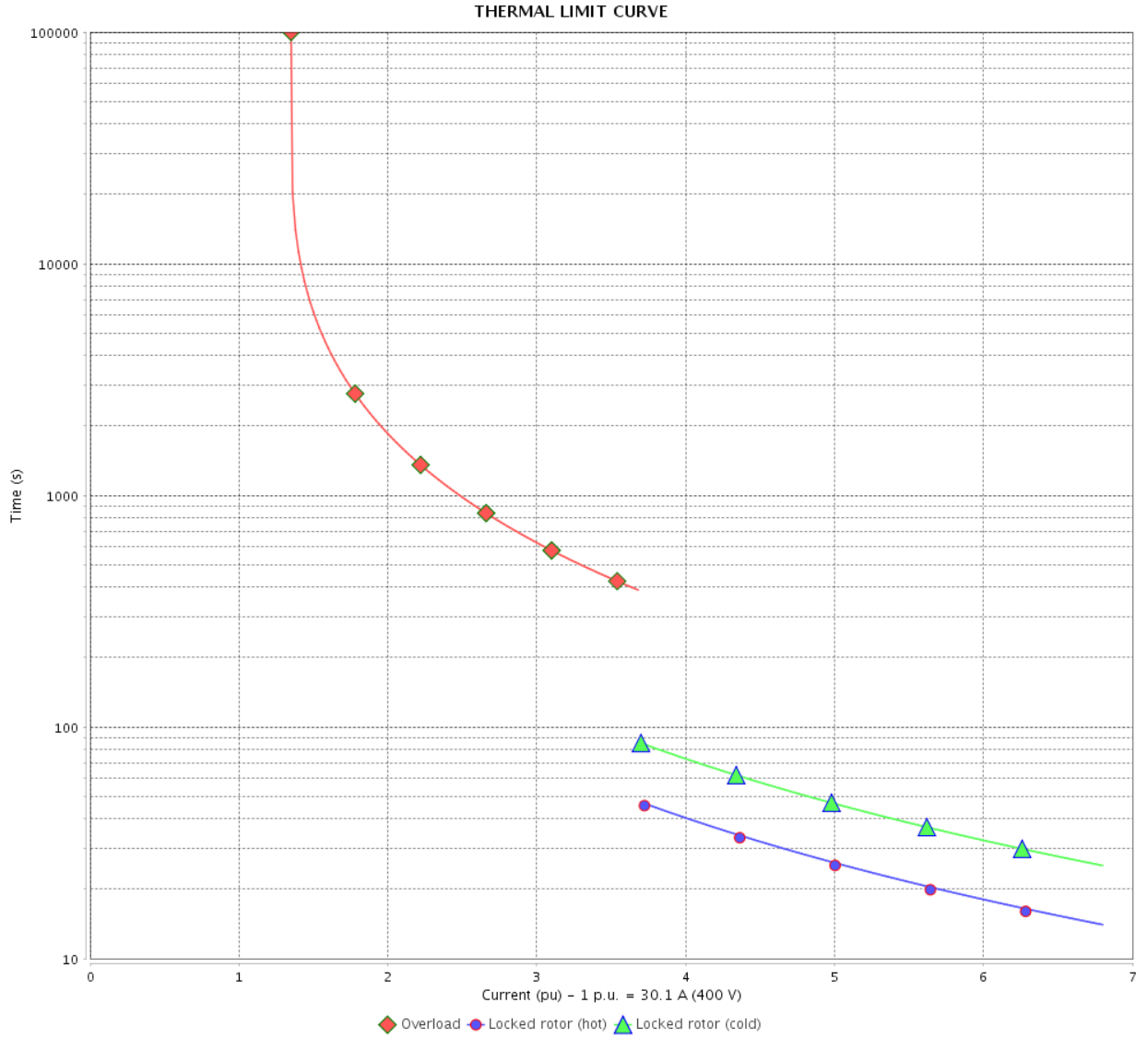
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		14 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40

Performance : 415 V 50 Hz 6P IE3

Rated current	: 29.7 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

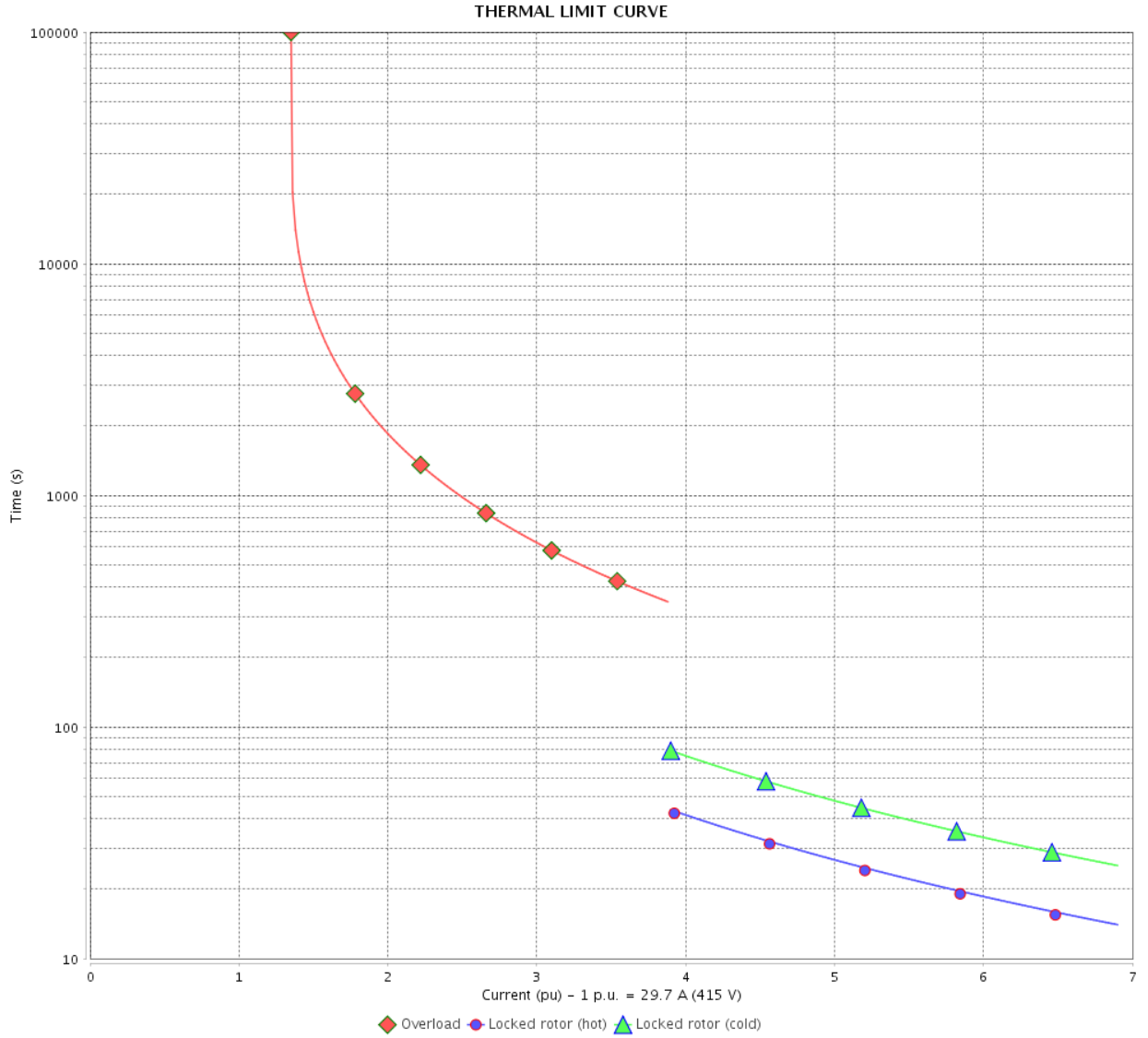
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 21	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

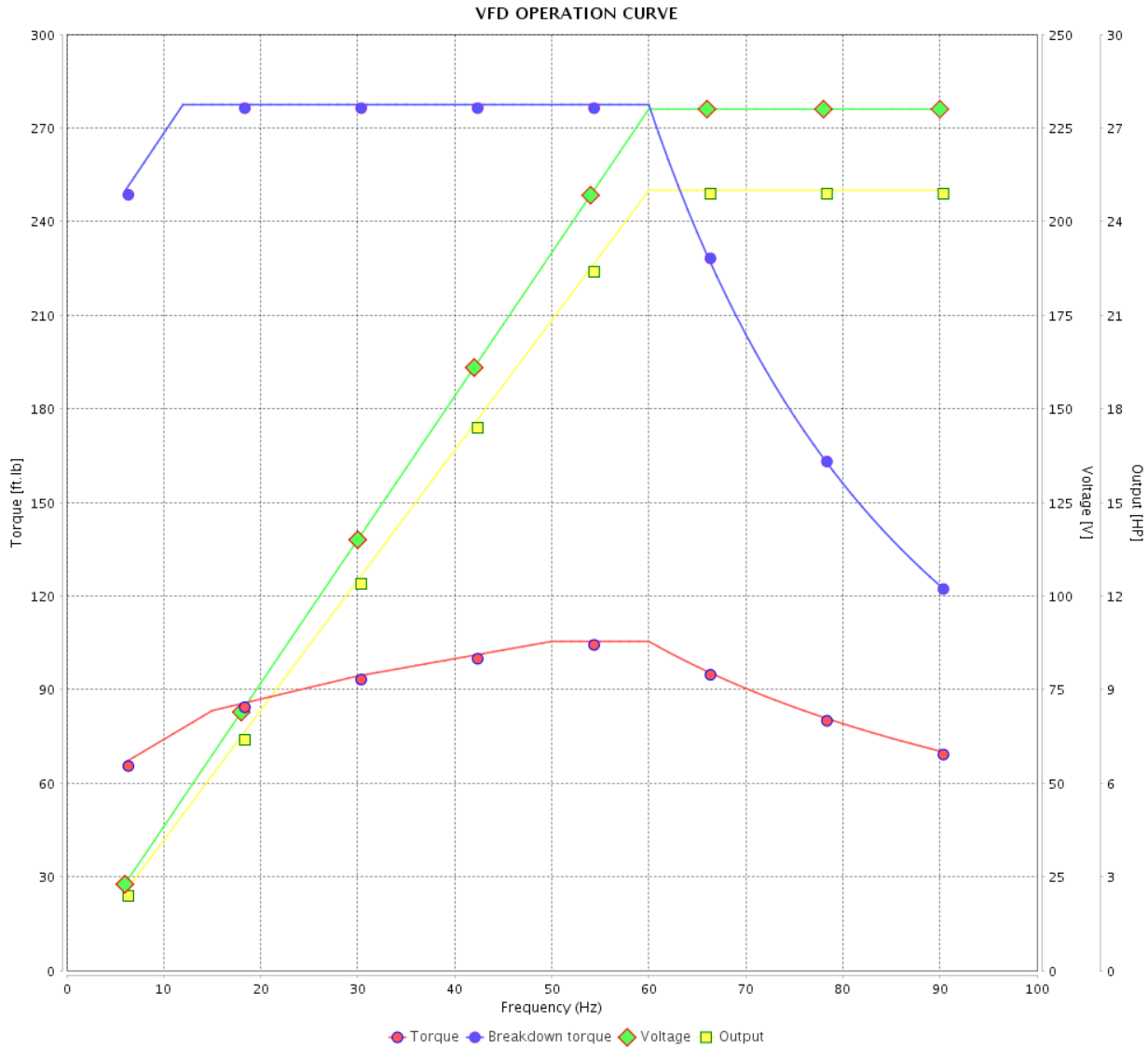


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 61.6/30.8 A
 LRC : 6.2
 Rated torque : 111 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 250 %
 Rated speed : 1183 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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

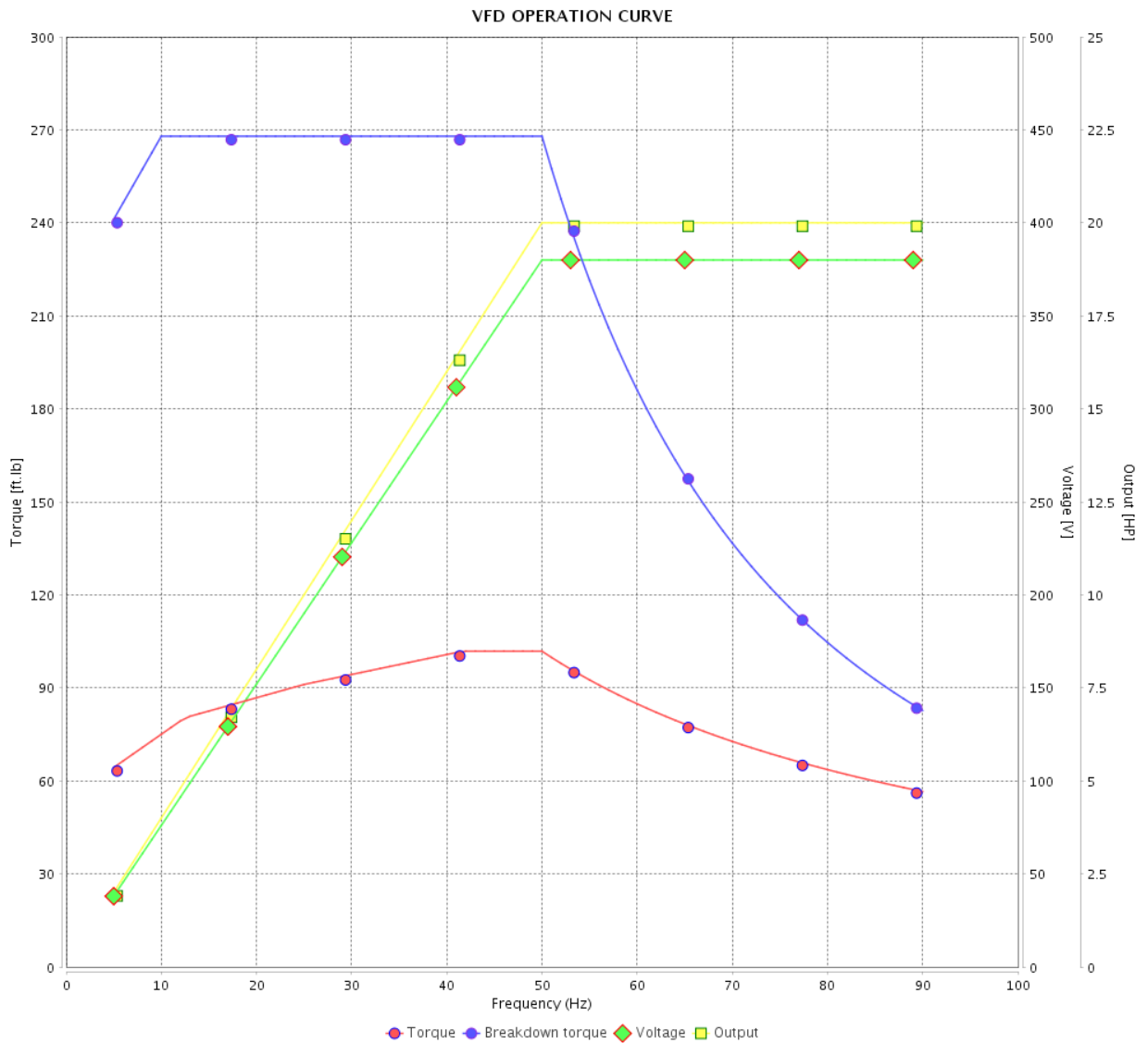


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 02512OT3E324TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 30.5 A
LRC : 6.6
Rated torque : 107 ft.lb
Locked rotor torque : 170 %
Breakdown torque : 250 %
Rated speed : 980 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
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

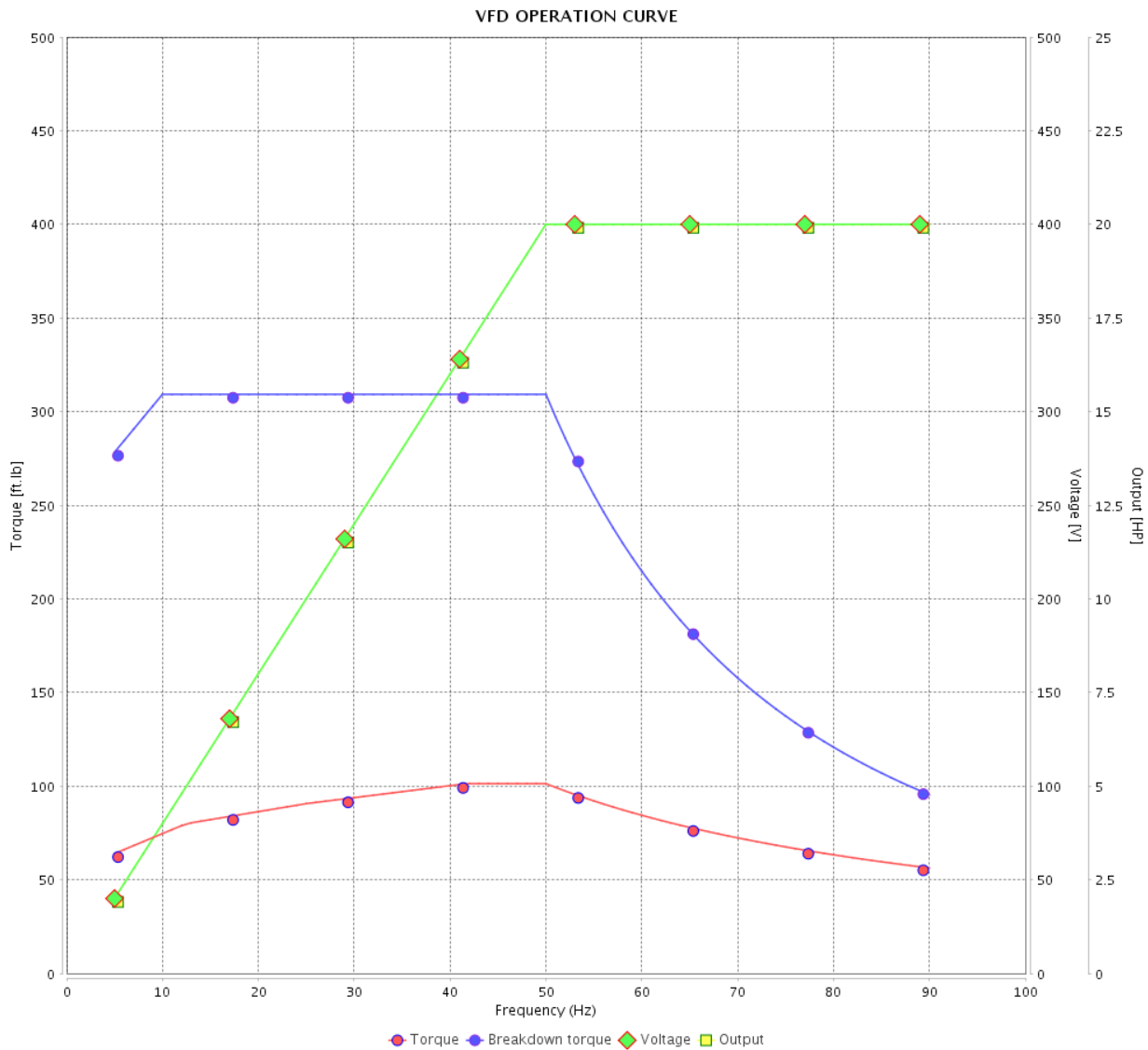


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40



Performance : 400 V 50 Hz 6P IE3

Rated current	: 30.1 A	Moment of inertia (J)	: 7.69 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 107 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

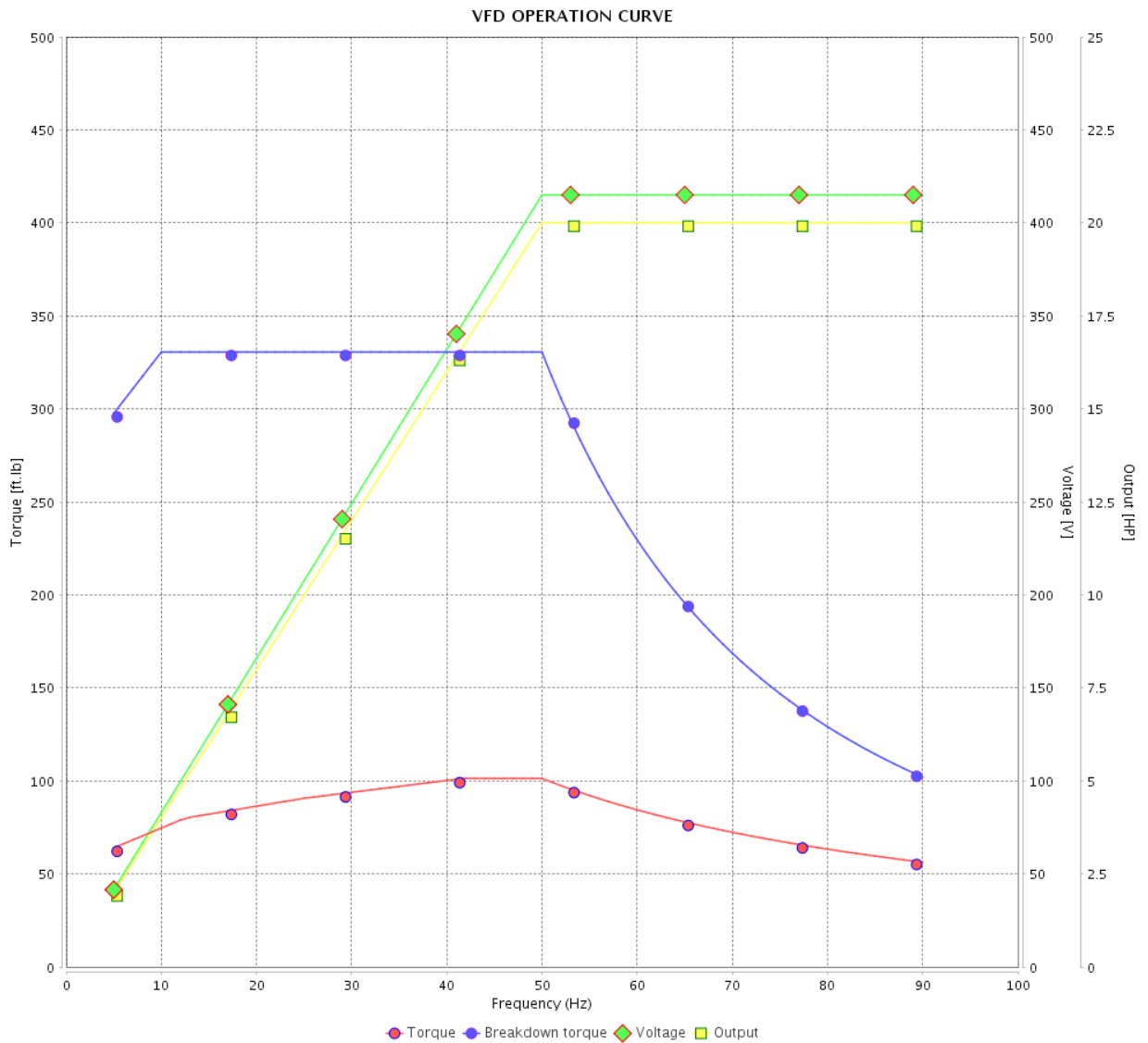


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14786494

Catalog # : 025120T3E324TC-W40

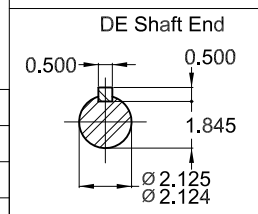
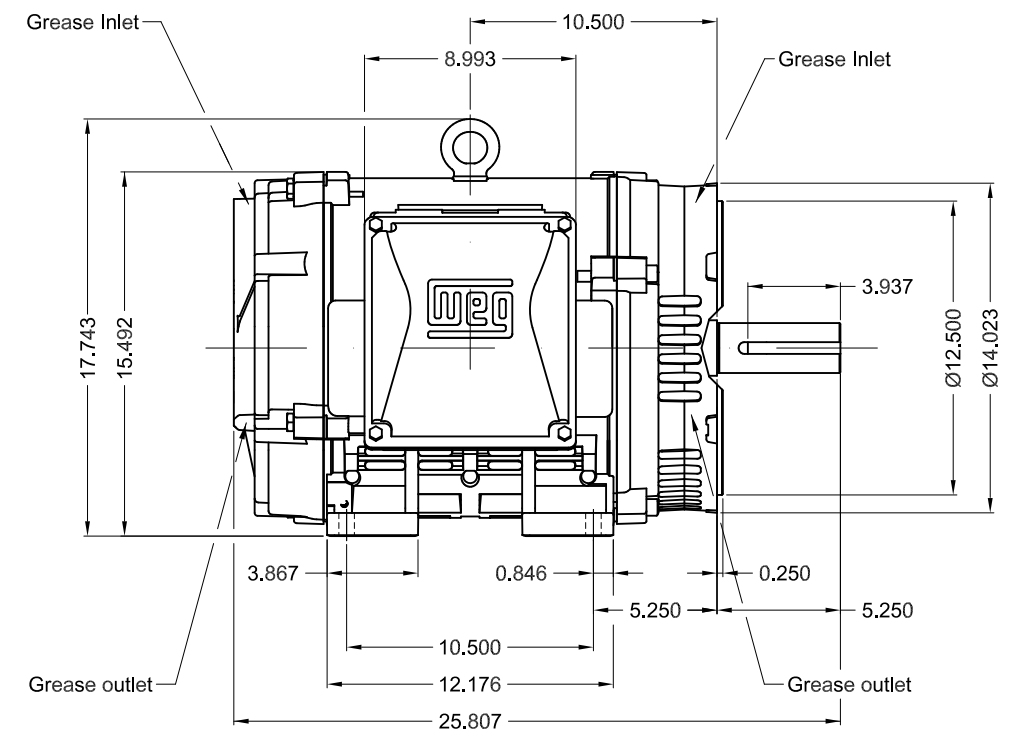
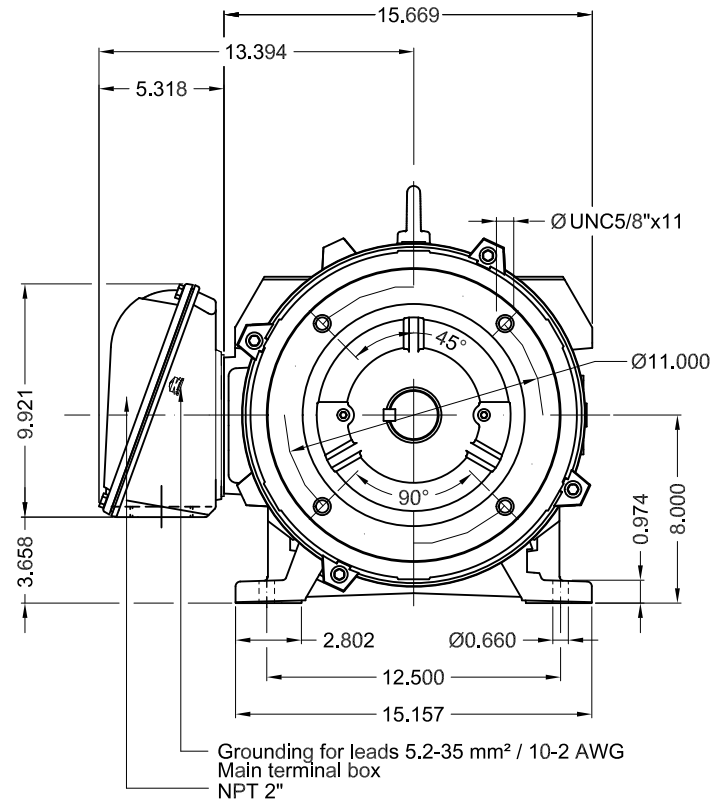


Performance : 415 V 50 Hz 6P IE3

Rated current : 29.7 A
 LRC : 6.9
 Rated torque : 107 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 310 %
 Rated speed : 985 rpm

Moment of inertia (J) : 7.69 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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



Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)

25 HP 06 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 324TC IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



WEG **W40 NEMA**
CC029A Premium
Inverter Duty Motor



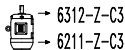
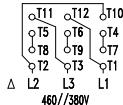
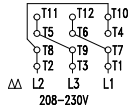
IEC 60034-1
 MOD.T01#FOXON



For 60Hz use on PWM, VT 1000:1, CT 3:1, 1.0SF

MODEL 025120T3E324TC-W40
 MADE IN BRAZIL
 14786494

PH 3	FR 324TC	HP(kW) 25.0(18.5)	Hz 60
V 230/460	A 61.6/30.8	RPM 1183	DES B
NEMA NOM EFF 93.0 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.81	SF 1.25	SFA 77.0/38.5
USABLE @208V	68.1 A	SF 1.15	SFA 78.3
20HP 15kW 50Hz 380V 30.5A 980RPM SF1.00 EFF 91.2% (IE3)			



→ 6312-Z-C3
 → 6211-Z-C3

MOBIL POLYREX EM
 21 g 20000 h

ALT 1000 m.a.s.l. 470 Lbs