

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 14406836	
				Catalog # : 01518XT3E254T	
Frame : 254T		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 : 328 lb			
Protection degree : IP55		Moment of inertia (J) : 2.31 sq.ft.lb			
Design : B					
Output [HP]	15	15	15	15	15
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	36.8/18.4	22.1	21.3	20.8	20.8
L. R. Amperes [A]	269/134	128	136	141	141
LRC [A]	7.3x(Code J)	5.8x(Code G)	6.4x(Code G)	6.8x(Code H)	6.8x(Code H)
No load current [A]	17.2/8.60	8.40	9.20	9.60	9.60
Rated speed [RPM]	1770	1455	1460	1465	1465
Slip [%]	1.67	3.00	2.67	2.33	2.33
Rated torque [ft.lb]	44.5	54.1	54.0	53.8	53.8
Locked rotor torque [%]	300	220	250	270	270
Breakdown torque [%]	300	229	250	270	270
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	46s (cold) 26s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level ²	69.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)	67.0 dB(A)
Efficiency (%)	25%	89.4	92.1	91.4	90.8
	50%	90.2	91.0	91.0	91.0
	75%	91.7	91.7	91.7	91.0
	100%	92.4	90.2	91.0	91.0
Power Factor	25%	0.39	0.45	0.42	0.39
	50%	0.65	0.71	0.68	0.64
	75%	0.75	0.79	0.77	0.75
	100%	0.81	0.84	0.82	0.81
Bearing type		Drive end : 6309 C3	Non drive end : 6209 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 532 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 860 lb	
Lubricant amount		: 13 g	: 9 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.		
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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

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TORQUE AND CURRENT VS SPEED CURVE



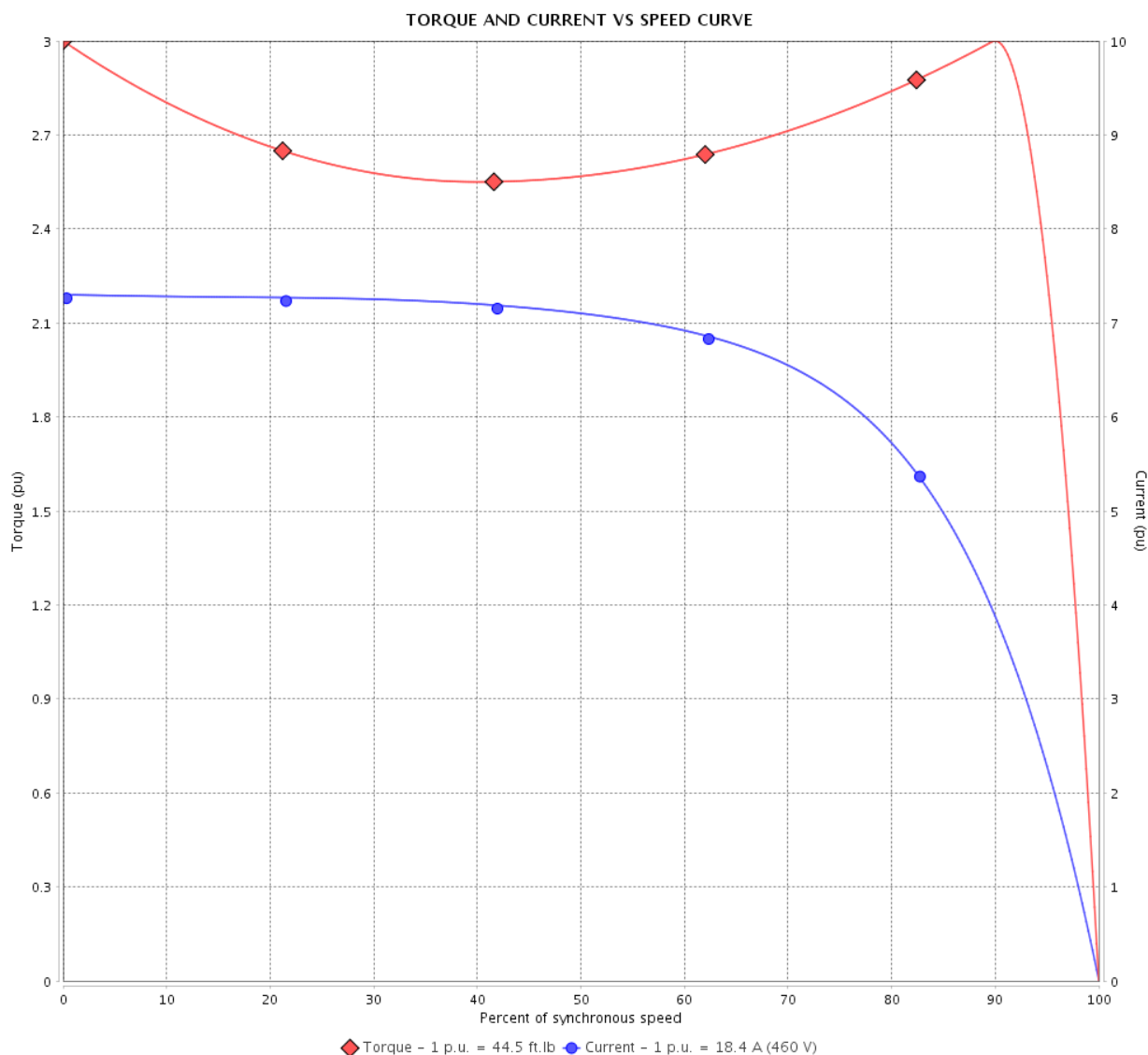
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T



Performance : 230/460 V 60 Hz 4P

Rated current : 36.8/18.4 A
 LRC : 7.3
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 300 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 2.31 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 46s (cold) 26s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



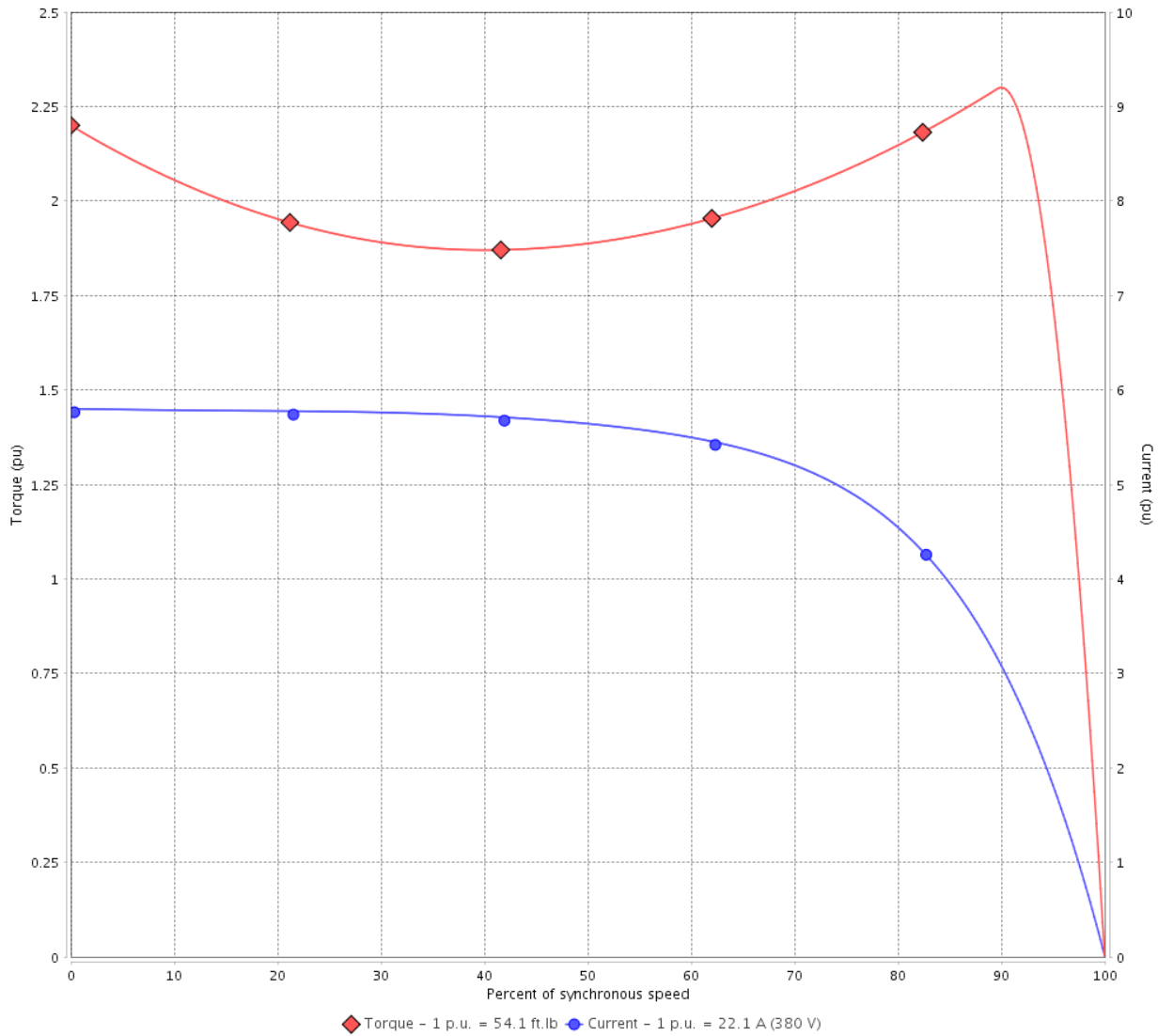
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current	: 22.1 A	Moment of inertia (J)	: 2.31 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 54.1 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



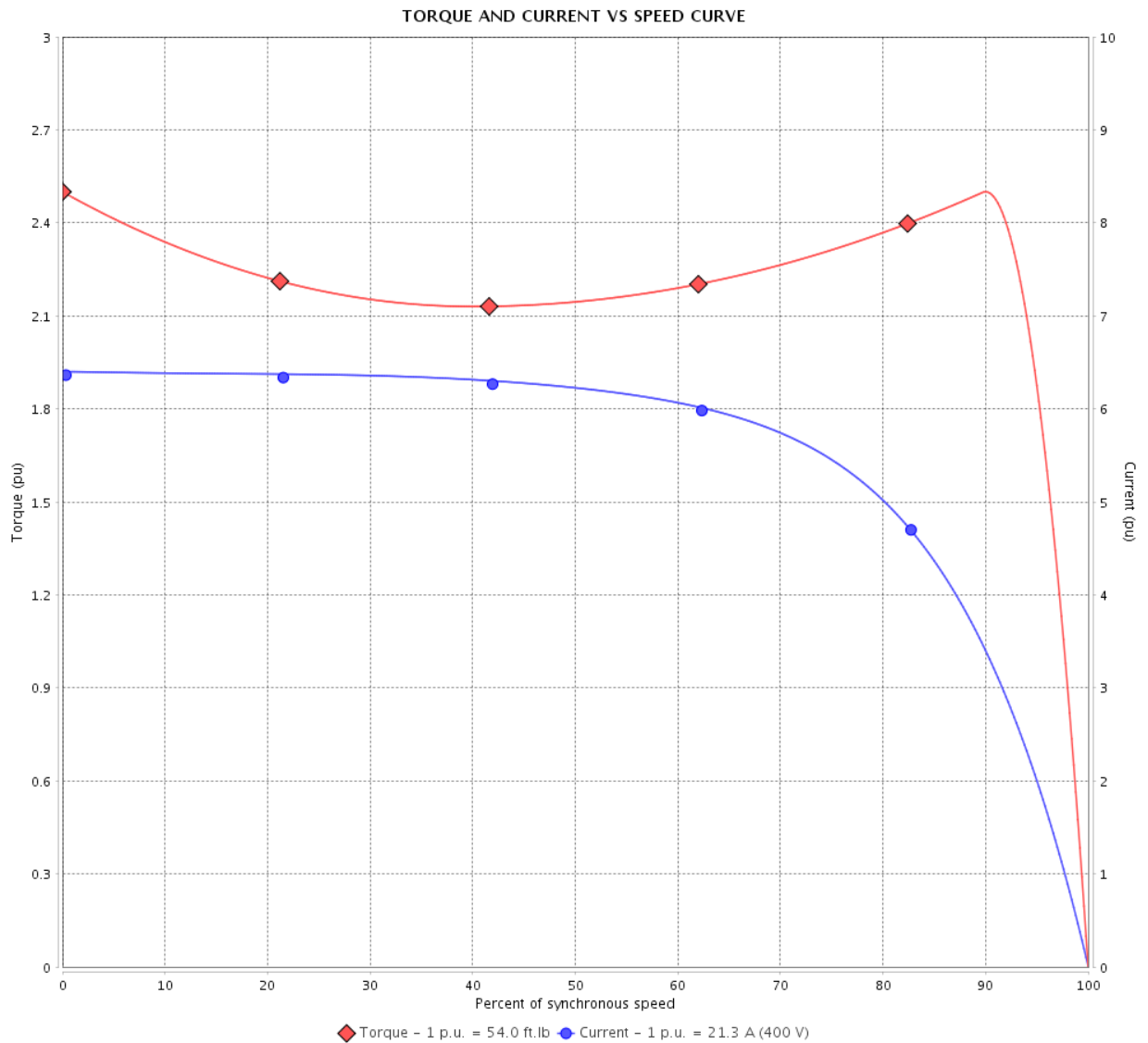
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T



Performance : 400 V 50 Hz 4P IE2

Rated current	: 21.3 A	Moment of inertia (J)	: 2.31 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 54.0 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



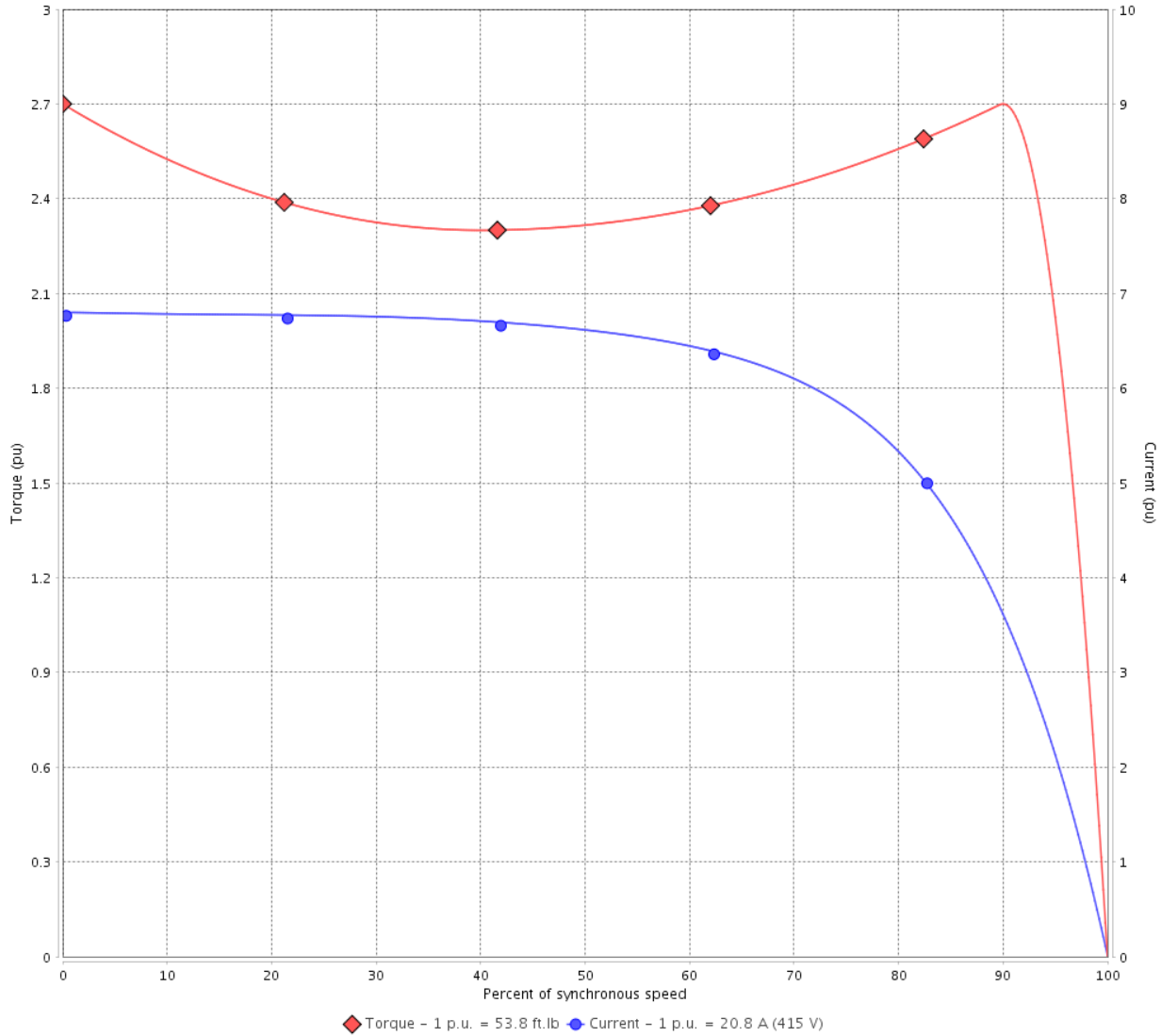
Customer :

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Product code : 14406836

Catalog # : 01518XT3E254T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P IE2

Rated current	: 20.8 A	Moment of inertia (J)	: 2.31 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 53.8 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

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

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LOAD PERFORMANCE CURVE

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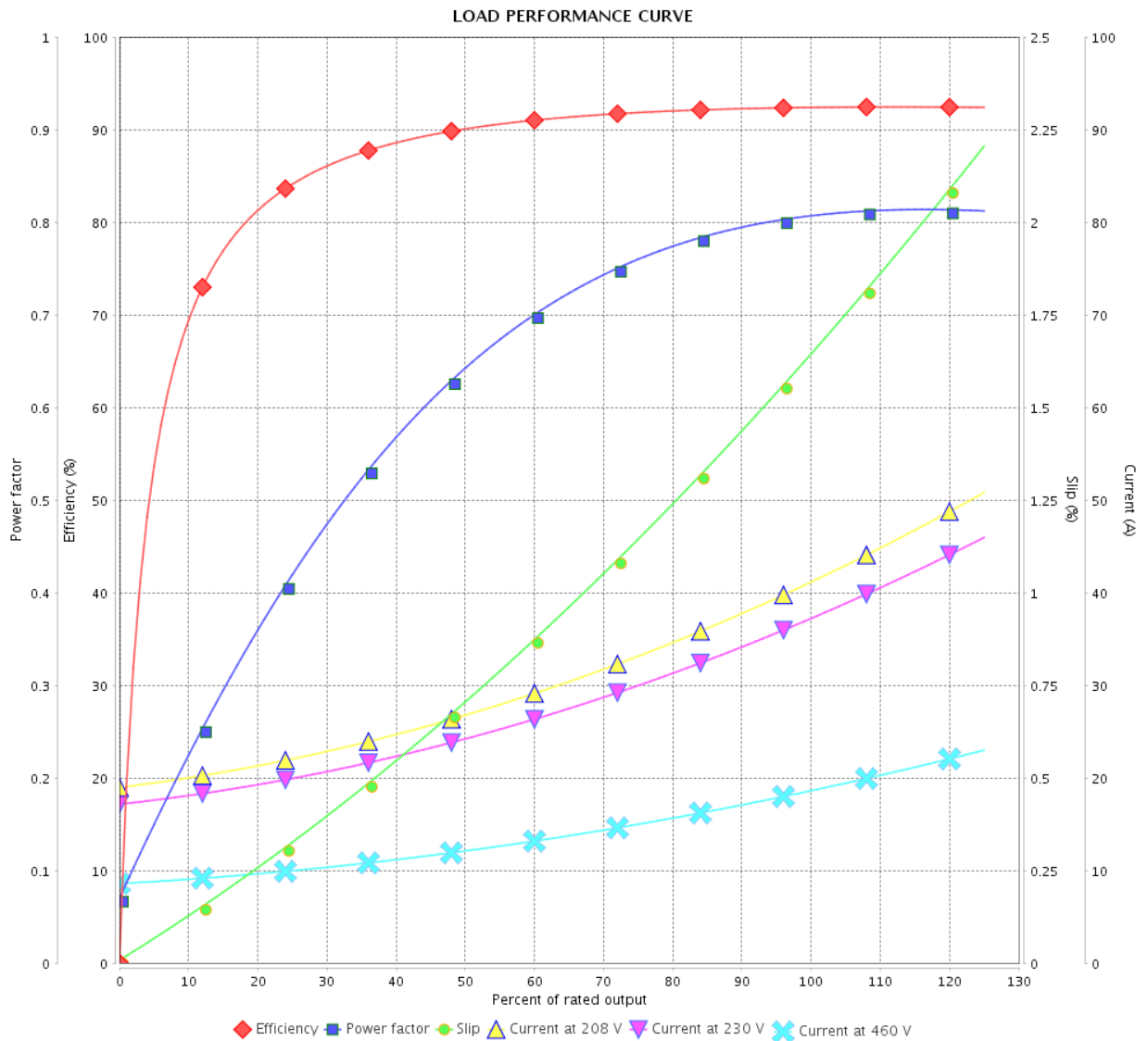


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T



Performance : 230/460 V 60 Hz 4P

Rated current : 36.8/18.4 A
 LRC : 7.3
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 300 %
 Breakdown torque : 300 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 2.31 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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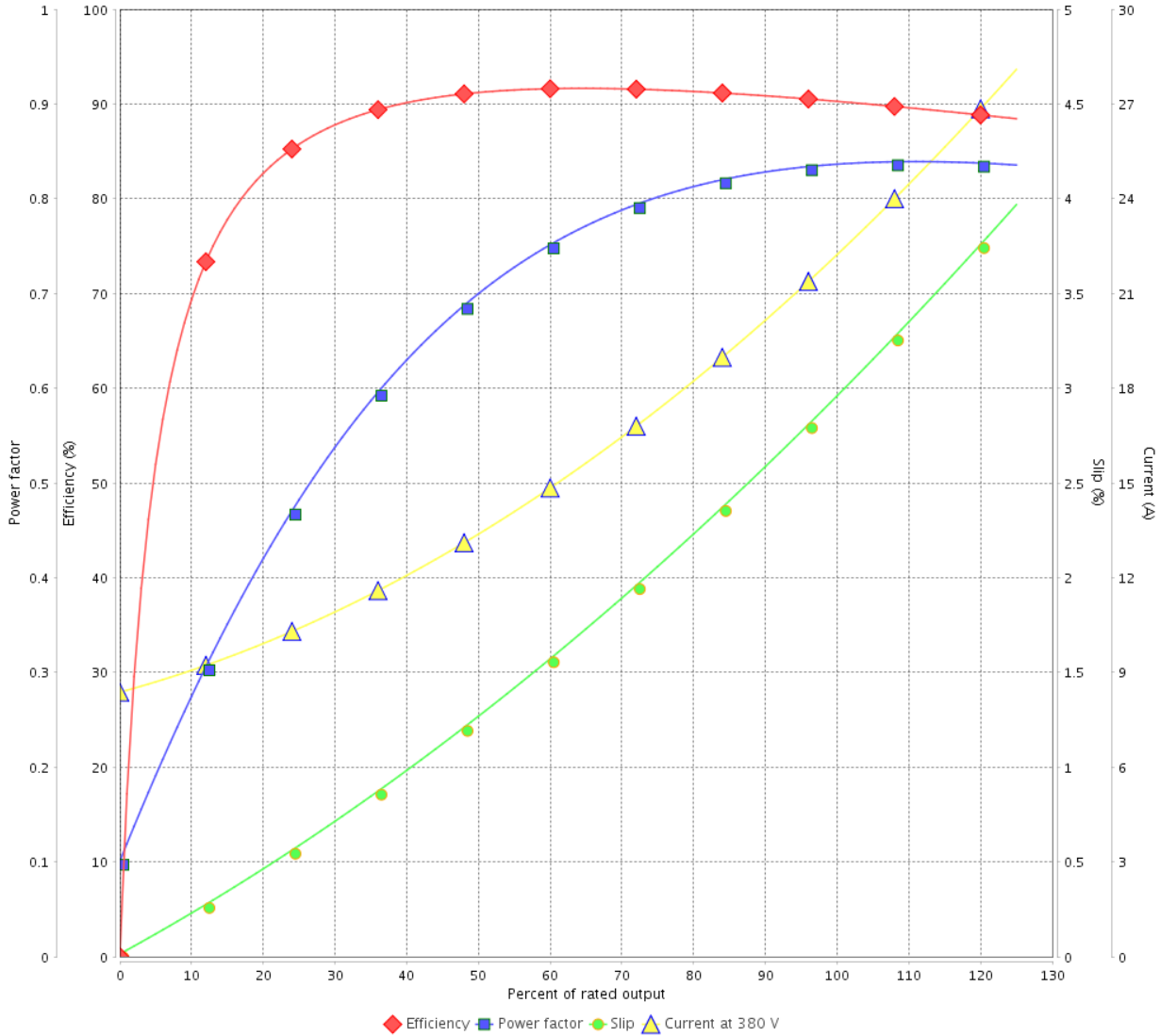
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Performance : 380 V 50 Hz 4P IE2

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 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 2.31 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

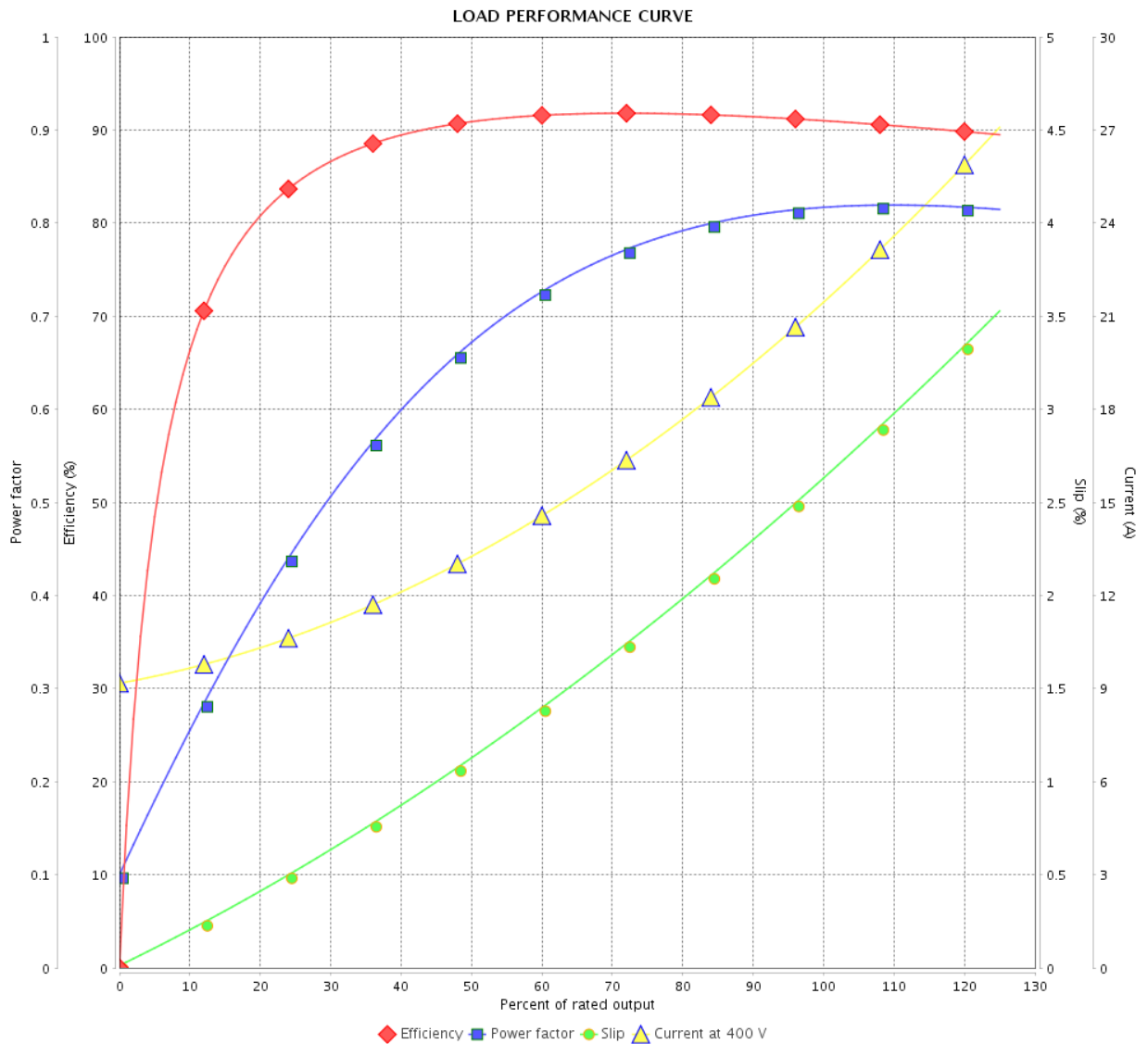


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T



Performance : 400 V 50 Hz 4P IE2

Rated current : 21.3 A
 LRC : 6.4
 Rated torque : 54.0 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 250 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 2.31 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



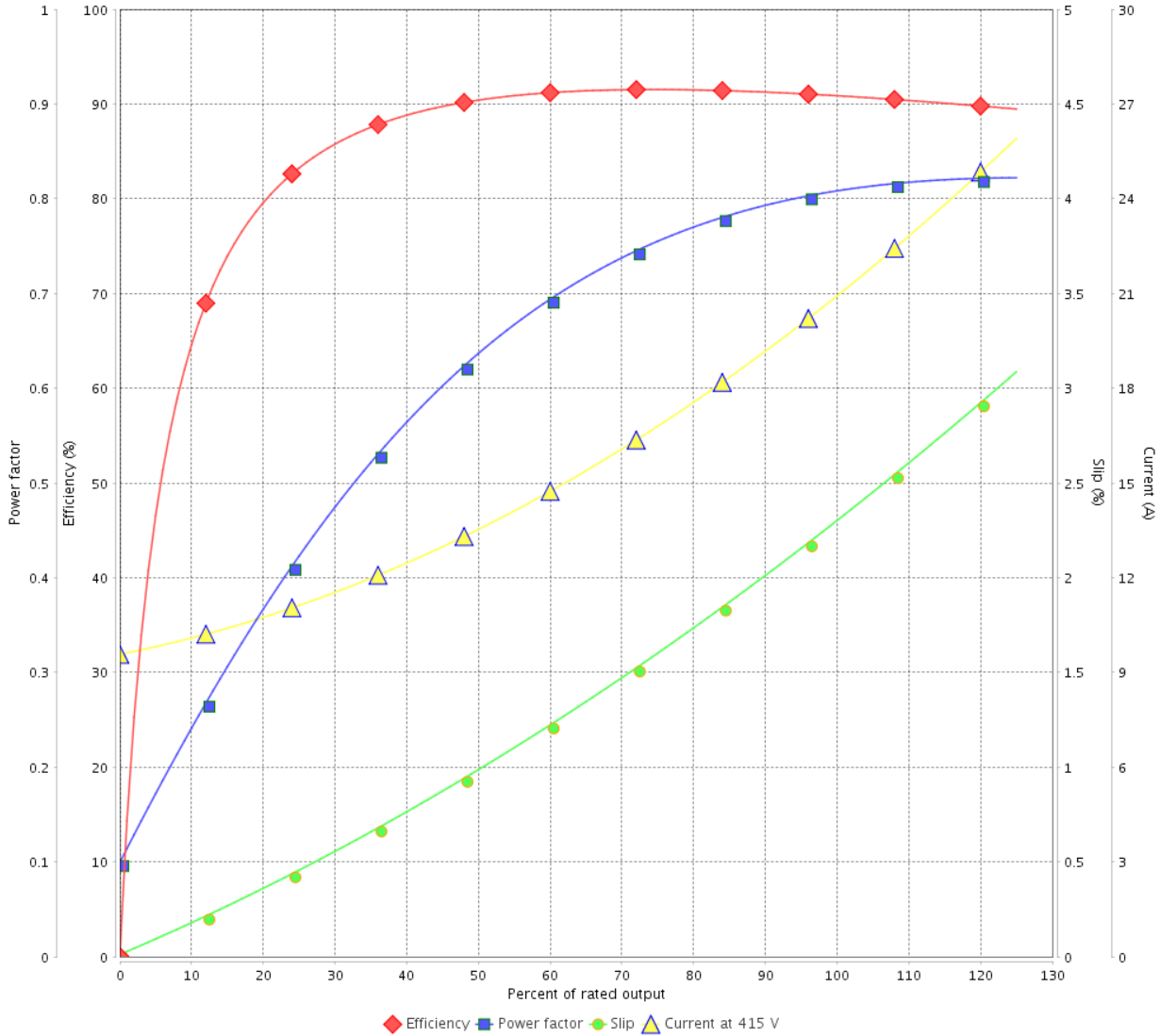
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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LRC : 7.3	Duty cycle : Cont.(S1)
Rated torque : 44.5 ft.lb	Insulation class : F
Locked rotor torque : 300 %	Service factor : 1.15
Breakdown torque : 300 %	Temperature rise : 80 K
Rated speed : 1770 rpm	Design : B

Heating constant

Cooling constant

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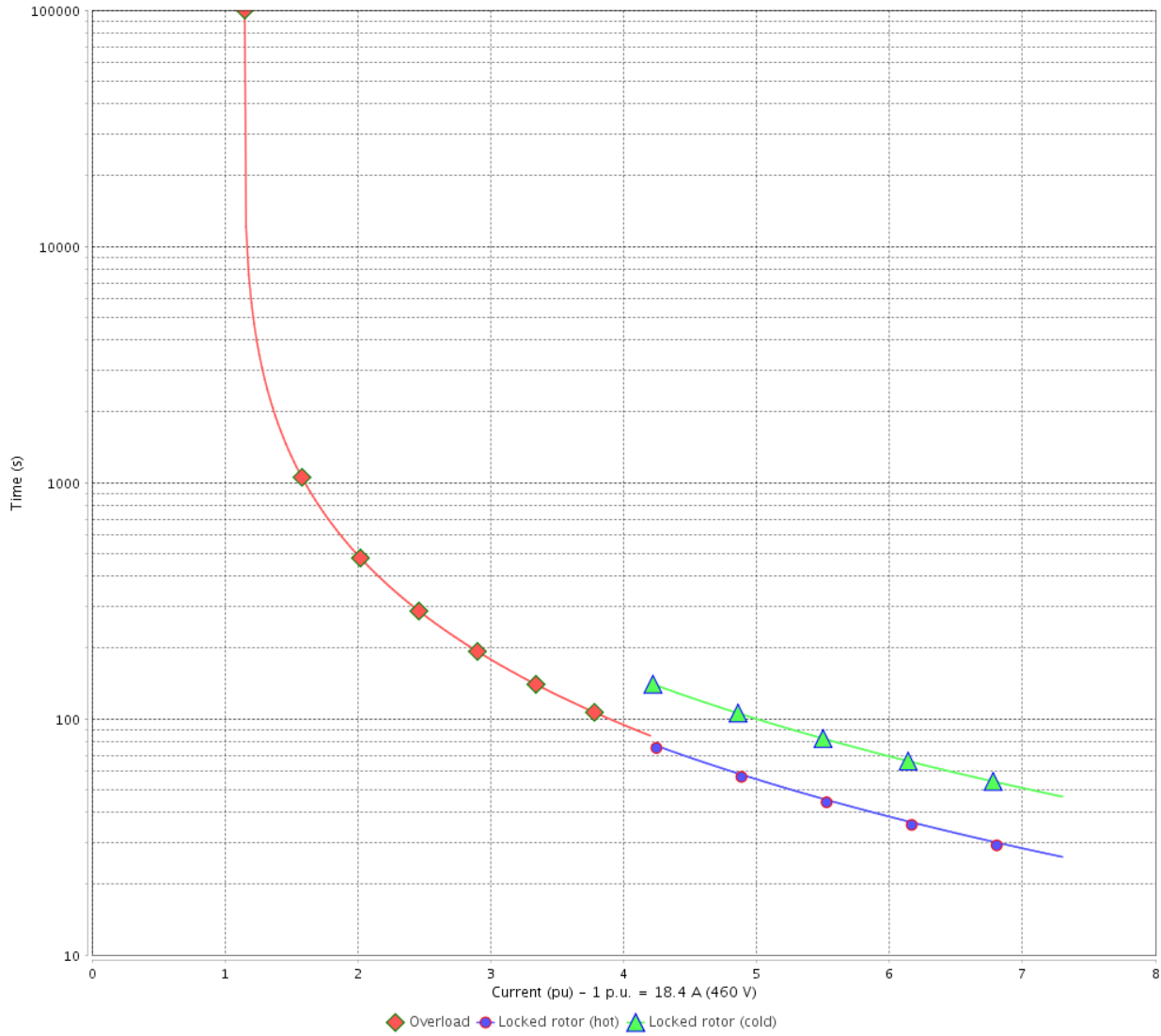
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Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Heating constant

Cooling constant

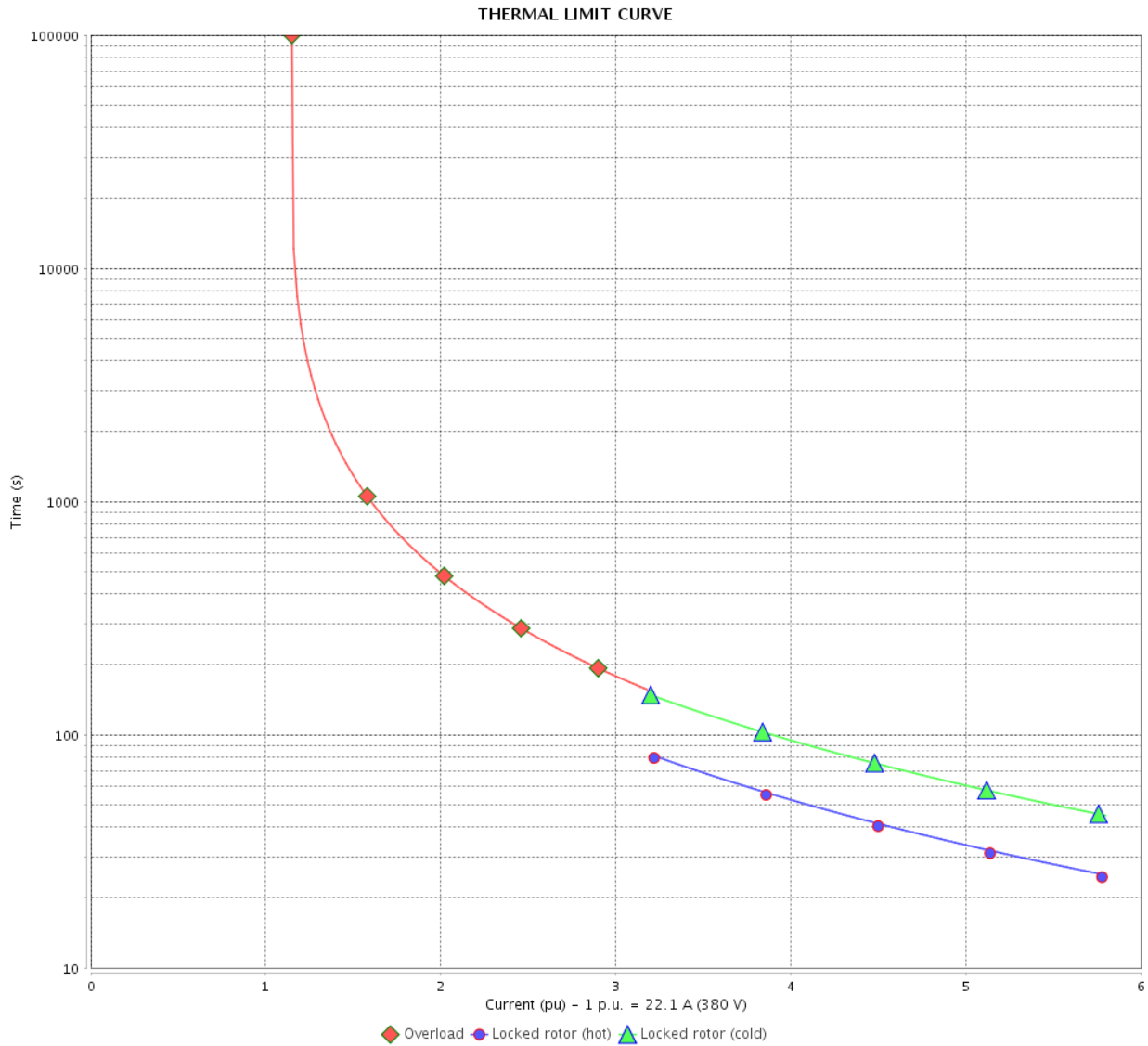
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Date	13/04/2022		13 / 22	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

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 Product code : 14406836
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Performance : 400 V 50 Hz 4P IE2

Rated current : 21.3 A	Moment of inertia (J) : 2.31 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 54.0 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 1460 rpm	Design : B

Heating constant

Cooling constant

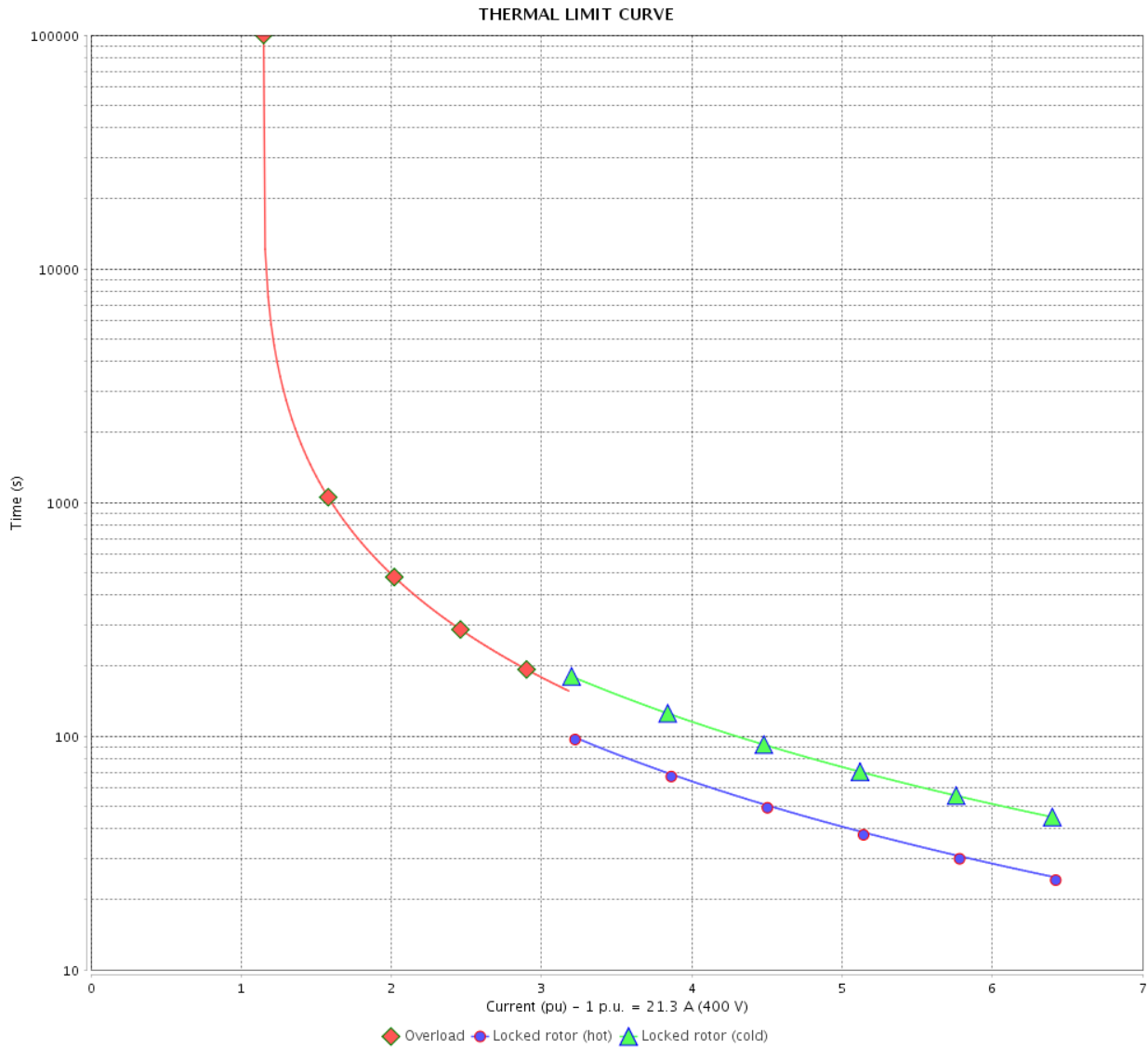
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Performance : 415 V 50 Hz 4P IE2

Rated current : 20.8 A	Moment of inertia (J) : 2.31 sq.ft.lb
LRC : 6.8	Duty cycle : Cont.(S1)
Rated torque : 53.8 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 1465 rpm	Design : B

Heating constant

Cooling constant

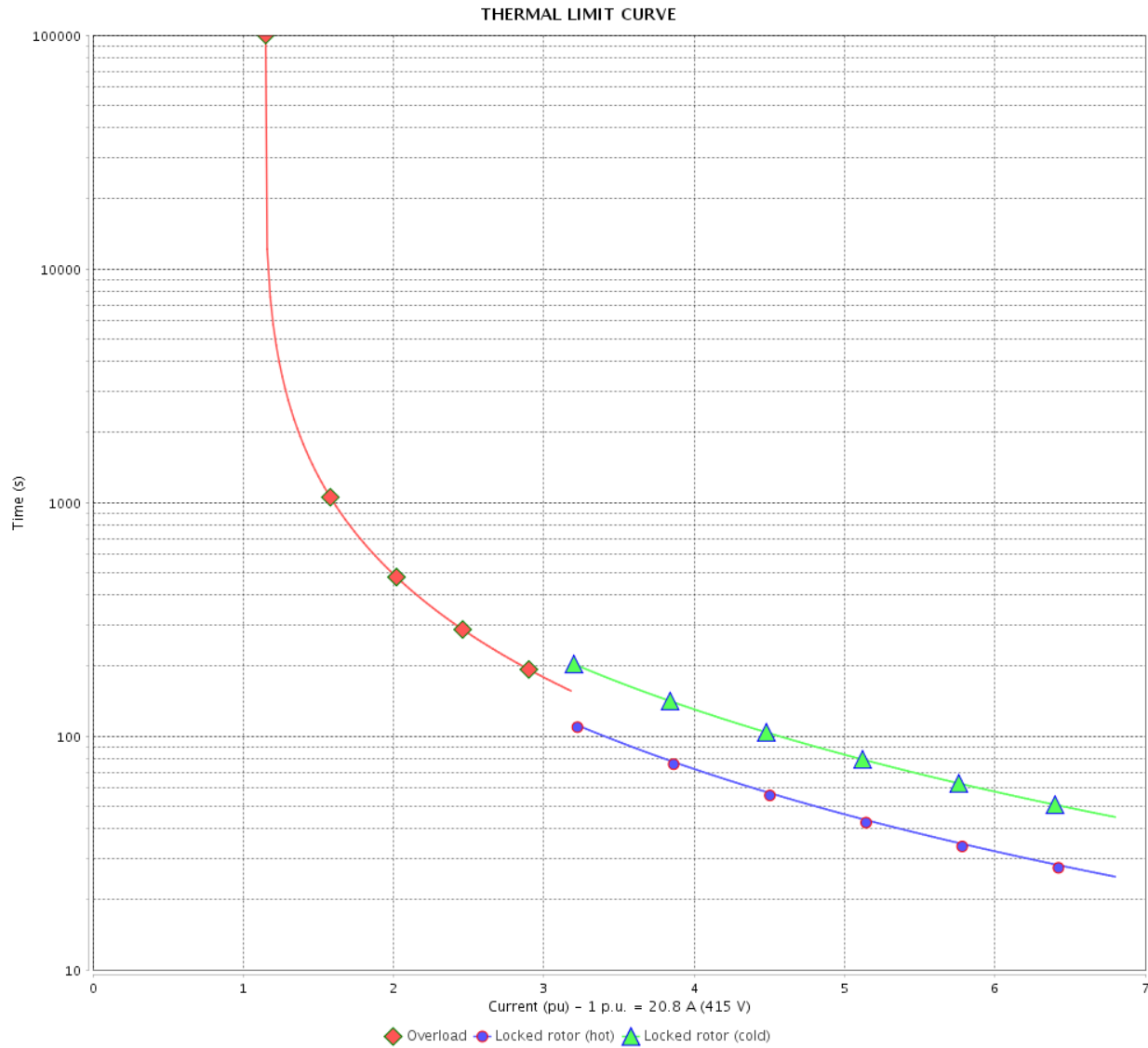
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THERMAL LIMIT CURVE

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Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

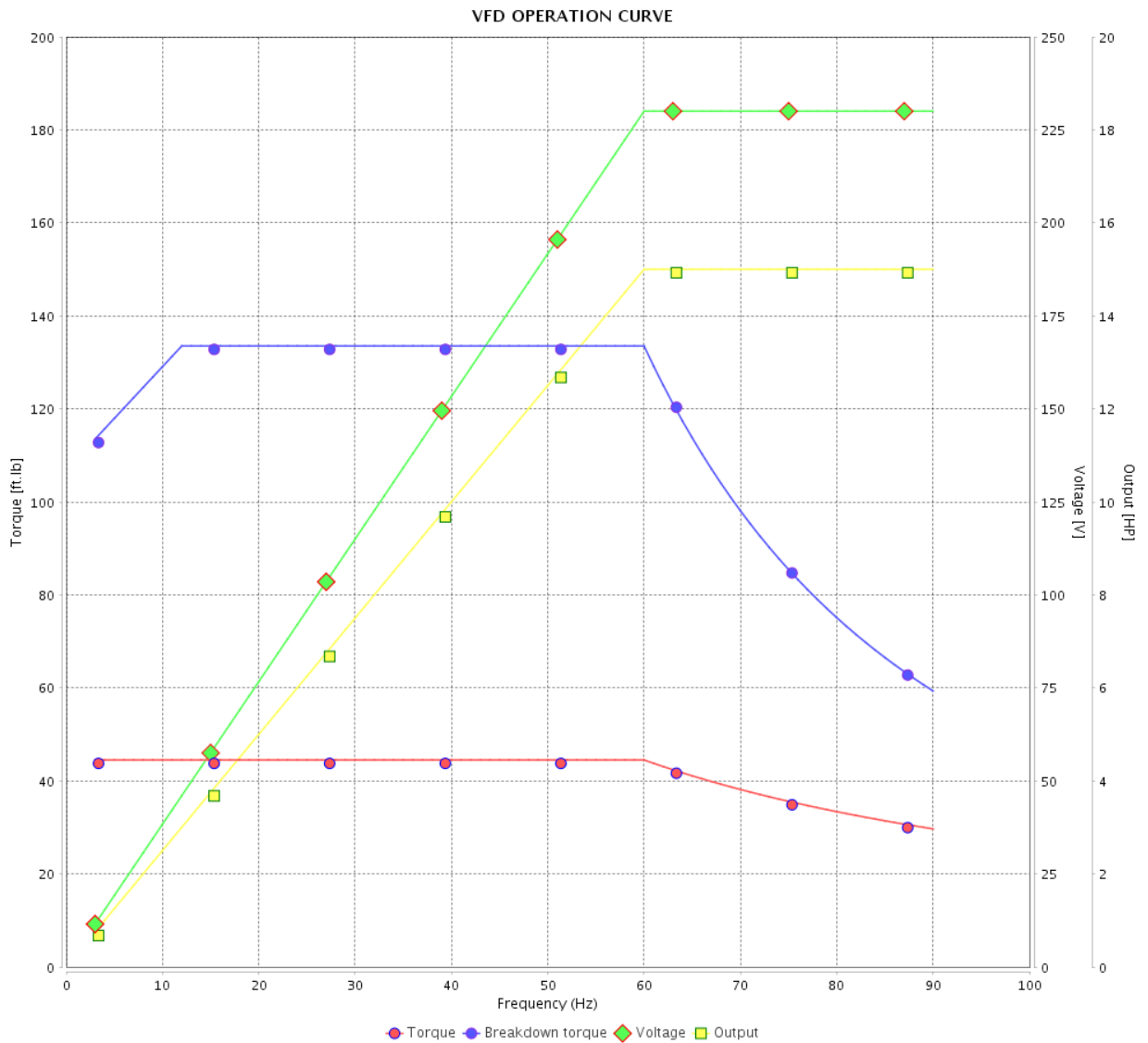


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Performance : 230/460 V 60 Hz 4P

Rated current : 36.8/18.4 A
 LRC : 7.3
 Rated torque : 44.5 ft.lb
 Locked rotor torque : 300 %
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Moment of inertia (J) : 2.31 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
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



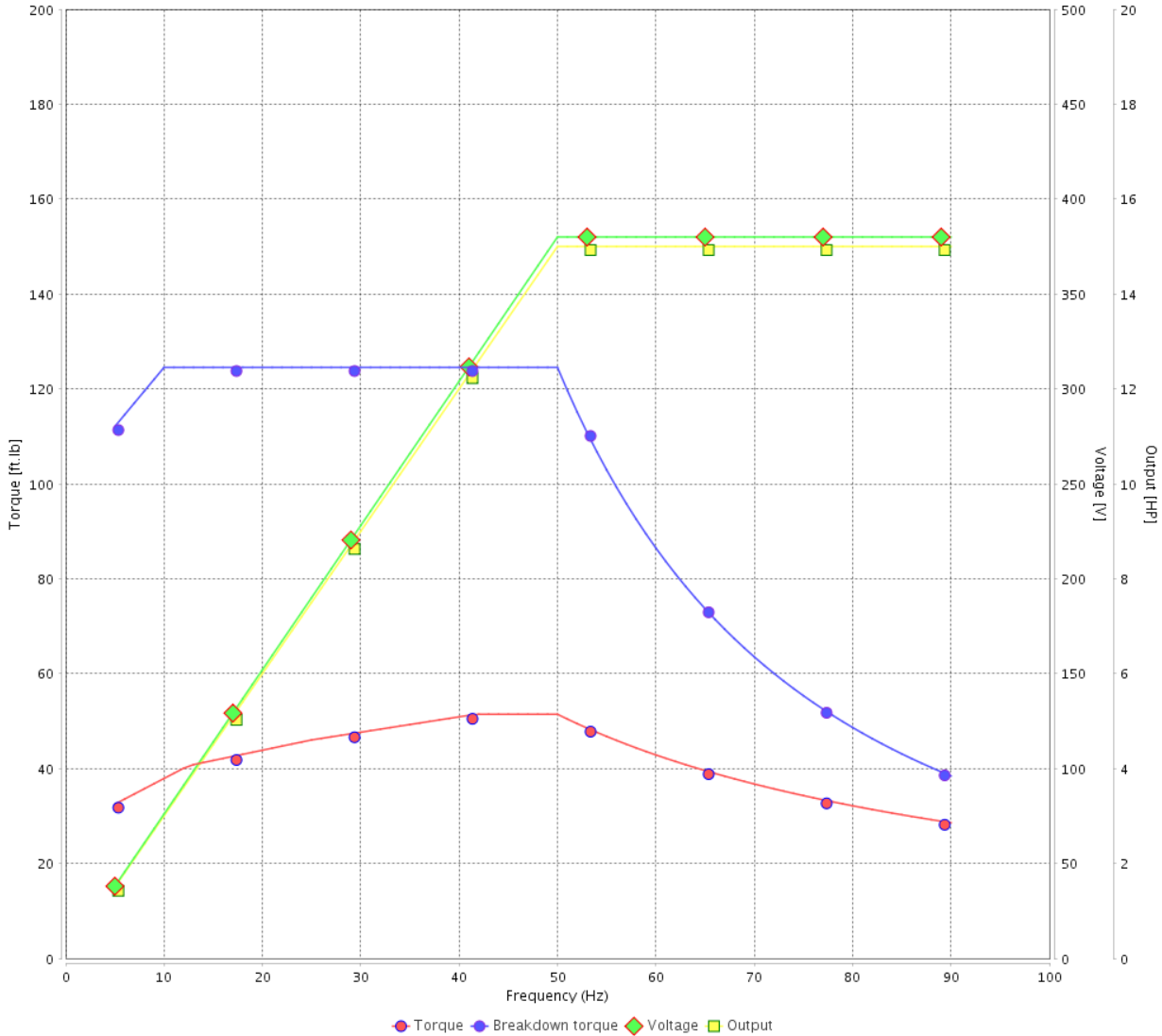
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VFD OPERATION CURVE



Performance : 380 V 50 Hz 4P IE2

Rated current : 22.1 A
 LRC : 5.8
 Rated torque : 54.1 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 229 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 2.31 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
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

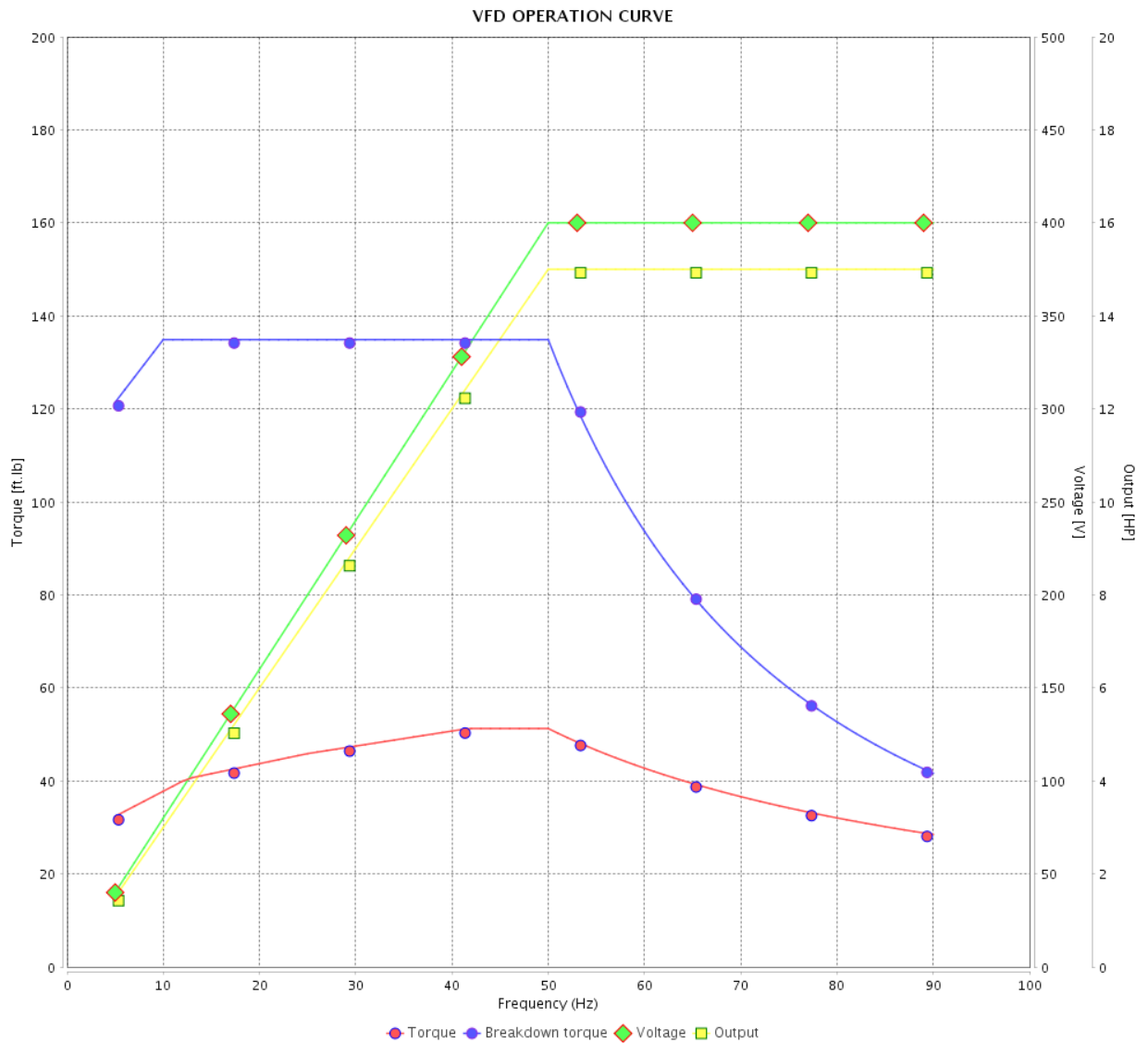


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14406836

Catalog # : 01518XT3E254T



Performance : 400 V 50 Hz 4P IE2

Rated current : 21.3 A
 LRC : 6.4
 Rated torque : 54.0 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 250 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 2.31 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
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



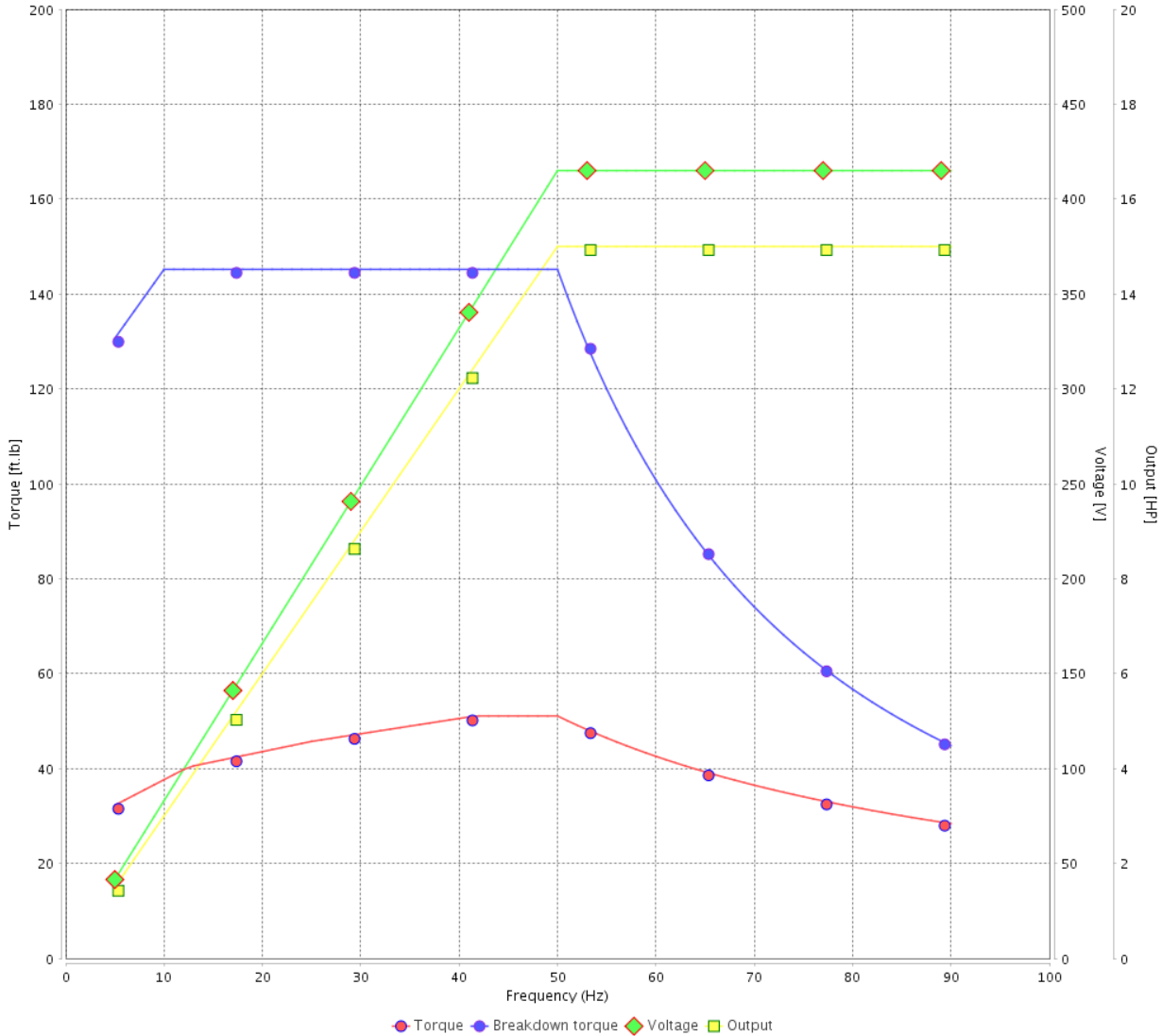
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LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 53.8 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1465 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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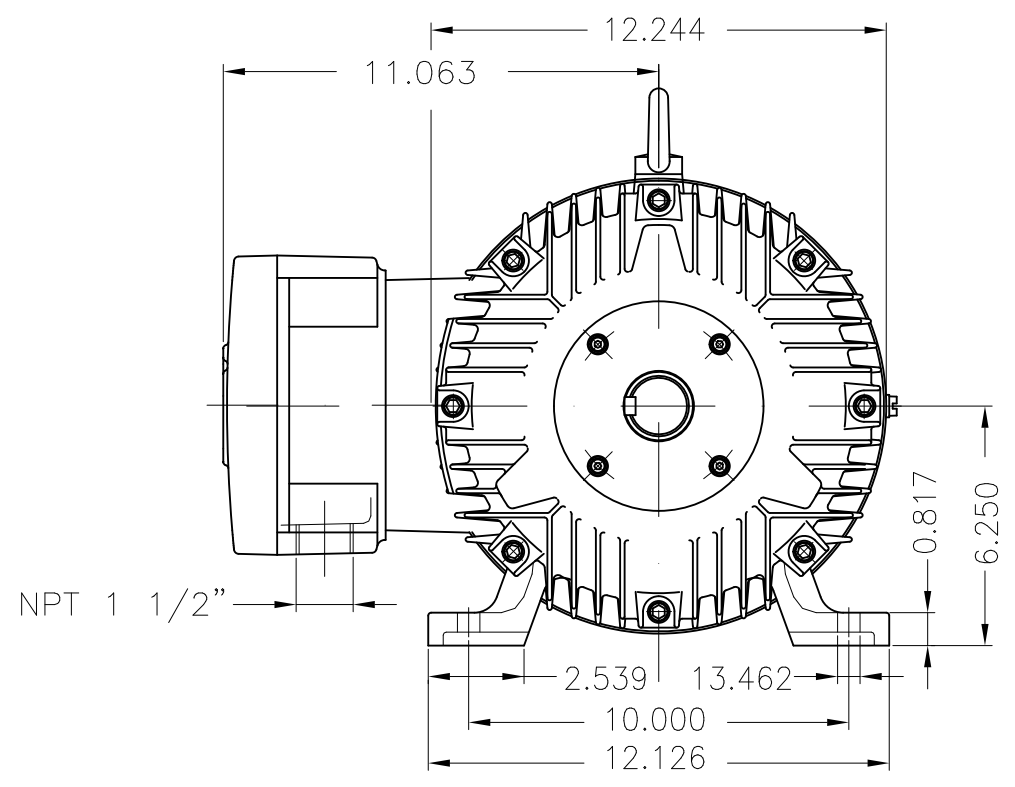
A

B

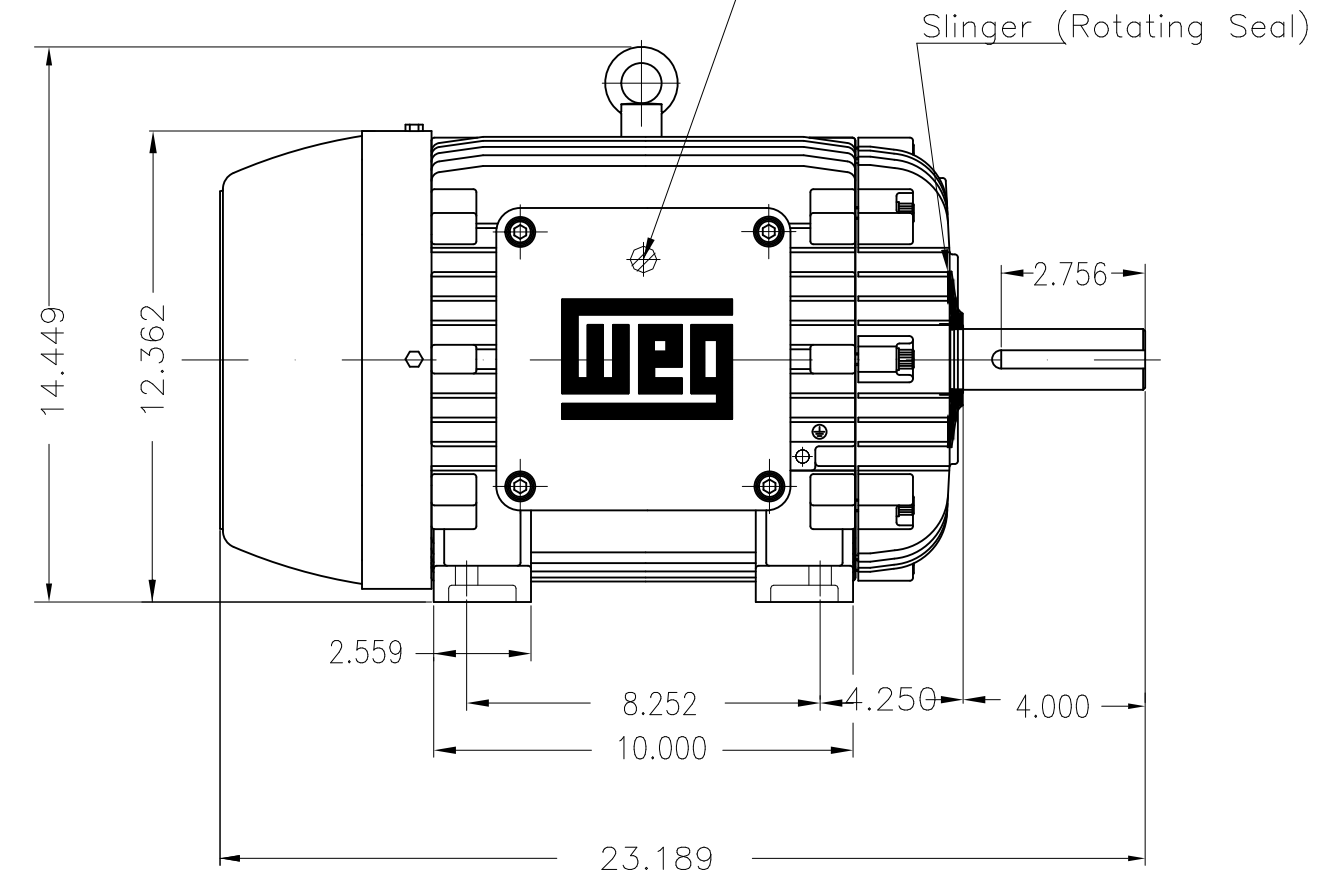
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D

E

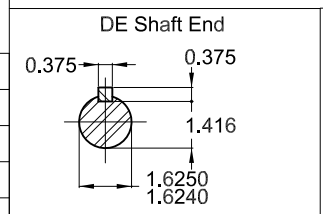


Grounding for leads 5.2–25 mm² / 10–4 AWG



15 HP 04 Poles 60 Hz A

- 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 254T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD

SHEET 1 / 1

Dimensions in inches XME A3

MADE IN BRAZIL

**W21X NEMA**
Premium

14406836



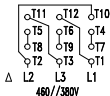
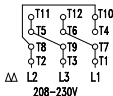
LISTED

CC029A

Inverter Duty Motor
Severe Duty

MODEL 01518XT3E254T

PH 3	FR 254T		
HP(kW) 15.0(11.0)		HZ 60	IP55
V 230/460		A 36.8/18.4	
RPM 1770		NEMA NOM EFF 92.4%	
PF 0.81		SFA 42.3/21.2	DES B
INS CL F Δ T 80 K		SF 1.15	ENCL TEFC
DUTY CONT.		CODE J	ALT 1000 m.a.s.l.
AMB 40°C	USABLE @208V	40.7 A	SF 1.15 SFA 46.8
AMB 55°C SF1.0			
15HP 11kW 50Hz 380V 22.1A 1455RPM SF1.00 EFF 90.2% (IE2)			



→ 6309-C3 MOBIL POLYREX EM
→ 6209-C3 13 g 20000 h

331 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.