

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 12408370	
				Catalog # : 06009XT3E405T	
Frame		: 404/5T		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 : 1230 lb	
Protection degree		: IP55		Moment of inertia (J) : 38.3 sq.ft.lb	
Design		: B			
Output [HP]	60	50	50	50	50
Poles	8	8	8	8	8
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	152/75.9	76.6	74.1	73.3	73.3
L. R. Amperes [A]	941/471	444	474	498	498
LRC [A]	6.2x(Code G)	5.8x(Code G)	6.4x(Code H)	6.8x(Code J)	6.8x(Code J)
No load current [A]	68.0/34.0	34.0	37.0	40.0	40.0
Rated speed [RPM]	885	735	735	740	740
Slip [%]	1.67	2.00	2.00	1.33	1.33
Rated torque [ft.lb]	356	357	357	355	355
Locked rotor torque [%]	180	170	190	210	210
Breakdown torque [%]	220	210	240	260	260
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	45s (cold) 25s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)	30s (cold) 17s (hot)
Noise level ²	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)	60.0 dB(A)
Efficiency (%)	25%	92.2	92.9	91.5	90.2
	50%	92.4	92.4	91.7	91.0
	75%	93.0	92.4	92.4	91.7
	100%	93.0	91.7	92.4	92.4
Power Factor	25%	0.39	0.40	0.36	0.33
	50%	0.65	0.66	0.61	0.57
	75%	0.75	0.76	0.72	0.69
	100%	0.80	0.80	0.78	0.76
Bearing type		Drive end : 6217 C3	Non drive end : 6314 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 2151 lb	
Lubrication interval		: 16602 h	: 17353 h	Max. compression : 3382 lb	
Lubricant amount		: 21 g	: 27 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
USABLE @208V 168A SF 1.00 SFA 168A					
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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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



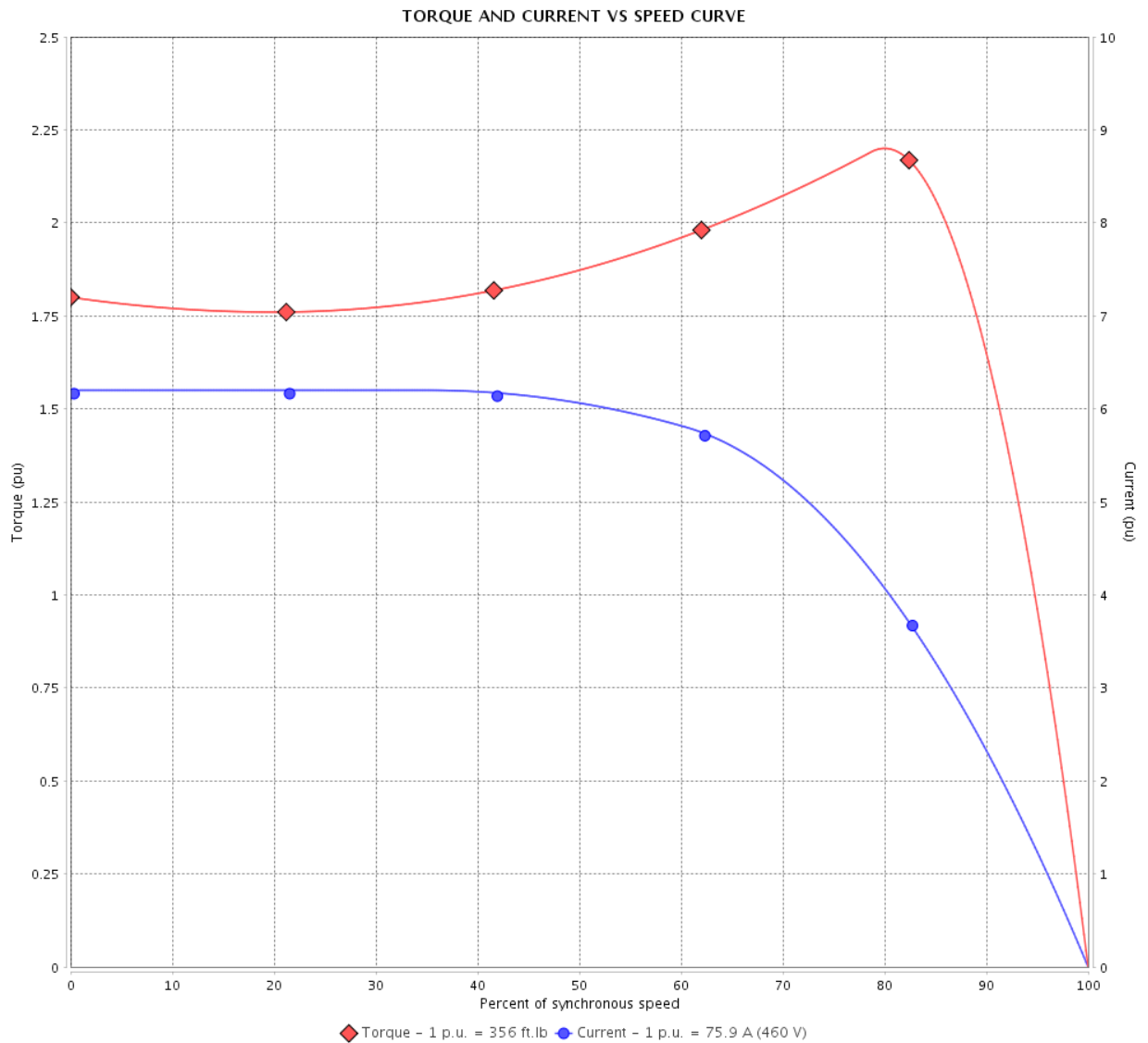
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 230/460 V 60 Hz 8P

Rated current : 152/75.9 A
 LRC : 6.2
 Rated torque : 356 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 220 %
 Rated speed : 885 rpm

Moment of inertia (J) : 38.3 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)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



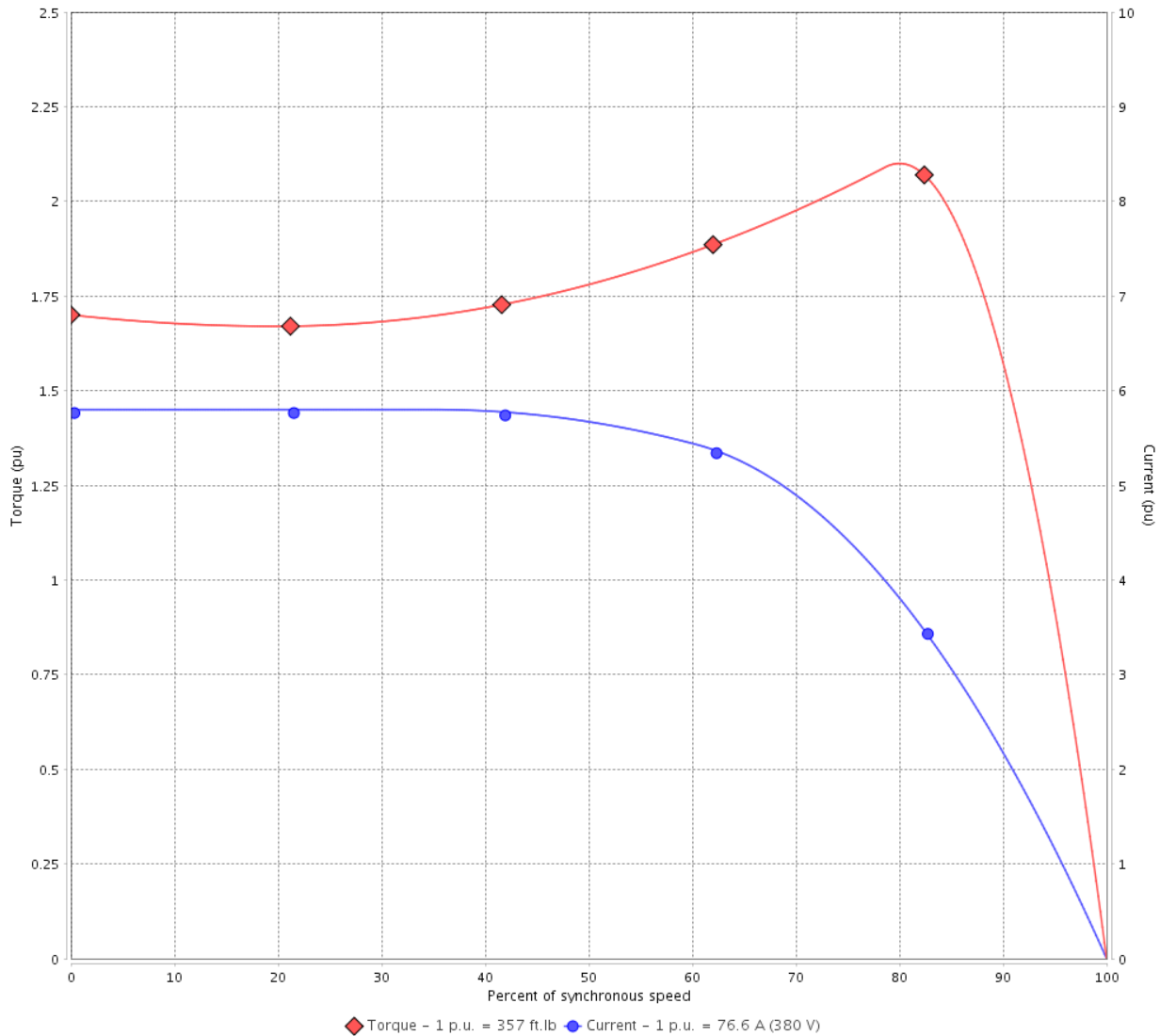
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 8P IE2

Rated current	: 76.6 A	Moment of inertia (J)	: 38.3 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 357 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 735 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



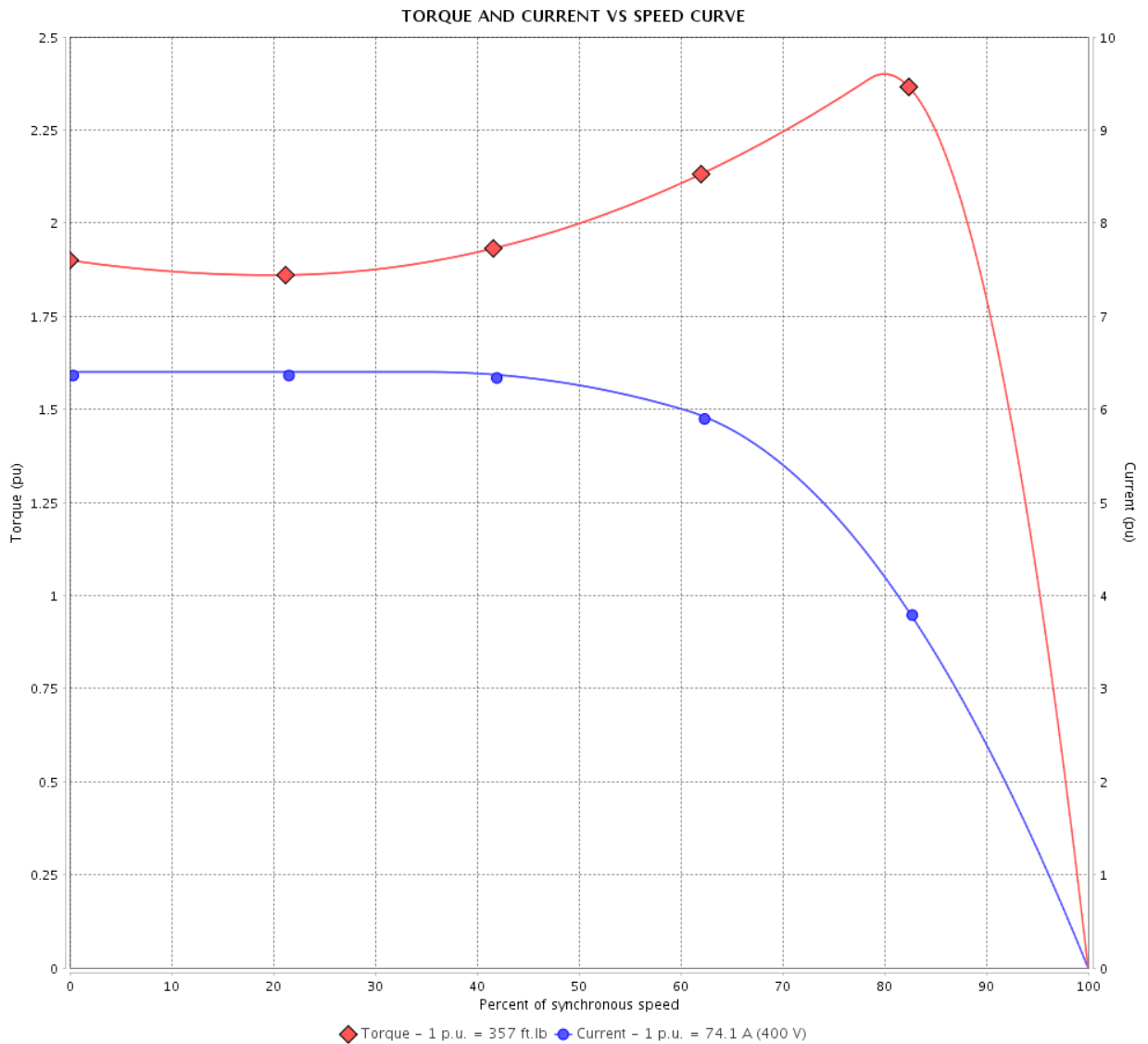
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 400 V 50 Hz 8P IE3

Rated current	: 74.1 A	Moment of inertia (J)	: 38.3 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 357 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 735 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



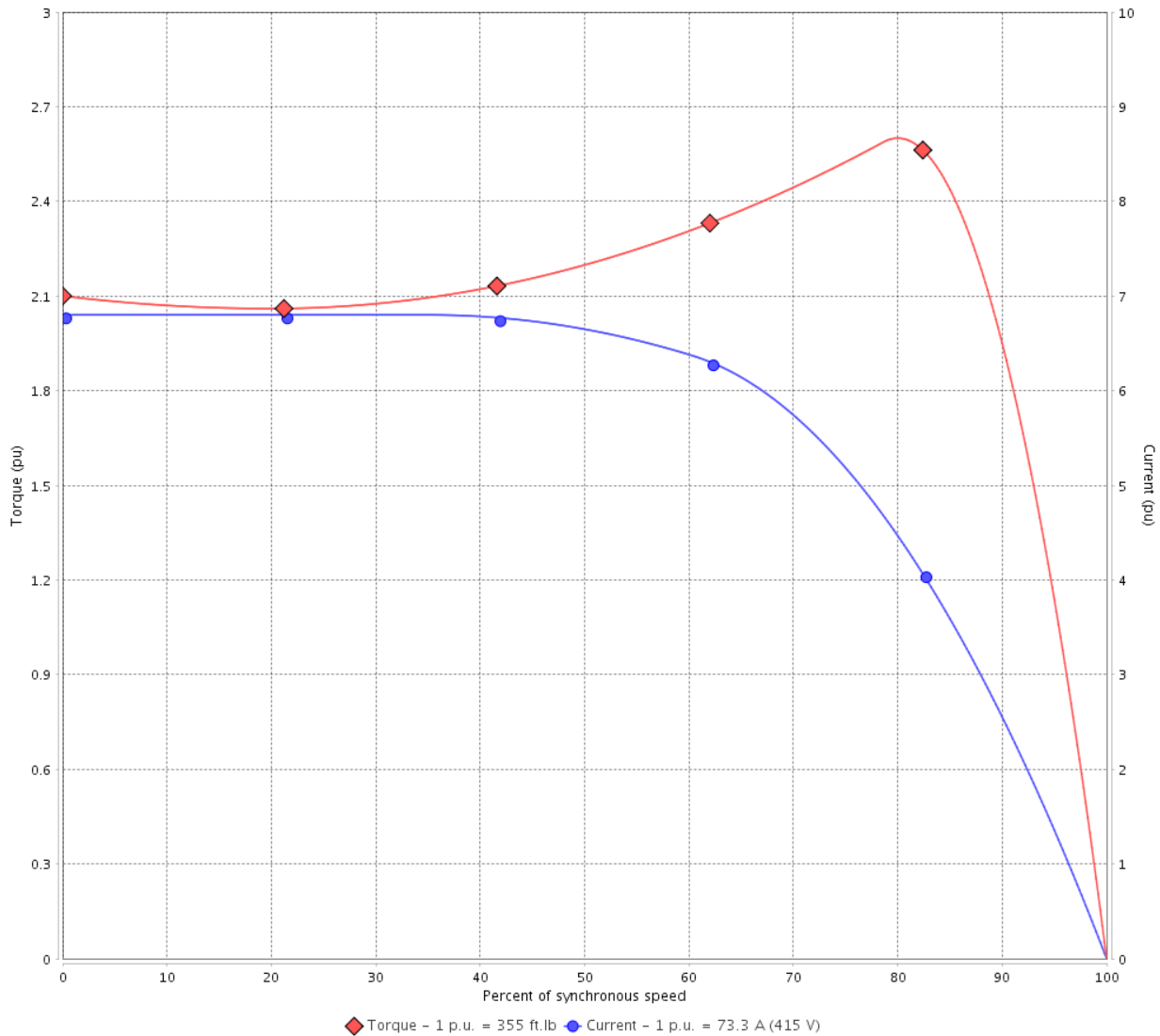
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 8P IE3

Rated current	: 73.3 A	Moment of inertia (J)	: 38.3 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 355 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 740 rpm	Design	: B

Locked rotor time : 30s (cold) 17s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

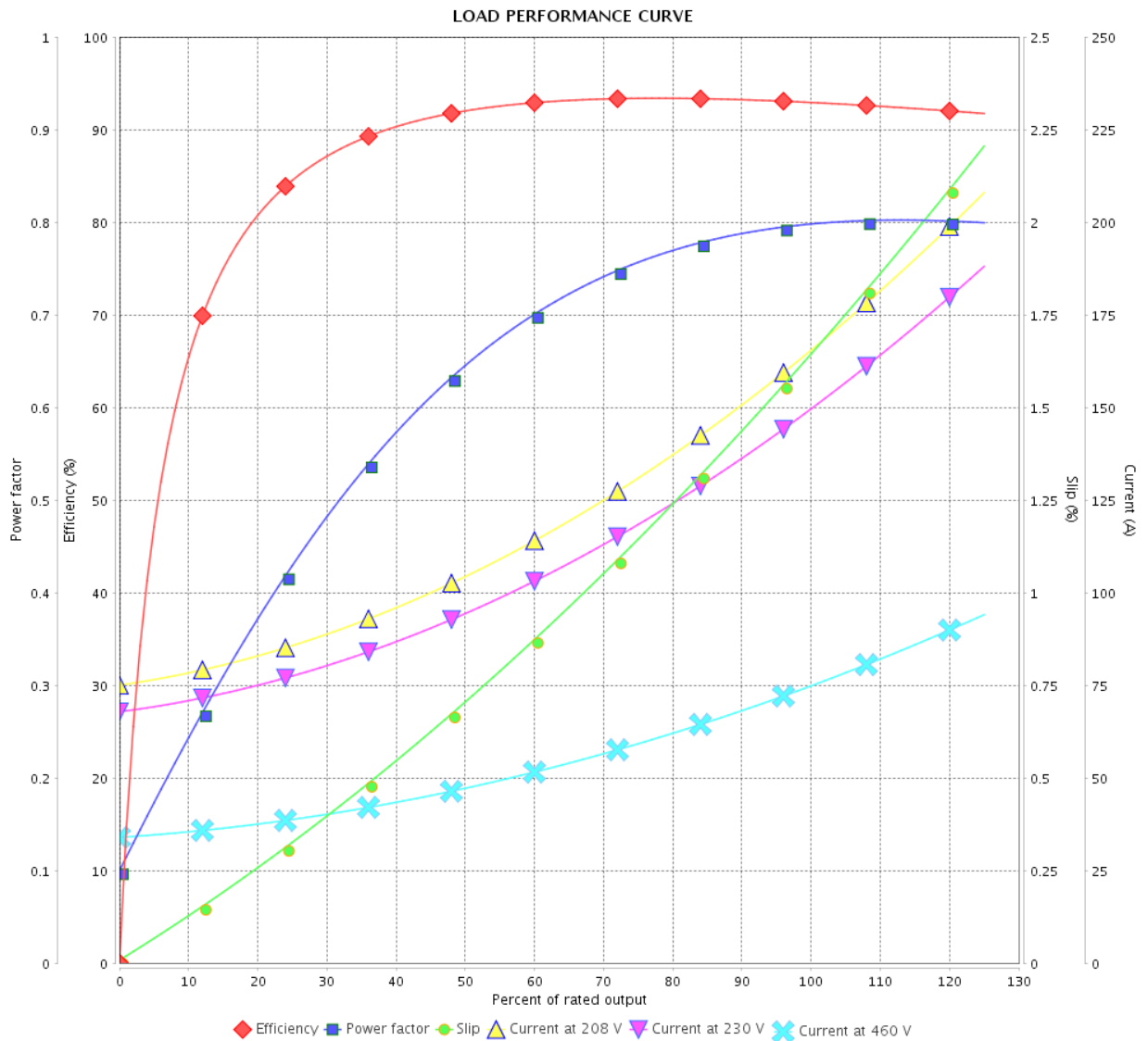


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 230/460 V 60 Hz 8P

Rated current : 152/75.9 A
 LRC : 6.2
 Rated torque : 356 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 220 %
 Rated speed : 885 rpm

Moment of inertia (J) : 38.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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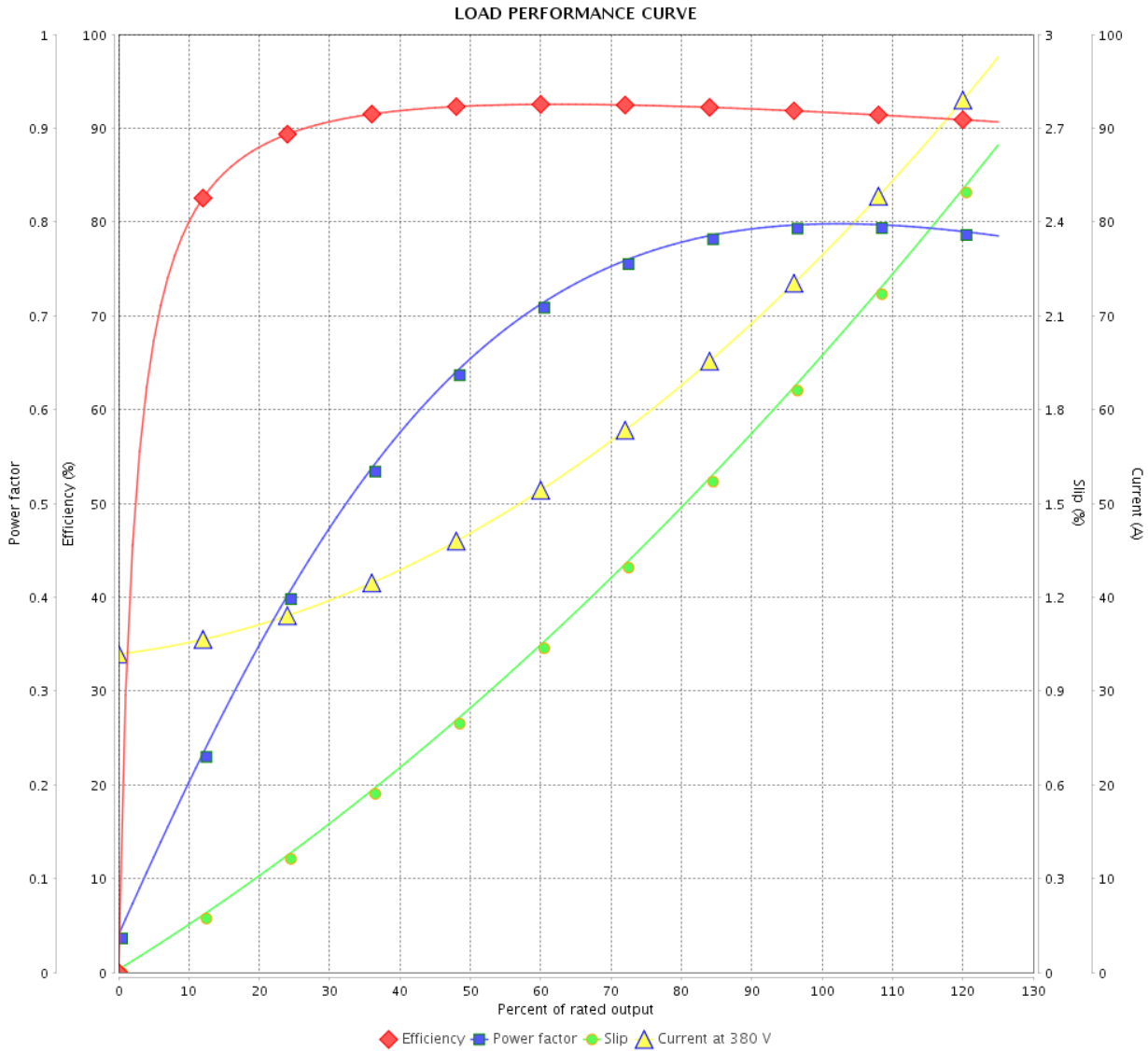


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Performance : 380 V 50 Hz 8P IE2

Rated current	: 76.6 A	Moment of inertia (J)	: 38.3 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 357 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 735 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

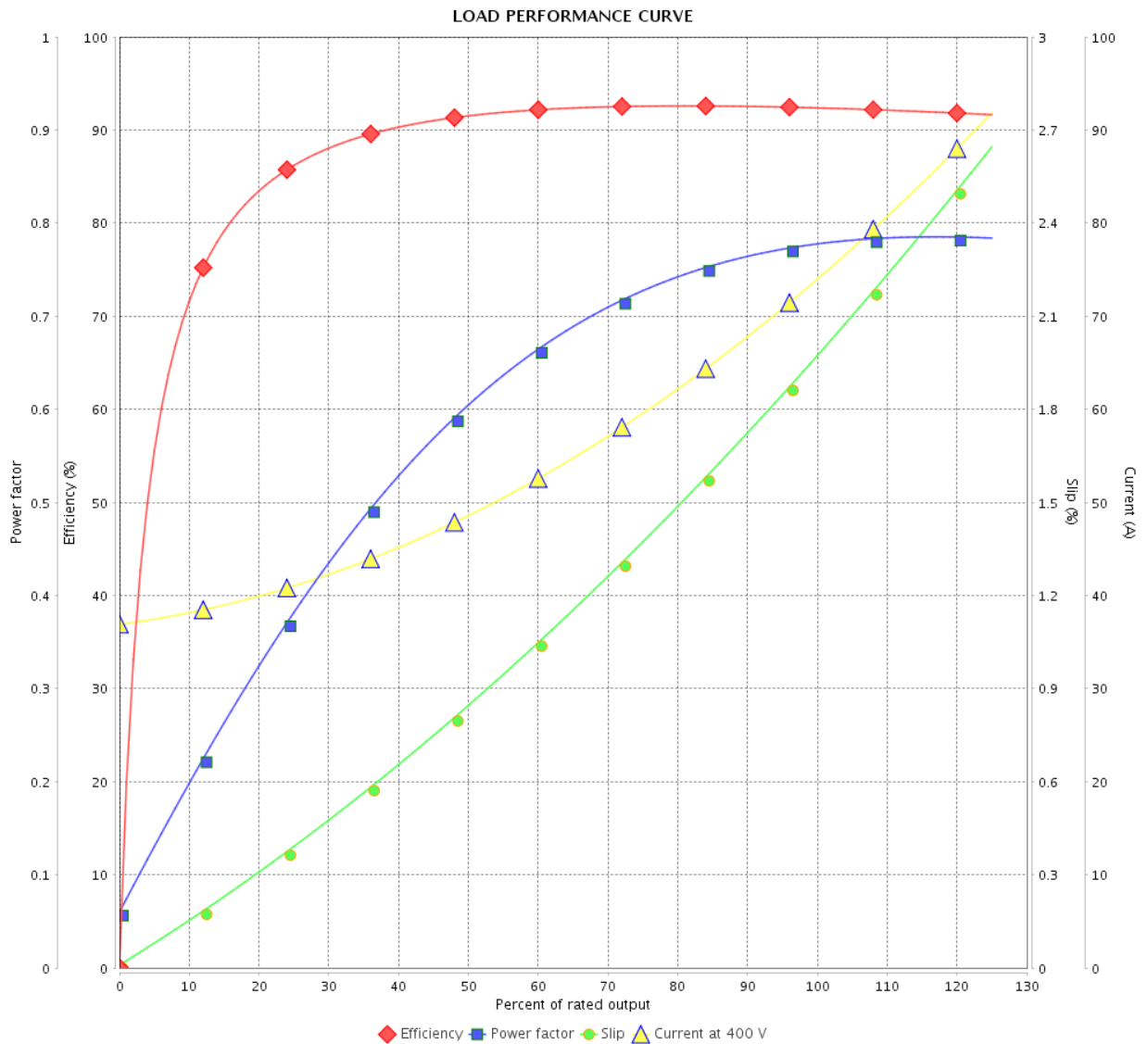


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 400 V 50 Hz 8P IE3

Rated current : 74.1 A
 LRC : 6.4
 Rated torque : 357 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 735 rpm

Moment of inertia (J) : 38.3 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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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



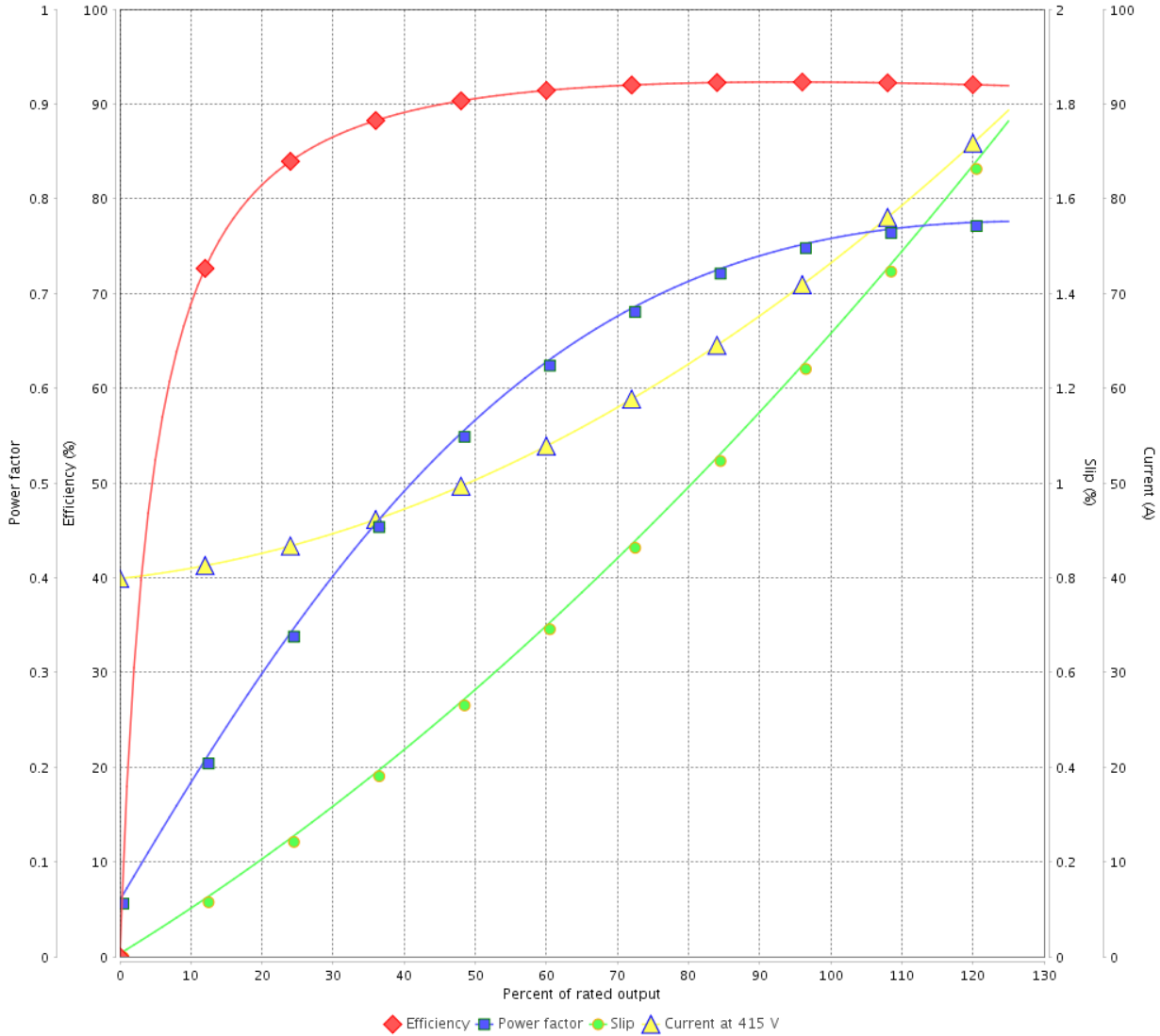
Customer :

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Moment of inertia (J) : 38.3 sq.ft.lb
 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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Performance : 230/460 V 60 Hz 8P

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LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 356 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 220 %	Temperature rise	: 80 K
Rated speed	: 885 rpm	Design	: B

Heating constant

Cooling constant

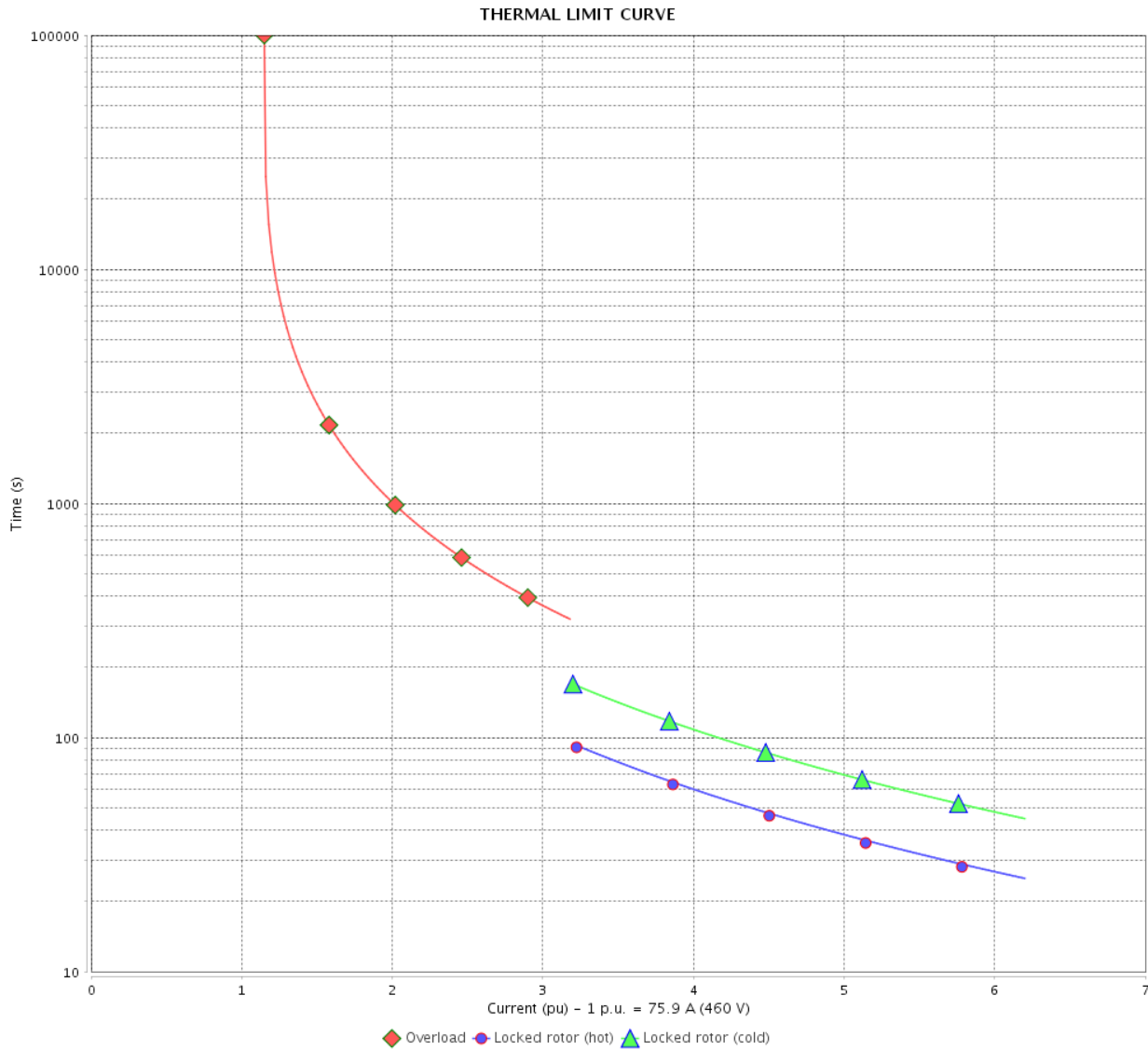
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THERMAL LIMIT CURVE

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Performance : 380 V 50 Hz 8P IE2

Rated current : 76.6 A	Moment of inertia (J) : 38.3 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 357 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.00
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 735 rpm	Design : B

Heating constant

Cooling constant

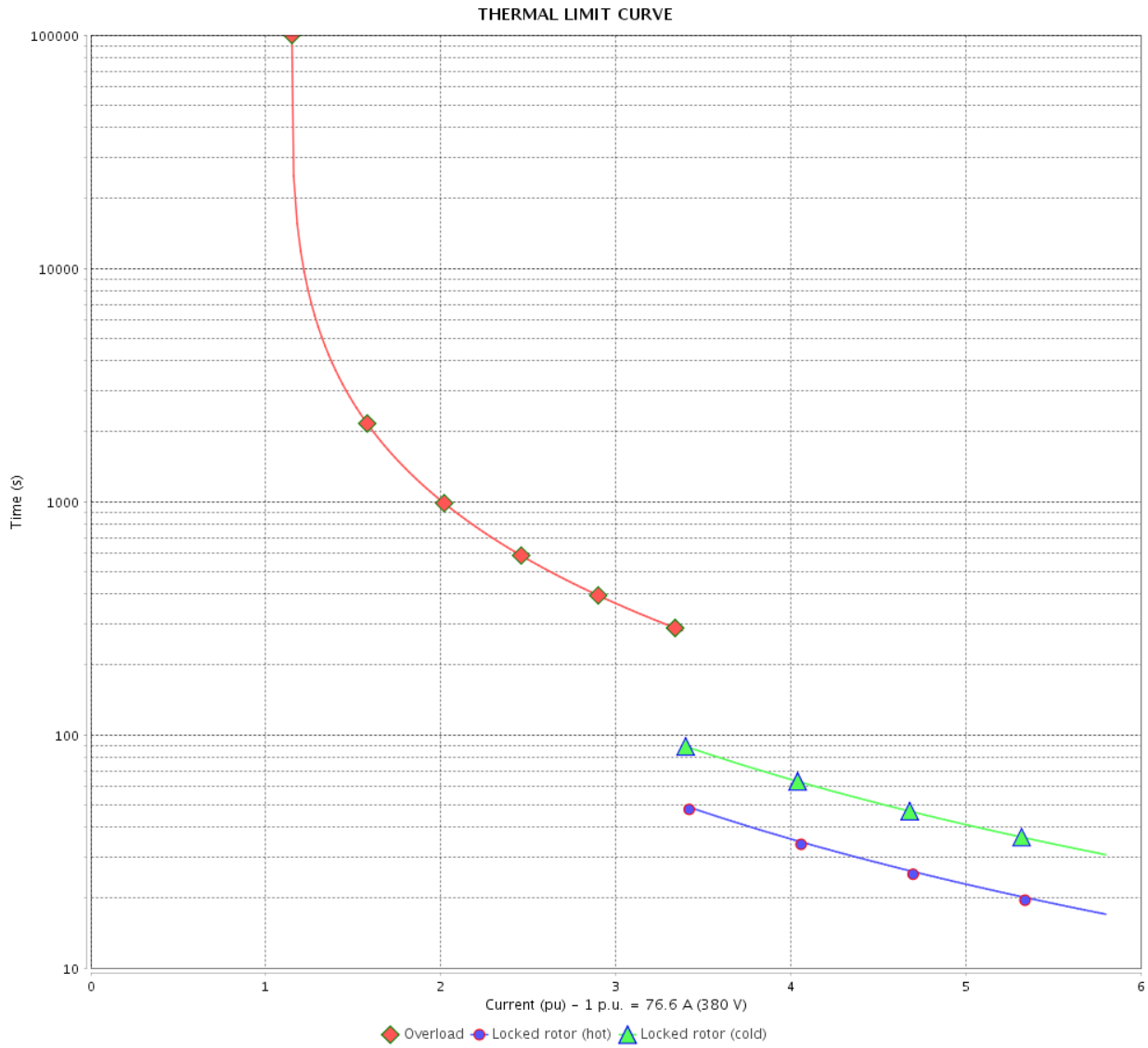
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

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Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408370
 Catalog # : 06009XT3E405T

Performance : 400 V 50 Hz 8P IE3

Rated current : 74.1 A	Moment of inertia (J) : 38.3 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 357 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 735 rpm	Design : B

Heating constant

Cooling constant

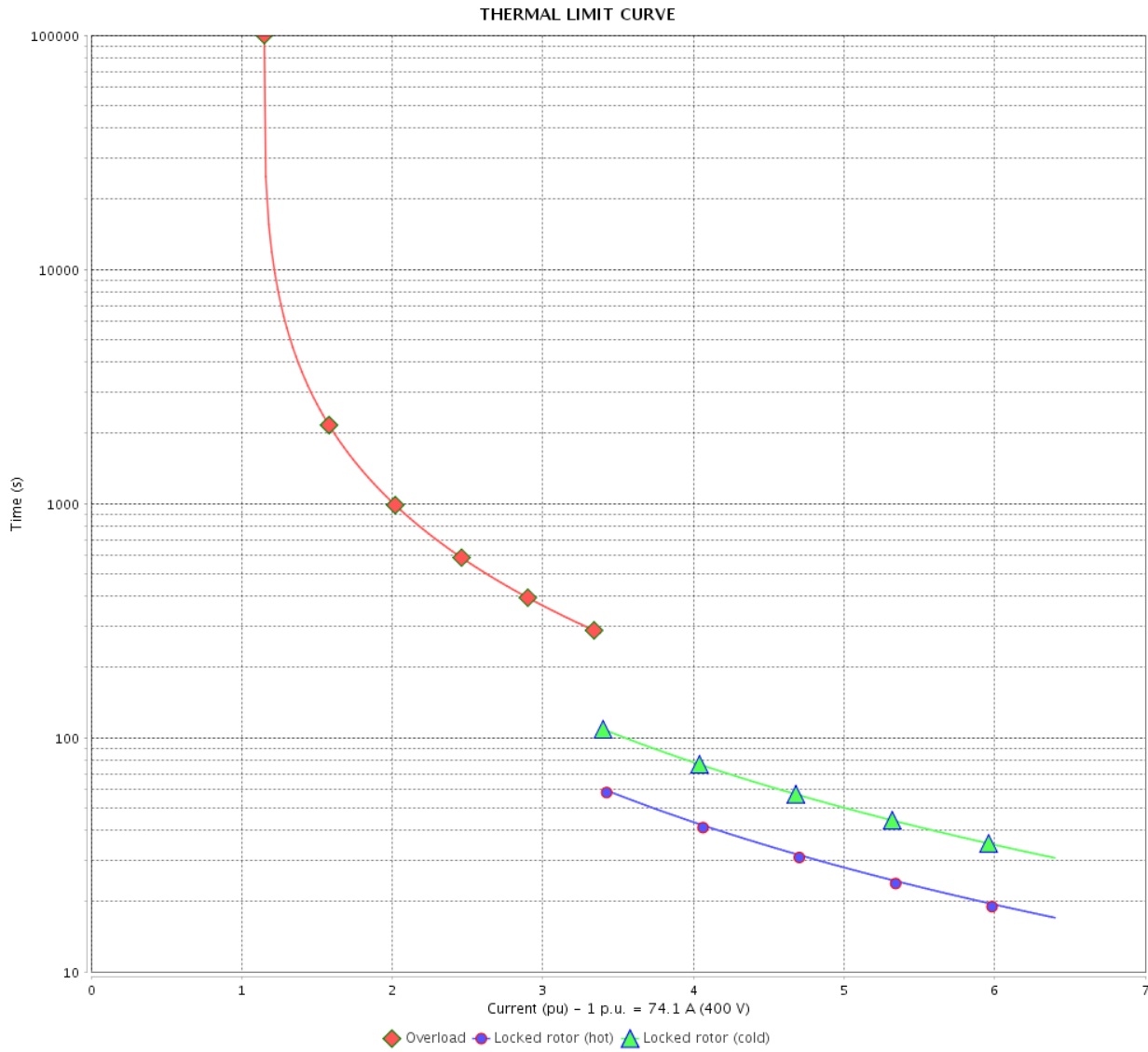
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Date	12/04/2022			

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12408370
 Catalog # : 06009XT3E405T

Performance : 415 V 50 Hz 8P IE3

Rated current : 73.3 A	Moment of inertia (J) : 38.3 sq.ft.lb
LRC : 6.8	Duty cycle : Cont.(S1)
Rated torque : 355 ft.lb	Insulation class : F
Locked rotor torque : 210 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 740 rpm	Design : B

Heating constant

Cooling constant

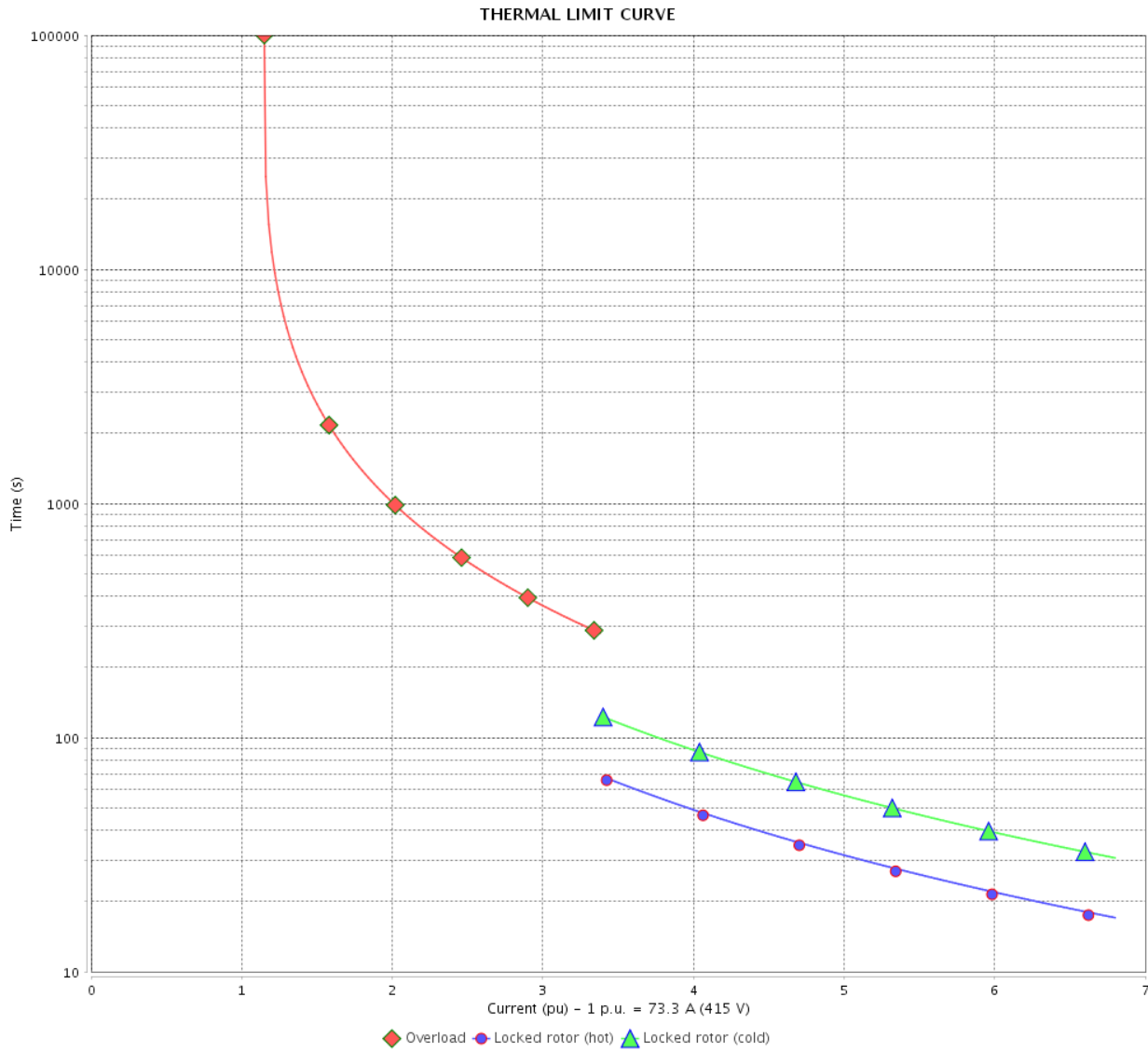
Rev.	Changes Summary	Performed	Checked	Date
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

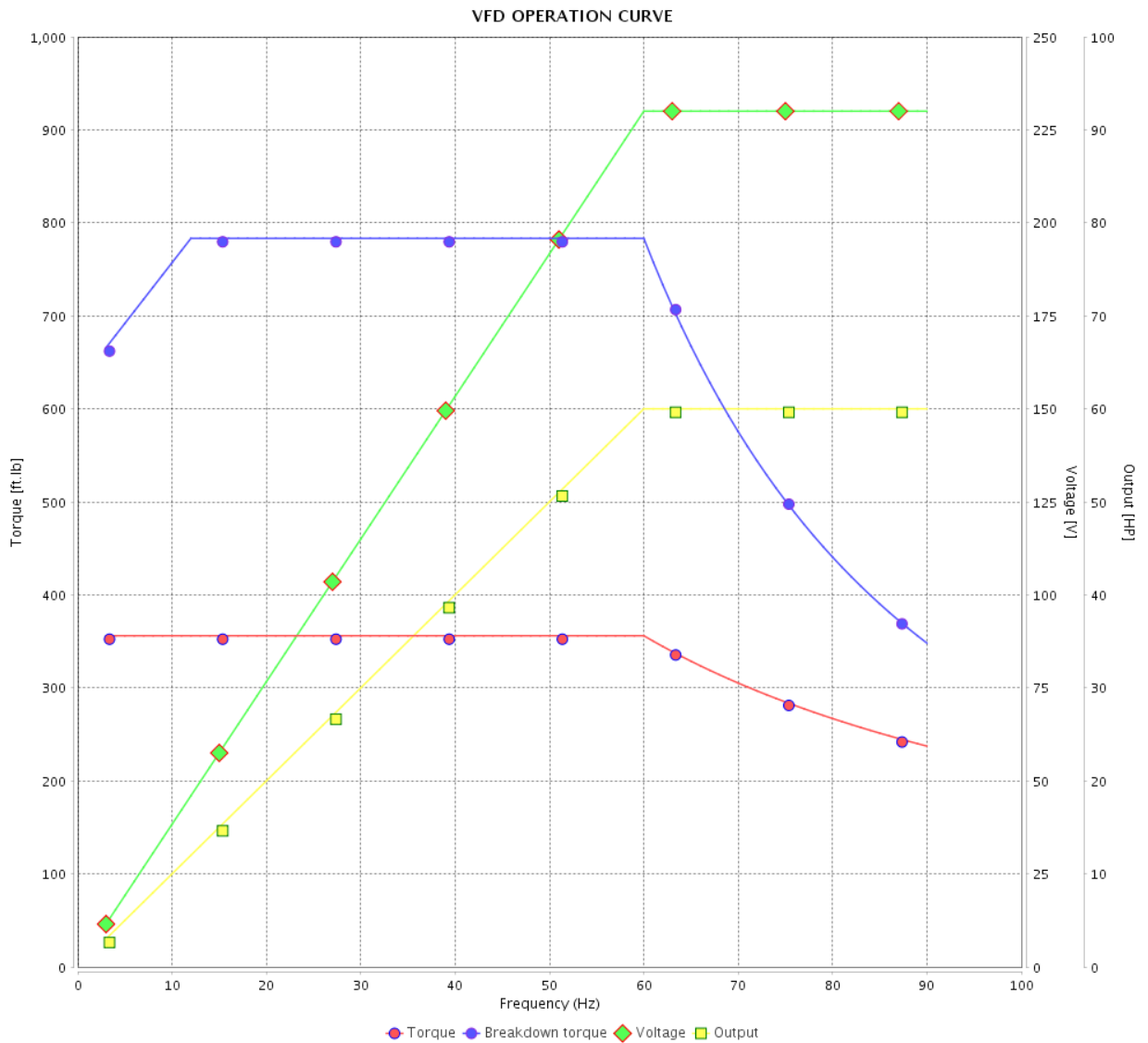


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Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 230/460 V 60 Hz 8P

Rated current : 152/75.9 A
 LRC : 6.2
 Rated torque : 356 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 220 %
 Rated speed : 885 rpm

Moment of inertia (J) : 38.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



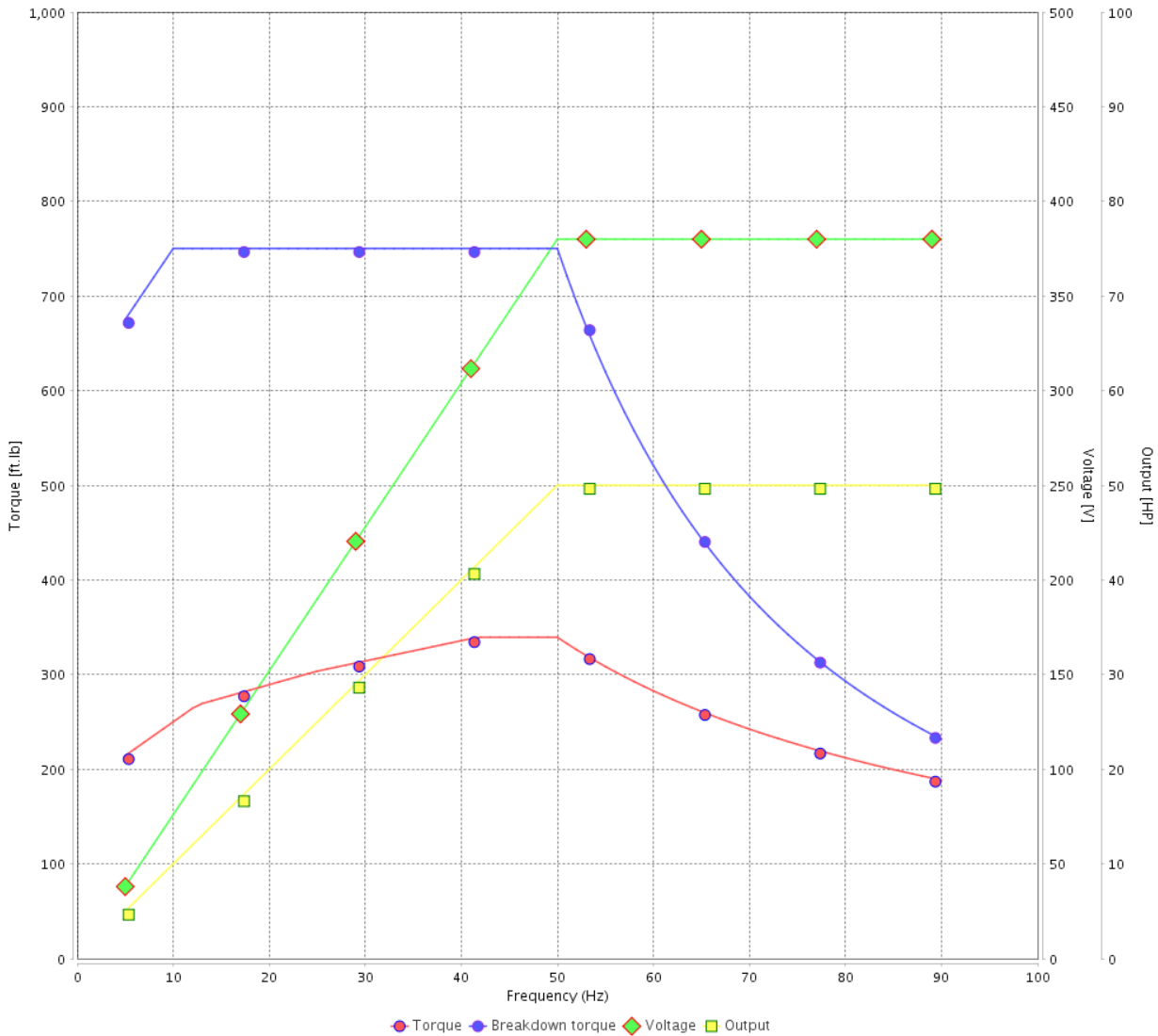
Customer :

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VFD OPERATION CURVE



Performance : 380 V 50 Hz 8P IE2

Rated current : 76.6 A
 LRC : 5.8
 Rated torque : 357 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 210 %
 Rated speed : 735 rpm

Moment of inertia (J) : 38.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

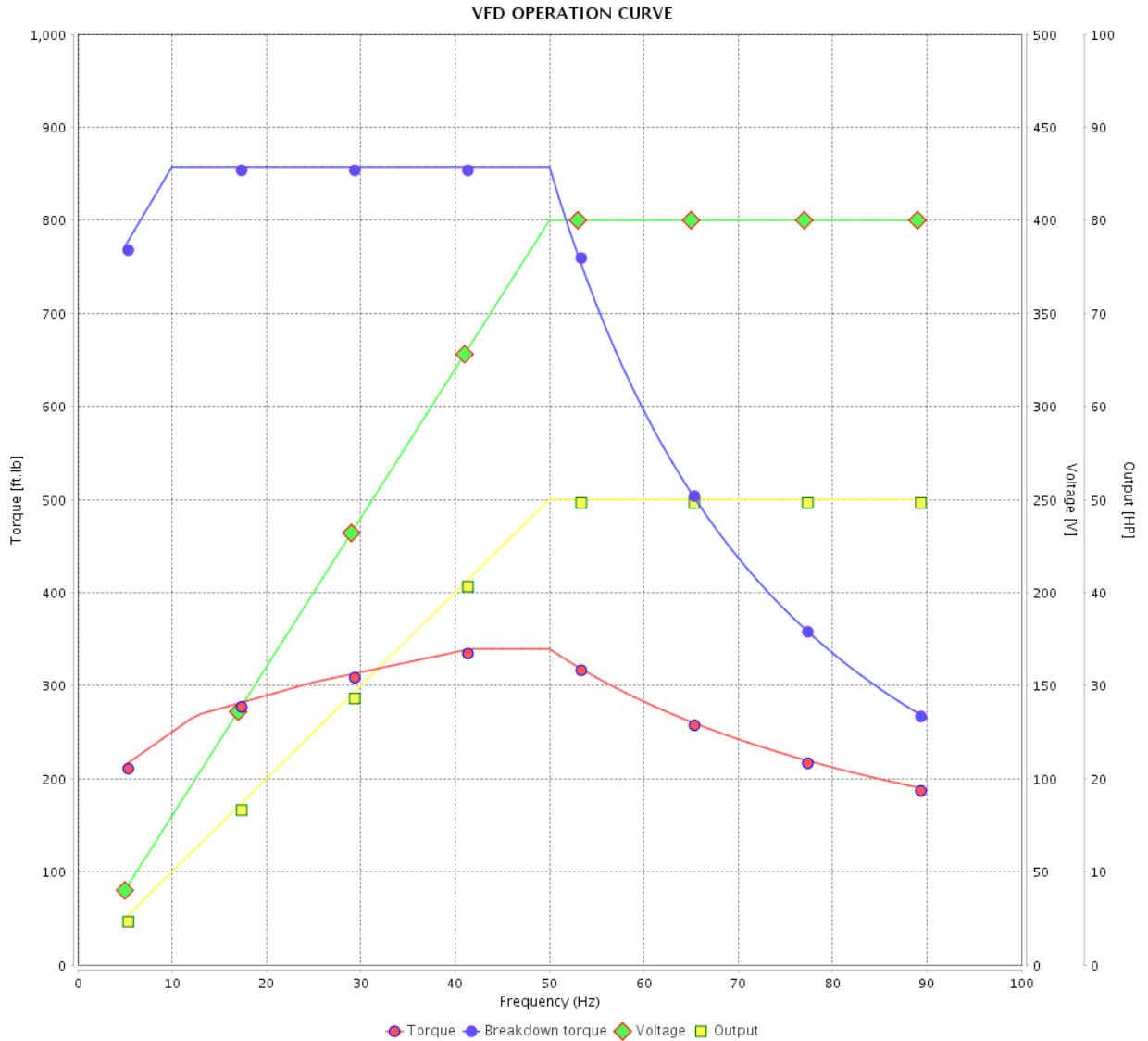


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12408370

Catalog # : 06009XT3E405T



Performance : 400 V 50 Hz 8P IE3

Rated current : 74.1 A
 LRC : 6.4
 Rated torque : 357 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 735 rpm

Moment of inertia (J) : 38.3 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



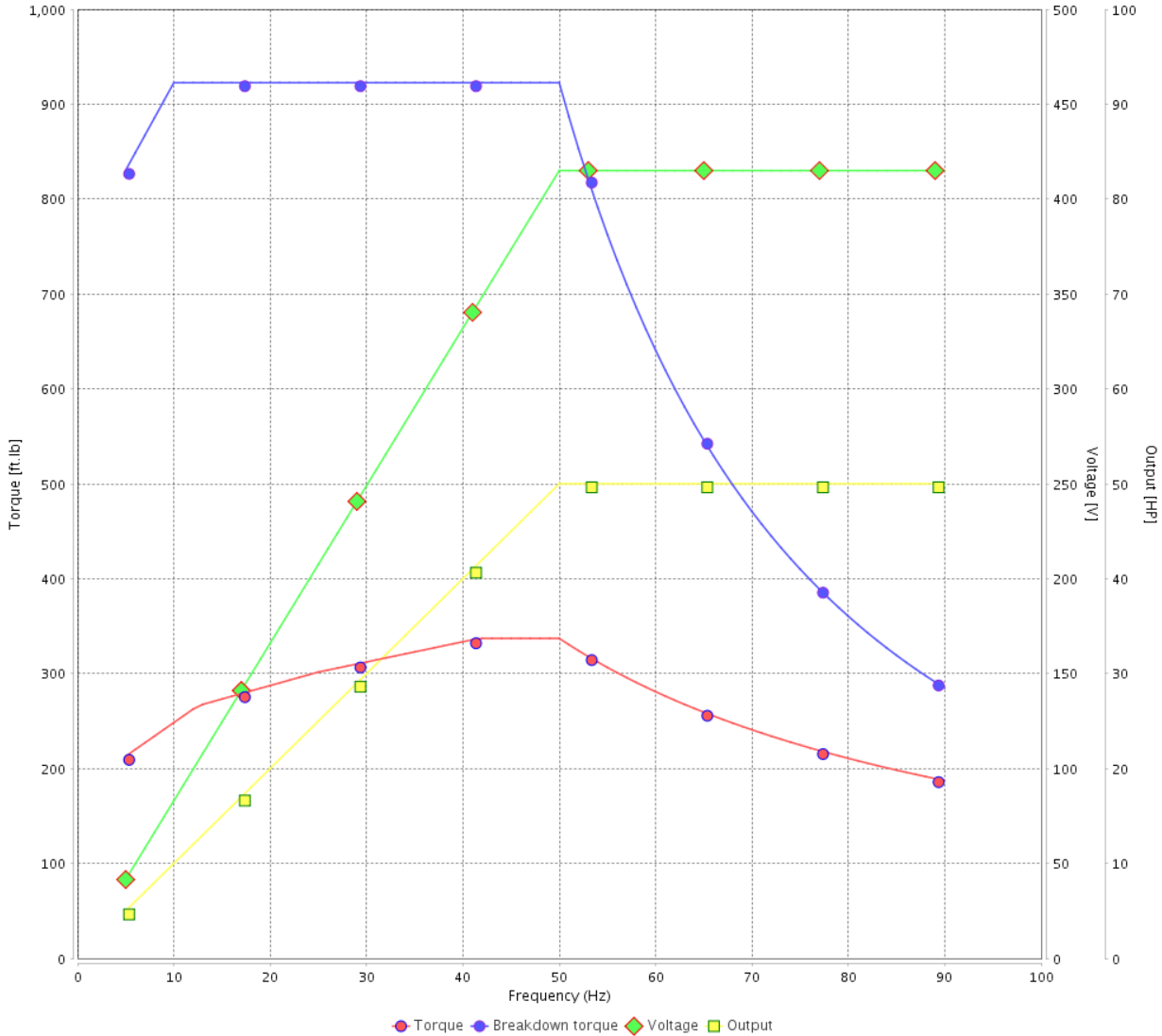
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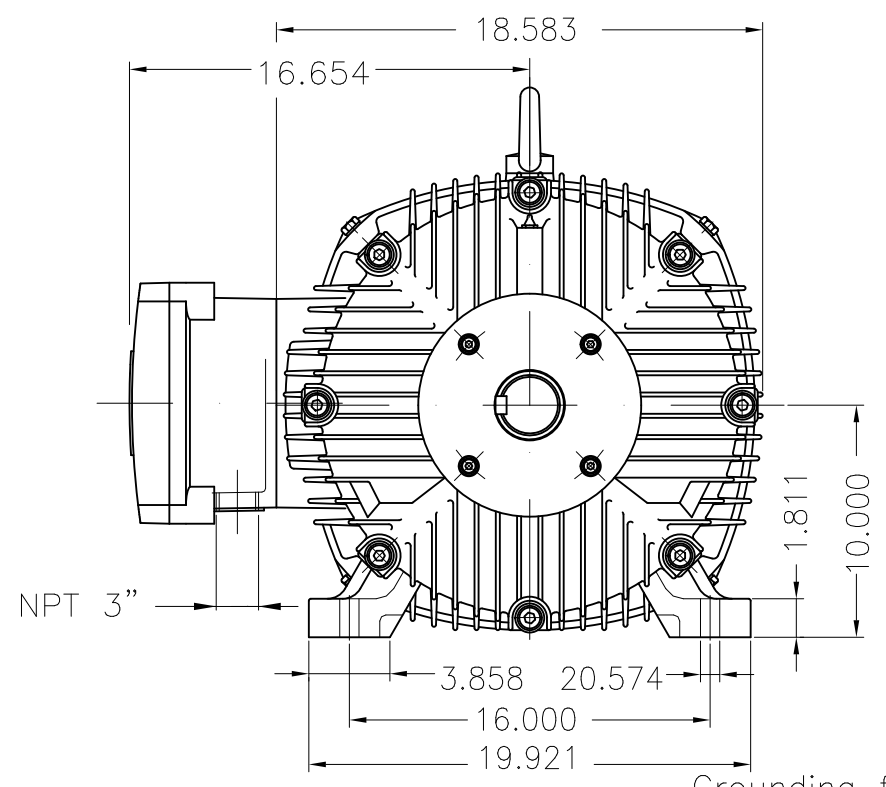


Performance : 415 V 50 Hz 8P IE3

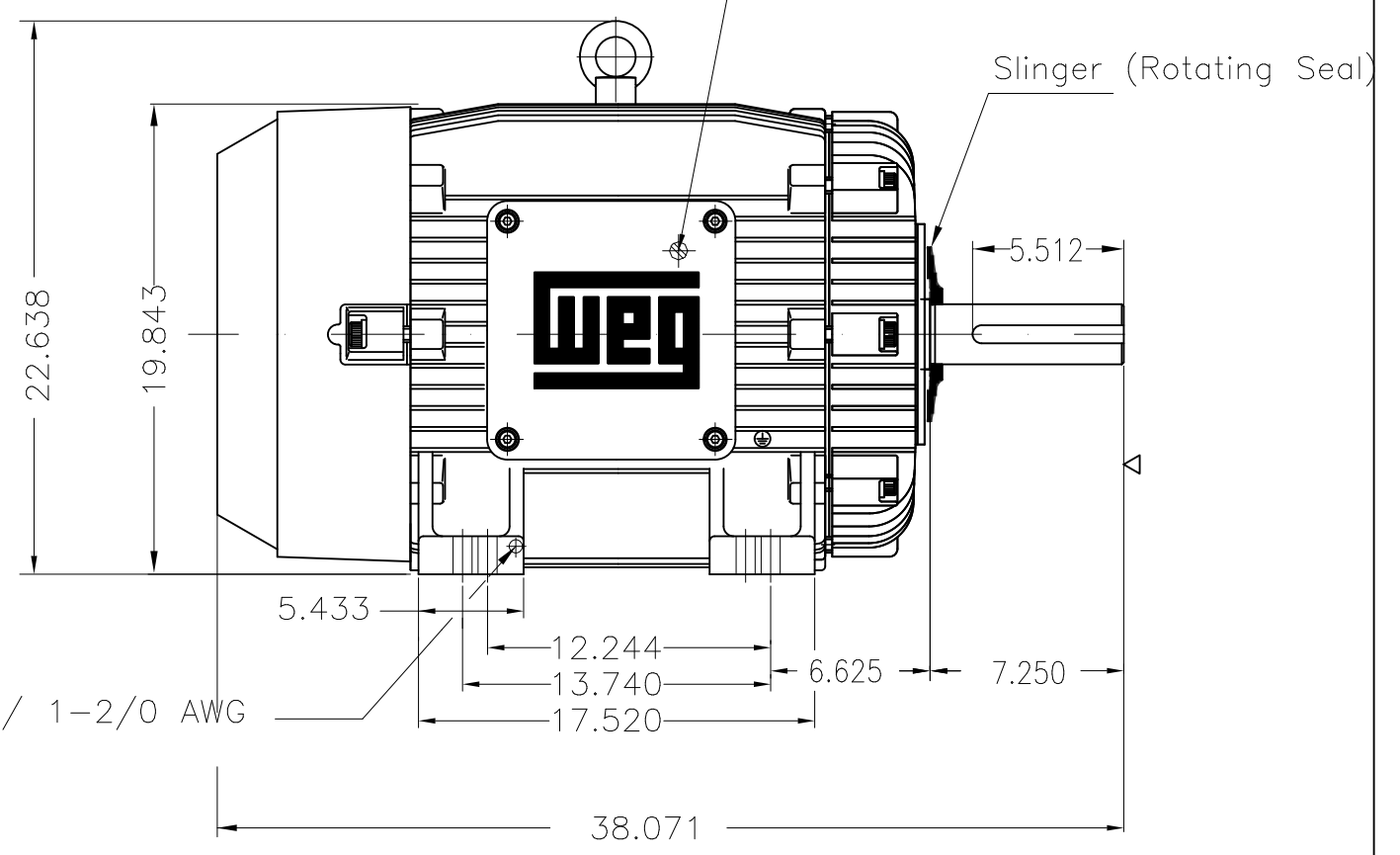
Rated current : 73.3 A
 LRC : 6.8
 Rated torque : 355 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 260 %
 Rated speed : 740 rpm

Moment of inertia (J) : 38.3 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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Date	12/04/2022			



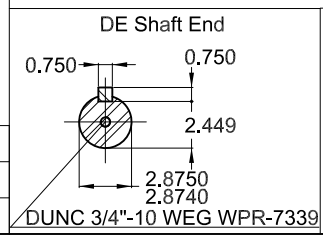
Grounding for leads 25-50 mm² / 3-1 AWG



Grounding for leads 35-70 mm² / 1-2/0 AWG

60 HP 08 Poles 60 Hz A

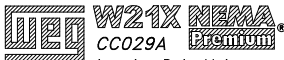
Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 404/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
 WDD





W21X
CC029A

NEMA
Premium

*Inverter Duty Motor
Severe Duty*

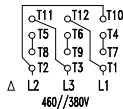
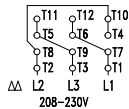


TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB
EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

MODEL 06009XT3E405T
MADE IN BRAZIL
12408370

PH 3	FR 404/5T	HP(kW) 60.0(45.0)	Hz 60
V 230/460	A 152/75.9	RPM 885	
NEMA NOM. EFF. 93.0%	INS CL F	ΔT 80 K	IP55
PF 0.80	DUTY CONT.	CODE G	
ENCL. TEFC	SF 1.15	SFA 175/87.3	
AMB 40°C	DES B	USABLE @208V 168 A SF 1.00	
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		
50HP 37kW 50Hz 380V 76.6A 735RPM SF1.00 EFF 91.7% (IE2)			



→ 6217-C3(21g)
→ 6314-C3(27g)

MOBIL POLYREX EM
16602 h

ALT 1000 m.a.s.l | 1230 Lbs