

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	14443177		
		Catalog # :	02536XT3E284TS		
Frame	: 284TS	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	: 463 lb		
Protection degree	: IP55	Moment of inertia (J)	: 2.58 sq.ft.lb		
Design	: B				
Output [HP]	25	25	25	25	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	57.2/28.6	34.7	33.1	31.7	
L. R. Amperes [A]	383/192	184	195	276	
LRC [A]	6.7x(Code G)	5.3x(Code E)	5.9x(Code F)	8.7x(Code J)	
No load current [A]	13.0/6.50	6.00	6.50	7.00	
Rated speed [RPM]	3545	2920	2930	2940	
Slip [%]	1.53	2.67	2.33	2.00	
Rated torque [ft.lb]	37.0	45.0	44.8	44.7	
Locked rotor torque [%]	240	180	210	229	
Breakdown torque [%]	240	180	200	220	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	104s (cold) 58s (hot)	57s (cold) 32s (hot)	59s (cold) 33s (hot)	59s (cold) 33s (hot)	
Noise level ²	75.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)	
Efficiency (%)	25%	91.5	92.1	91.5	90.9
	50%	91.7	91.7	91.7	91.7
	75%	92.4	91.7	91.7	91.7
	100%	92.4	91.0	91.7	92.4
Power Factor	25%	0.57	0.64	0.61	0.57
	50%	0.78	0.82	0.80	0.77
	75%	0.85	0.87	0.86	0.85
	100%	0.88	0.89	0.88	0.88
Bearing type	: <u>Drive end</u> 6311 C3 <u>Non drive end</u> 6211 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 197 lb		
Lubrication interval	: 11517 h 14226 h	Max. compression	: 660 lb		
Lubricant amount	: 18 g 11 g				
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 62.8A SF 1.10 SFA 69.0A					
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 / 22		

DATA SHEET

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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	14/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



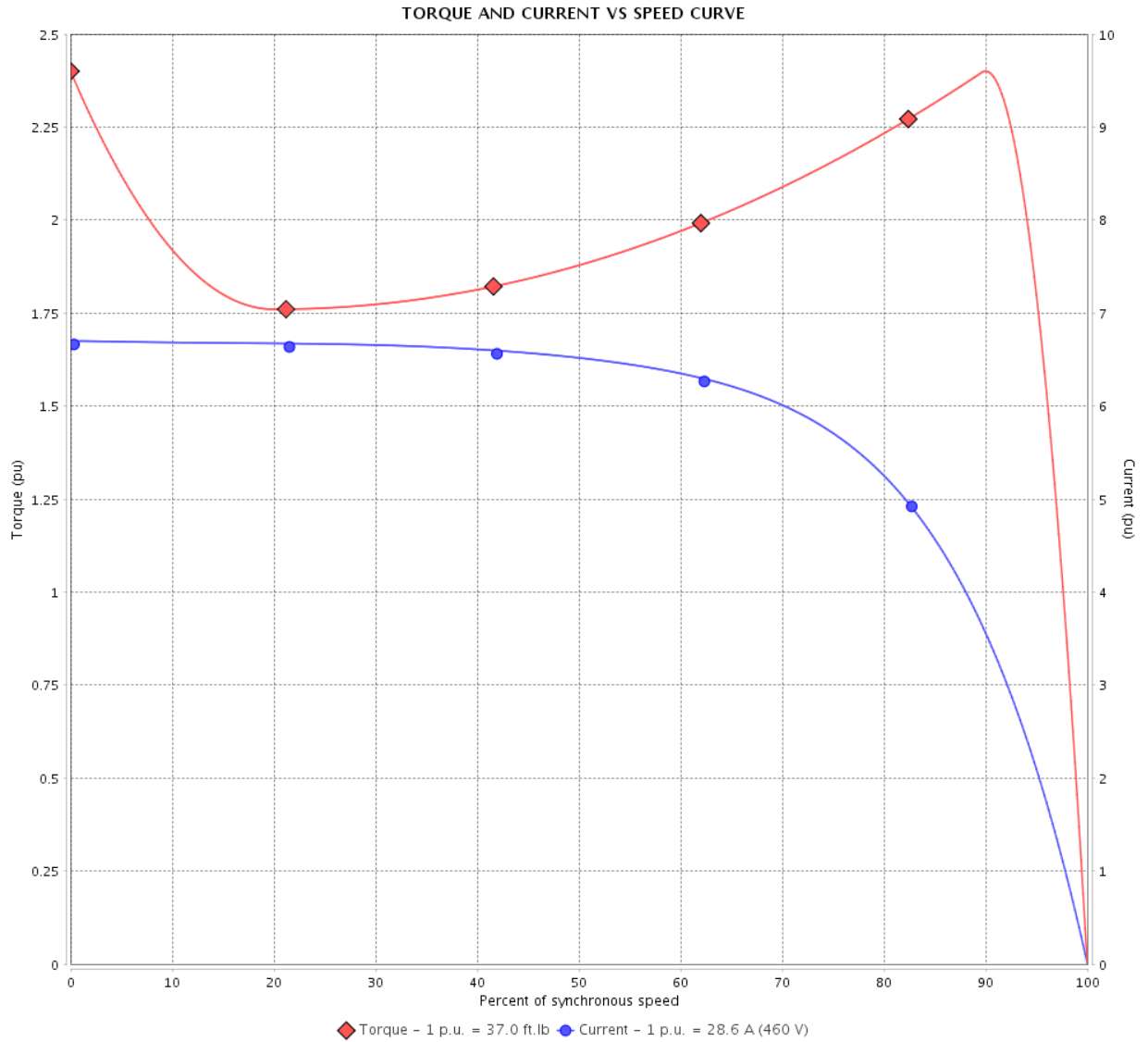
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS



Performance : 230/460 V 60 Hz 2P

Rated current : 57.2/28.6 A
 LRC : 6.7
 Rated torque : 37.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 2.58 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 104s (cold) 58s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 22	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



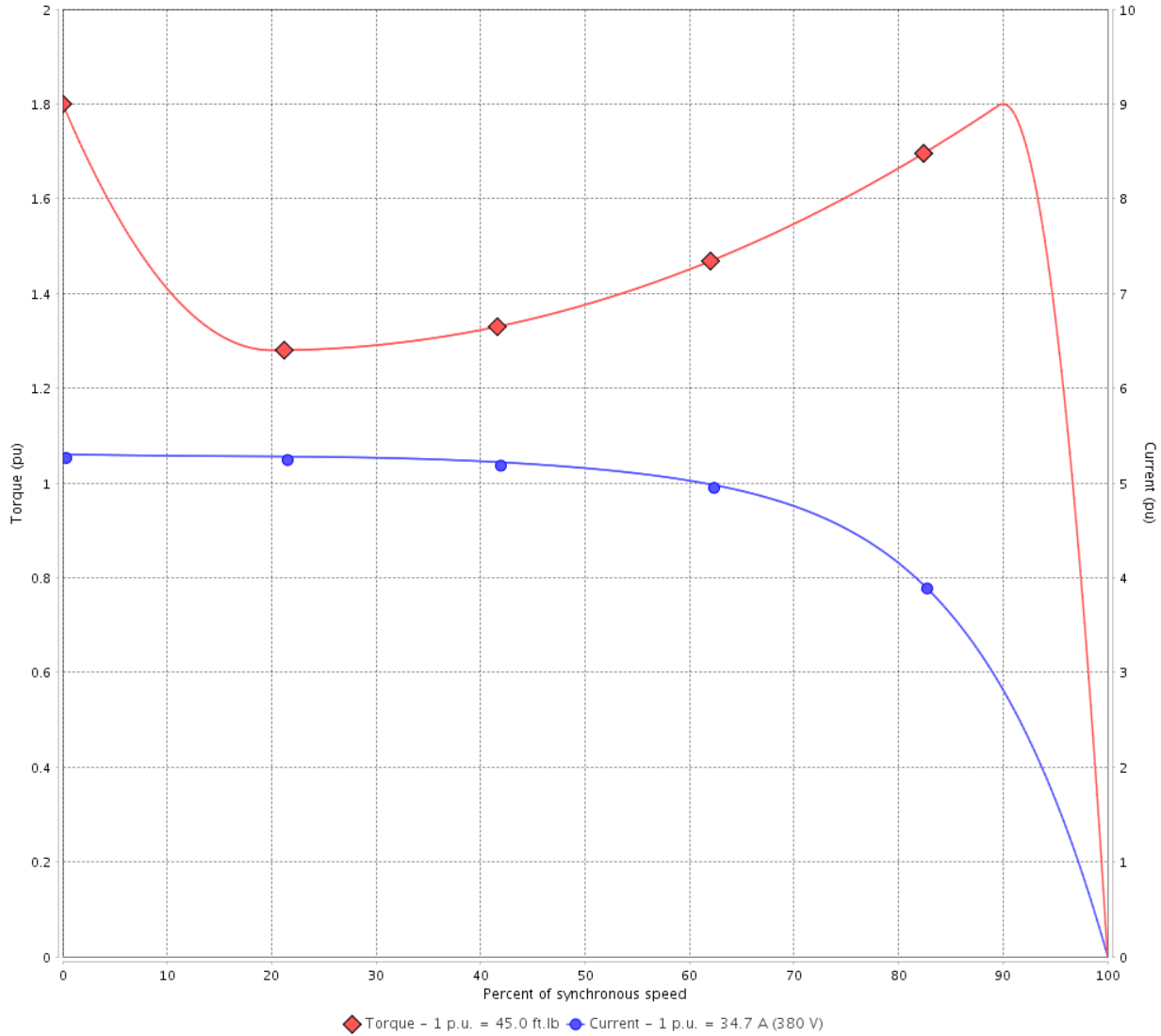
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 34.7 A	Moment of inertia (J)	: 2.58 sq.ft.lb
LRC	: 5.3	Duty cycle	: Cont.(S1)
Rated torque	: 45.0 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 180 %	Temperature rise	: 80 K
Rated speed	: 2920 rpm	Design	: B

Locked rotor time : 57s (cold) 32s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



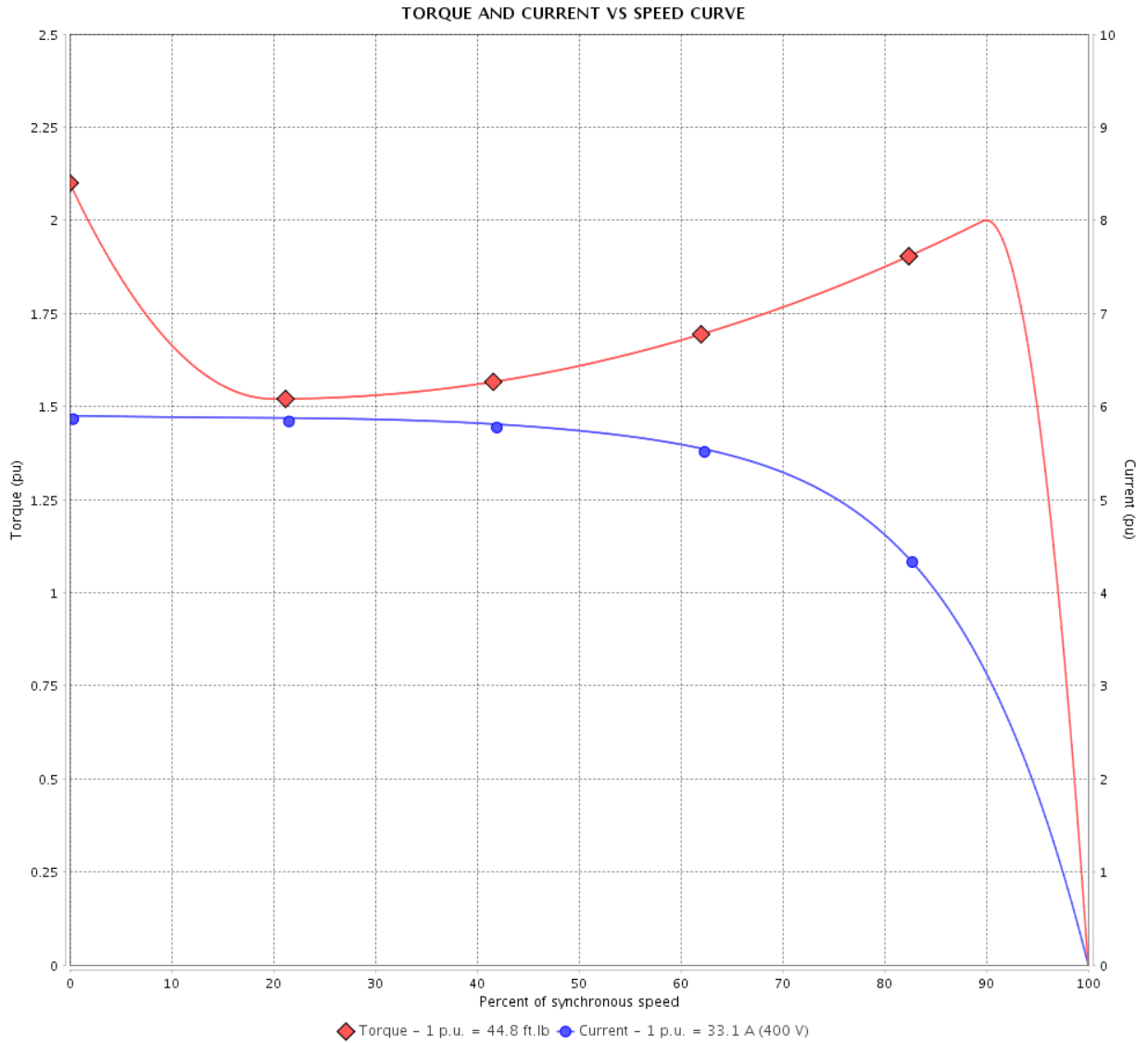
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS



Performance : 400 V 50 Hz 2P IE2

Rated current	: 33.1 A	Moment of inertia (J)	: 2.58 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 44.8 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 2930 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



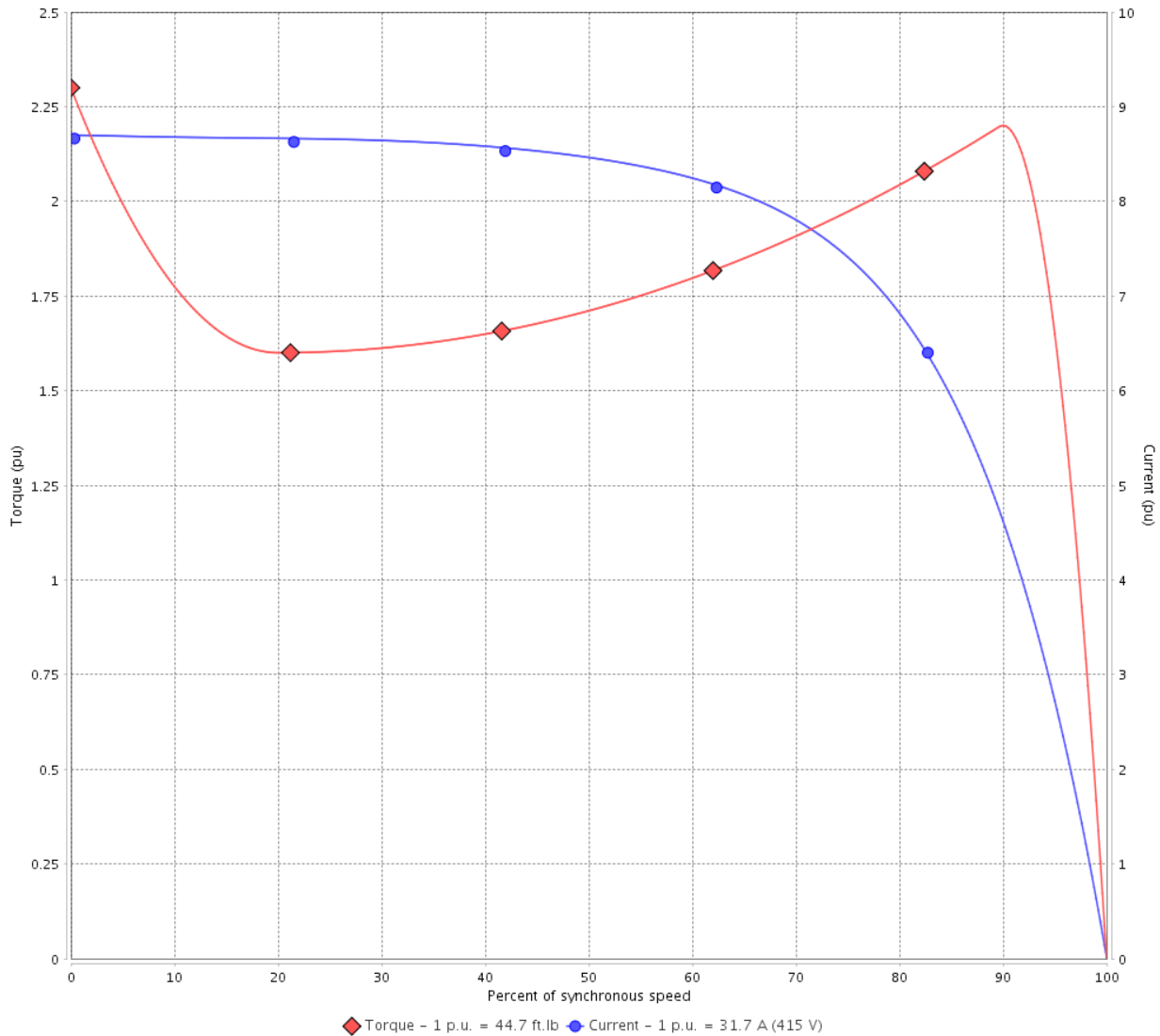
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 31.7 A	Moment of inertia (J)	: 2.58 sq.ft.lb
LRC	: 8.7	Duty cycle	: Cont.(S1)
Rated torque	: 44.7 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 2940 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 22	Revision
Checked by				
Date	14/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

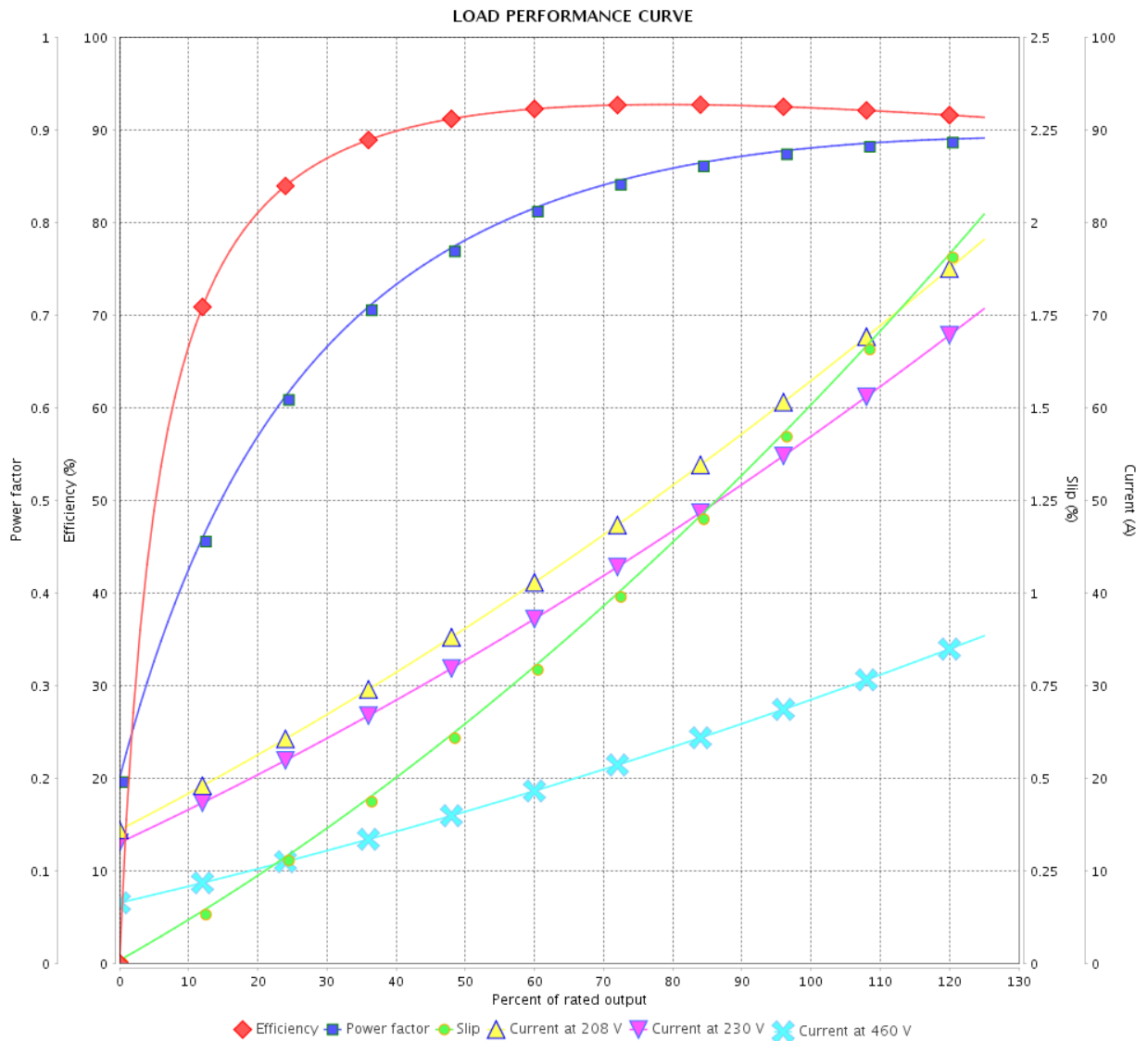


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS



Performance : 230/460 V 60 Hz 2P

Rated current : 57.2/28.6 A
 LRC : 6.7
 Rated torque : 37.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 2.58 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
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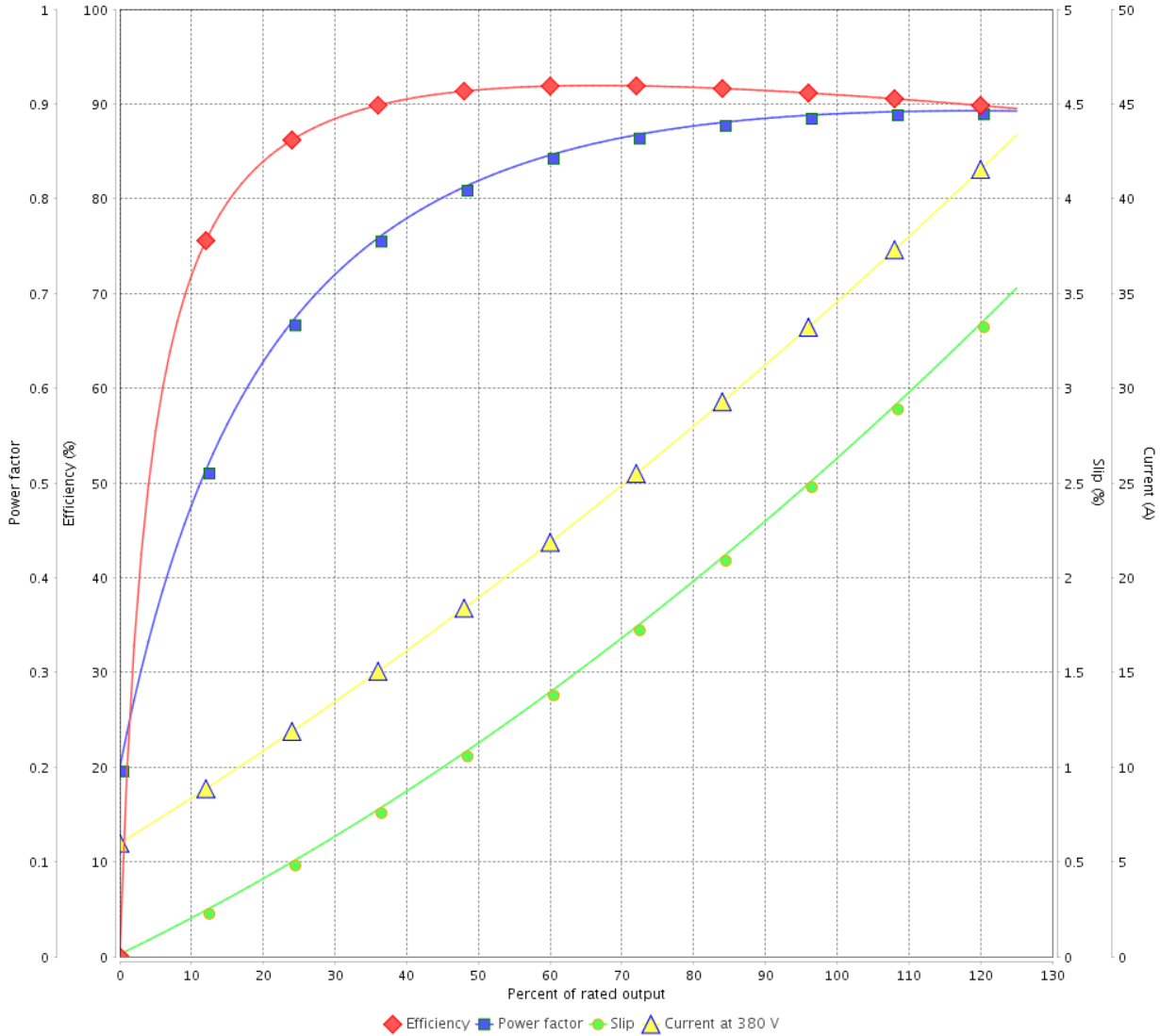
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LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 34.7 A
 LRC : 5.3
 Rated torque : 45.0 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 180 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 2.58 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		8 / 22		
Date	14/04/2022			

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Three Phase Induction Motor - Squirrel Cage

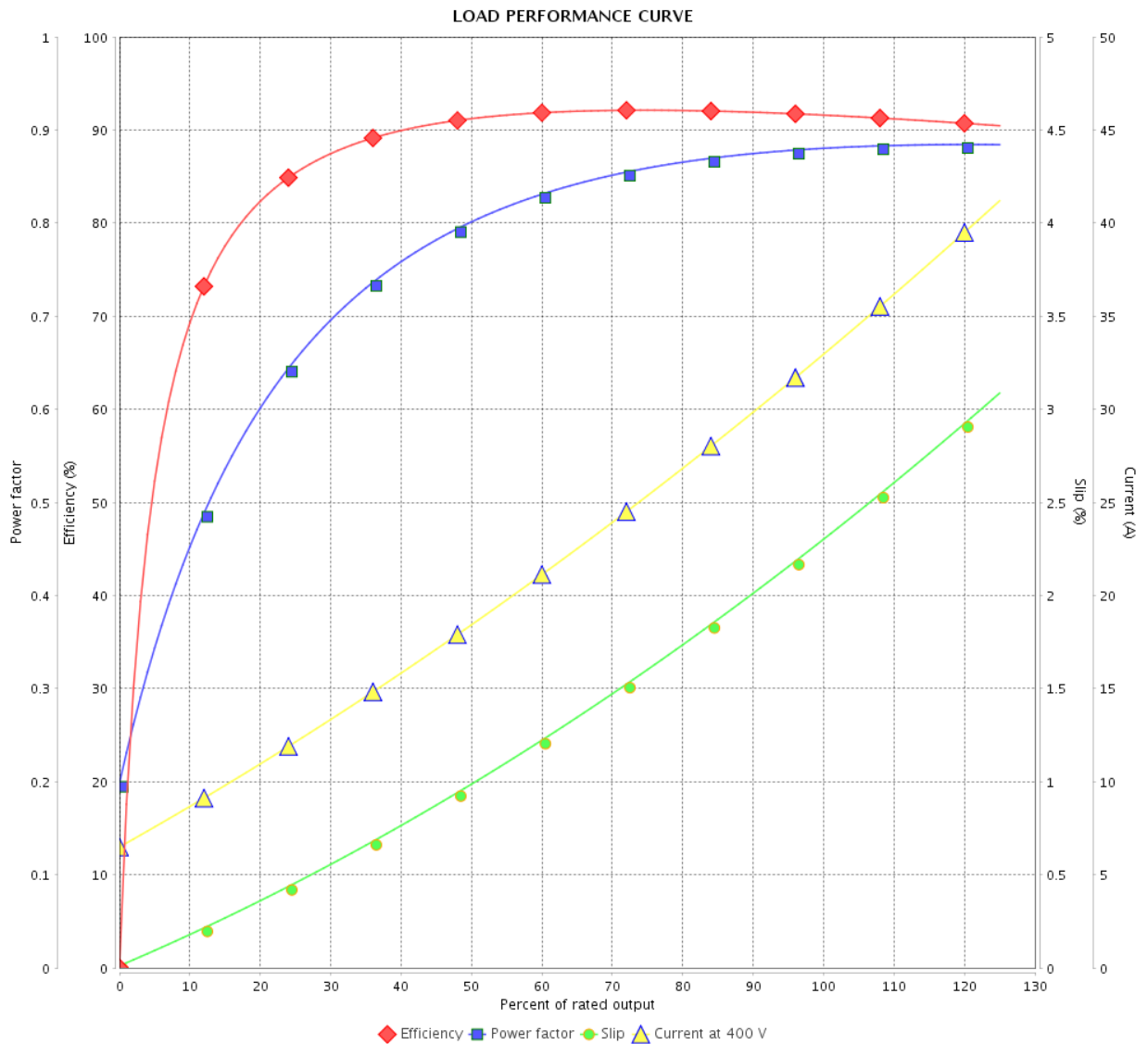


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Performance : 400 V 50 Hz 2P IE2

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Performed by			Page	Revision
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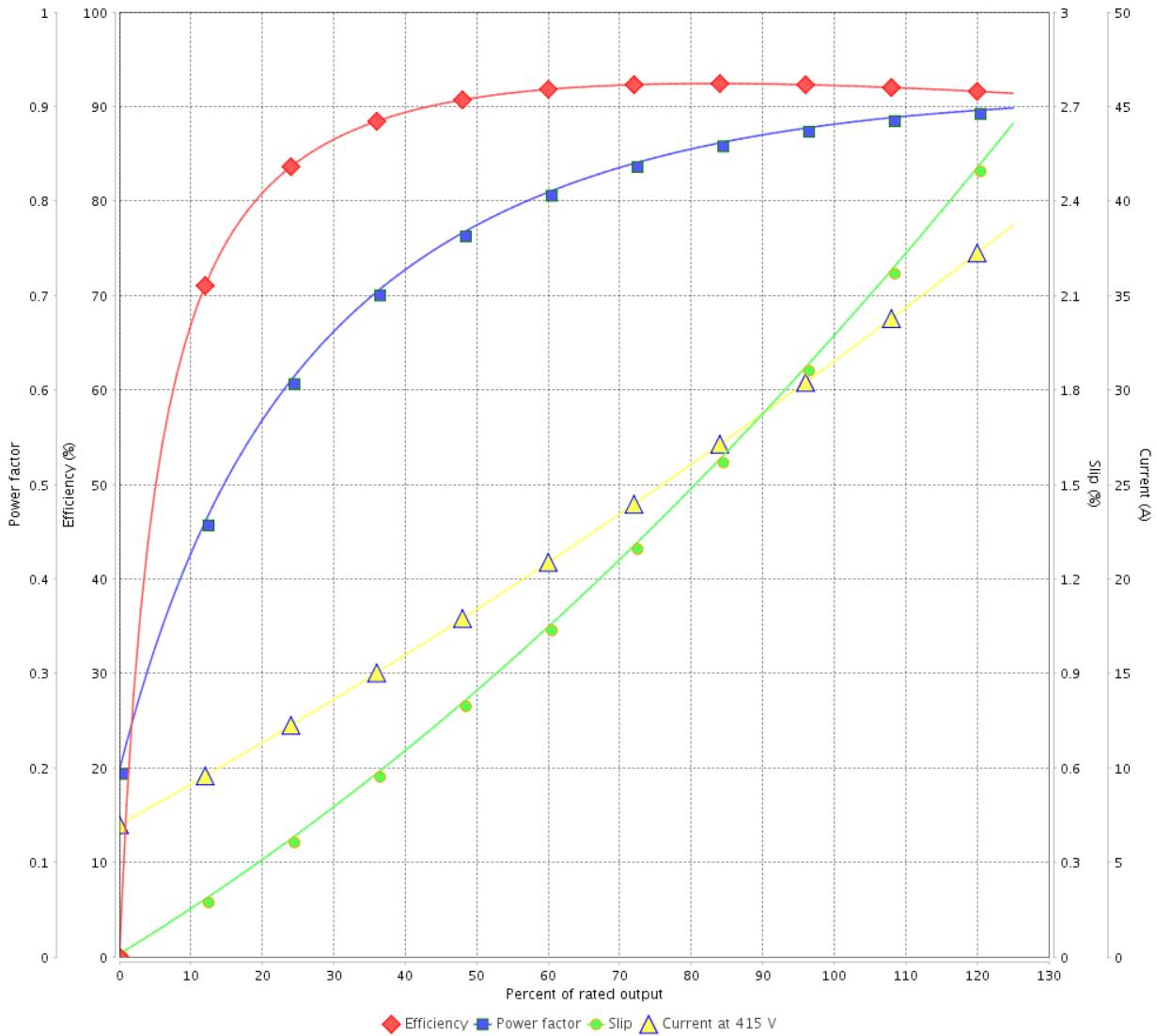
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 Locked rotor torque : 229 %
 Breakdown torque : 220 %
 Rated speed : 2940 rpm

Moment of inertia (J) : 2.58 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 10 / 22	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE



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Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 3545 rpm	Design	: B

Heating constant

Cooling constant

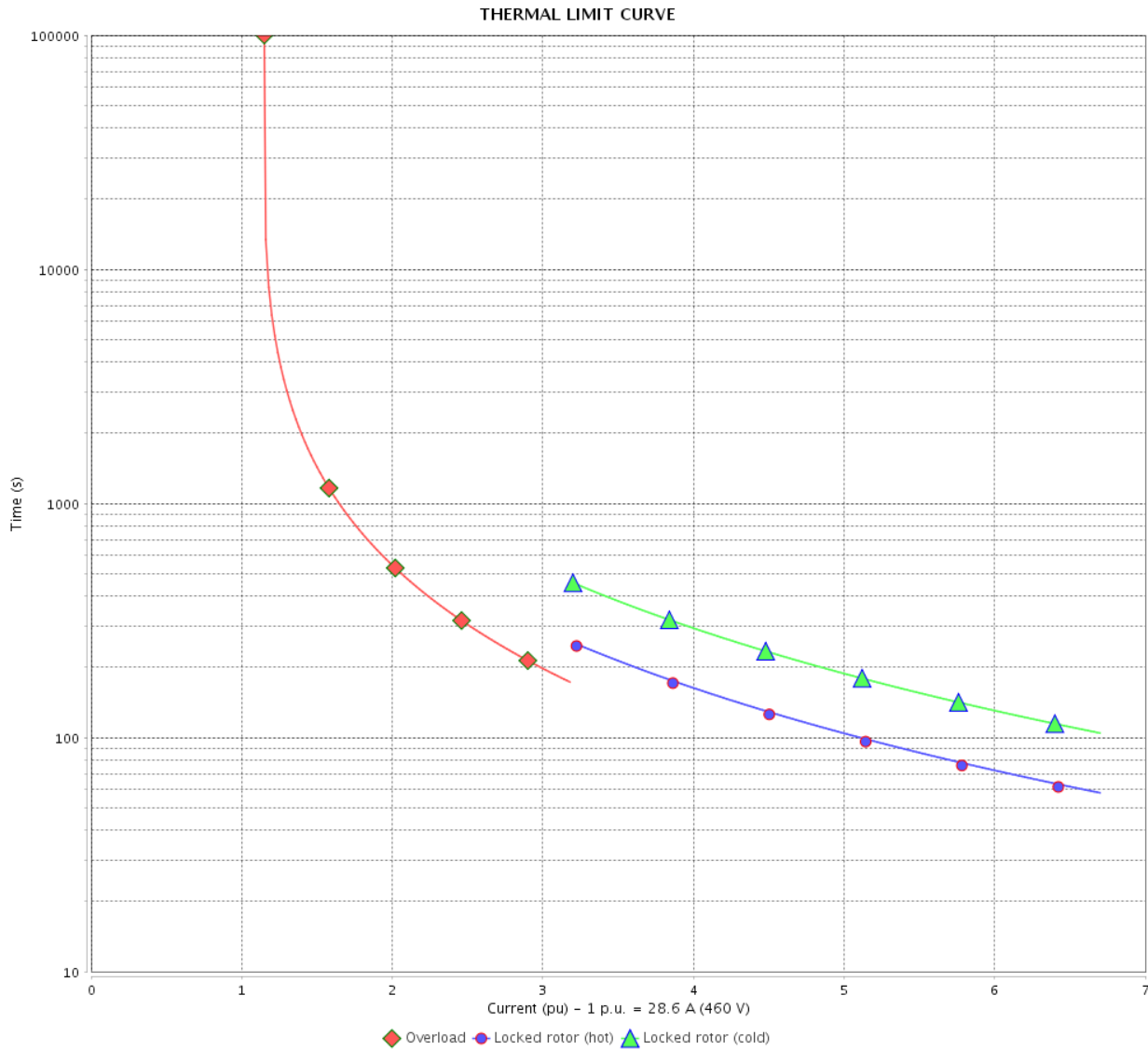
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Performed by				
Checked by			Page	Revision
Date	14/04/2022		11 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		12 / 22		
Date		14/04/2022		

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Performance : 380 V 50 Hz 2P IE2

Rated current : 34.7 A	Moment of inertia (J) : 2.58 sq.ft.lb
LRC : 5.3	Duty cycle : Cont.(S1)
Rated torque : 45.0 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.00
Breakdown torque : 180 %	Temperature rise : 80 K
Rated speed : 2920 rpm	Design : B

Heating constant

Cooling constant

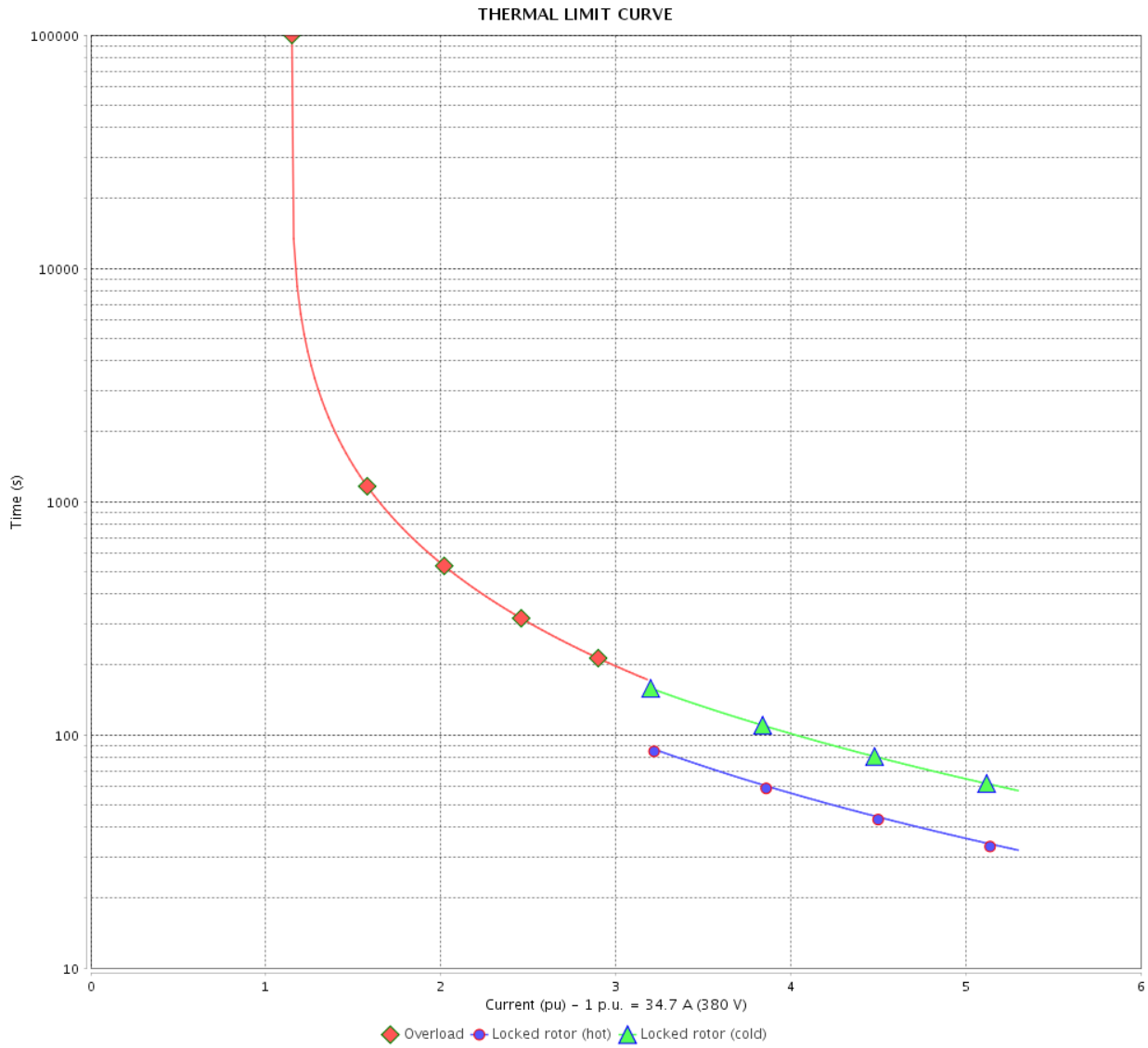
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Checked by				
Date	14/04/2022	13 / 22		

THERMAL LIMIT CURVE

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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		14 / 22		
Date		14/04/2022		

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Performance : 400 V 50 Hz 2P IE2

Rated current : 33.1 A	Moment of inertia (J) : 2.58 sq.ft.lb
LRC : 5.9	Duty cycle : Cont.(S1)
Rated torque : 44.8 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 2930 rpm	Design : B

Heating constant

Cooling constant

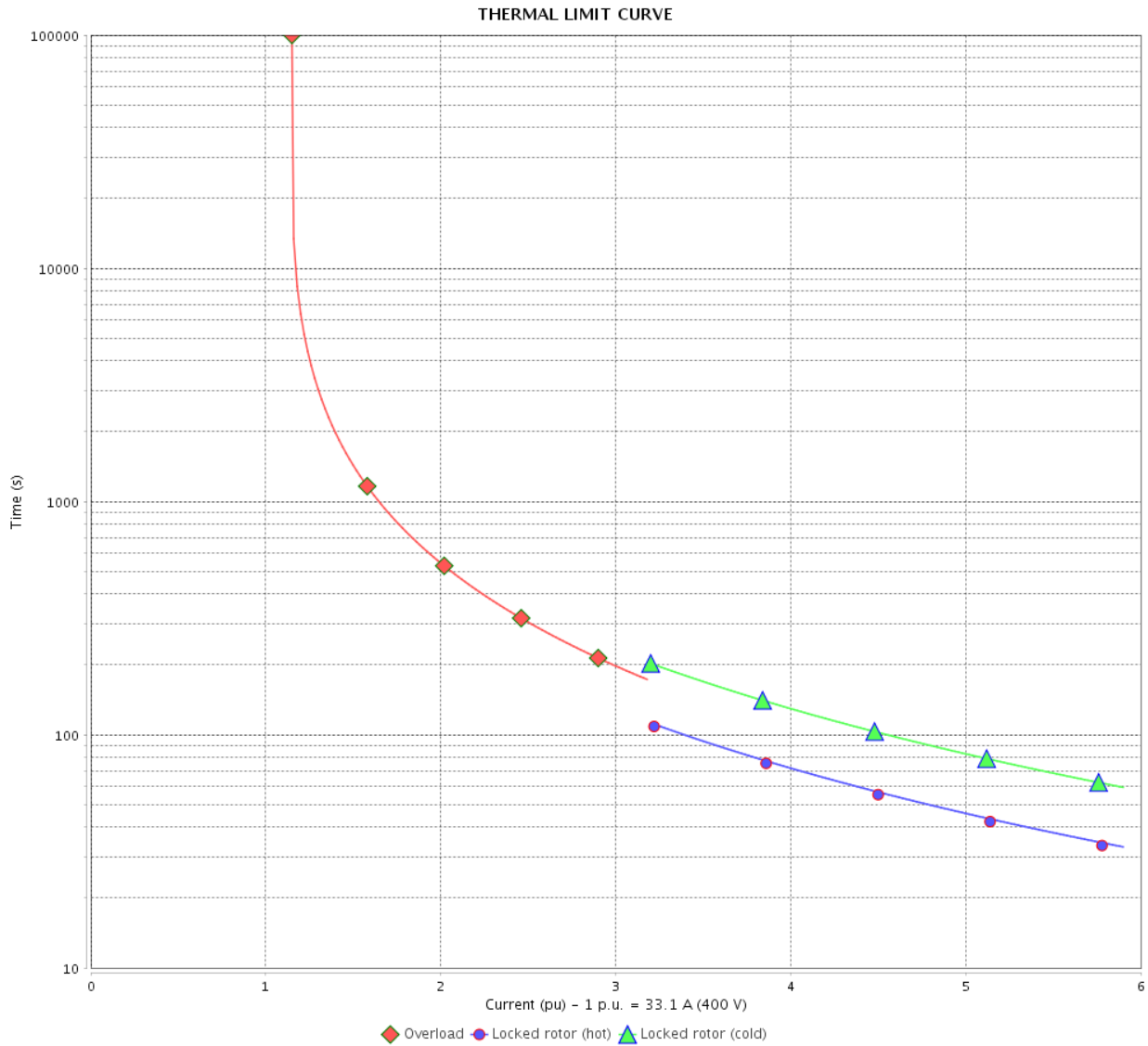
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Performed by			Page 15 / 22	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		16 / 22		
Date		14/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14443177
 Catalog # : 02536XT3E284TS

Performance : 415 V 50 Hz 2P IE3

Rated current : 31.7 A	Moment of inertia (J) : 2.58 sq.ft.lb
LRC : 8.7	Duty cycle : Cont.(S1)
Rated torque : 44.7 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.00
Breakdown torque : 220 %	Temperature rise : 80 K
Rated speed : 2940 rpm	Design : B

Heating constant

Cooling constant

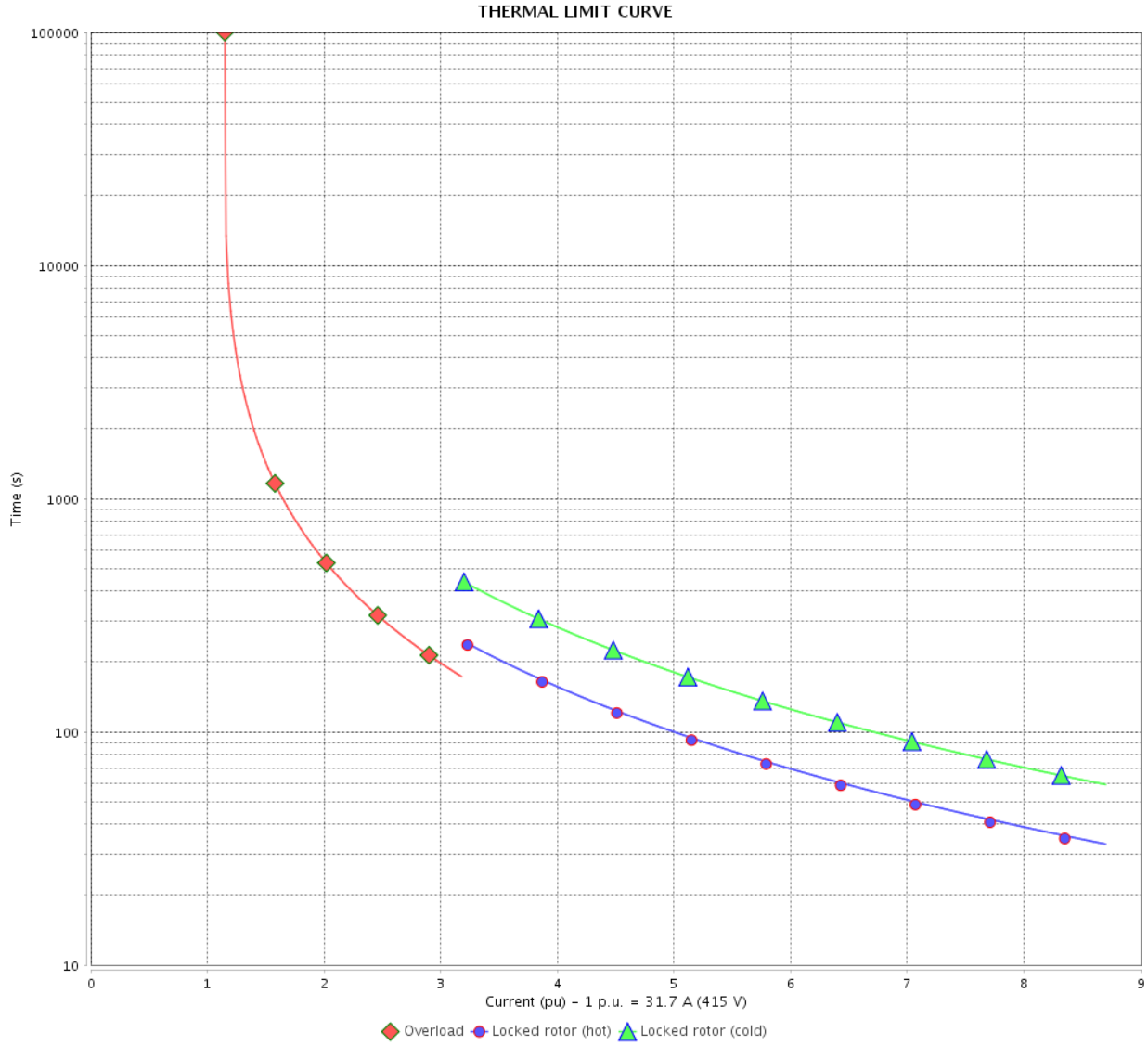
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 17 / 22	Revision
Checked by				
Date	14/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		18 / 22		
Date		14/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

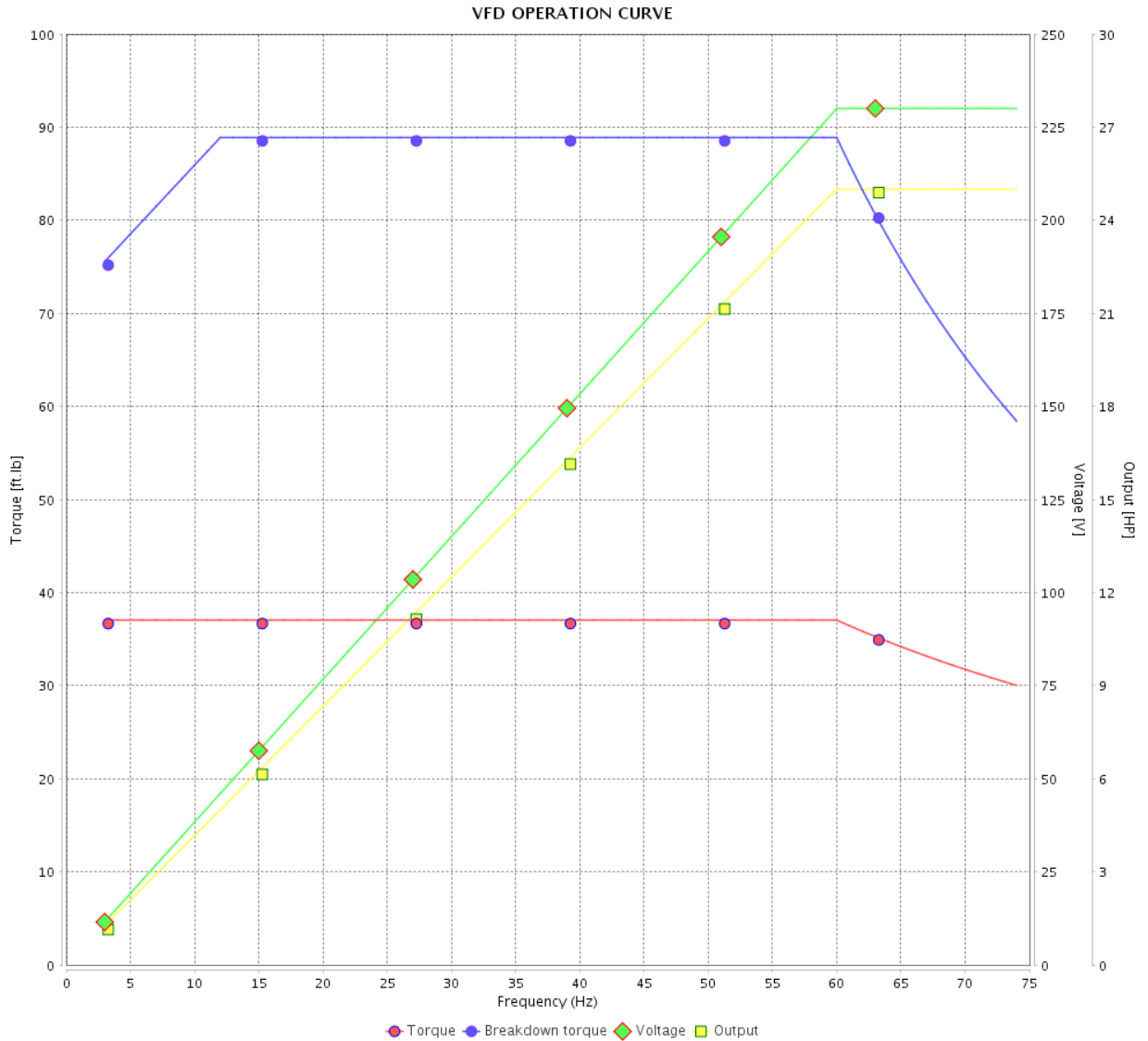


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS



Performance : 230/460 V 60 Hz 2P

Rated current : 57.2/28.6 A
 LRC : 6.7
 Rated torque : 37.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 240 %
 Rated speed : 3545 rpm

Moment of inertia (J) : 2.58 sq.ft.lb
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 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 19 / 22	Revision
Checked by				
Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



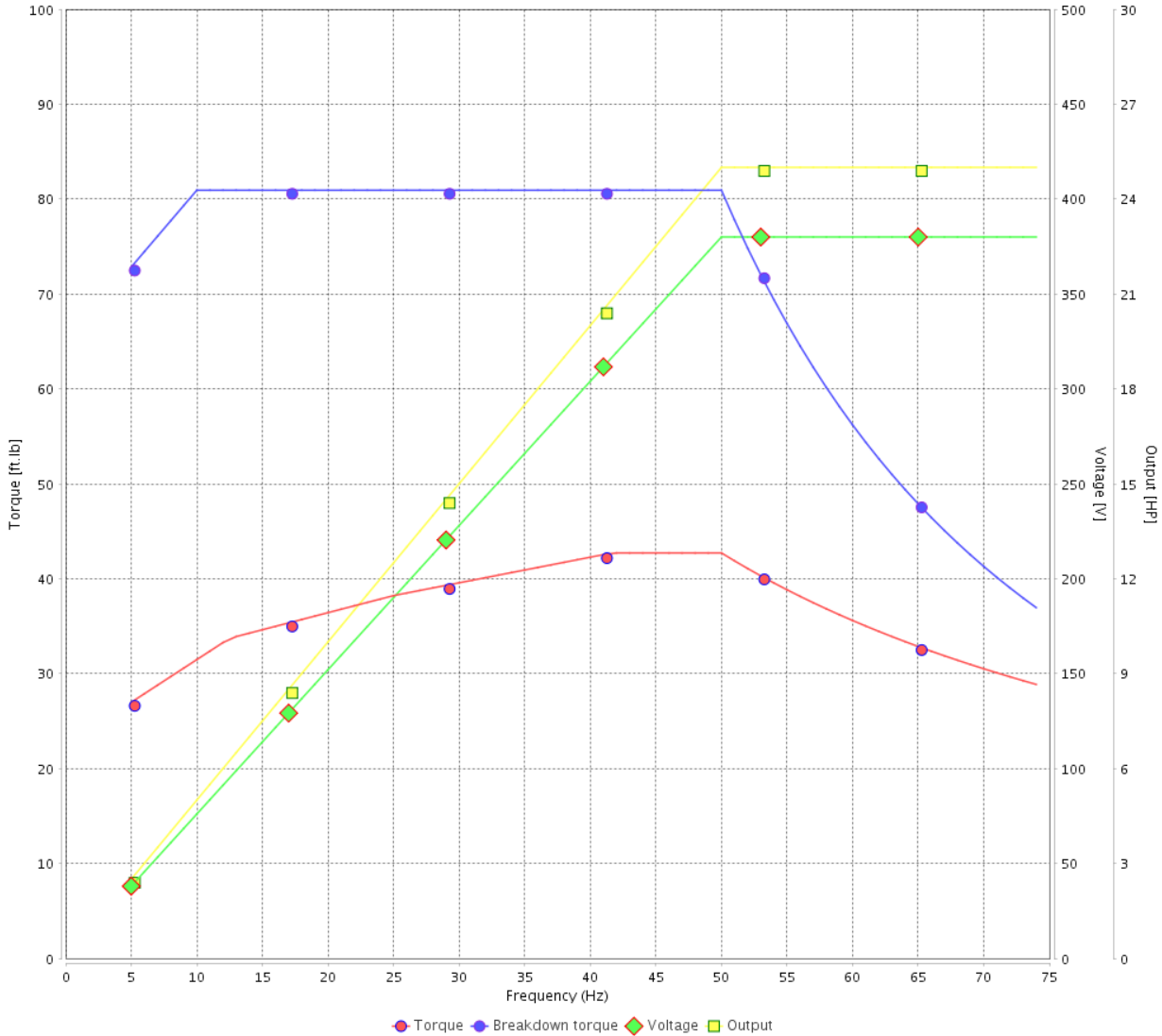
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS

VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 34.7 A
 LRC : 5.3
 Rated torque : 45.0 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 180 %
 Rated speed : 2920 rpm

Moment of inertia (J) : 2.58 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 20 / 22	Revision
Checked by				
Date	14/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

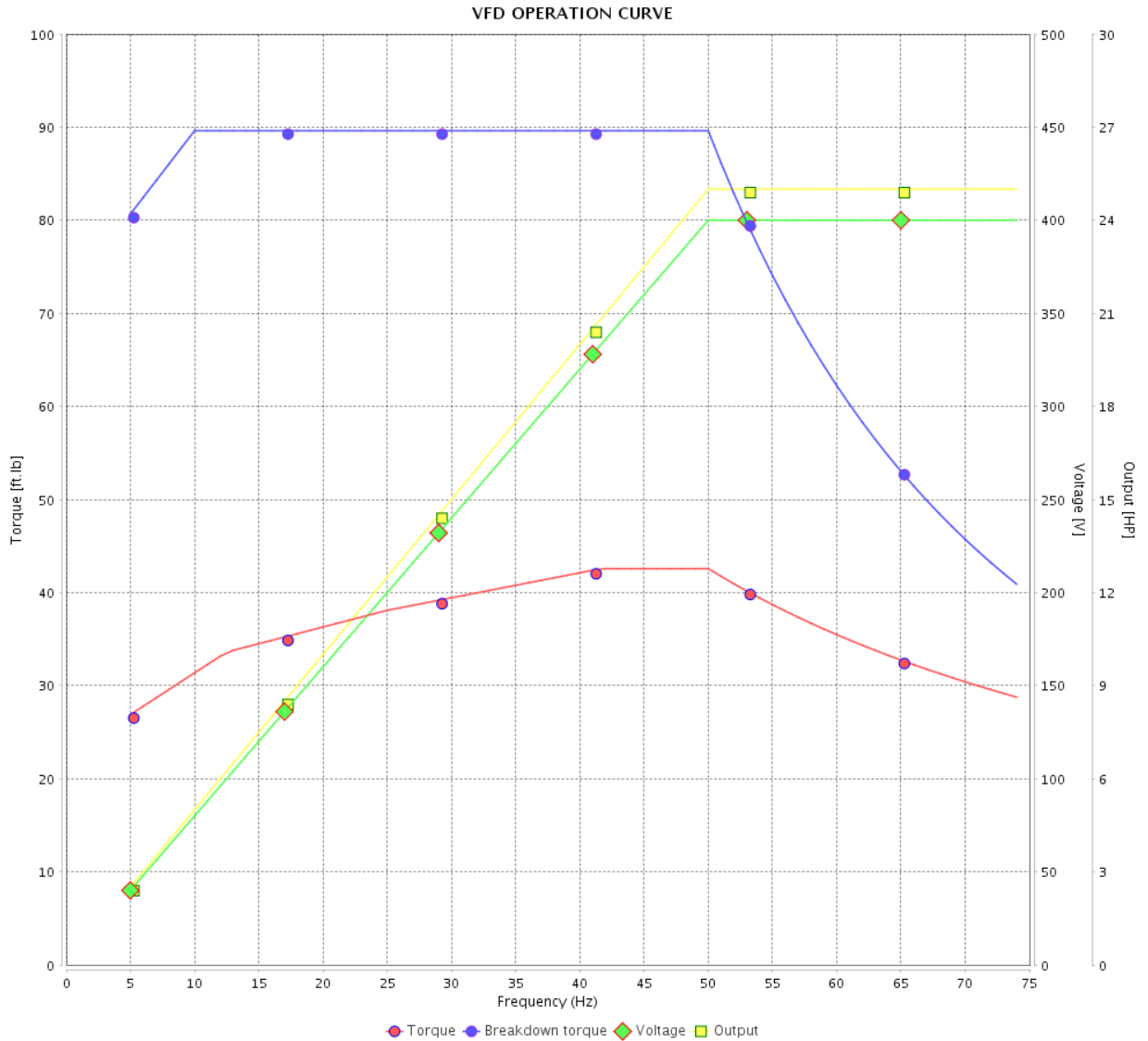


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14443177

Catalog # : 02536XT3E284TS



Performance : 400 V 50 Hz 2P IE2

Rated current : 33.1 A
 LRC : 5.9
 Rated torque : 44.8 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 200 %
 Rated speed : 2930 rpm

Moment of inertia (J) : 2.58 sq.ft.lb
 Duty cycle : Cont.(S1)
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Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		21 / 22		
Date		14/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

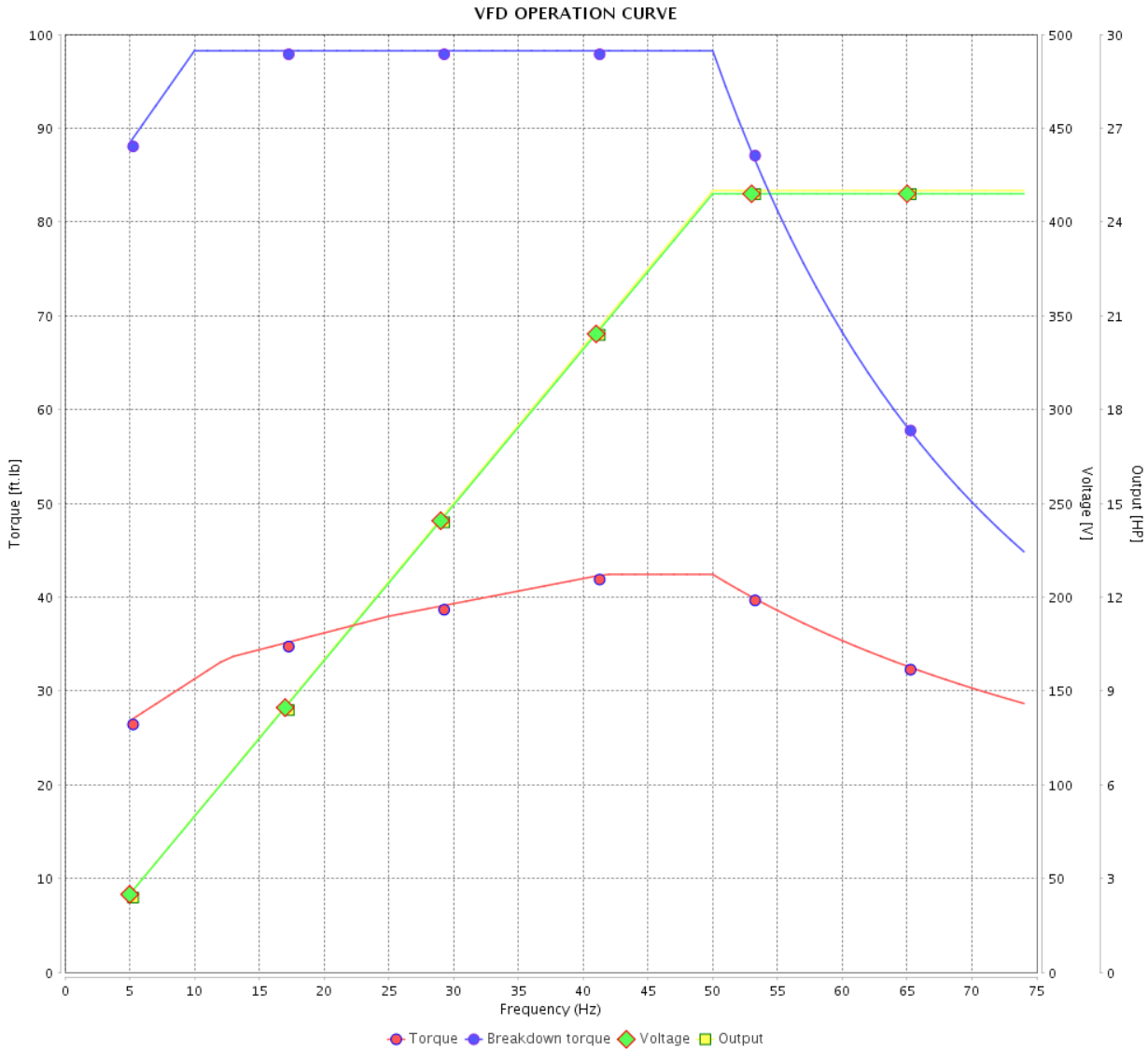


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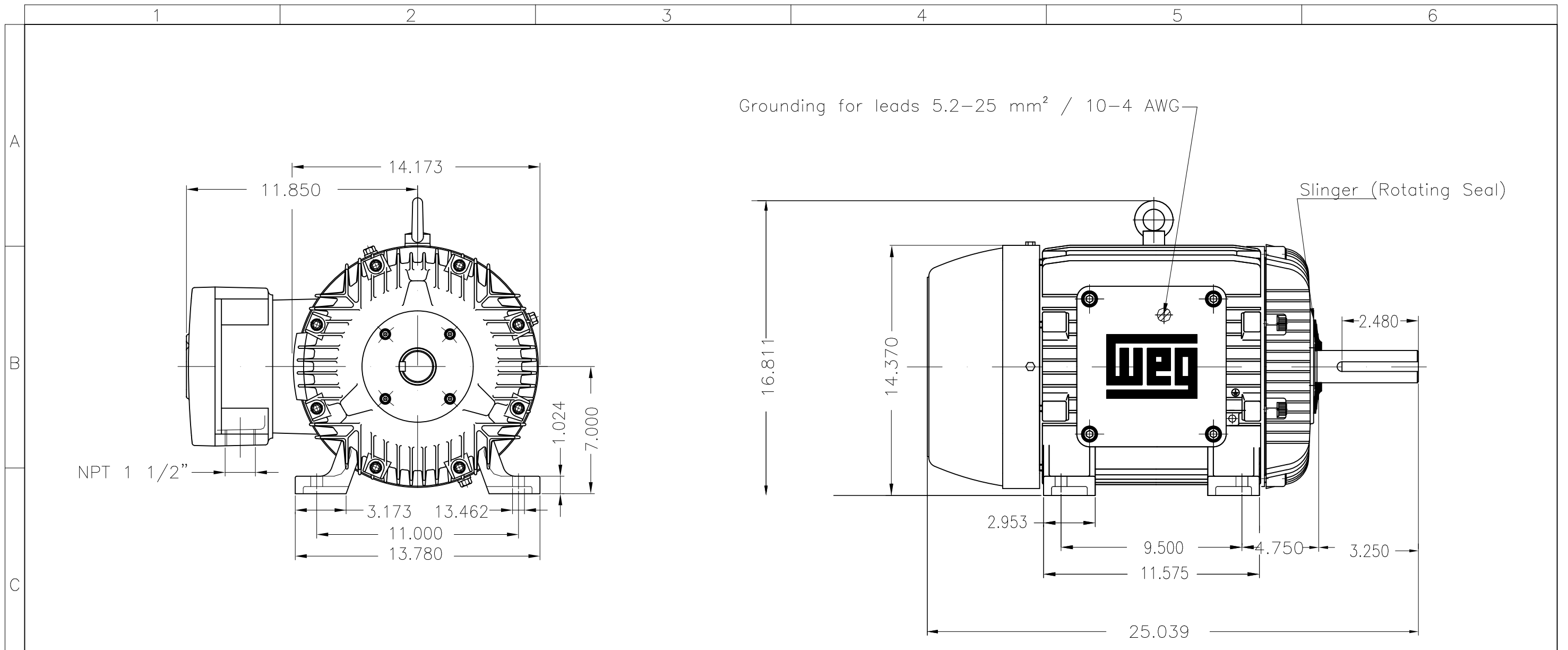


Performance : 415 V 50 Hz 2P IE3

Rated current : 31.7 A
 LRC : 8.7
 Rated torque : 44.7 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 220 %
 Rated speed : 2940 rpm

Moment of inertia (J) : 2.58 sq.ft.lb
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Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 22 / 22	Revision
Checked by				
Date	14/04/2022			



Grounding for leads 5.2–25 mm² / 10–4 AWG

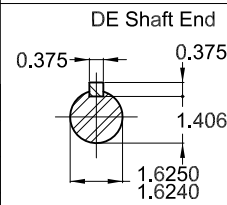
Slinger (Rotating Seal)

C

D

E

Color RAL 5009
 Painting plan 202P
 Mounting NEMA F-1
 Mounting B3R(D)



25 HP 02 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 284TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD



MADE IN BRAZIL


W21X NEMA
Premium

14443177

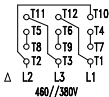
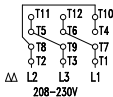
CC029A

Inverter Duty Motor
Severe Duty


LISTED

MODEL 02536XT3E284TS

PH 3	FR 284TS		
HP(kW) 25.0(18.5)		HZ 60	IP55
V 230/460		A 57.2/28.6	
RPM 3545		NEMA NOM EFF 92.4%	
PF 0.88		SFA 65.8/32.9	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE G	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	62.8 A	SF 1.10 SFA 69.1
AMB 55°C SF1.0 -bearings lub interval reduced by a factor of 50%			
25HP 18.5kW 50Hz 380V 34.7A 2920RPM SF1.00 EFF 91.0% (IE2)			



→ 6311-C3 MOBIL POLYREX EM
 → 6211-C3 18 g 11517 h

463 Lbs



TEMP CODE T3C
 CSA/UL: Class I - Div. 1 - Groups C and D
 CSA: Class II - Div. 1 - Groups F and G
 CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 6:1CT, 1.0SF, T3C, AMB 40°C.