

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14494127		
		Catalog # :	015120T3E284TC-W40		
Frame	: 284TC	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	: 323 lb		
Protection degree	: IP23	Moment of inertia (J)	: 4.80 sq.ft.lb		
Design	: B				
Output [HP]	15	10	10	10	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	36.8/18.4	15.8	15.4	15.4	
L. R. Amperes [A]	232/116	115	116	122	
LRC [A]	6.3x(Code G)	7.3x(Code J)	7.5x(Code K)	7.9x(Code K)	
No load current [A]	15.6/7.80	7.80	8.40	8.90	
Rated speed [RPM]	1180	980	985	985	
Slip [%]	1.67	2.00	1.50	1.50	
Rated torque [ft.lb]	66.8	53.6	53.3	53.3	
Locked rotor torque [%]	260	290	330	360	
Breakdown torque [%]	260	320	350	380	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	28s (cold) 16s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)	
Noise level ²	59.0 dB(A)				
Efficiency (%)	25%	90.8	88.3	88.4	88.4
	50%	91.0	88.6	88.6	88.6
	75%	91.7	89.0	89.0	89.0
	100%	91.7	89.1	89.1	89.1
Power Factor	25%	0.42	0.37	0.33	0.31
	50%	0.67	0.62	0.58	0.55
	75%	0.77	0.75	0.71	0.68
	100%	0.82	0.81	0.79	0.76
Bearing type	: <u>Drive end</u> 6311 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	: 18 g	11 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 40.7A SF 1.15 SFA 46.8A					
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



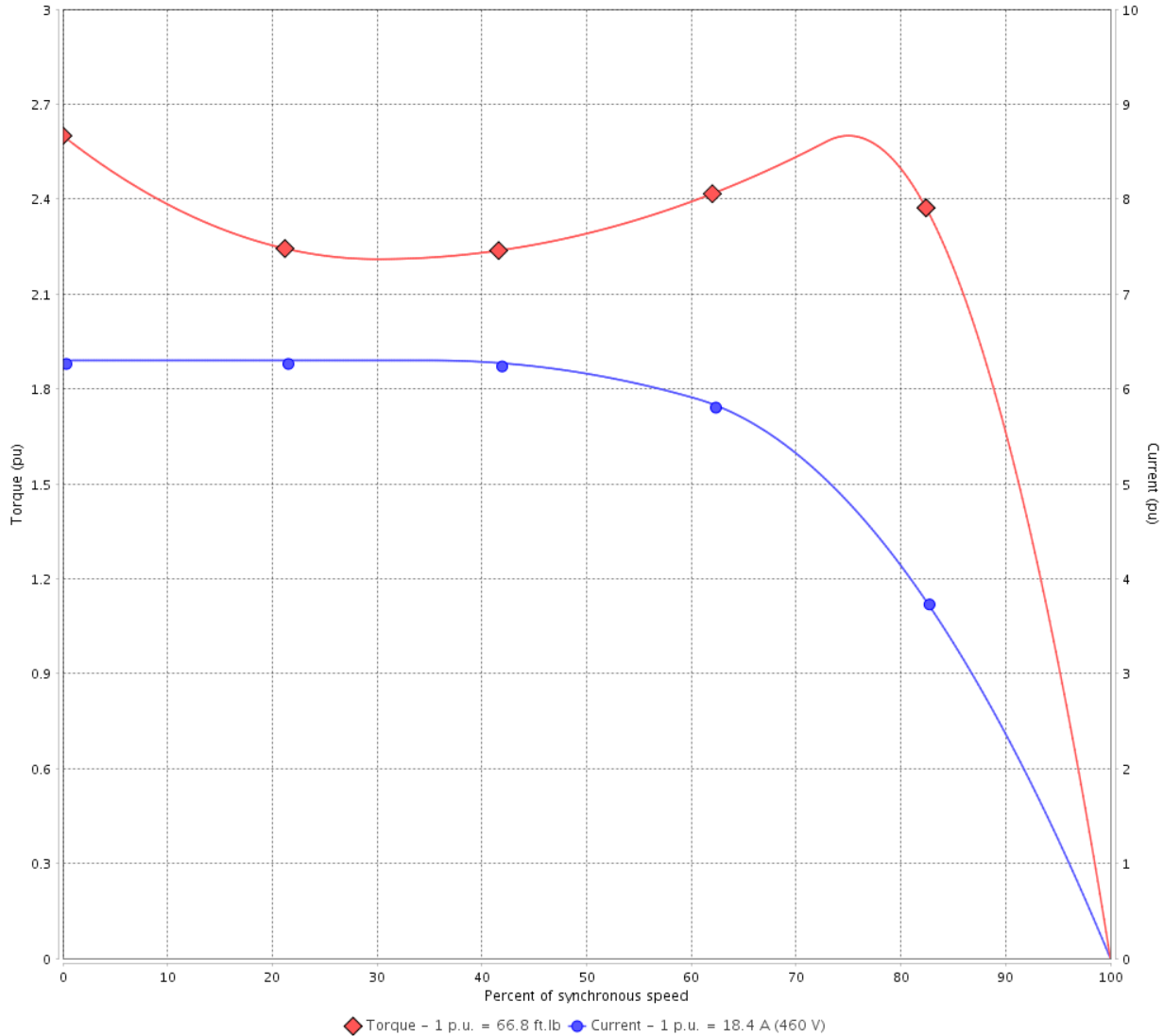
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14494127

Catalog # : 015120T3E284TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 36.8/18.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 66.8 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1180 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (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



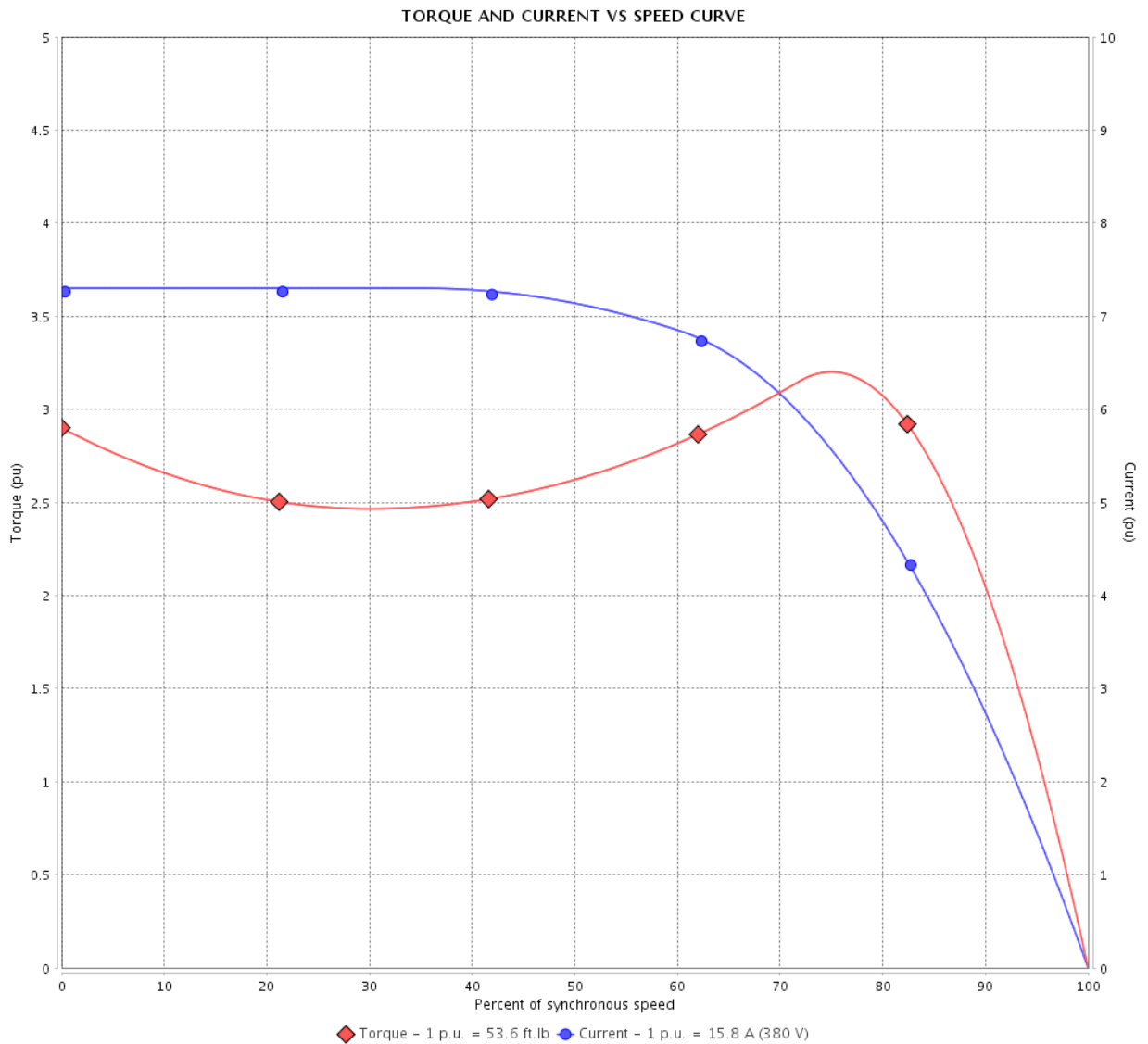
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14494127

Catalog # : 01512OT3E284TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 15.8 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 53.6 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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



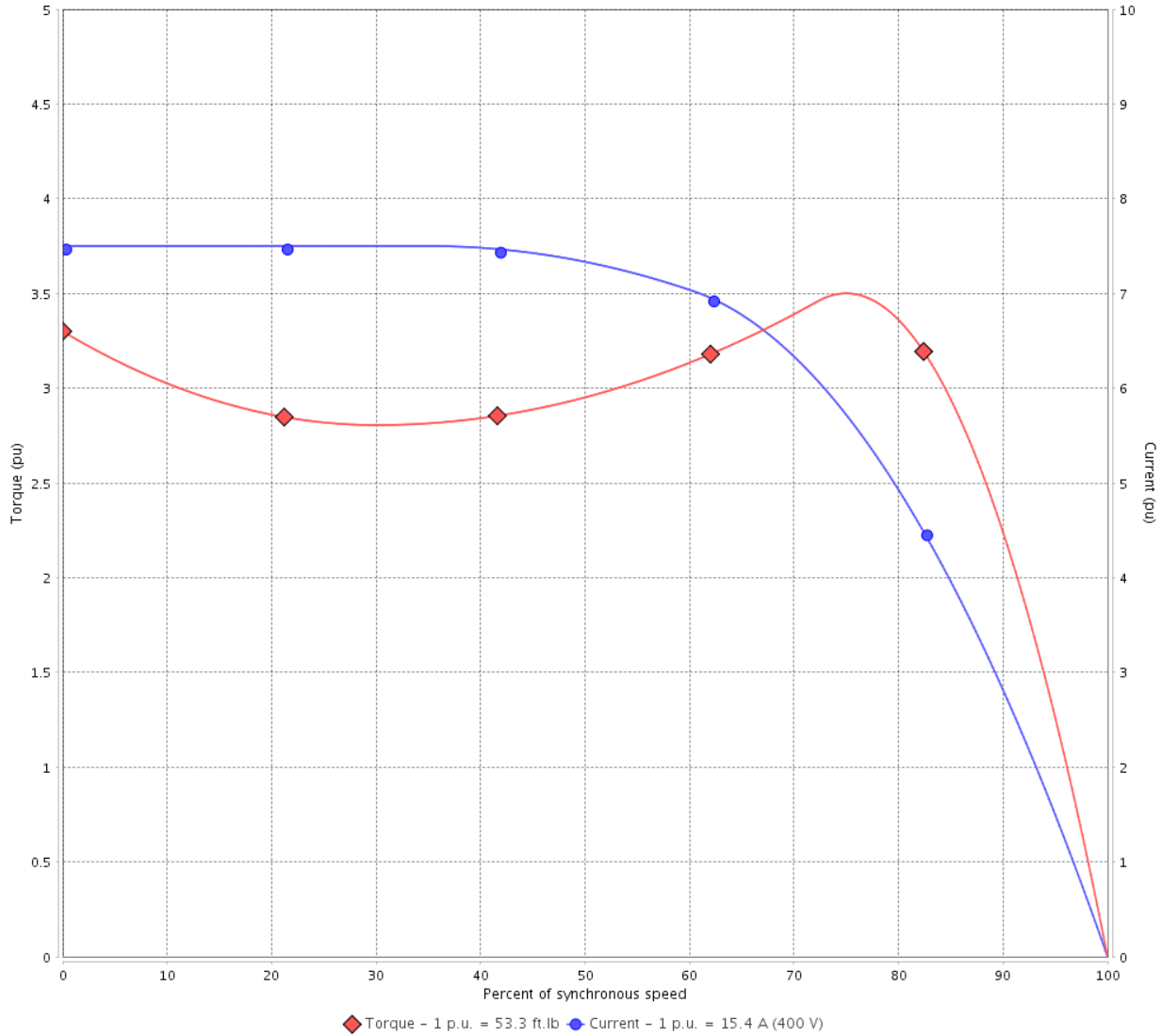
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14494127

Catalog # : 015120T3E284TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 15.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 985 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	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



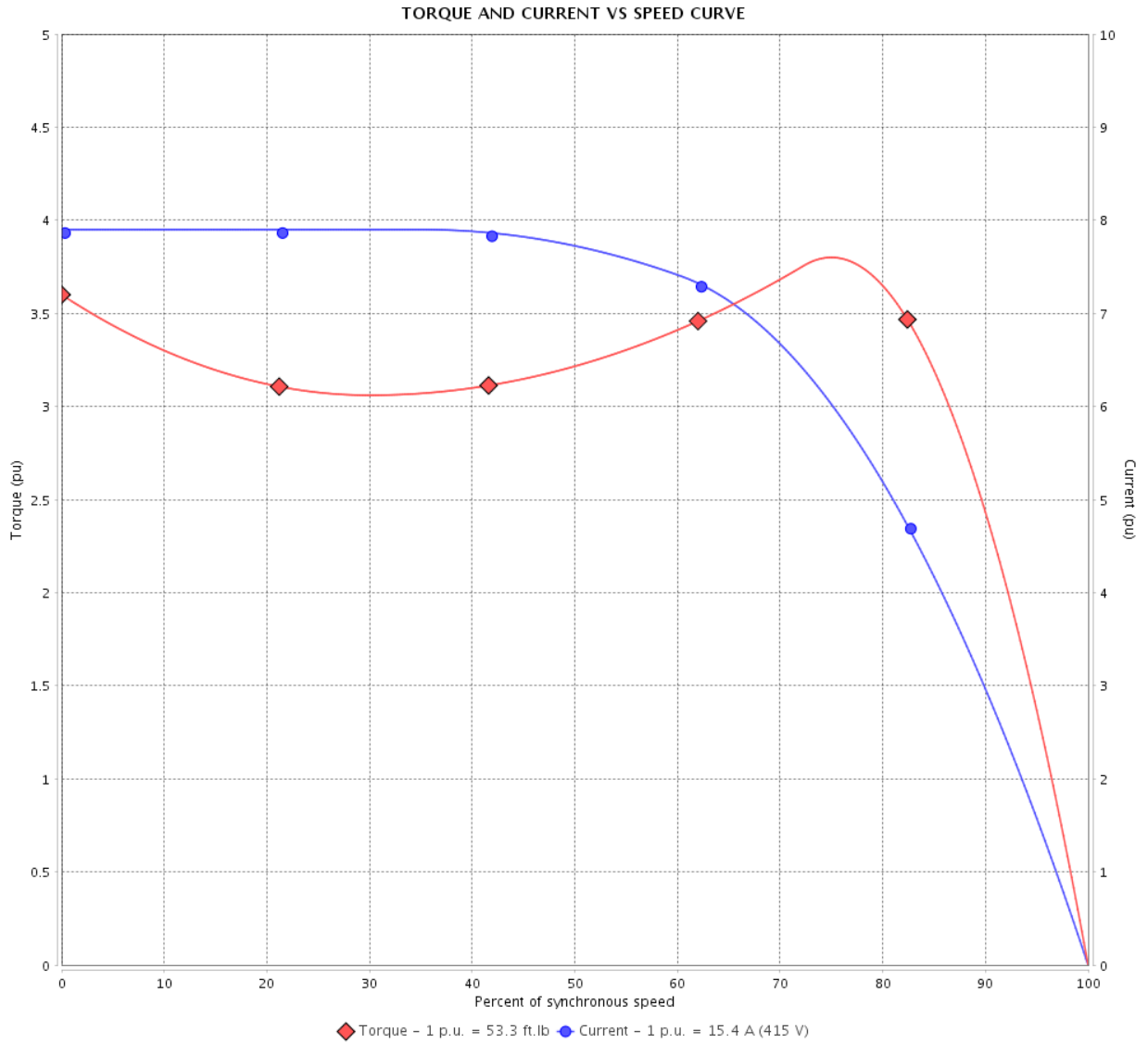
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14494127

Catalog # : 015120T3E284TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 15.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (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



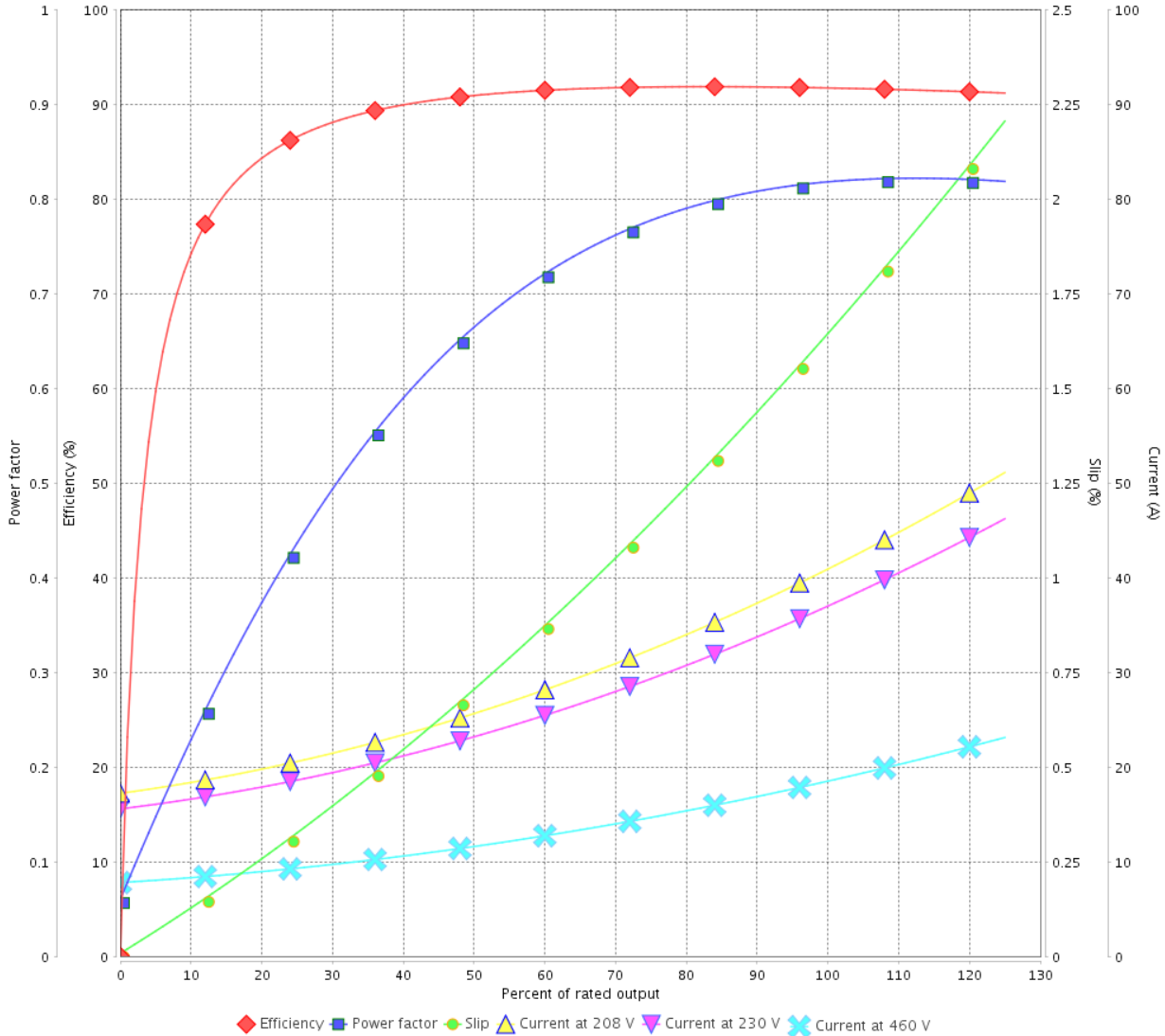
Customer :

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LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 36.8/18.4 A
 LRC : 6.3
 Rated torque : 66.8 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 4.80 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 6 / 21	Revision
Checked by				
Date	13/04/2022			

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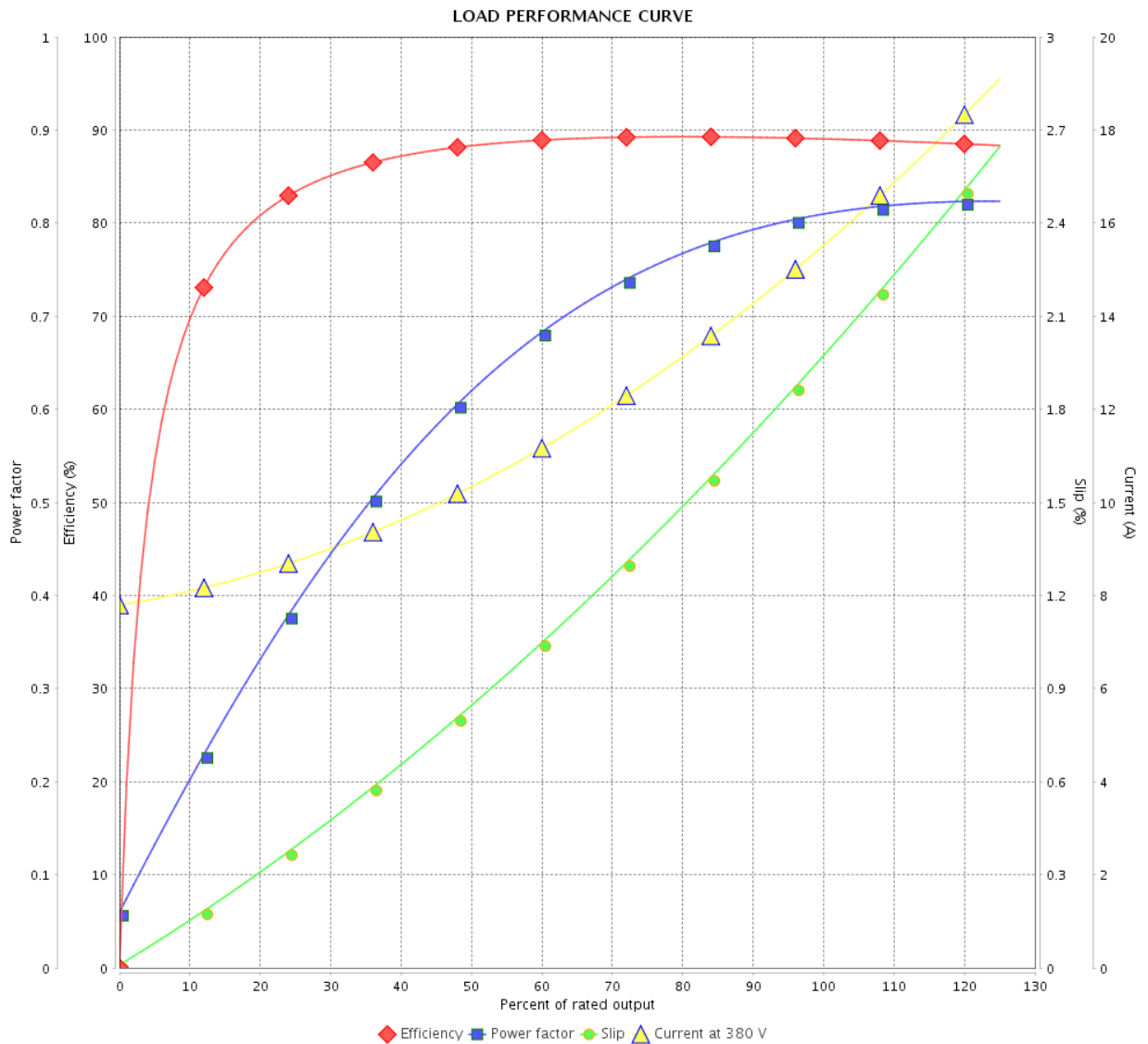


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Product code : 14494127

Catalog # : 015120T3E284TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.8 A
 LRC : 7.3
 Rated torque : 53.6 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 320 %
 Rated speed : 980 rpm

Moment of inertia (J) : 4.80 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				
		Page	Revision	
		7 / 21		

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Three Phase Induction Motor - Squirrel Cage



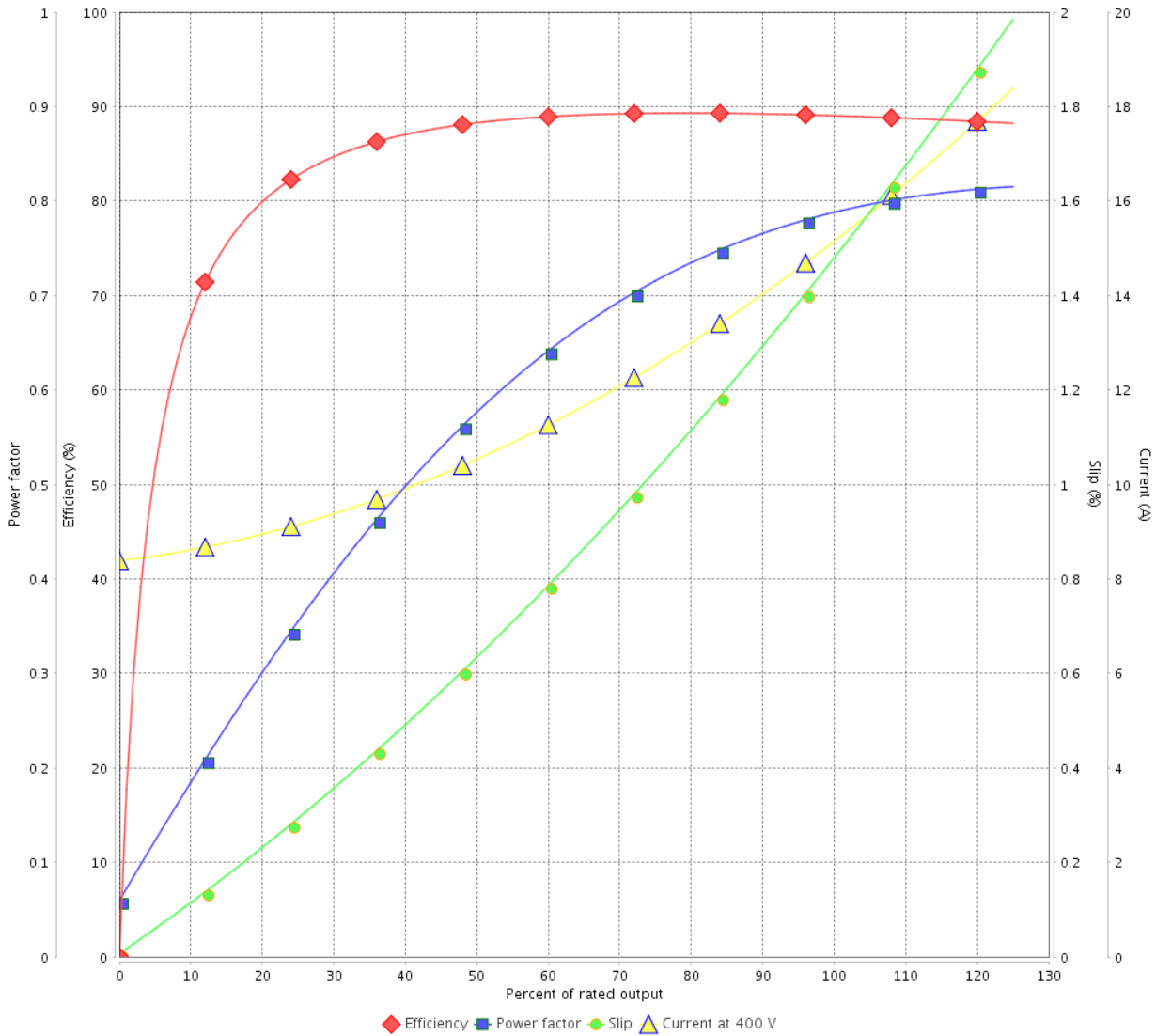
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 15.4 A
 LRC : 7.5
 Rated torque : 53.3 ft.lb
 Locked rotor torque : 330 %
 Breakdown torque : 350 %
 Rated speed : 985 rpm

Moment of inertia (J) : 4.80 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

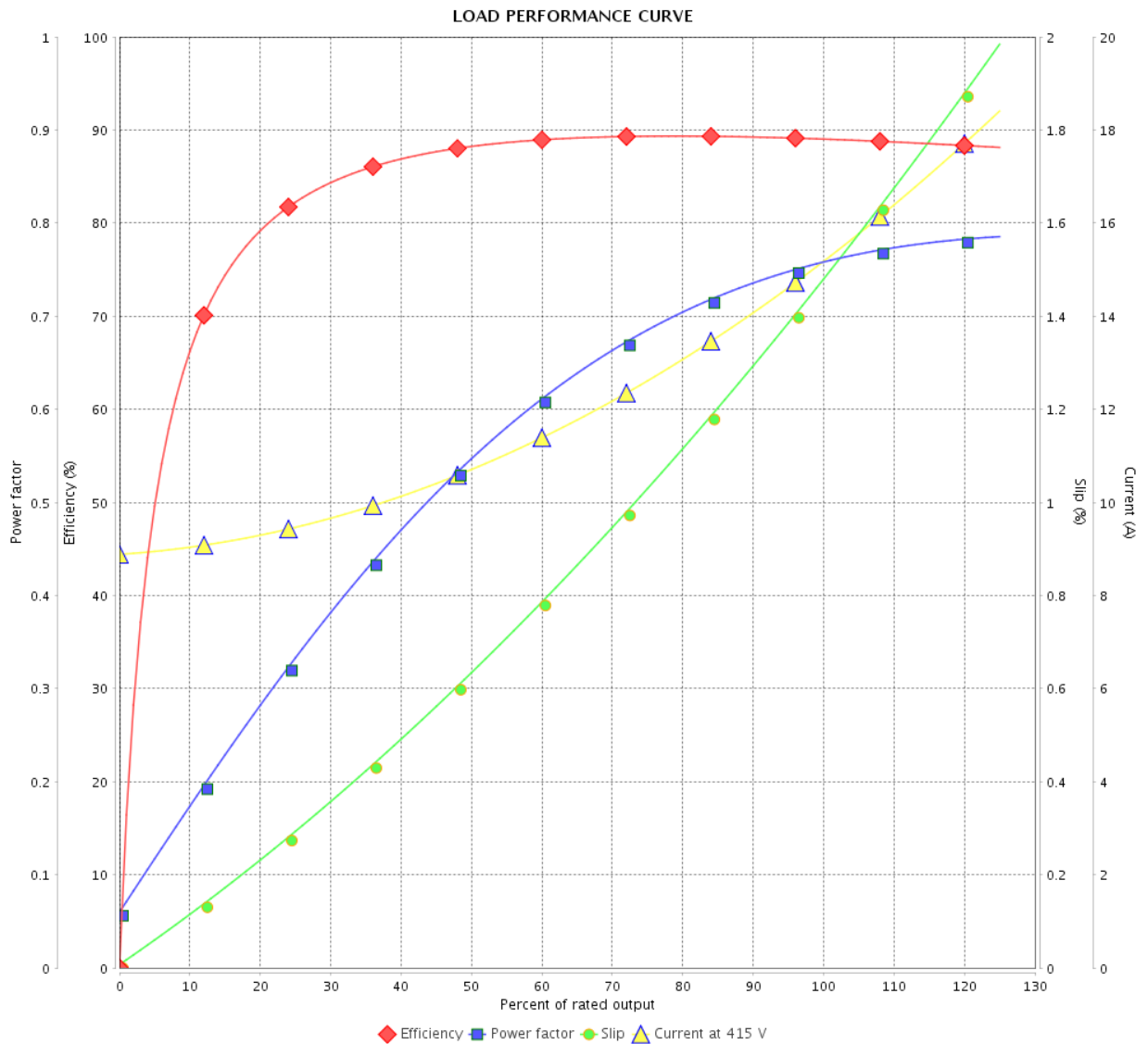


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 Locked rotor torque : 360 %
 Breakdown torque : 380 %
 Rated speed : 985 rpm

Moment of inertia (J) : 4.80 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			9 / 21	
Date	13/04/2022			

THERMAL LIMIT CURVE



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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

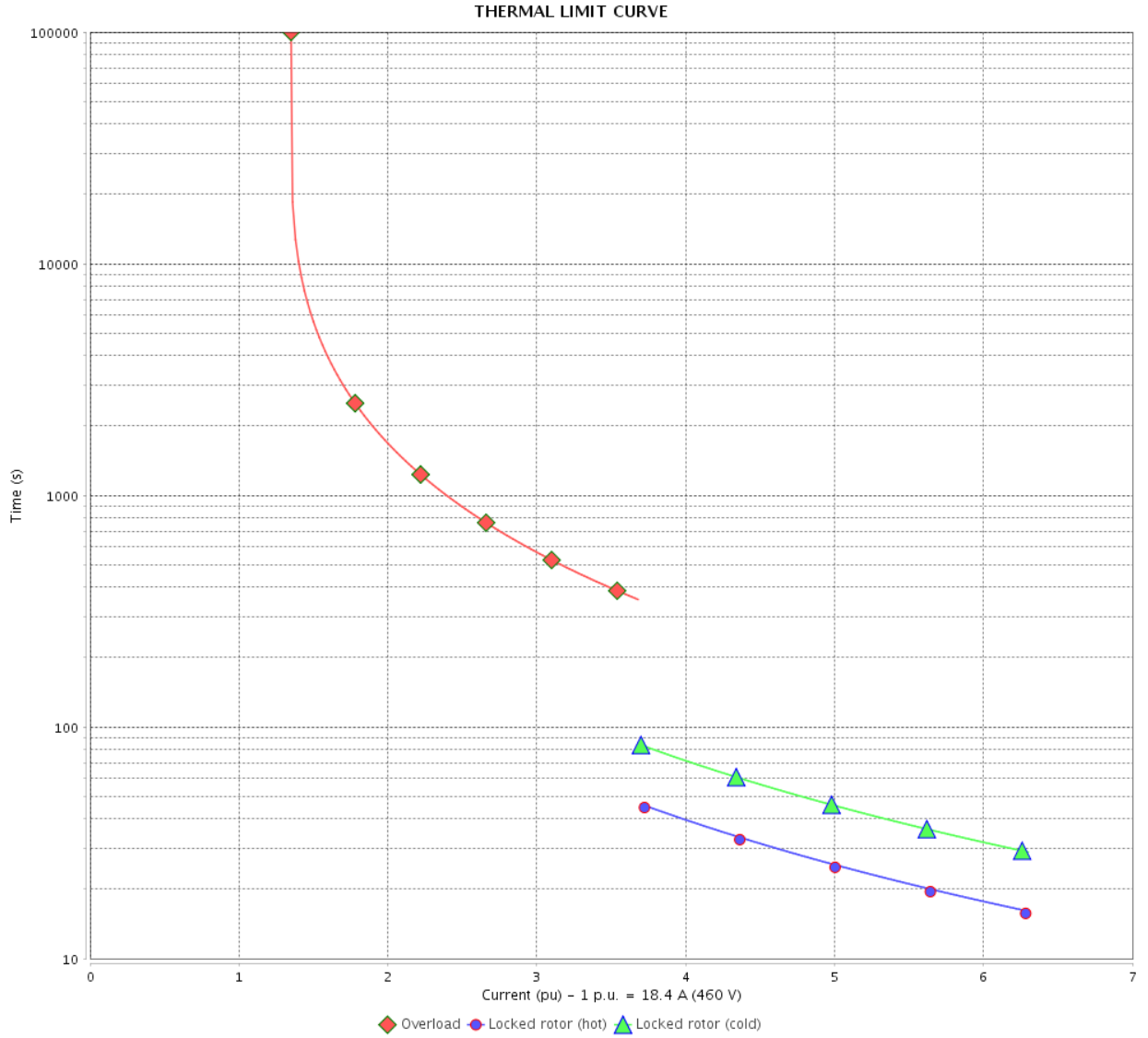
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		10 / 21	

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

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Performance : 380 V 50 Hz 6P IE3

Rated current : 15.8 A
LRC : 7.3
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Breakdown torque : 320 %
Rated speed : 980 rpm

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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

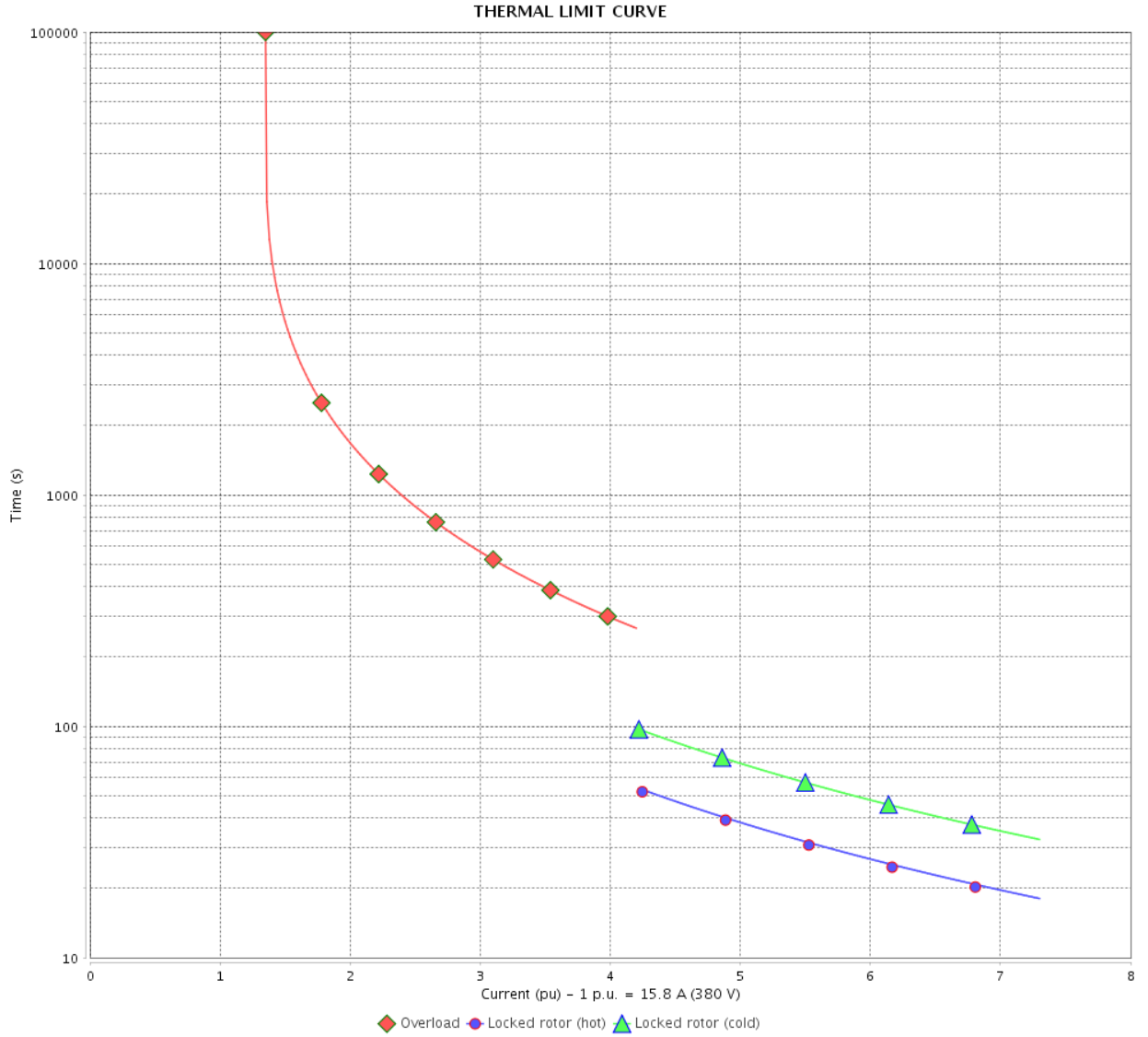
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 21	

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by				
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LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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Cooling constant

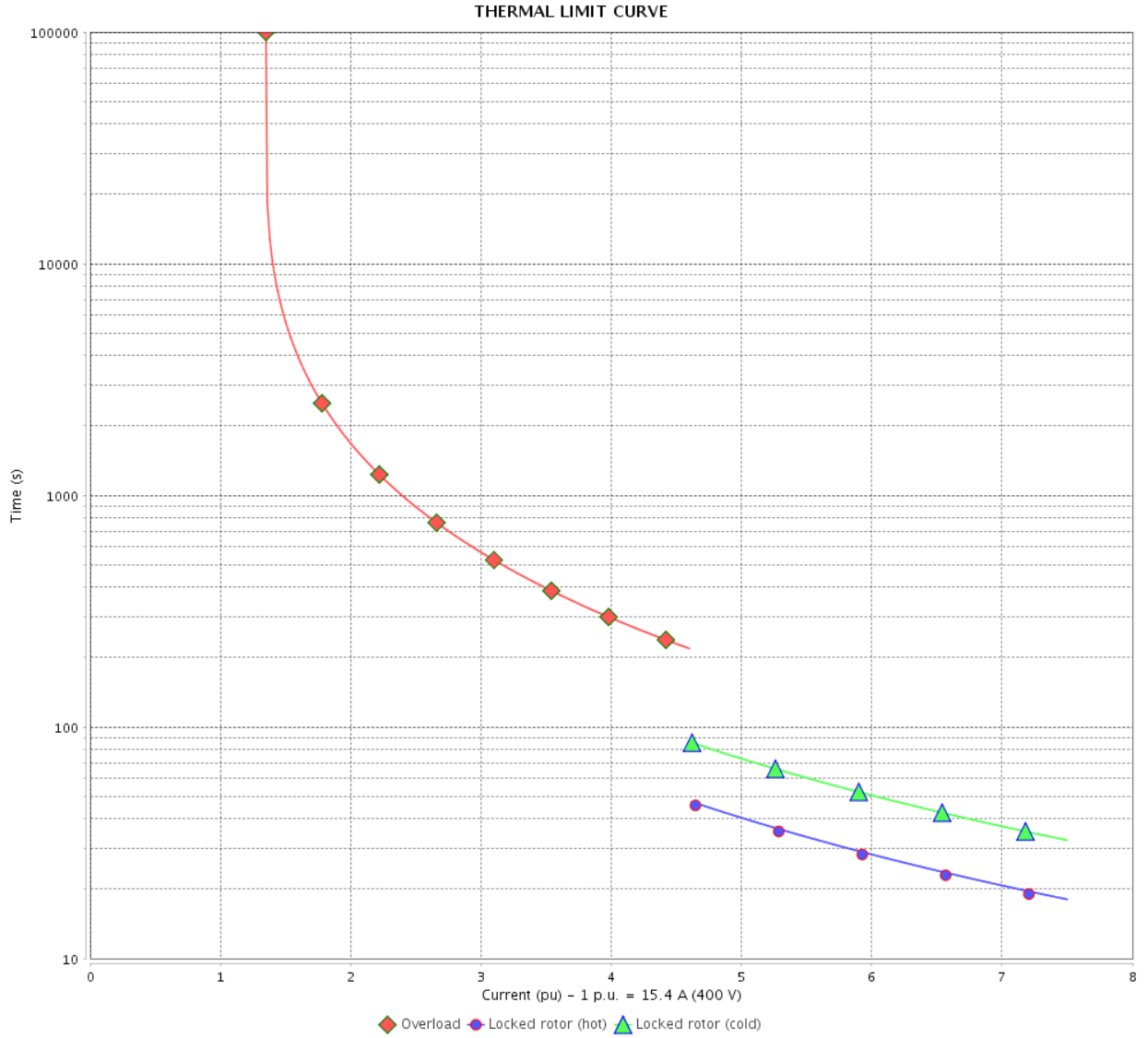
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Date	13/04/2022		14 / 21	

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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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



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Customer :

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Three-Phase

Product code : 14494127

Catalog # : 015120T3E284TC-W40

Performance : 415 V 50 Hz 6P IE3

Rated current	: 15.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

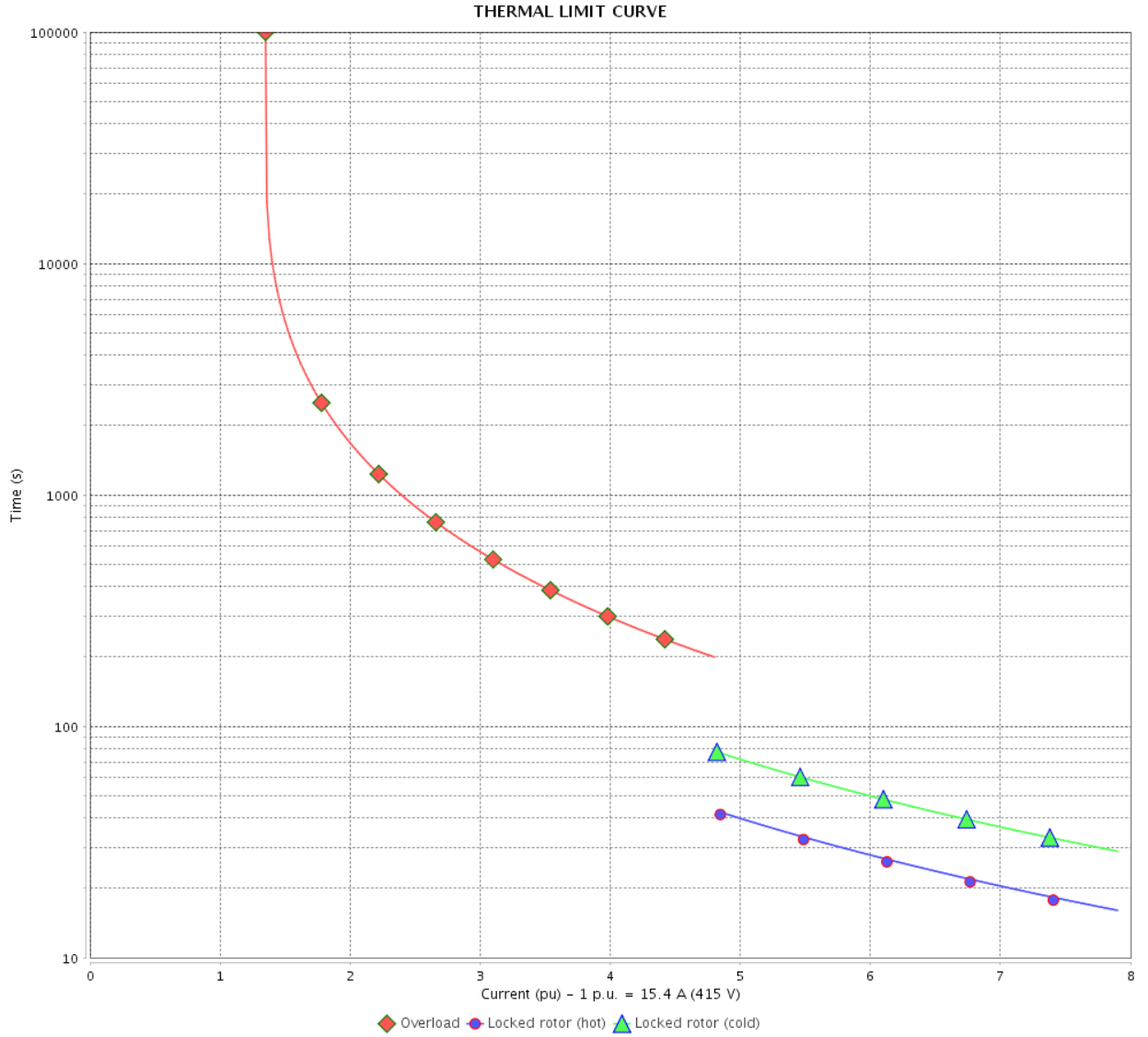
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Performed by				
Checked by			Page	Revision
Date	13/04/2022		16 / 21	

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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				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



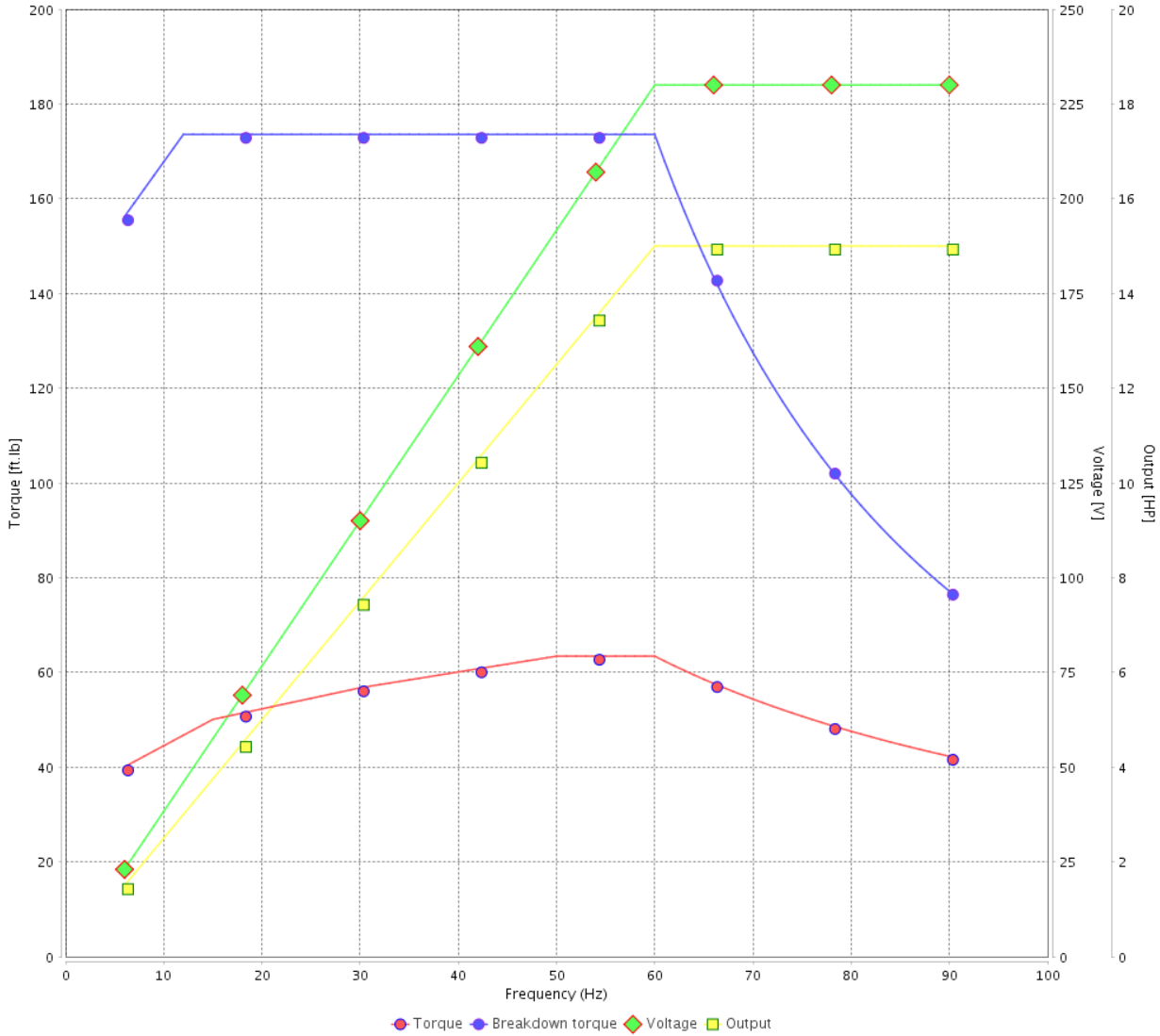
Customer :

Product line : W40 NEMA Premium Efficiency
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Catalog # : 015120T3E284TC-W40

VFD OPERATION CURVE



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Rated current : 36.8/18.4 A
LRC : 6.3
Rated torque : 66.8 ft.lb
Locked rotor torque : 260 %
Breakdown torque : 260 %
Rated speed : 1180 rpm

Moment of inertia (J) : 4.80 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

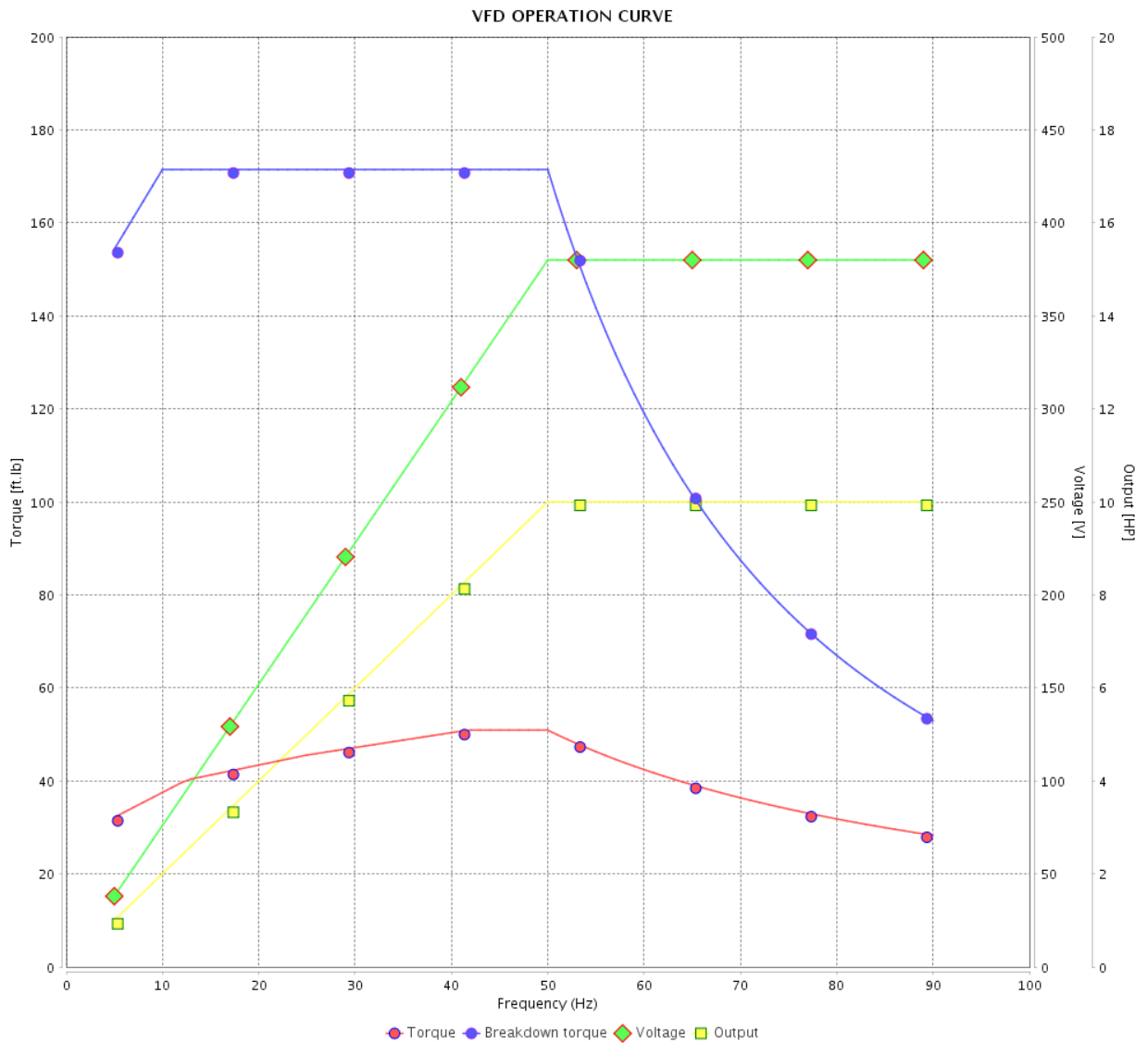


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14494127

Catalog # : 015120T3E284TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.8 A
 LRC : 7.3
 Rated torque : 53.6 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 320 %
 Rated speed : 980 rpm

Moment of inertia (J) : 4.80 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 19 / 21
Checked by				
Date	13/04/2022			
				Revision

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

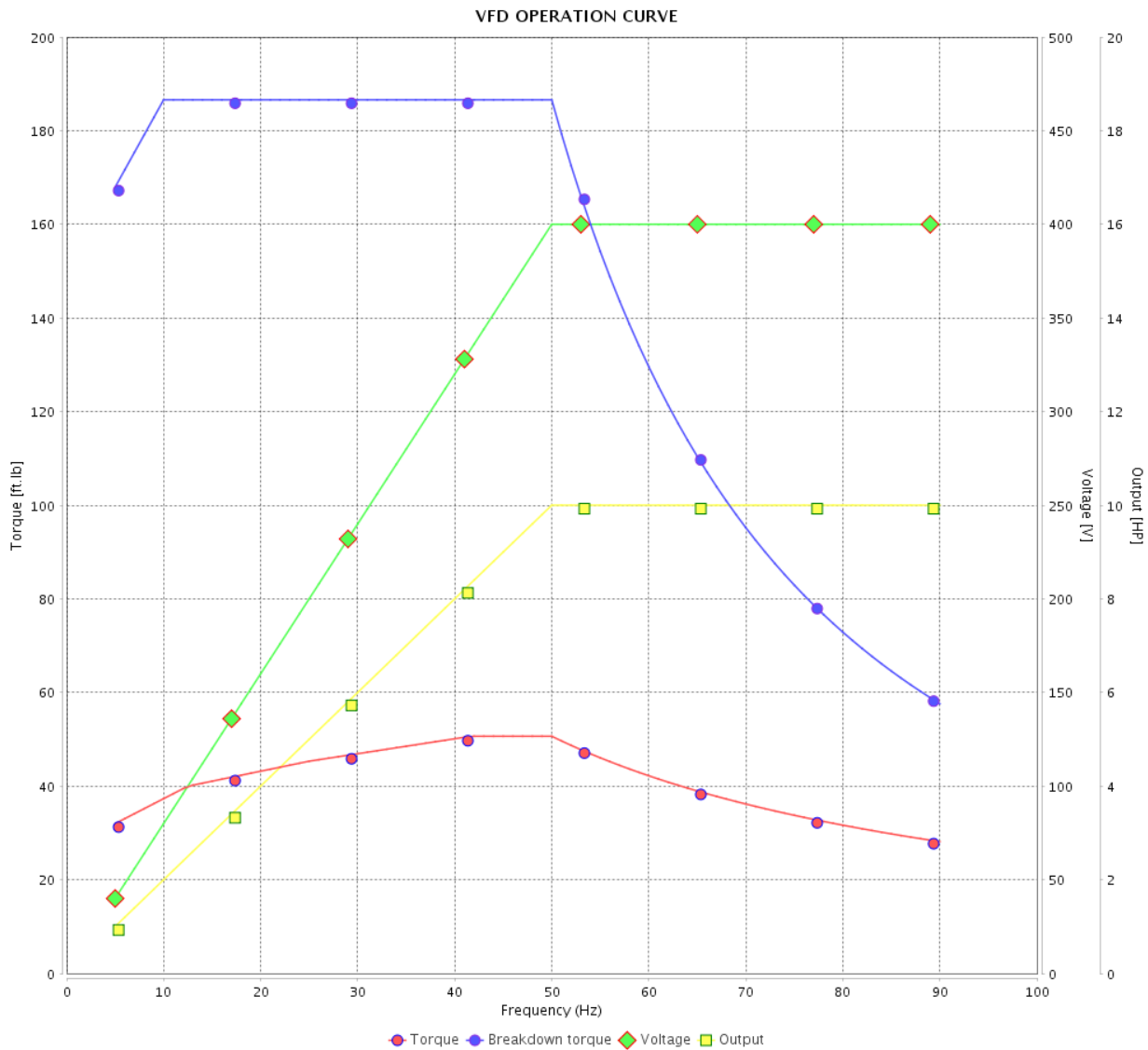


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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

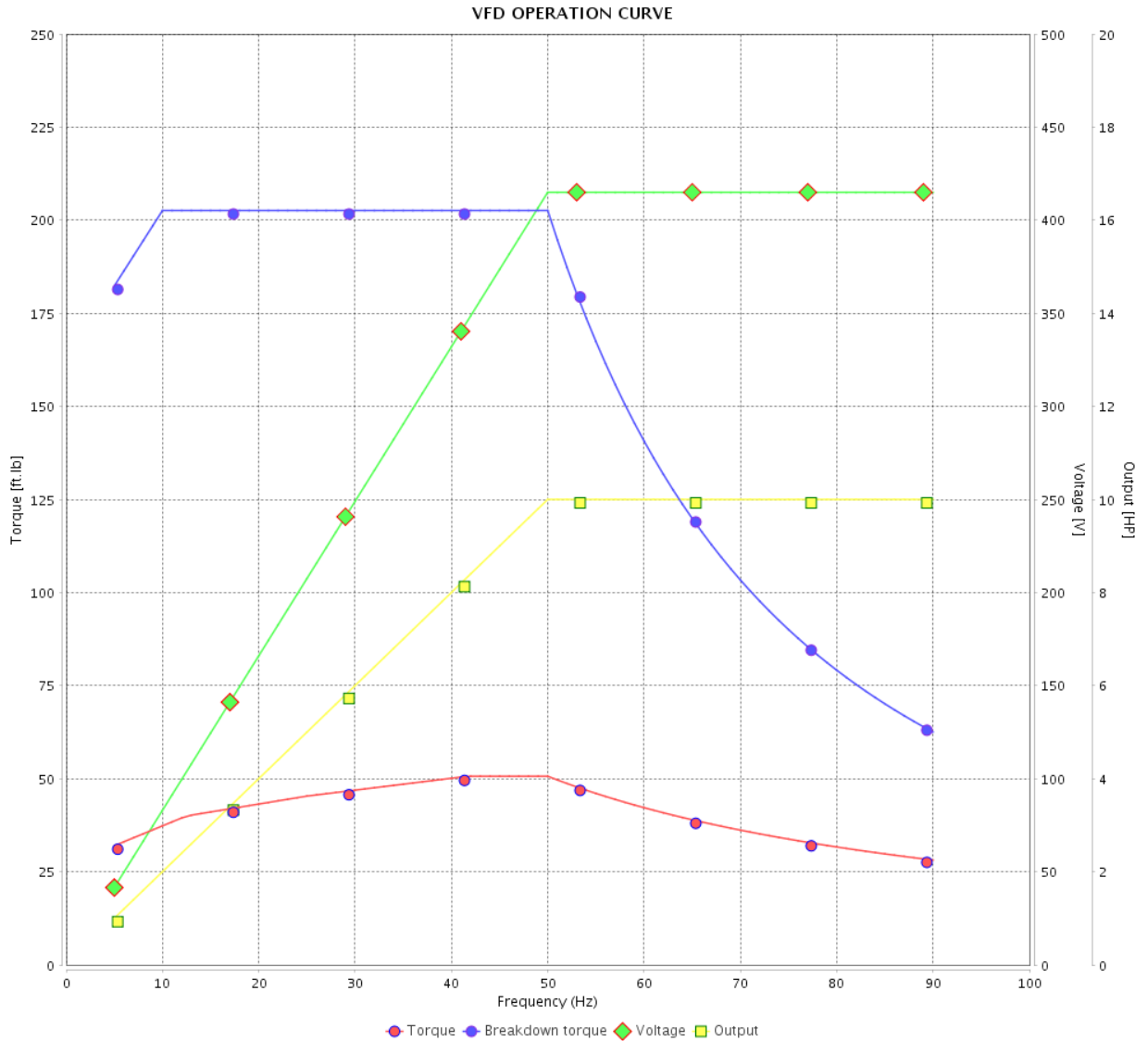


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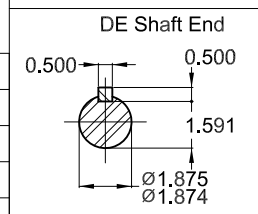
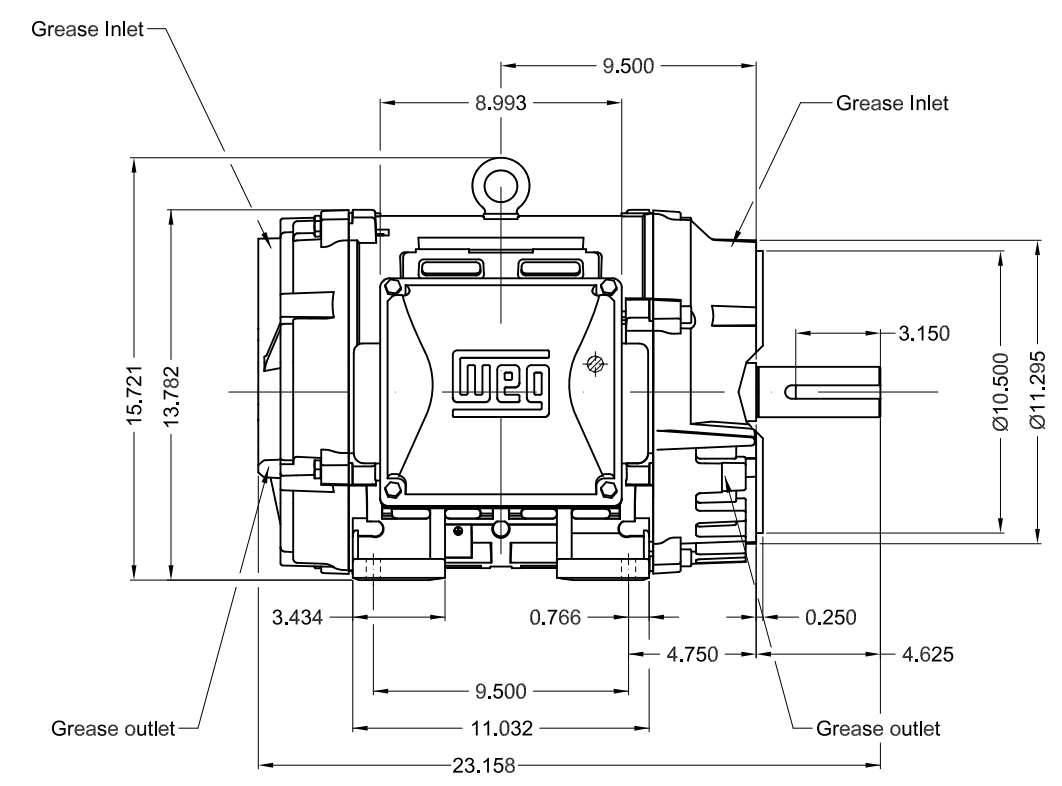
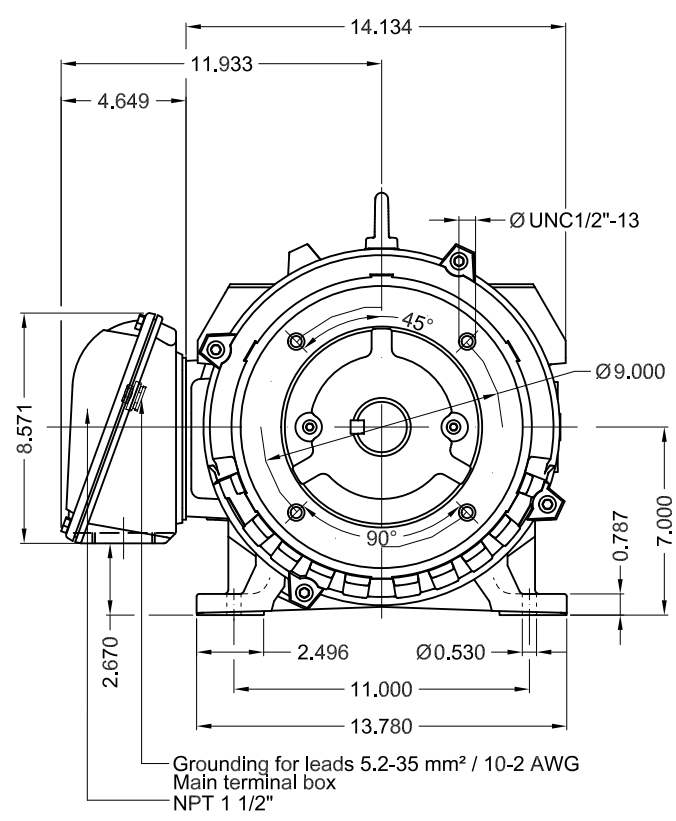


Performance : 415 V 50 Hz 6P IE3

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 Rated torque : 53.3 ft.lb
 Locked rotor torque : 360 %
 Breakdown torque : 380 %
 Rated speed : 985 rpm

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 Service factor : 1.00
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Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 21 / 21
Checked by				
Date	13/04/2022			



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

15 HP 06 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 284TC IP23 ODP					
RELEASED							
REL DT.		WMO Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



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



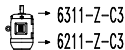
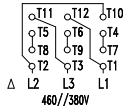
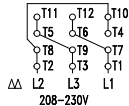
IEC 60034-1
 MOD.T01#FOXON



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

MODEL 015120T3E284TC-W40
 MADE IN BRAZIL
 14494127

PH 3	FR 284TC	HP(kW) 15.0(11.0)	Hz 60
V 230/460	A 36.8/18.4	RPM 1180	DES B
NEMA NOM EFF 91.7 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.82	SF 1.25	SFA 46.0/23.0
USABLE @208V	40.7 A	SF 1.15	SFA 46.8
10HP 7.5kW 50Hz 380V 15.8A 980RPM SF1.00 EFF 89.1% (IE3)	ALT 1000 m.a.s.l.		



MOBIL POLYREX EM
 18 g 20000 h

ALT 1000 m.a.s.l. 324 Lbs