

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :		14407586
			Catalog # :		02512XT3E324T
Frame		: 324T	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		: 644 lb
Protection degree		: IP55	Moment of inertia (J)		: 10.8 sq.ft.lb
Design		: B			
Output [HP]	25	25	25	25	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	61.6/30.8	36.8	35.1	34.2	
L. R. Amperes [A]	382/191	180	190	198	
LRC [A]	6.2x(Code G)	4.9x(Code E)	5.4x(Code F)	5.8x(Code G)	
No load current [A]	28.0/14.0	13.2	14.2	14.9	
Rated speed [RPM]	1180	975	980	980	
Slip [%]	1.67	2.50	2.00	2.00	
Rated torque [ft.lb]	111	135	134	134	
Locked rotor torque [%]	210	160	180	200	
Breakdown torque [%]	260	200	229	250	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	45s (cold) 25s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	54s (cold) 30s (hot)	
Noise level ²	62.0 dB(A)	58.0 dB(A)	58.0 dB(A)	58.0 dB(A)	
Efficiency (%)	25%	92.2	92.7	92.1	92.1
	50%	92.4	91.7	91.7	91.7
	75%	93.0	92.4	92.4	92.4
	100%	93.0	91.0	91.7	91.7
Power Factor	25%	0.40	0.46	0.43	0.40
	50%	0.65	0.71	0.68	0.65
	75%	0.77	0.81	0.79	0.77
	100%	0.81	0.84	0.83	0.82
Bearing type		Drive end : 6312 C3	Non drive end : 6212 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 963 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 1607 lb	
Lubricant amount		: 21 g	: 13 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 67.2A SF 1.15 SFA 77.3A					
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 / 22	

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



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	13/04/2022		2 / 22	

TORQUE AND CURRENT VS SPEED CURVE



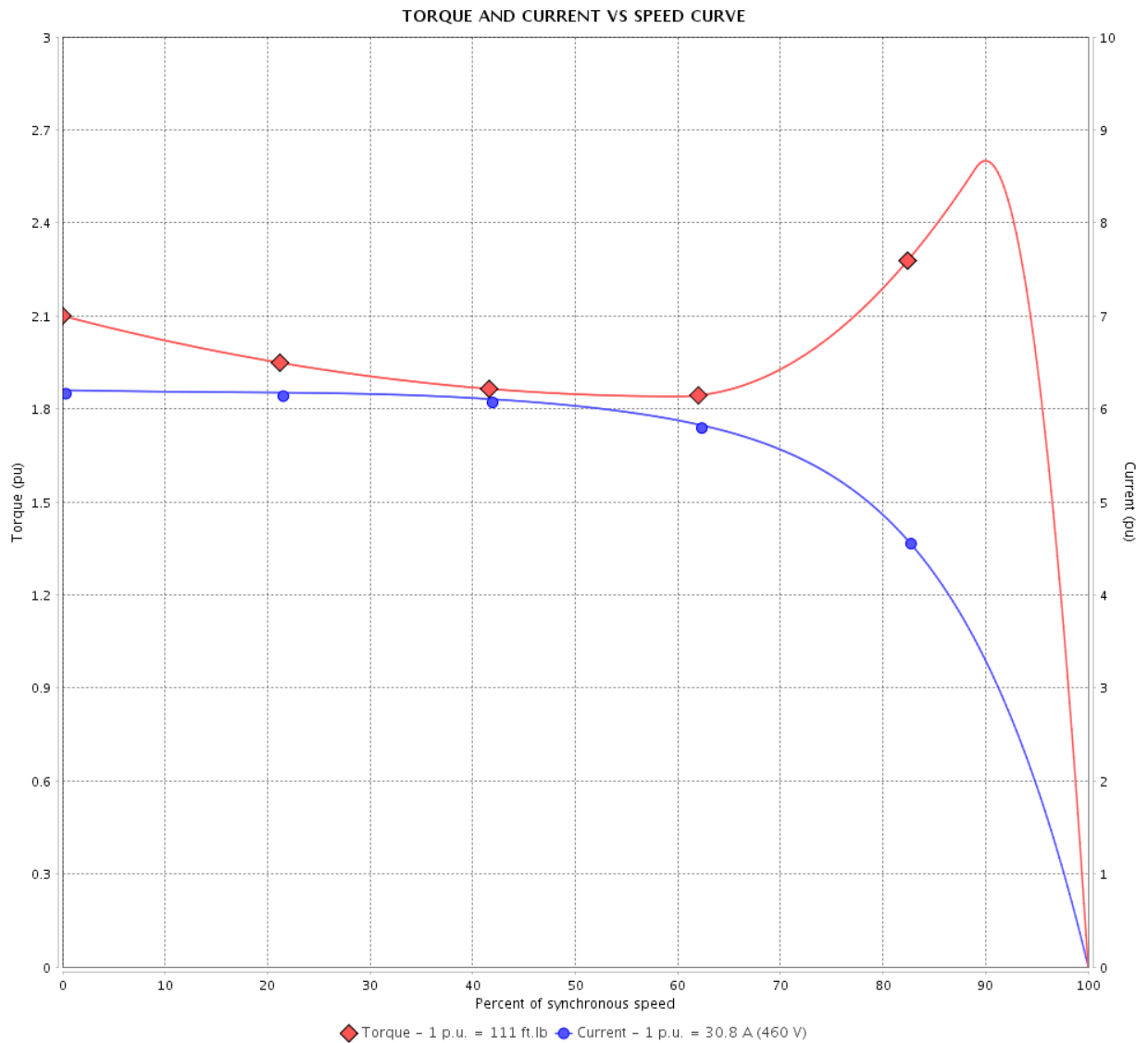
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



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 : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 10.8 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



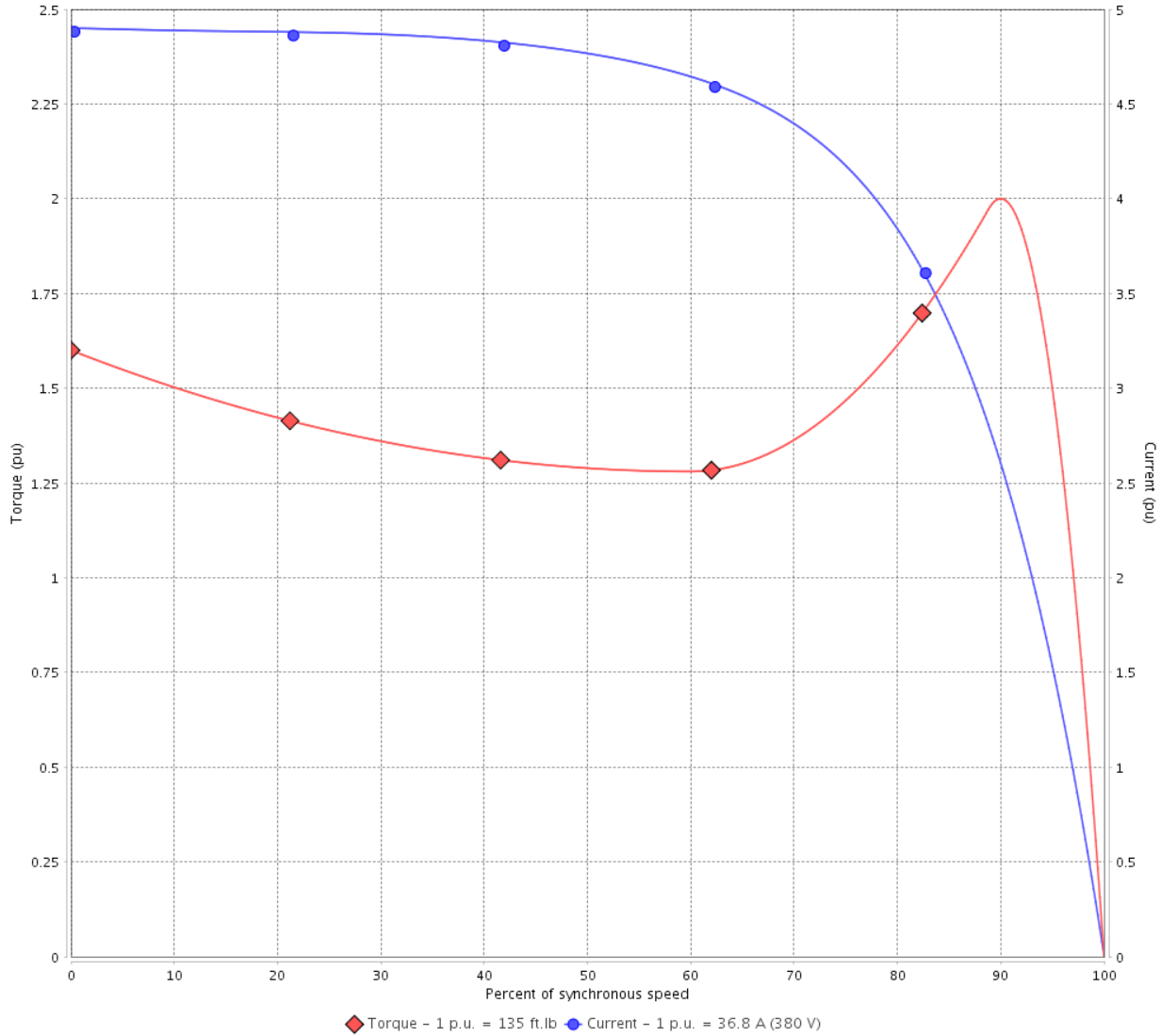
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current	: 36.8 A	Moment of inertia (J)	: 10.8 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 135 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



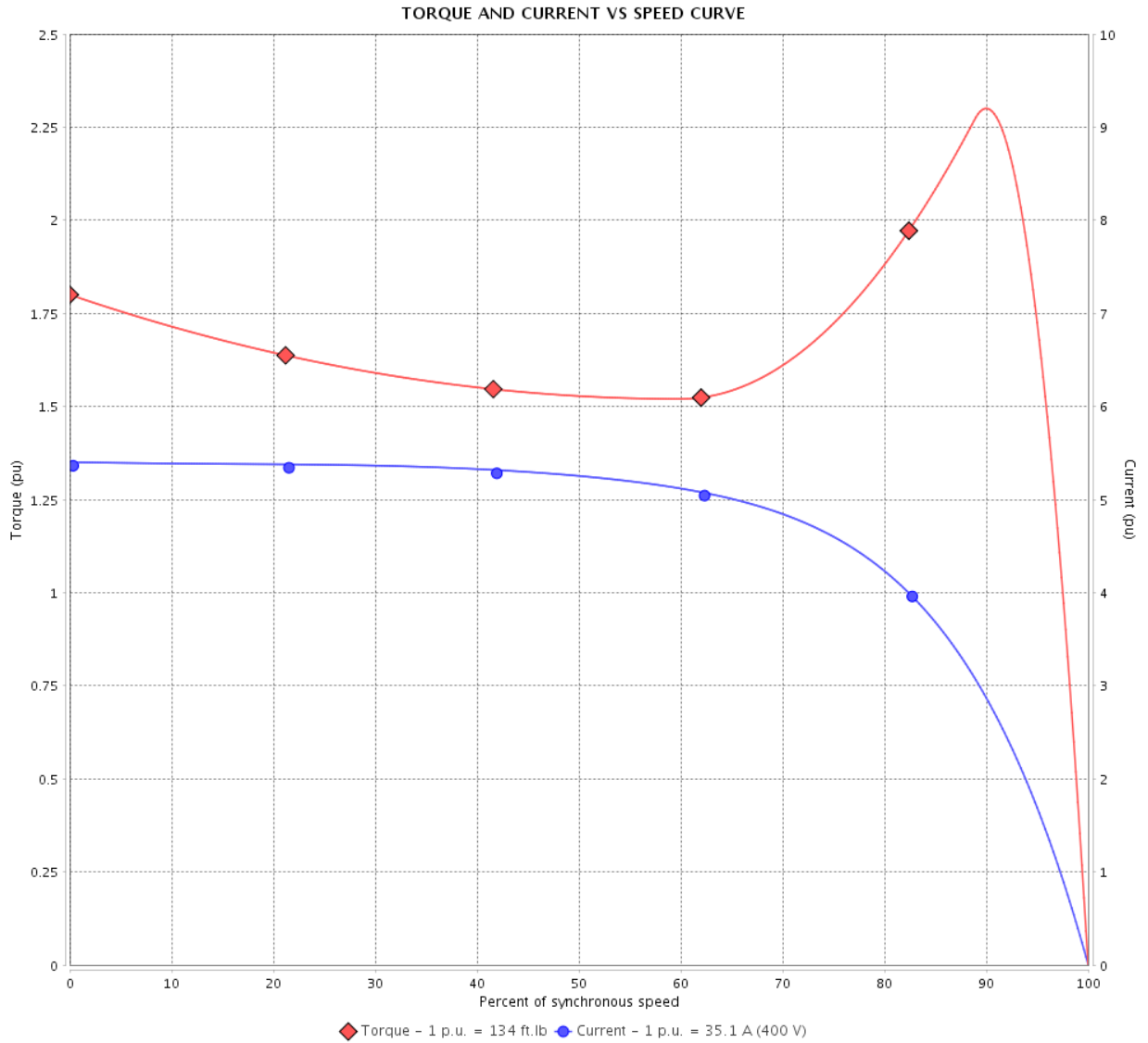
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



Performance : 400 V 50 Hz 6P IE3

Rated current	: 35.1 A	Moment of inertia (J)	: 10.8 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 134 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 22	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



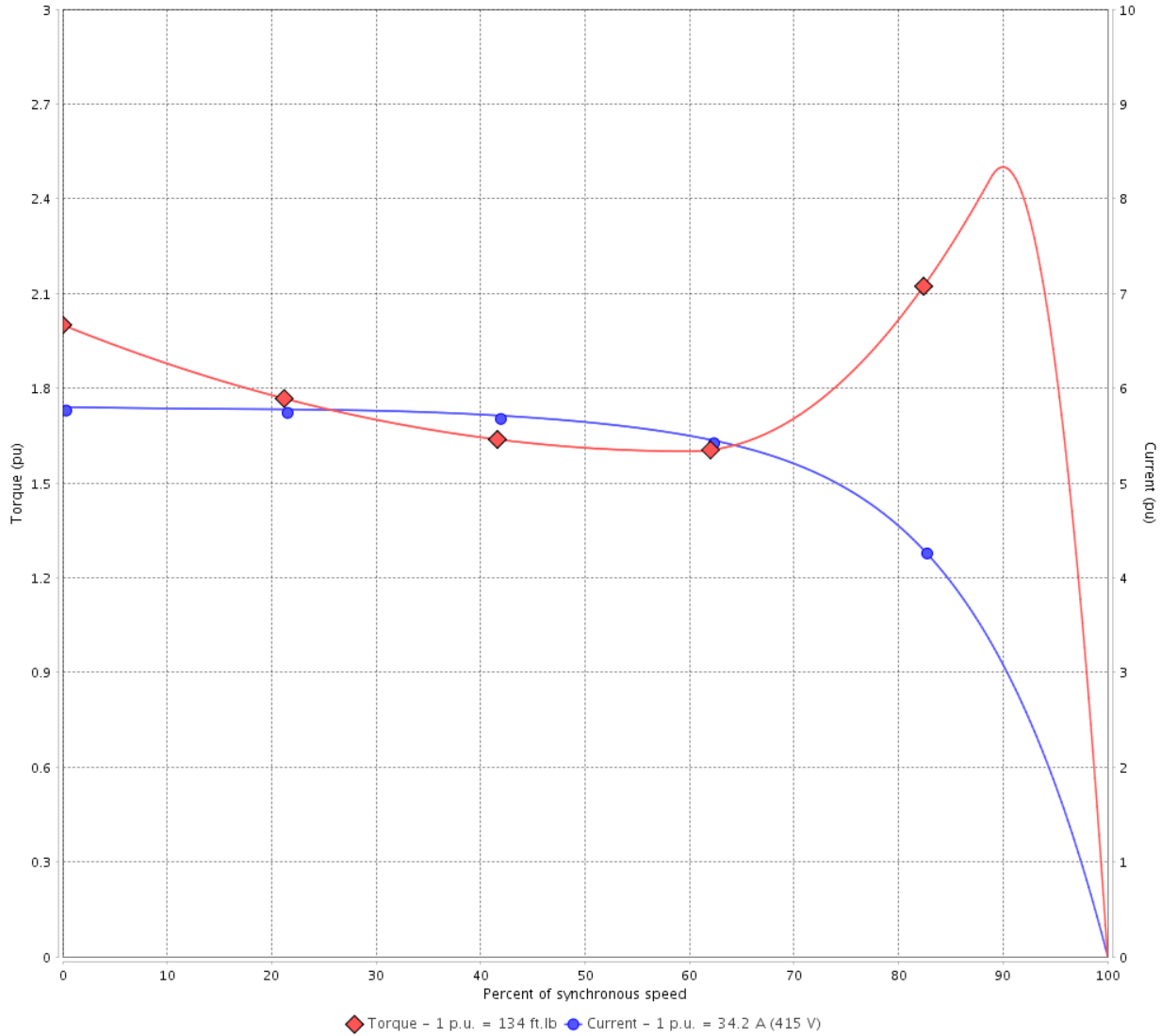
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current	: 34.2 A	Moment of inertia (J)	: 10.8 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 134 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 54s (cold) 30s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 22	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

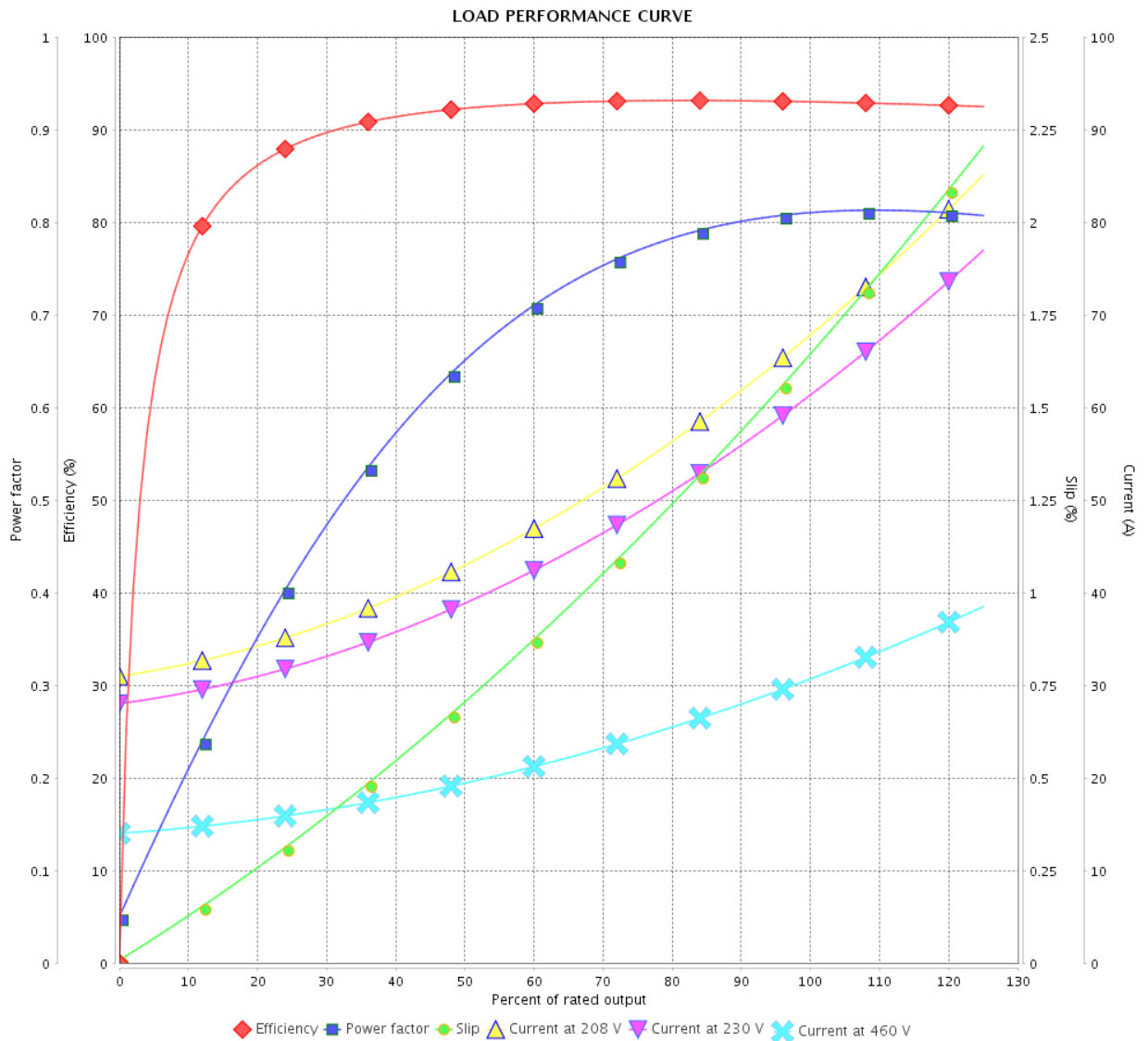


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



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 : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 10.8 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 / 22		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



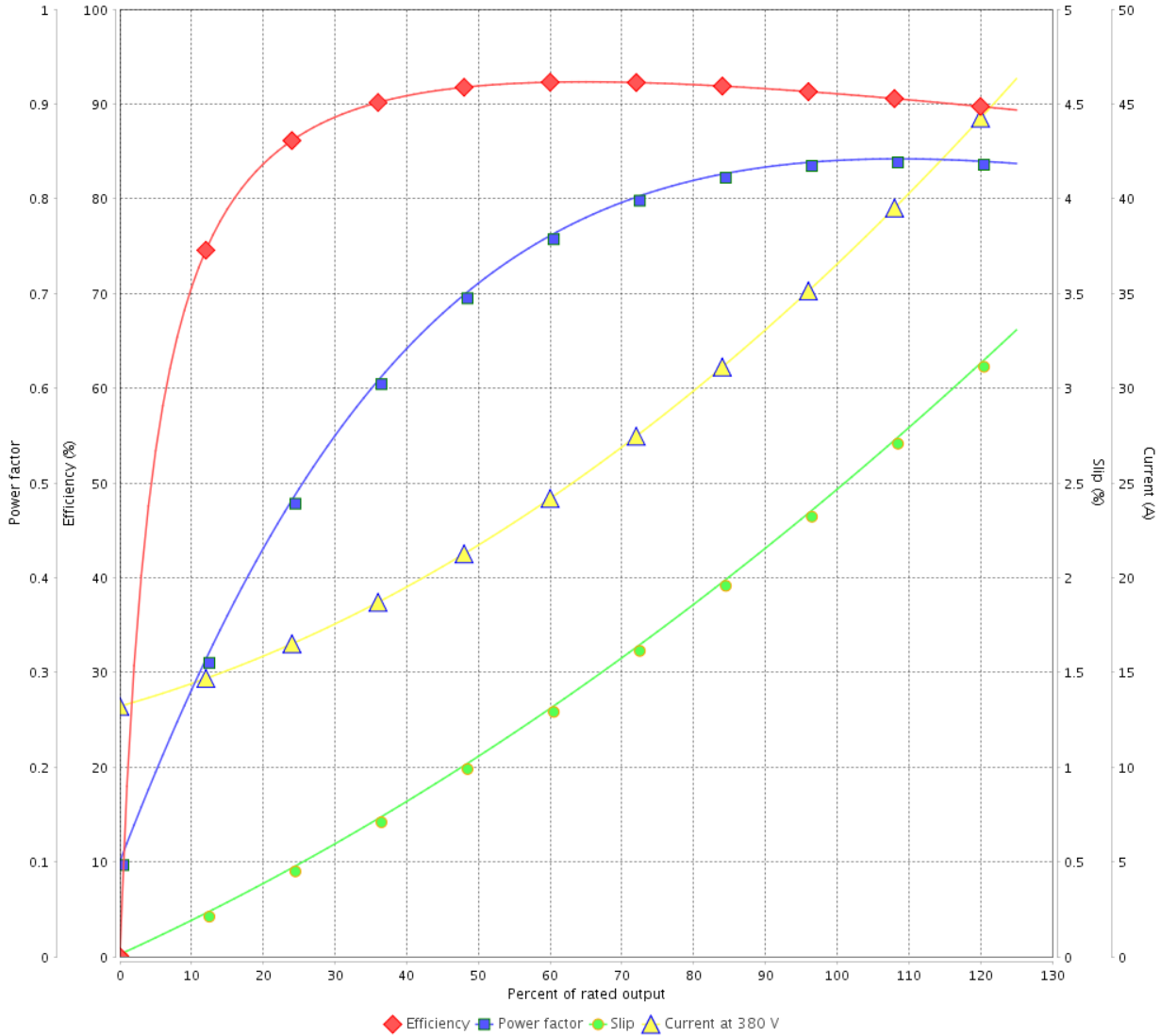
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current : 36.8 A
 LRC : 4.9
 Rated torque : 135 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 200 %
 Rated speed : 975 rpm

Moment of inertia (J) : 10.8 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				

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

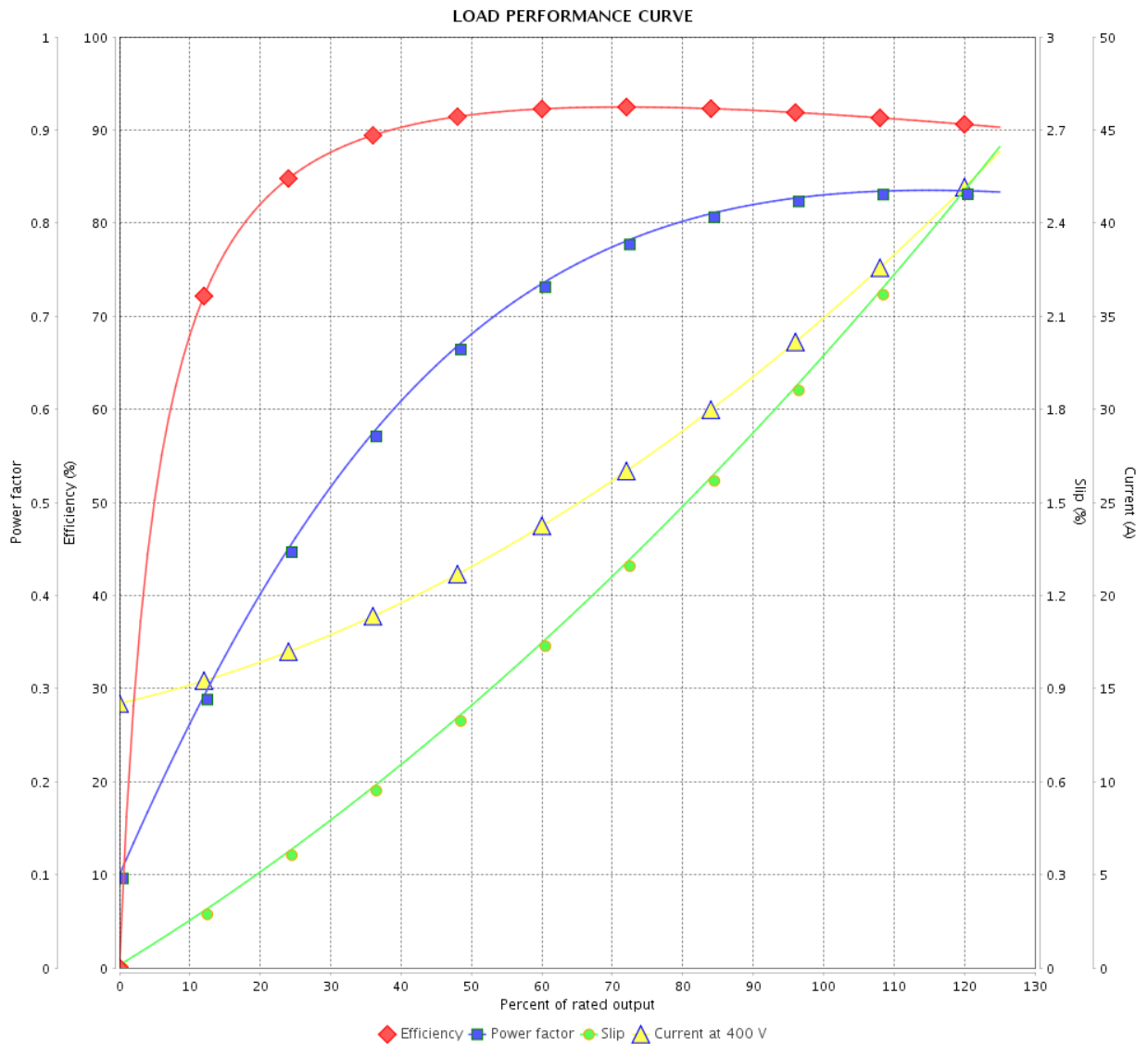


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



Performance : 400 V 50 Hz 6P IE3

Rated current : 35.1 A
 LRC : 5.4
 Rated torque : 134 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 229 %
 Rated speed : 980 rpm

Moment of inertia (J) : 10.8 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 / 22		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



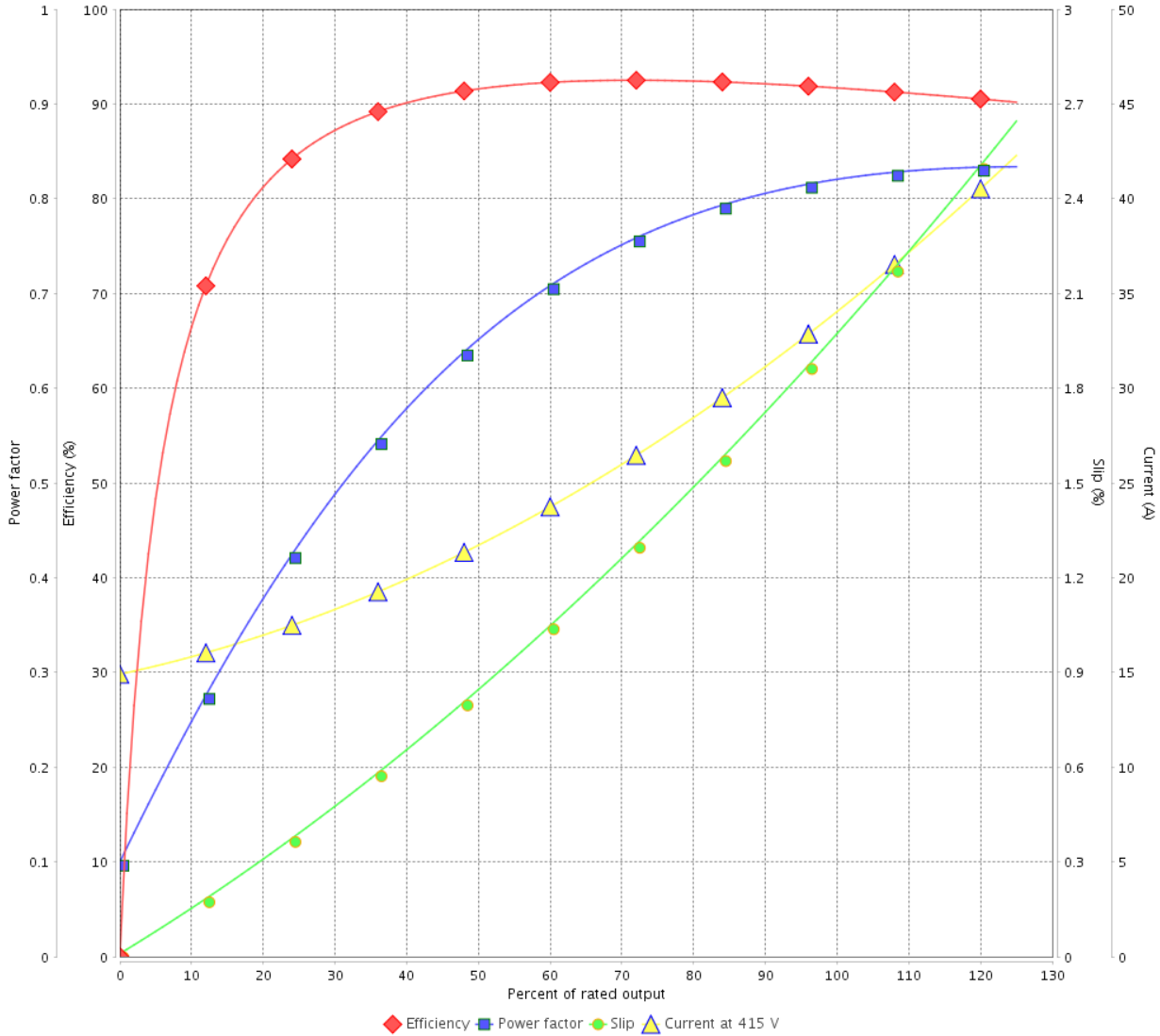
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

LOAD PERFORMANCE CURVE



Performance : 415 V 50 Hz 6P IE3

Rated current : 34.2 A
 LRC : 5.8
 Rated torque : 134 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 980 rpm

Moment of inertia (J) : 10.8 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	13/04/2022			

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14407586
 Catalog # : 02512XT3E324T

Performance : 230/460 V 60 Hz 6P

Rated current : 61.6/30.8 A	Moment of inertia (J) : 10.8 sq.ft.lb
LRC : 6.2	Duty cycle : Cont.(S1)
Rated torque : 111 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.15
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 1180 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022	11 / 22		

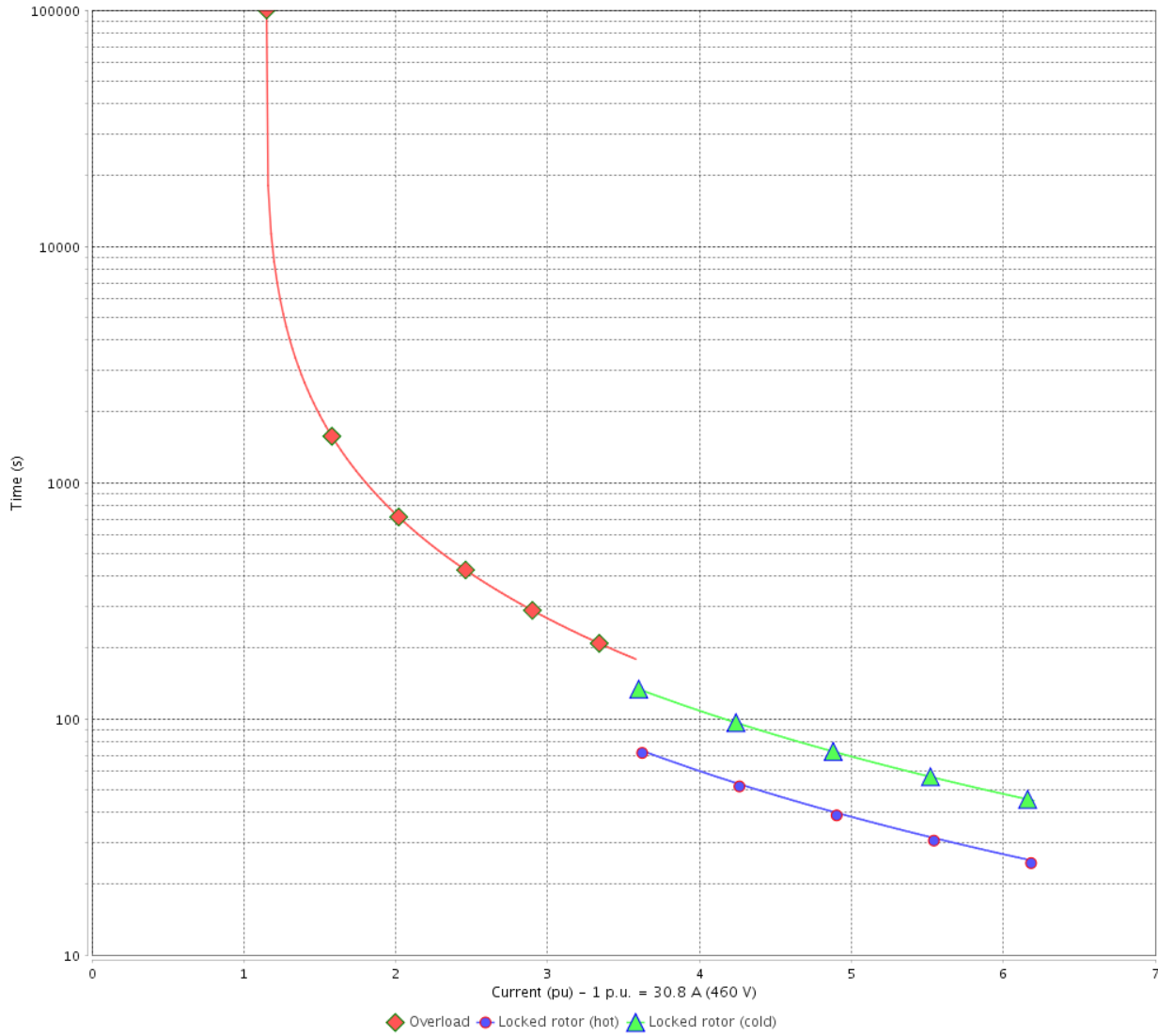
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 14407586
Catalog # : 02512XT3E324T

Performance : 380 V 50 Hz 6P IE2

Rated current : 36.8 A	Moment of inertia (J) : 10.8 sq.ft.lb
LRC : 4.9	Duty cycle : Cont.(S1)
Rated torque : 135 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 80 K
Rated speed : 975 rpm	Design : B

Heating constant

Cooling constant

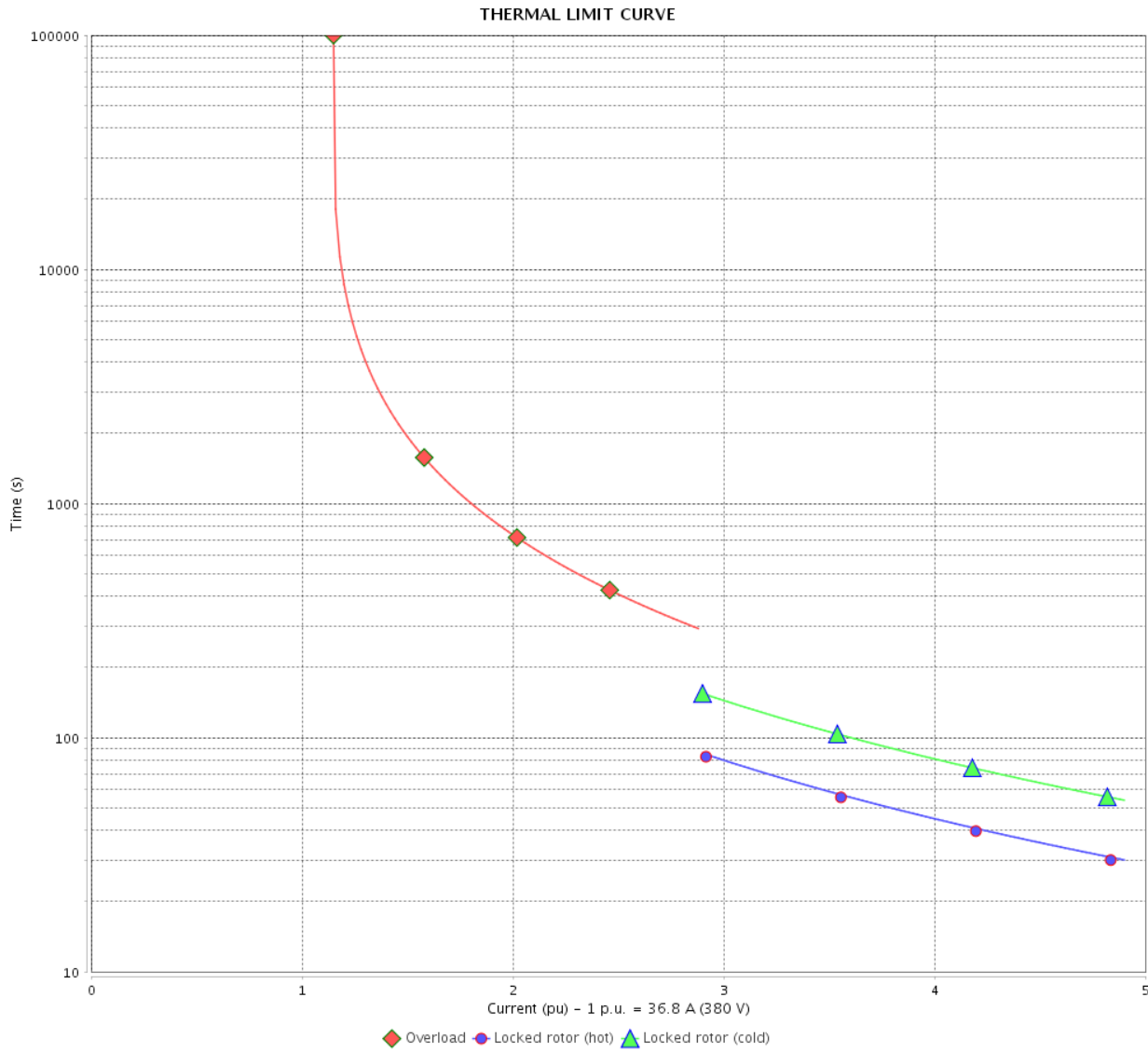
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		13 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		14 / 22		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14407586
 Catalog # : 02512XT3E324T

Performance : 400 V 50 Hz 6P IE3

Rated current : 35.1 A	Moment of inertia (J) : 10.8 sq.ft.lb
LRC : 5.4	Duty cycle : Cont.(S1)
Rated torque : 134 ft.lb	Insulation class : F
Locked rotor torque : 180 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 980 rpm	Design : B

Heating constant

Cooling constant

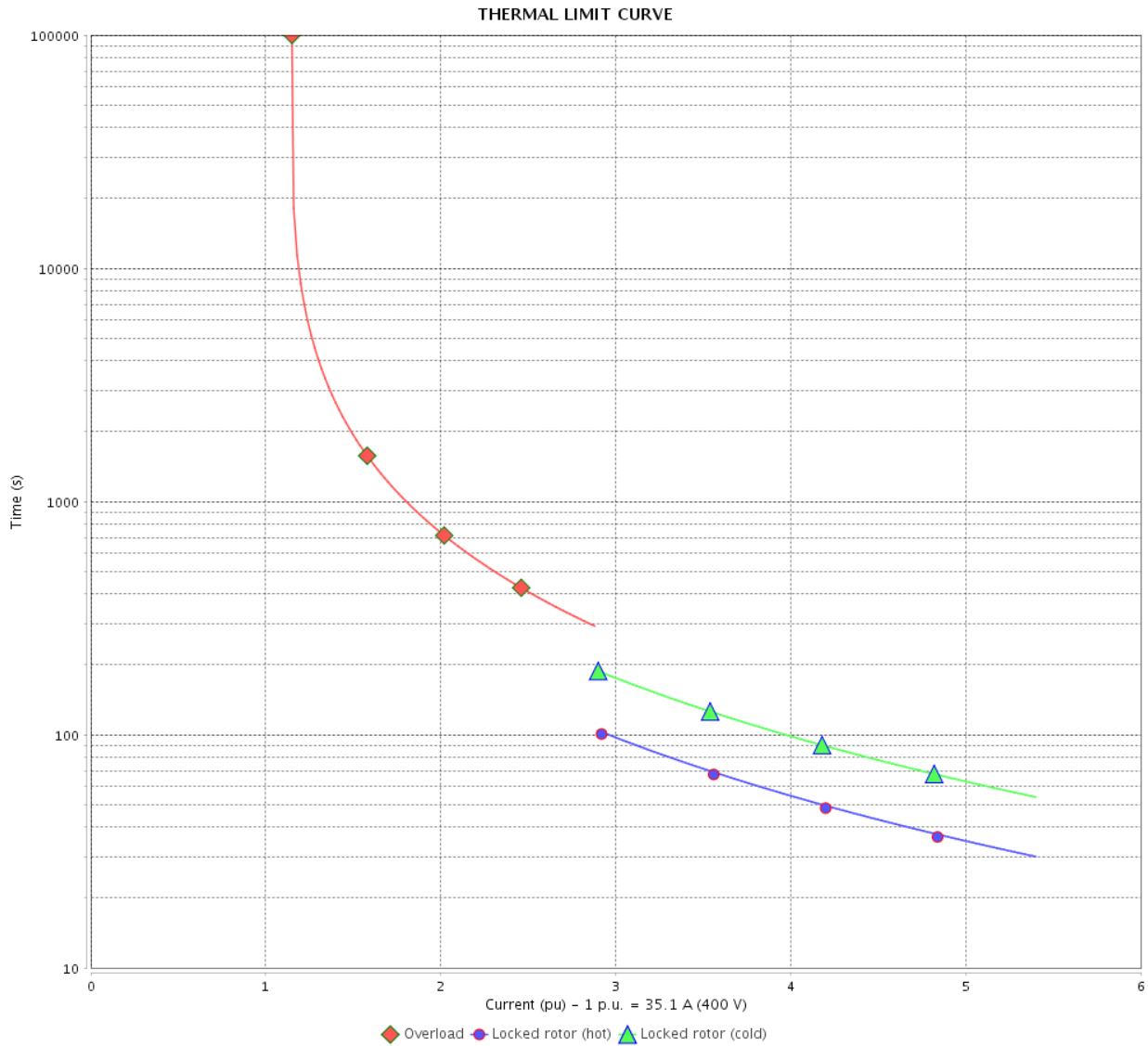
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 15 / 22	Revision
Checked by				
Date	13/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 14407586
 Catalog # : 02512XT3E324T

Performance : 415 V 50 Hz 6P IE3

Rated current : 34.2 A	Moment of inertia (J) : 10.8 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 134 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 980 rpm	Design : B

Heating constant

Cooling constant

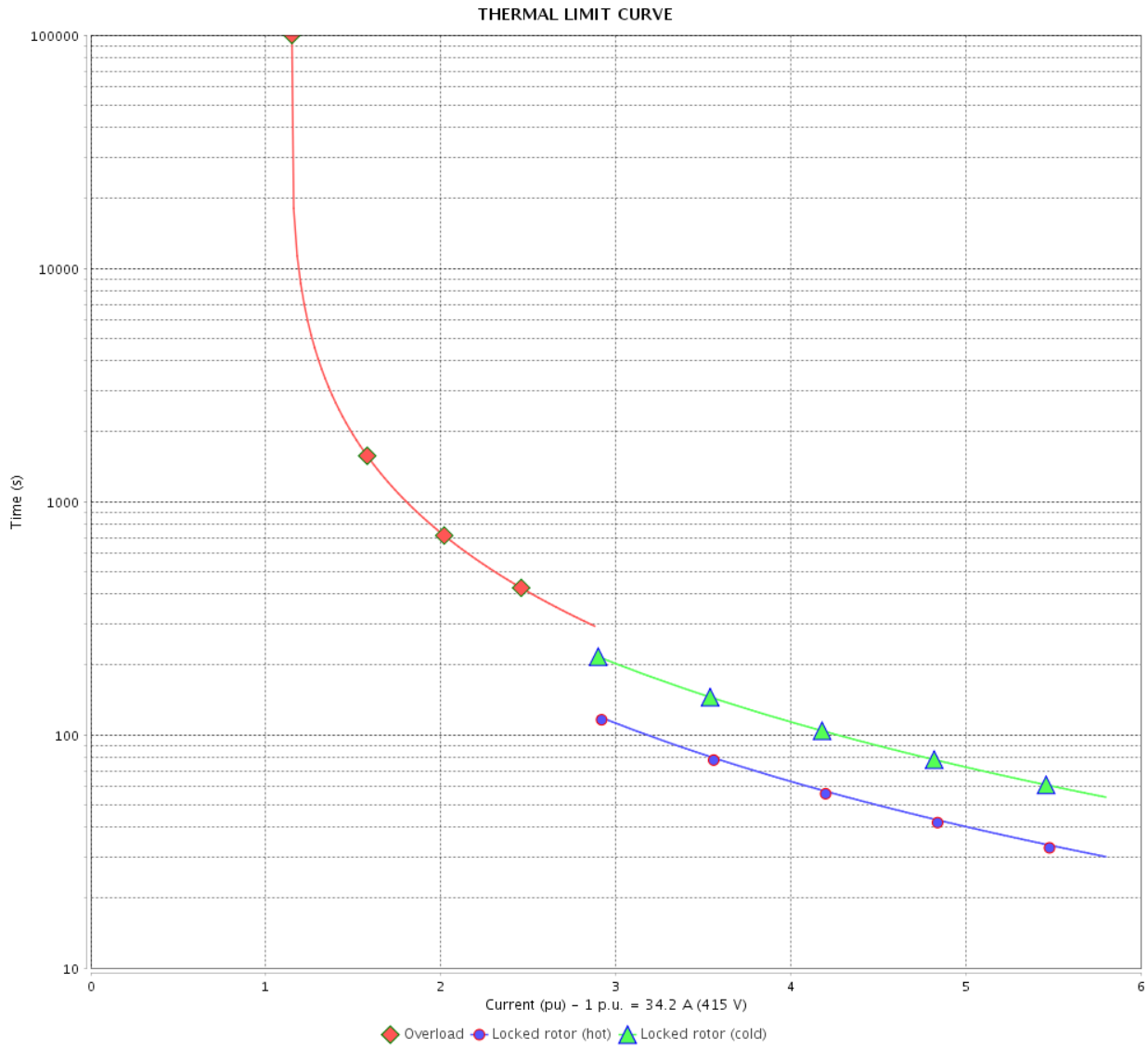
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	13/04/2022	17 / 22		

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		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

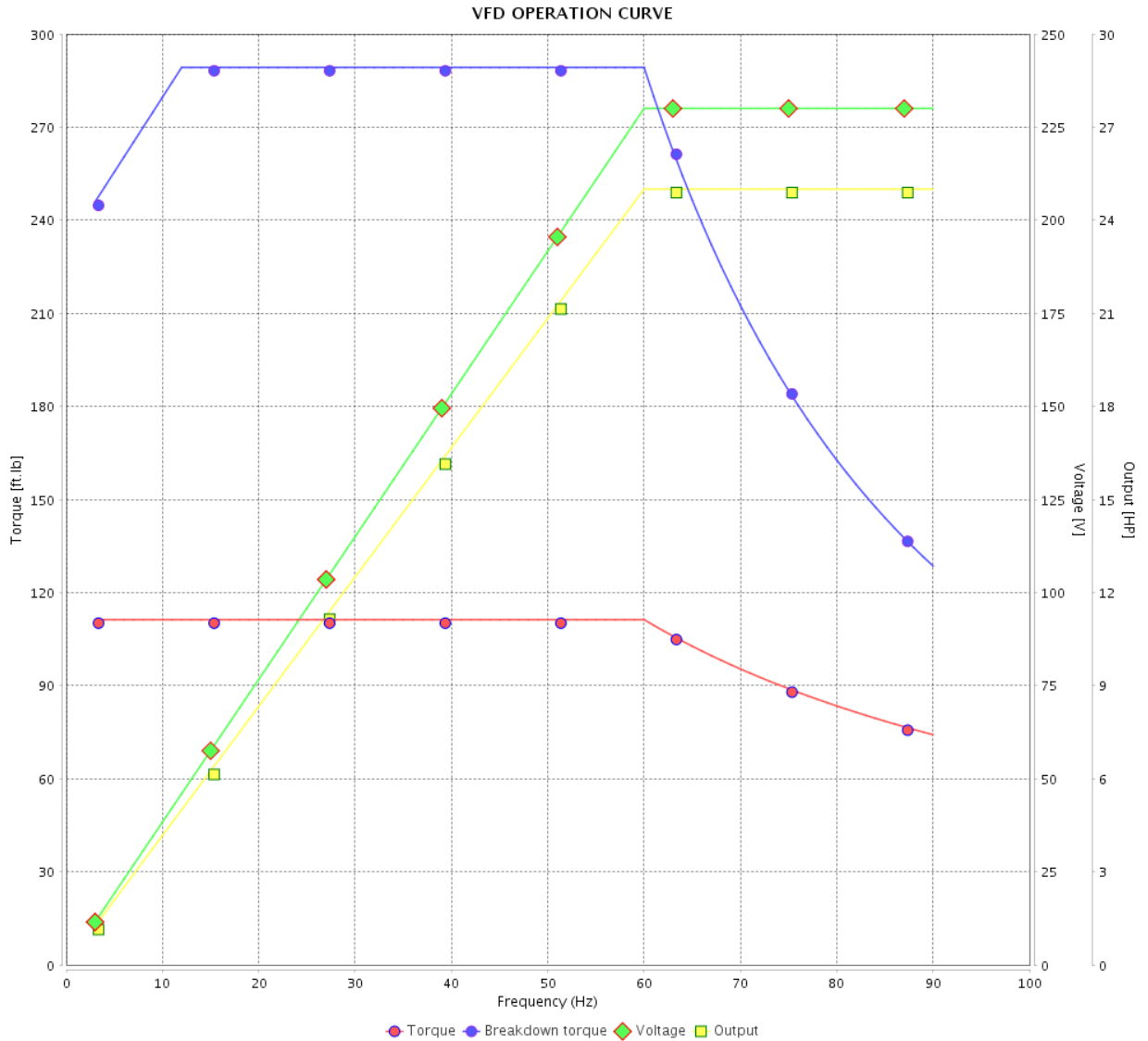


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



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 : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 10.8 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				
Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



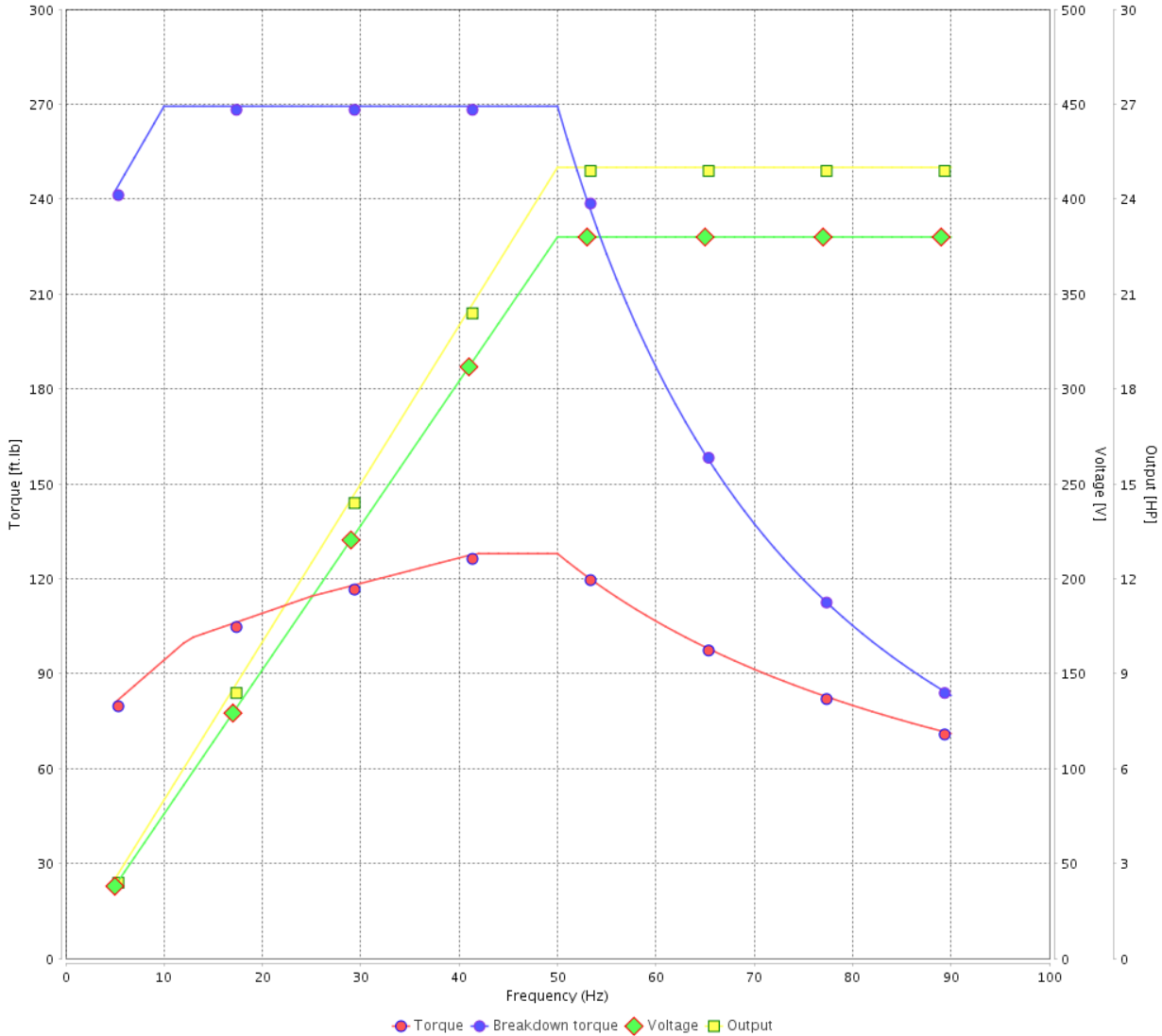
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE2

Rated current	: 36.8 A	Moment of inertia (J)	: 10.8 sq.ft.lb
LRC	: 4.9	Duty cycle	: Cont.(S1)
Rated torque	: 135 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 22	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

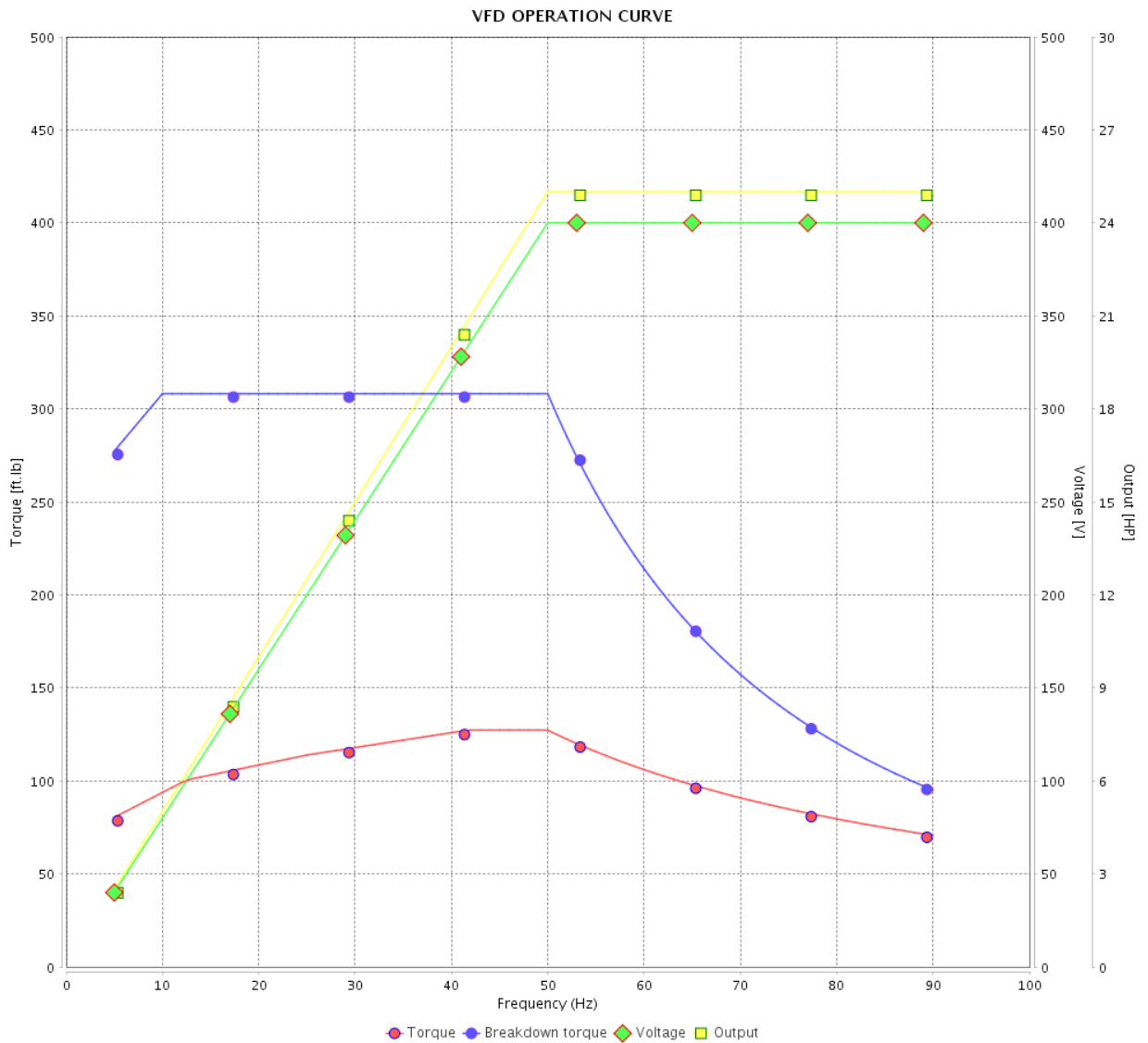


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T



Performance : 400 V 50 Hz 6P IE3

Rated current : 35.1 A
 LRC : 5.4
 Rated torque : 134 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 229 %
 Rated speed : 980 rpm

Moment of inertia (J) : 10.8 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			21 / 22	
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



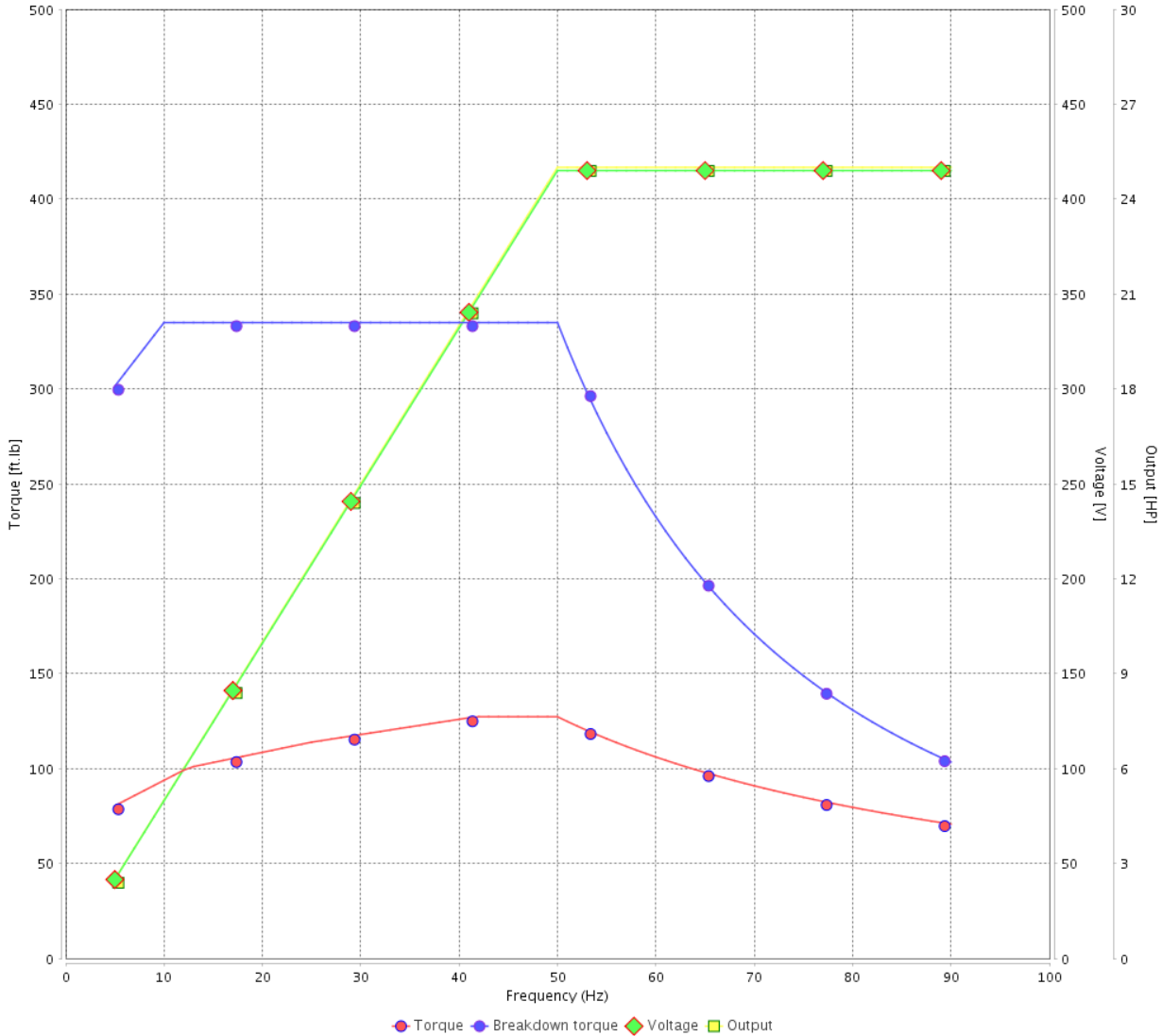
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407586

Catalog # : 02512XT3E324T

VFD OPERATION CURVE

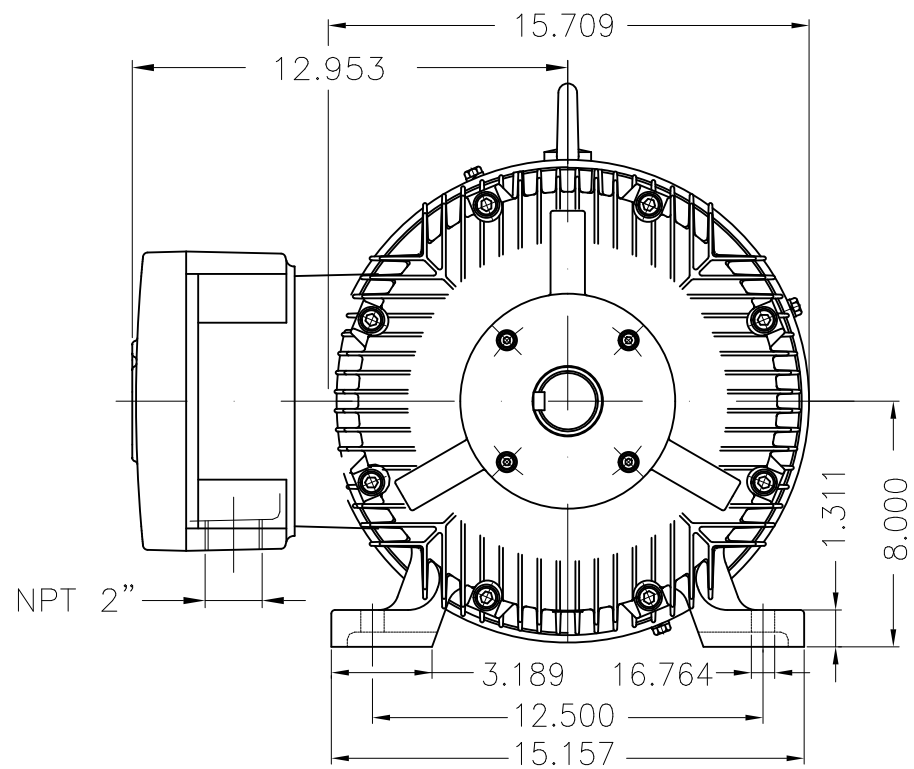


Performance : 415 V 50 Hz 6P IE3

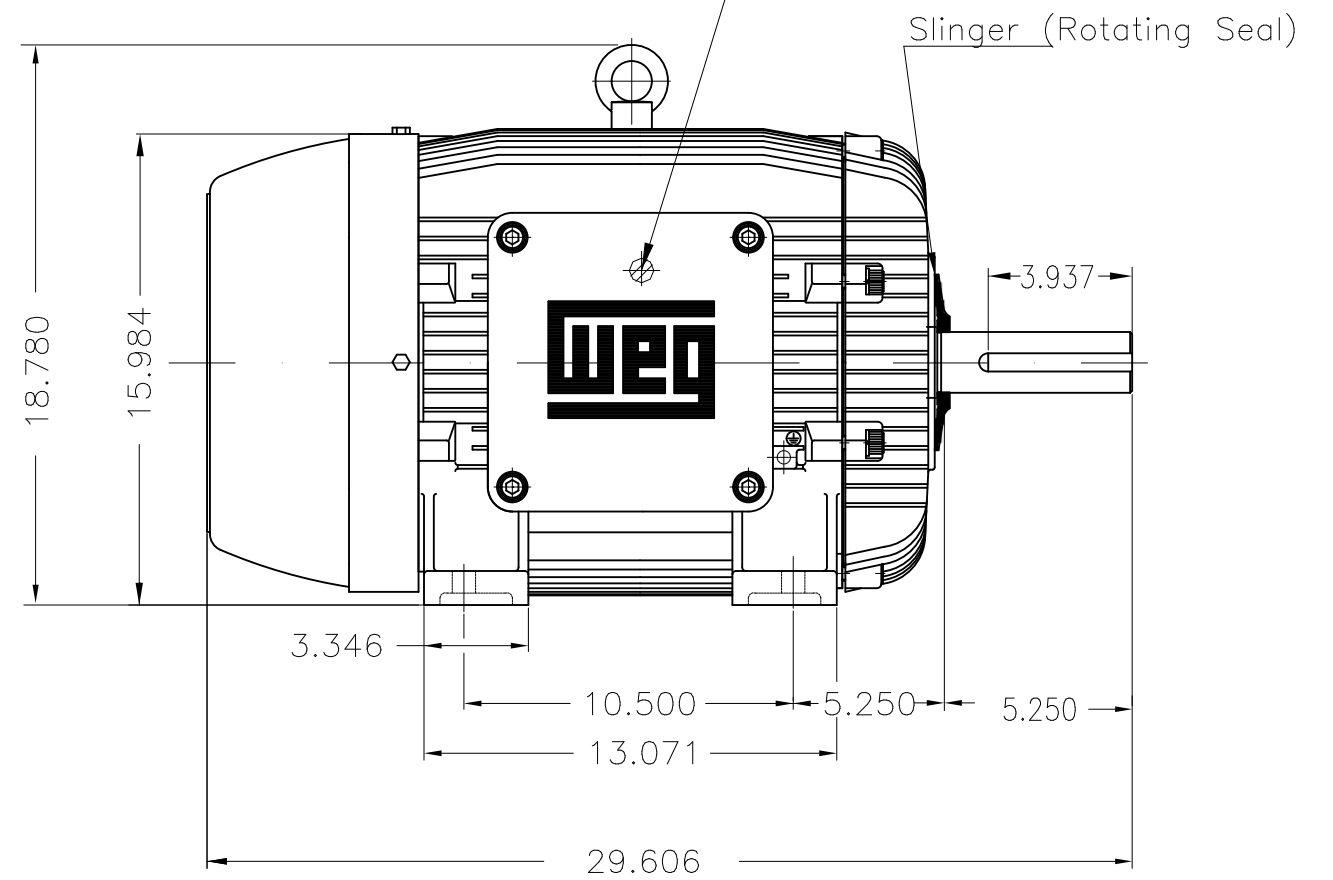
Rated current : 34.2 A
 LRC : 5.8
 Rated torque : 134 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 980 rpm

Moment of inertia (J) : 10.8 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 22 / 22	Revision
Checked by				
Date	13/04/2022			



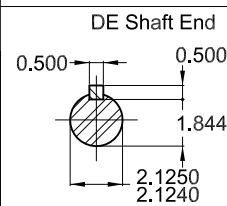
Grounding for leads 5.2–35 mm² / 10–2 AWG



25 HP 06 Poles 60 Hz

Dimensions in inches

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



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 324T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET 1 / 1			

PREVIEW
WDD



MADE IN BRAZIL


W21X NEMA
Premium

14407586



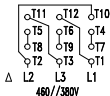
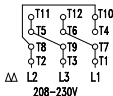
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 02512XT3E324T

PH 3	FR 324T		
HP(kW) 25.0(18.5)		HZ 60	IP55
V 230/460		A 61.6/30.8	
RPM 1180		NEMA NOM EFF 93.0%	
PF 0.81		SFA 70.8/35.4	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	67.2 A	SF 1.15 SFA 77.3
AMB 55°C SF1.0			
25HP 18.5kW 50Hz 380V 36.8A 975RPM SF1.00 EFF 91.0% (IE2)			



→ 6312-C3 MOBIL POLYREX EM
 → 6212-C3 21 g 20000 h

578 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.