

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: NEMA Premium Efficiency Three-Phase	Product code :	11341754		
		Catalog # :	05012XT3E365T		
Frame	: 364/5T	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	: 1076 lb		
Protection degree	: IP55	Moment of inertia (J)	: 29.4 sq.ft.lb		
Design	: B				
Output [HP]	50	50	50	50	
Poles	6	6	6	6	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	116/58.1	71.3	67.2	65.1	
L. R. Amperes [A]	860/430	414	430	449	
LRC [A]	7.4x(Code H)	5.8x(Code F)	6.4x(Code G)	6.9x(Code H)	
No load current [A]	48.0/24.0	24.0	25.0	26.0	
Rated speed [RPM]	1185	975	980	980	
Slip [%]	1.25	2.50	2.00	2.00	
Rated torque [ft.lb]	222	269	268	268	
Locked rotor torque [%]	260	200	220	240	
Breakdown torque [%]	280	210	240	260	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	36s (cold) 20s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	27s (cold) 15s (hot)	
Noise level ²	65.0 dB(A)	61.0 dB(A)	61.0 dB(A)	61.0 dB(A)	
Efficiency (%)	25%	93.5	92.8	93.4	92.2
	50%	93.6	92.4	93.0	92.4
	75%	94.1	92.4	93.0	93.0
	100%	94.1	91.7	92.4	93.0
Power Factor	25%	0.44	0.50	0.46	0.45
	50%	0.71	0.76	0.73	0.71
	75%	0.81	0.83	0.81	0.80
	100%	0.85	0.86	0.86	0.85
Bearing type	: <u>Drive end</u> 6314 C3 <u>Non drive end</u> 6314 C3	Foundation loads			
Sealing	: Oil Seal Lip Seal	Max. traction	: 1850 lb		
Lubrication interval	: 14267 h 14267 h	Max. compression	: 2925 lb		
Lubricant amount	: 27 g 27 g				
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 128A SF 1.00 SFA 128A					
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



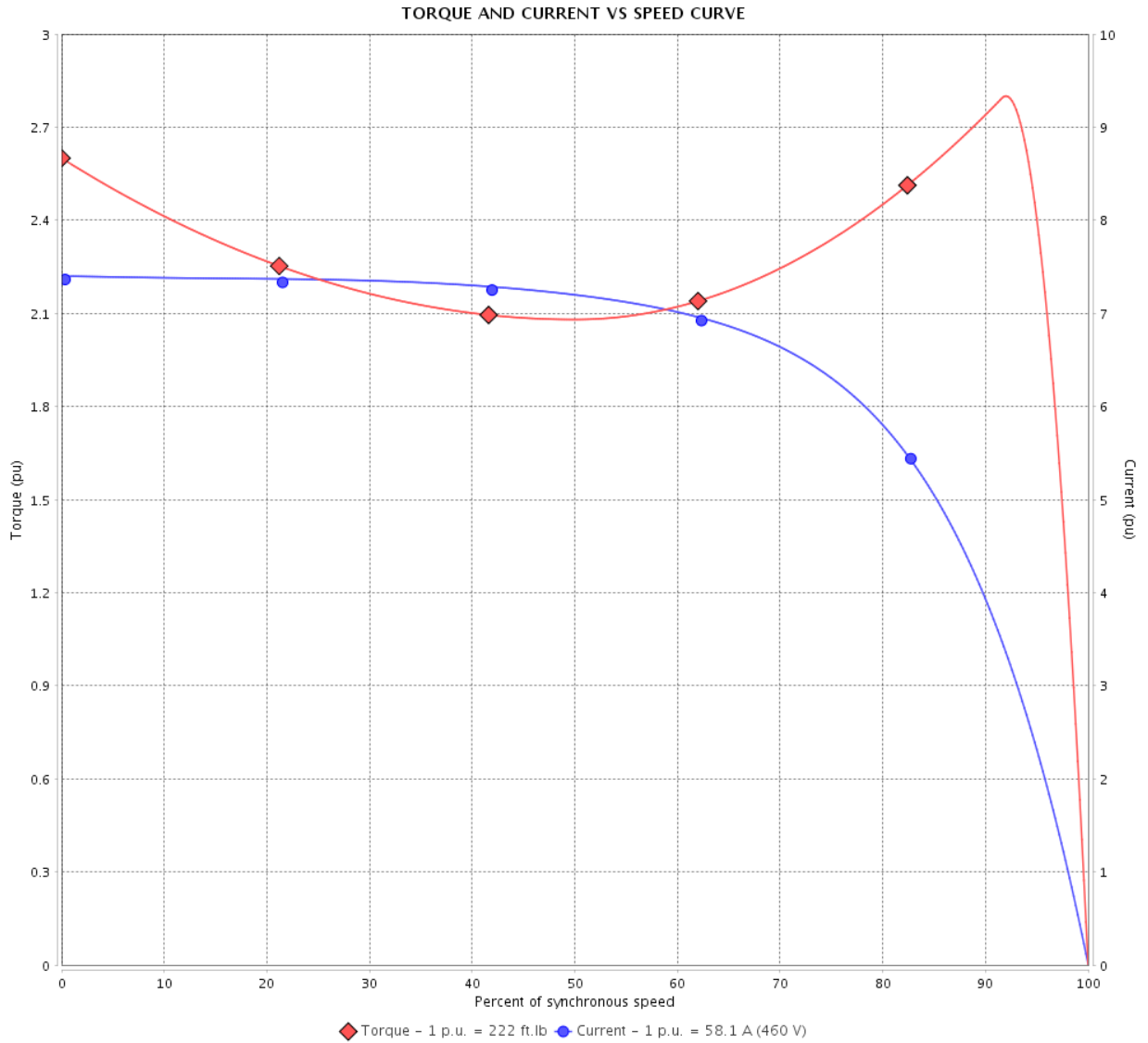
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A
 LRC : 7.4
 Rated torque : 222 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 280 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 29.4 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 36s (cold) 20s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



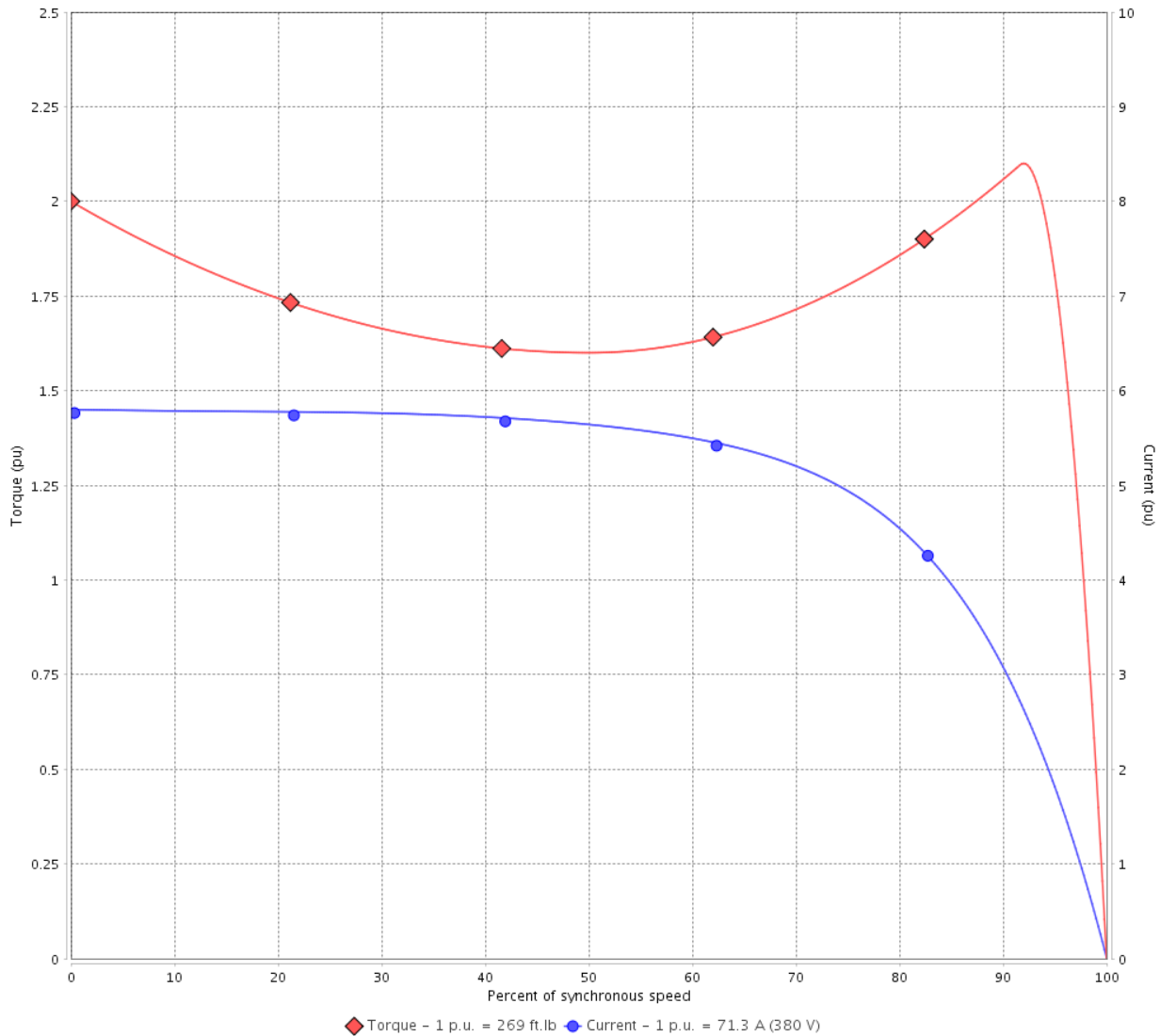
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current	: 71.3 A	Moment of inertia (J)	: 29.4 sq.ft.lb
LRC	: 5.8	Duty cycle	: Cont.(S1)
Rated torque	: 269 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 975 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



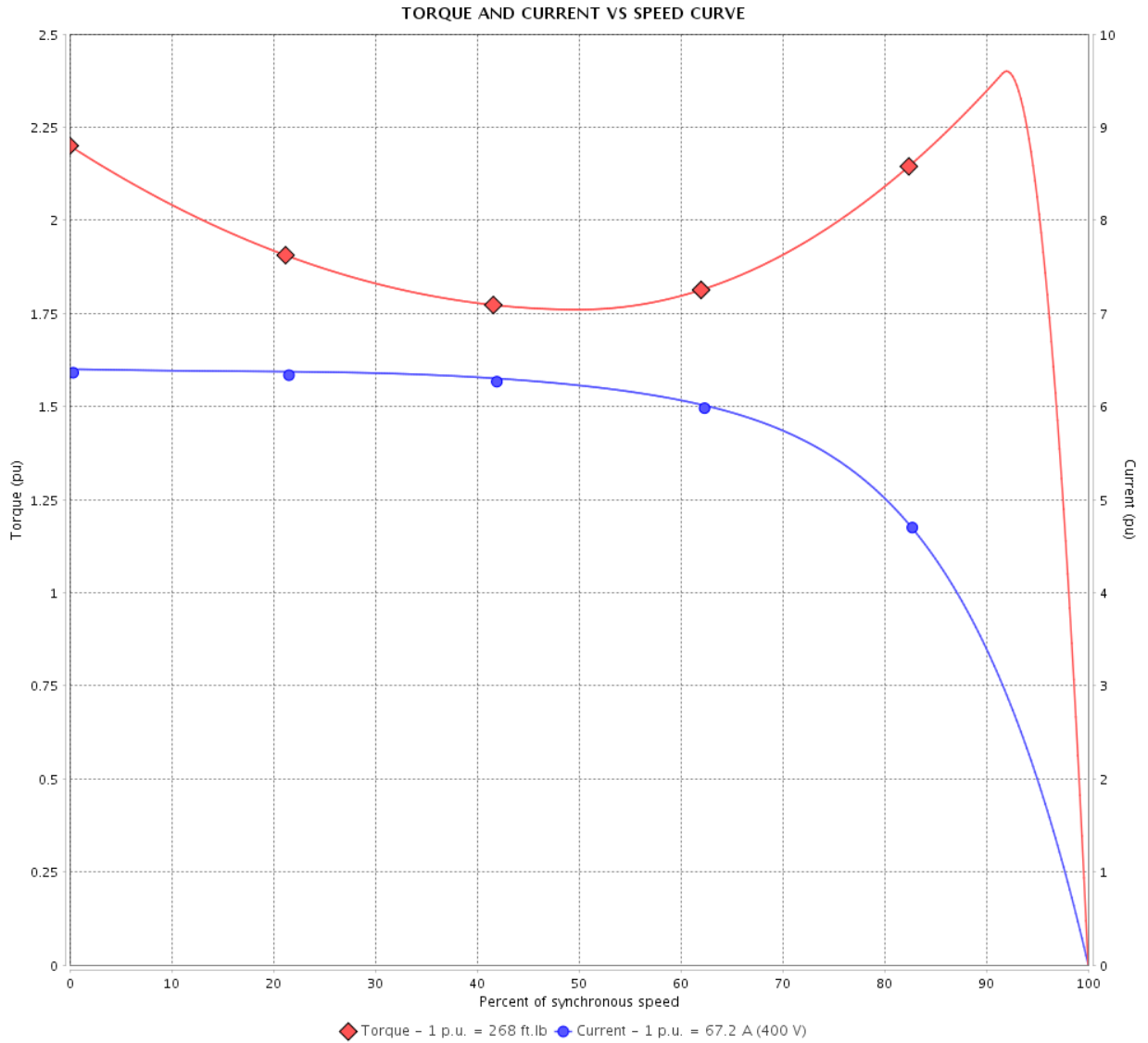
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 400 V 50 Hz 6P IE2

Rated current	: 67.2 A	Moment of inertia (J)	: 29.4 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 268 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



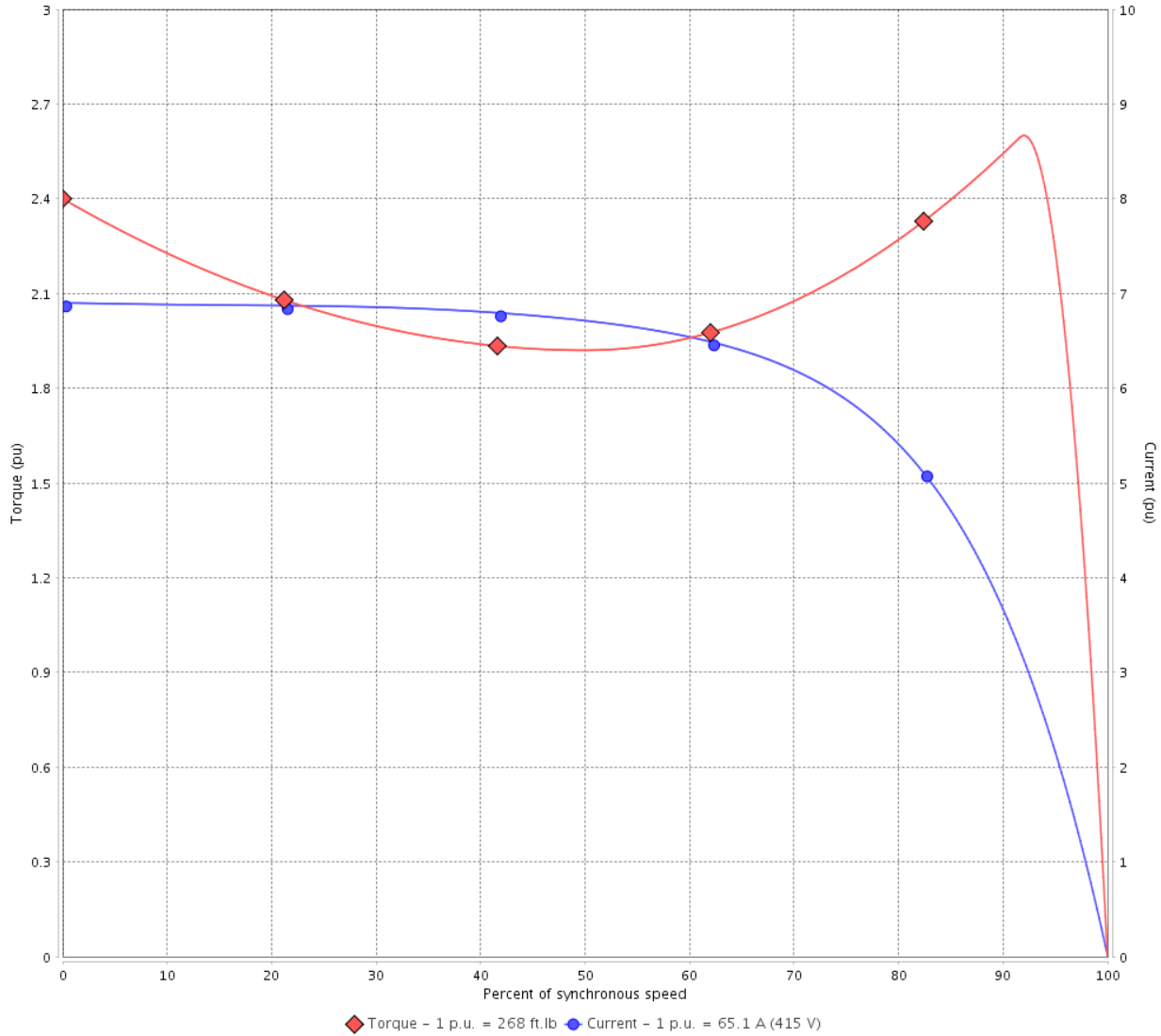
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 6P IE2

Rated current	: 65.1 A	Moment of inertia (J)	: 29.4 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 268 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

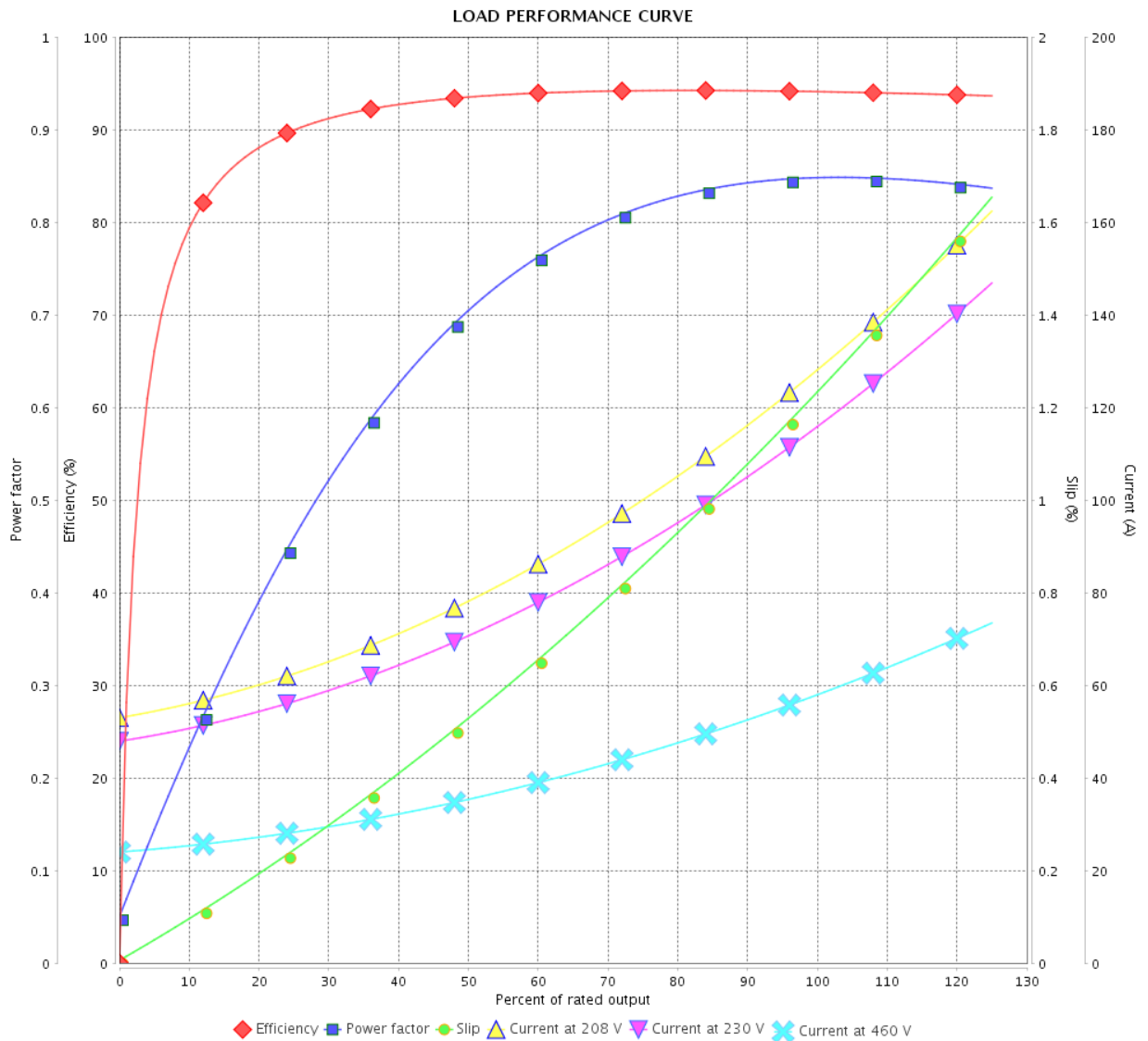


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A
 LRC : 7.4
 Rated torque : 222 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 280 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 29.4 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



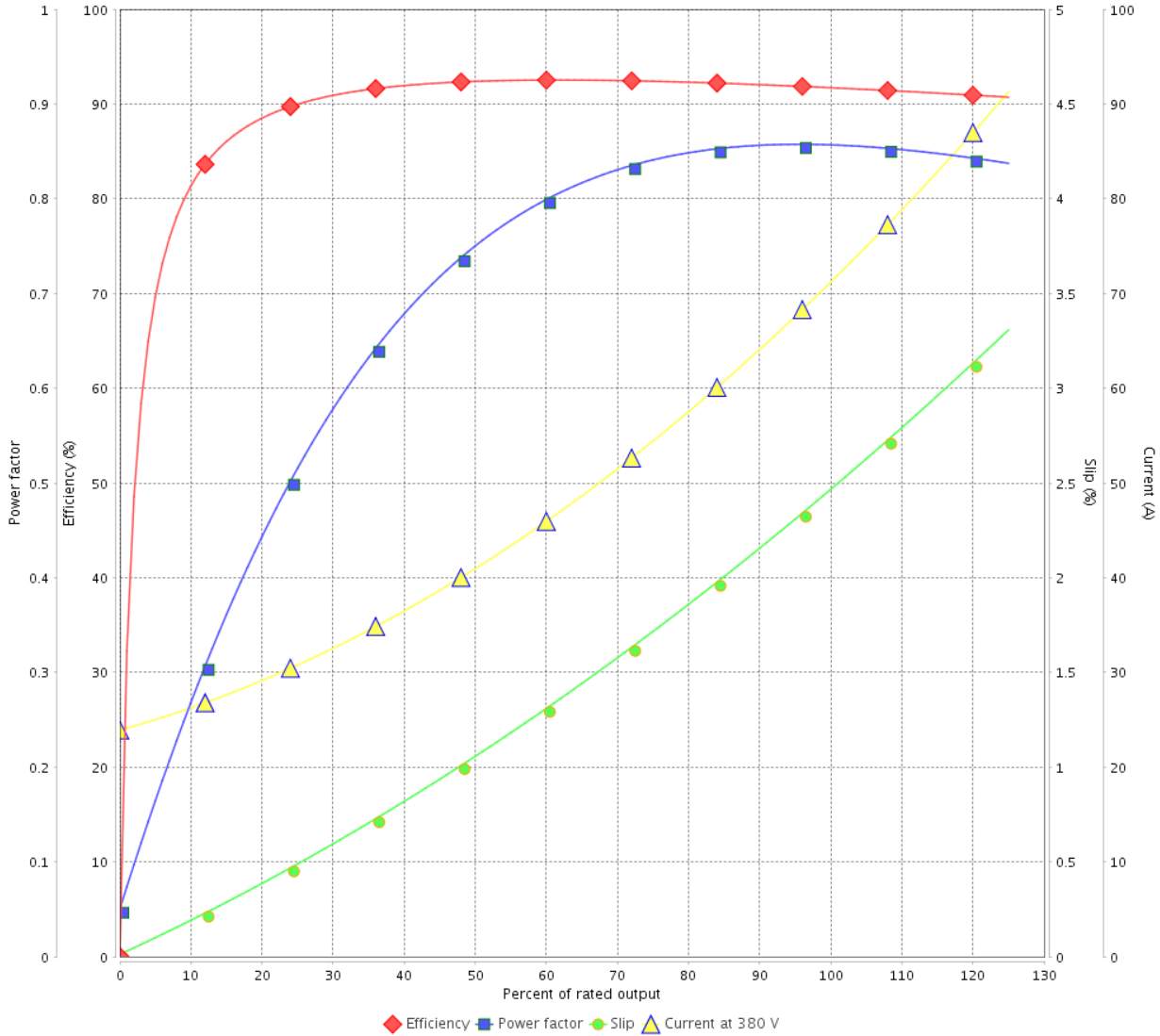
Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T

LOAD PERFORMANCE CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current : 71.3 A
 LRC : 5.8
 Rated torque : 269 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 975 rpm

Moment of inertia (J) : 29.4 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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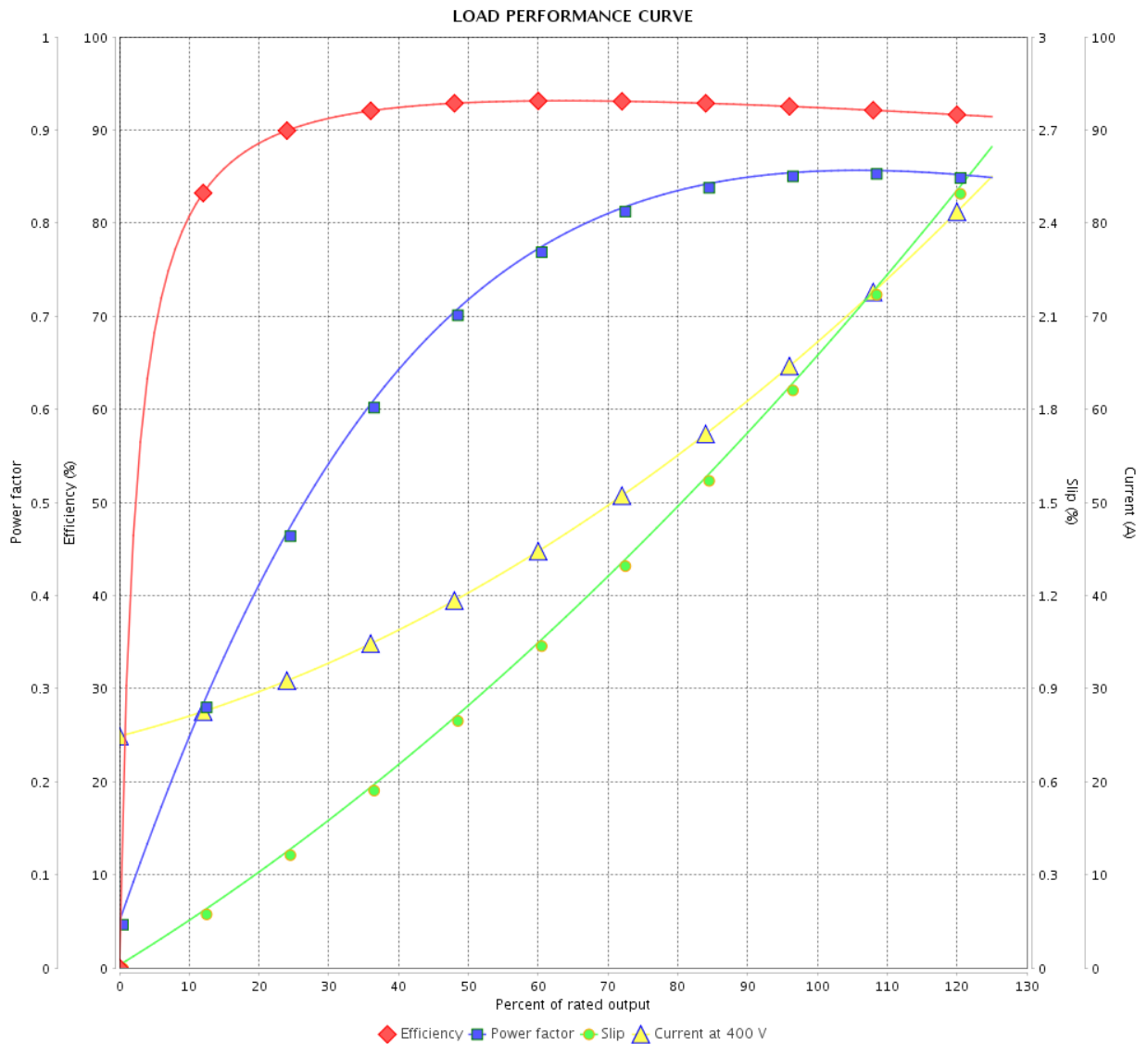


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 400 V 50 Hz 6P IE2

Rated current : 67.2 A
 LRC : 6.4
 Rated torque : 268 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 980 rpm

Moment of inertia (J) : 29.4 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

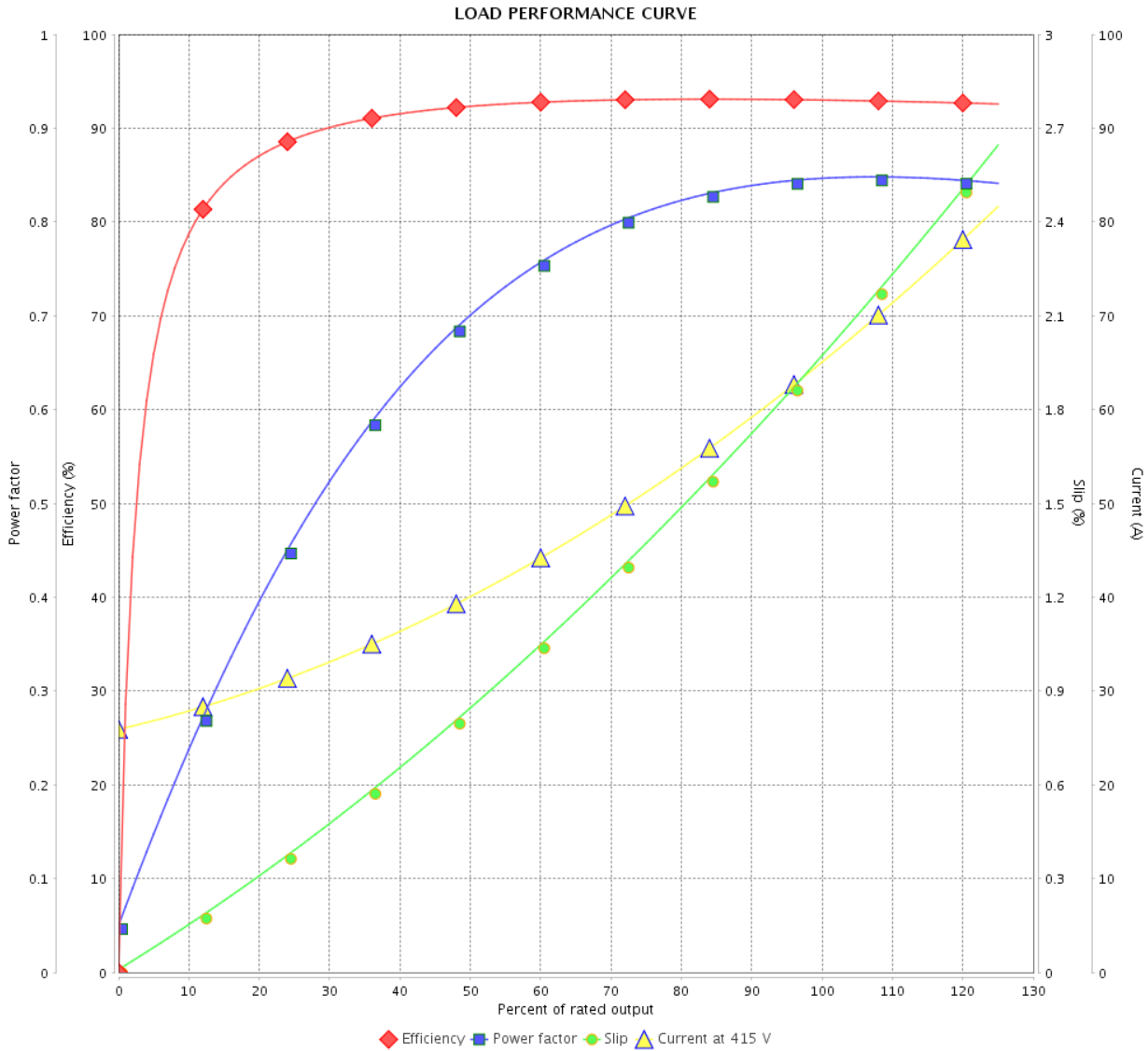


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 415 V 50 Hz 6P IE2

Rated current : 65.1 A
 LRC : 6.9
 Rated torque : 268 ft.lb
 Locked rotor torque : 240 %
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 Rated speed : 980 rpm

Moment of inertia (J) : 29.4 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



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11341754
 Catalog # : 05012XT3E365T

Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A	Moment of inertia (J) : 29.4 sq.ft.lb
LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 222 ft.lb	Insulation class : F
Locked rotor torque : 260 %	Service factor : 1.15
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 1185 rpm	Design : B

Heating constant

Cooling constant

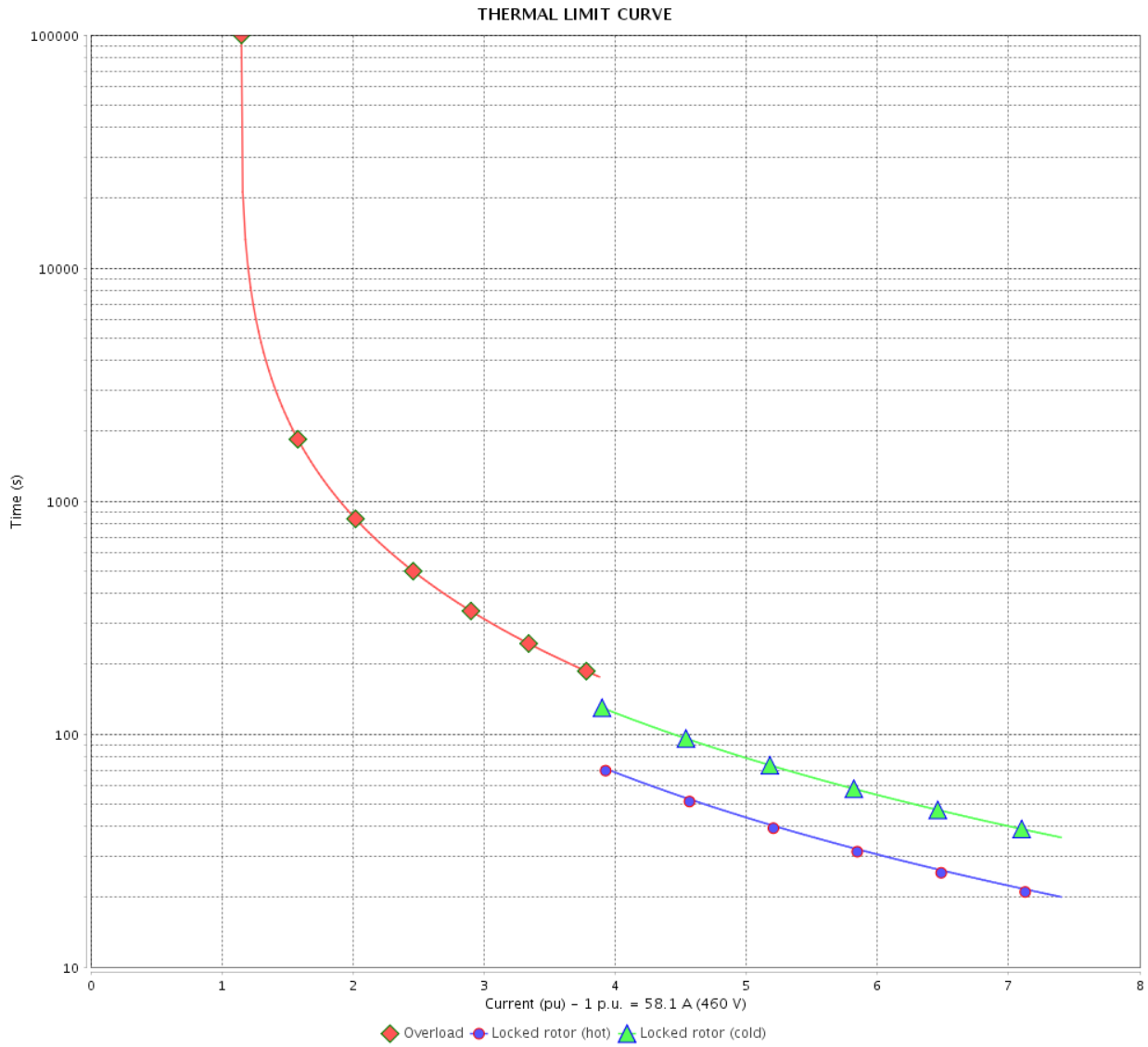
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11341754
 Catalog # : 05012XT3E365T

Performance : 380 V 50 Hz 6P IE1

Rated current : 71.3 A	Moment of inertia (J) : 29.4 sq.ft.lb
LRC : 5.8	Duty cycle : Cont.(S1)
Rated torque : 269 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 975 rpm	Design : B

Heating constant

Cooling constant

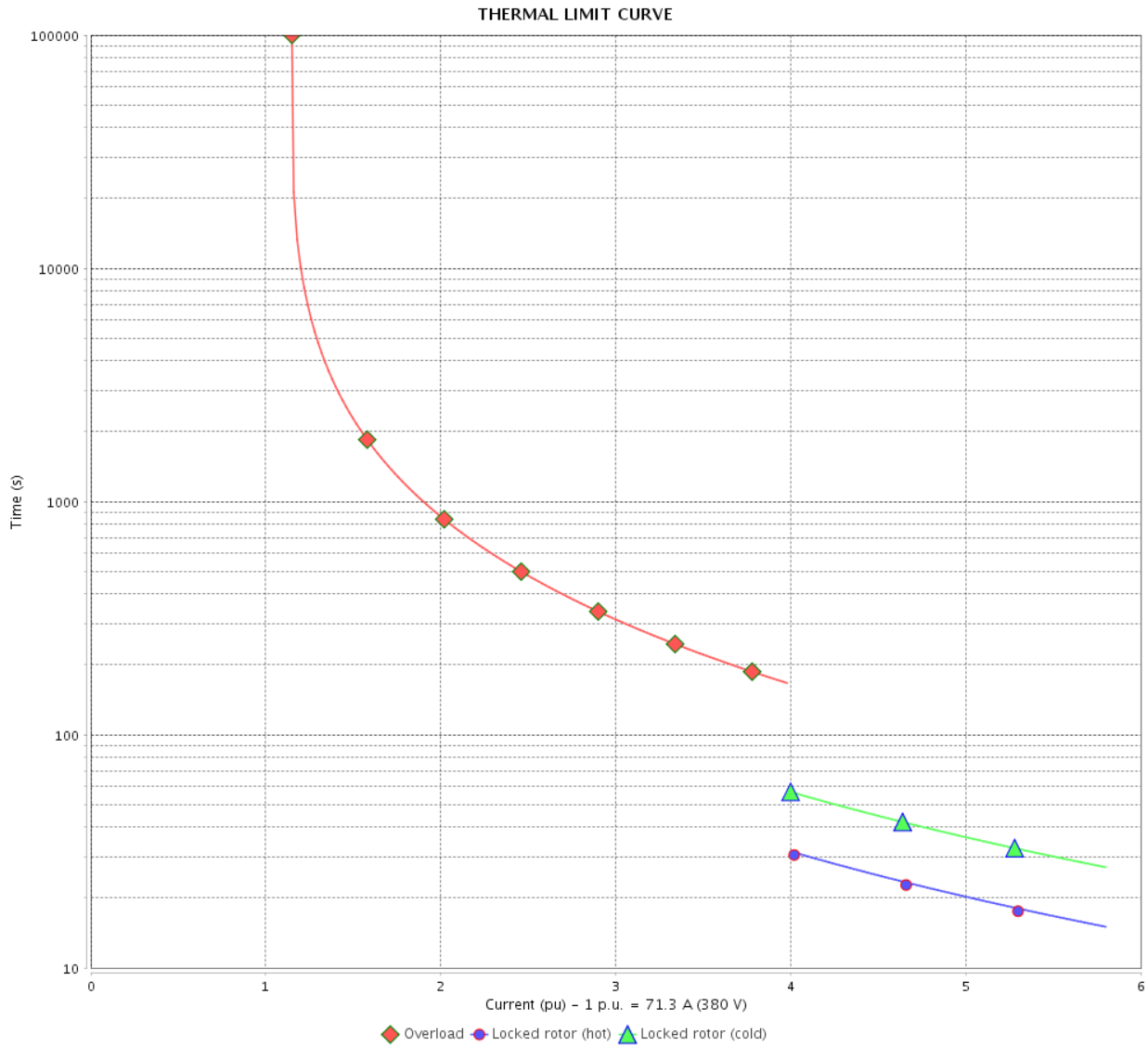
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11341754
 Catalog # : 05012XT3E365T

Performance : 400 V 50 Hz 6P IE2

Rated current : 67.2 A	Moment of inertia (J) : 29.4 sq.ft.lb
LRC : 6.4	Duty cycle : Cont.(S1)
Rated torque : 268 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 980 rpm	Design : B

Heating constant

Cooling constant

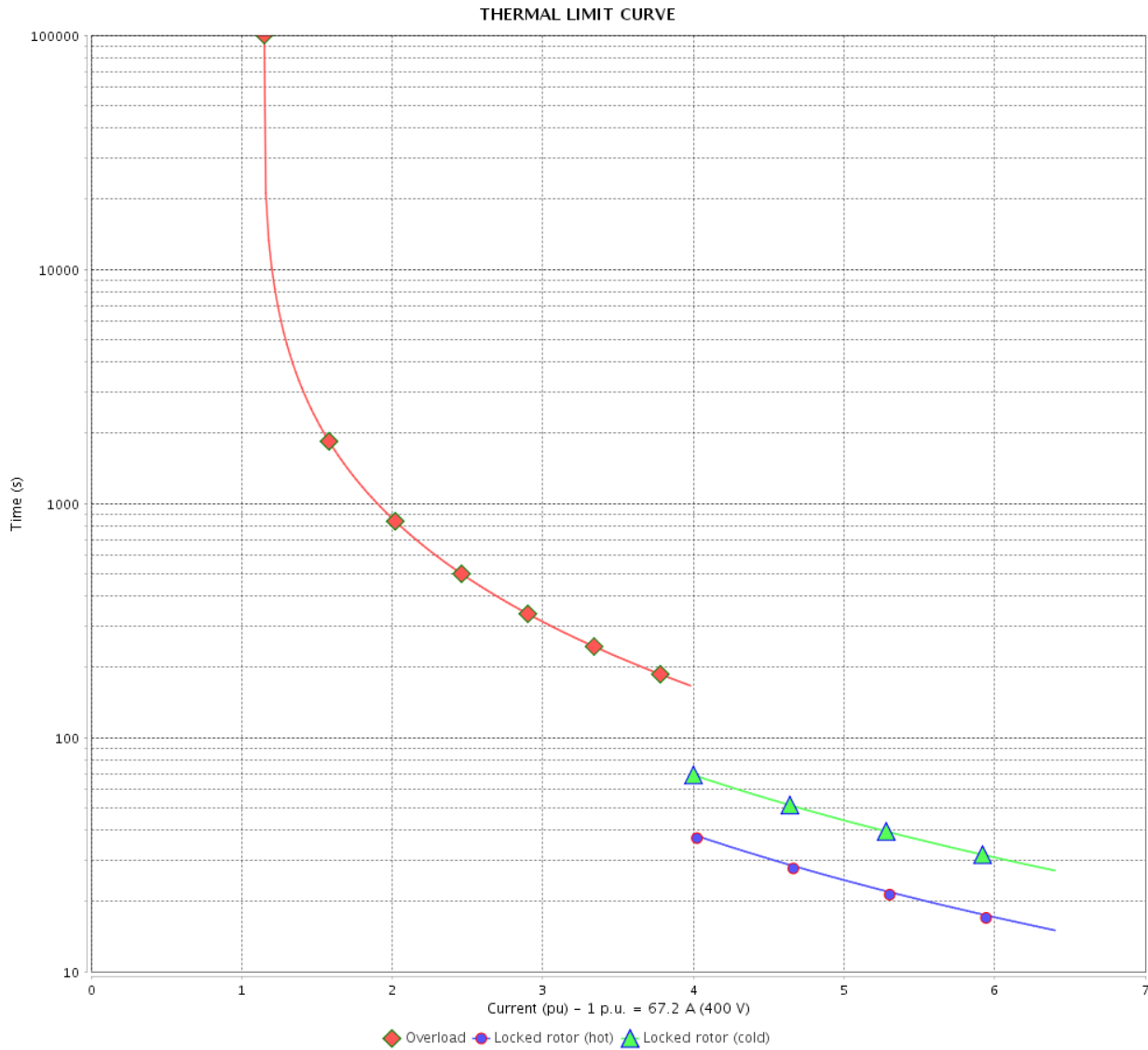
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Three Phase Induction Motor - Squirrel Cage



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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11341754
 Catalog # : 05012XT3E365T

Performance : 415 V 50 Hz 6P IE2

Rated current : 65.1 A	Moment of inertia (J) : 29.4 sq.ft.lb
LRC : 6.9	Duty cycle : Cont.(S1)
Rated torque : 268 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 260 %	Temperature rise : 80 K
Rated speed : 980 rpm	Design : B

Heating constant

Cooling constant

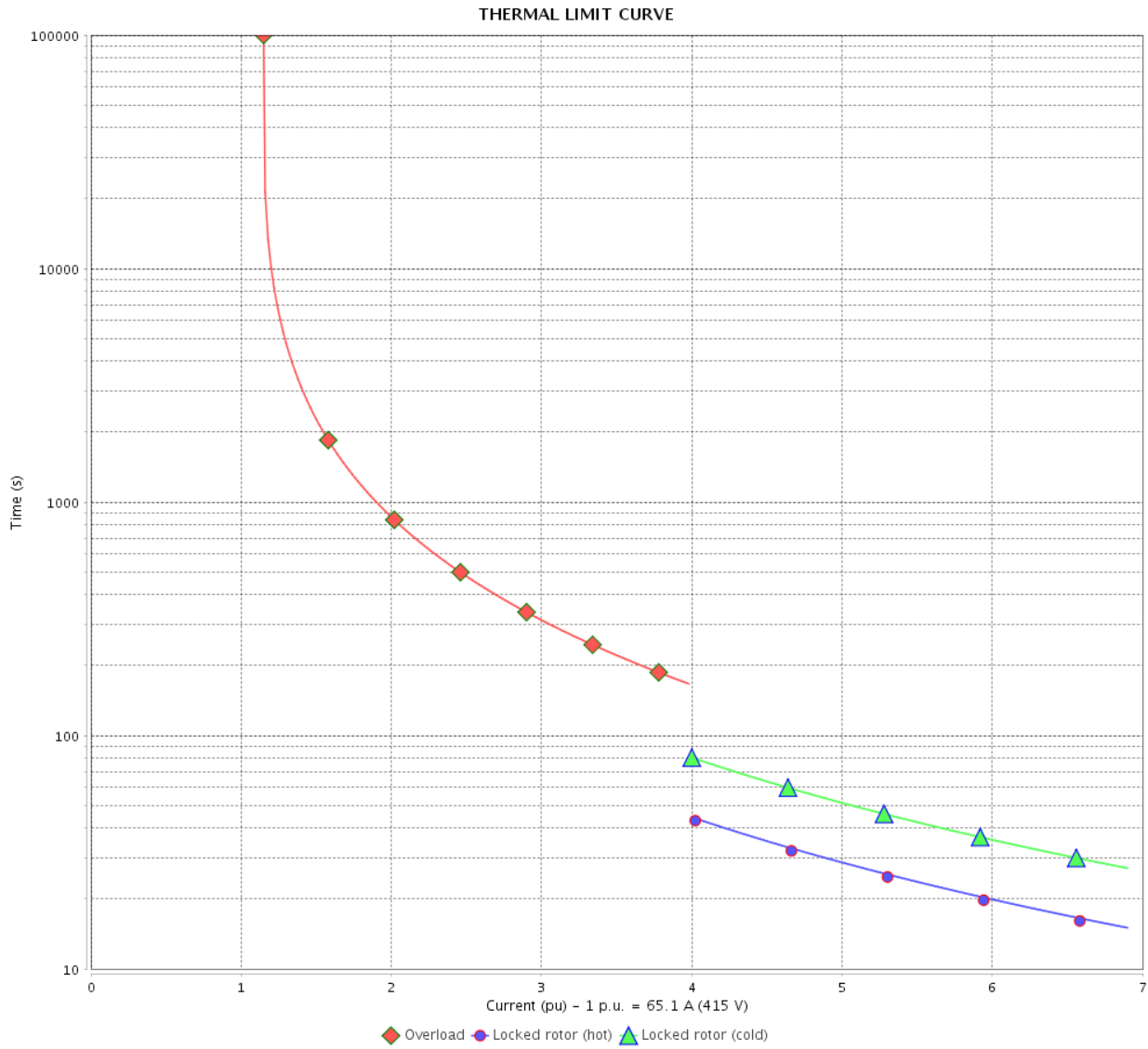
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

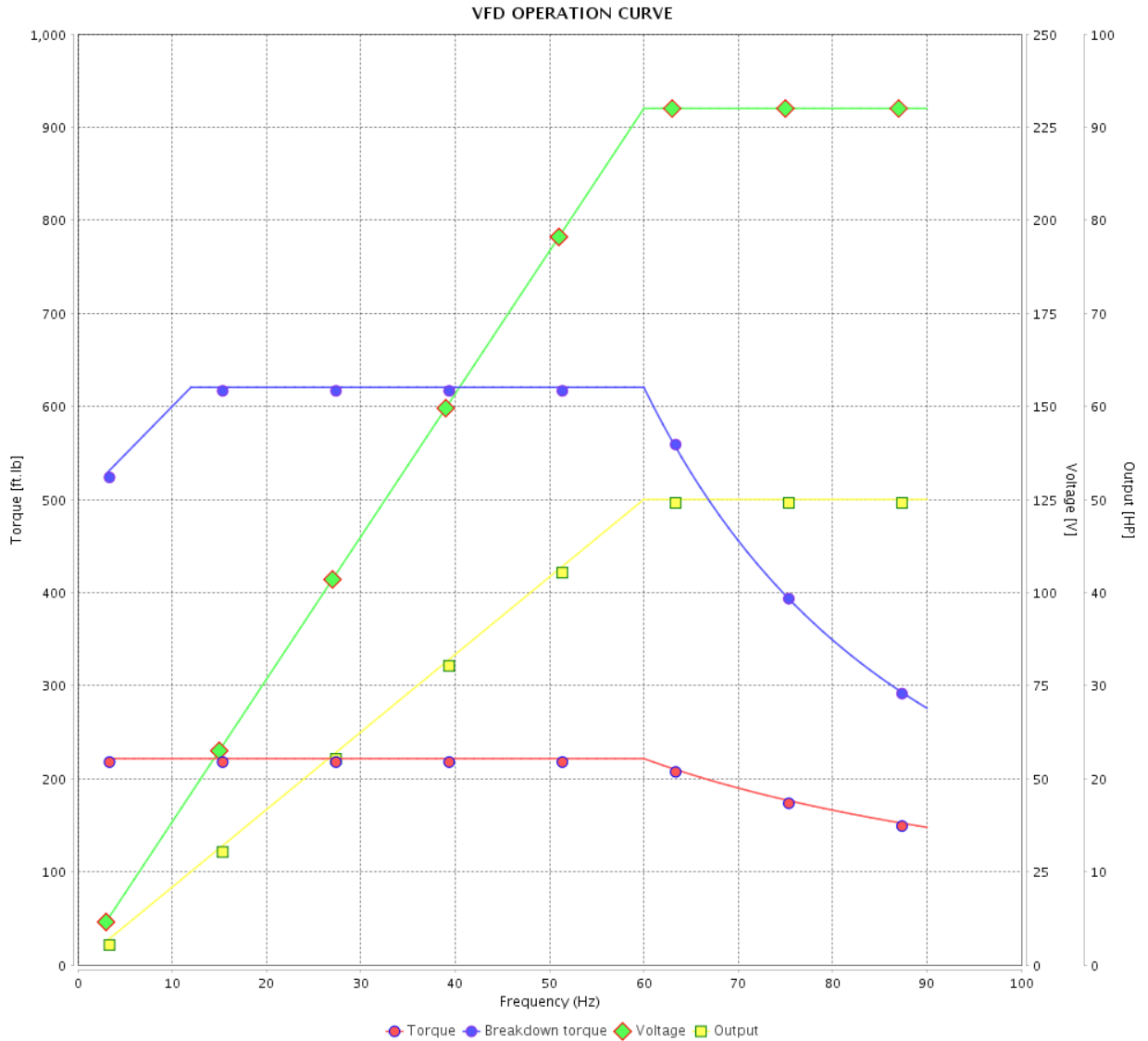


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A
 LRC : 7.4
 Rated torque : 222 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 280 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 29.4 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



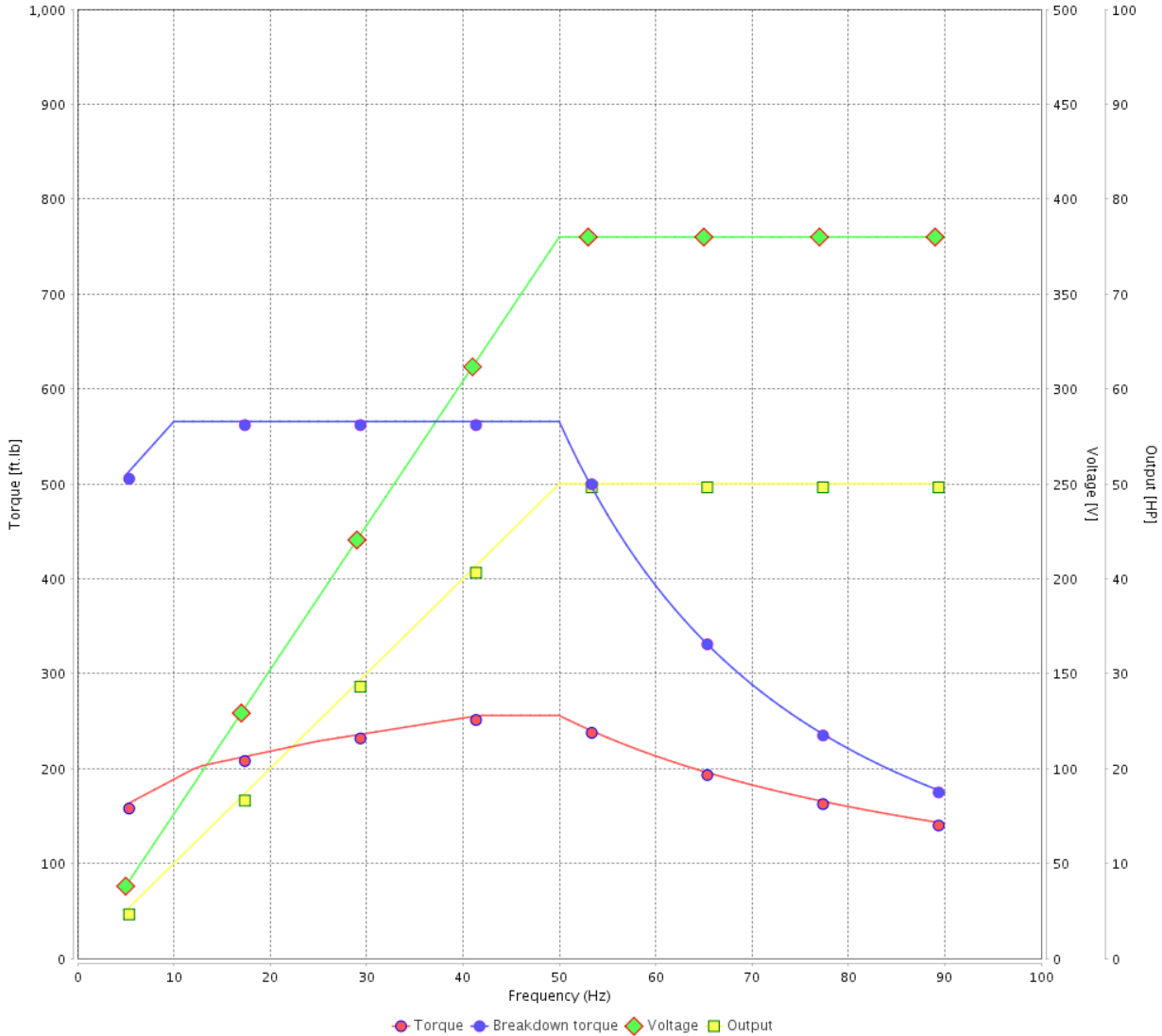
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T

VFD OPERATION CURVE



Performance : 380 V 50 Hz 6P IE1

Rated current : 71.3 A
 LRC : 5.8
 Rated torque : 269 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 210 %
 Rated speed : 975 rpm

Moment of inertia (J) : 29.4 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

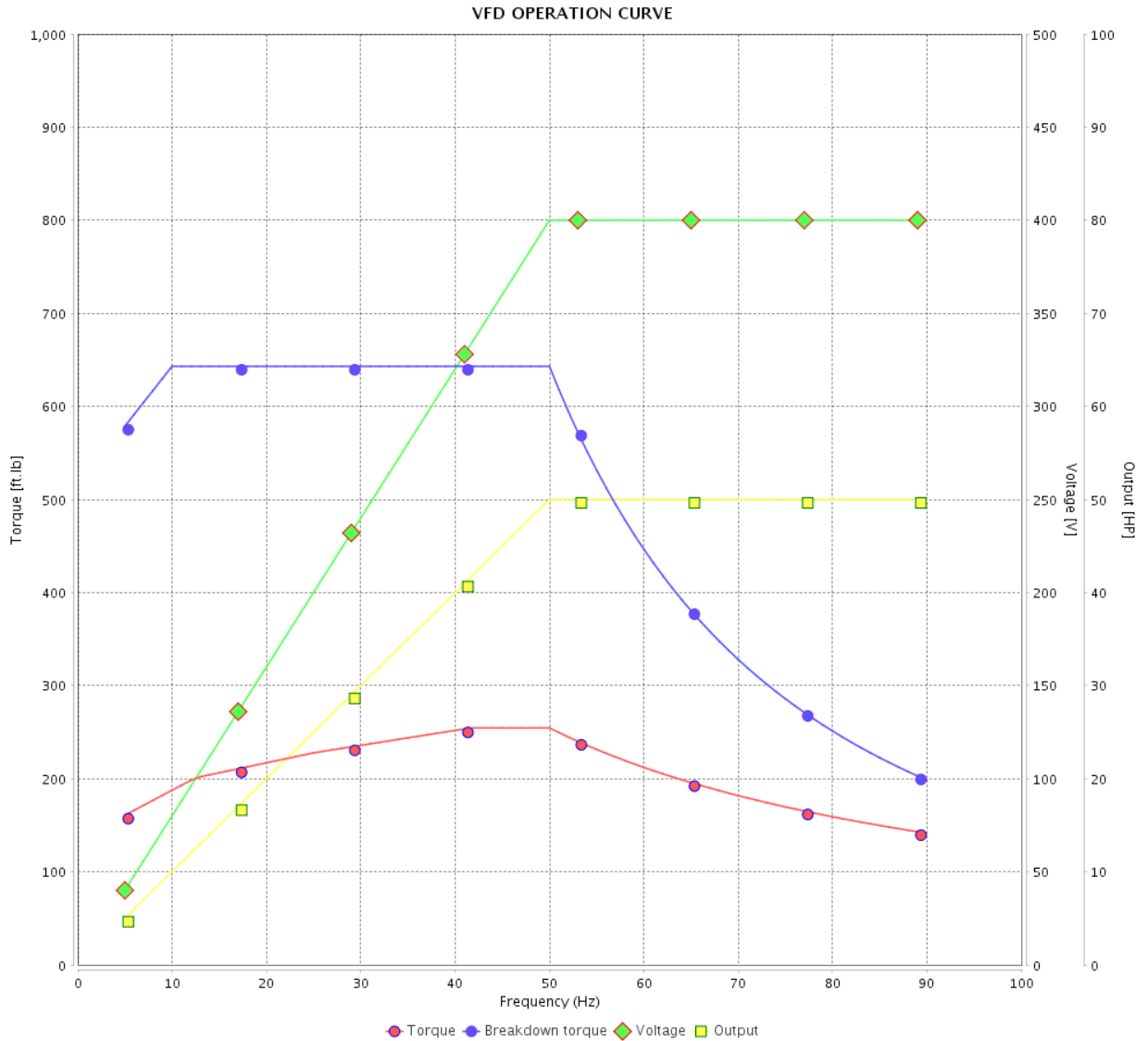


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

Catalog # : 05012XT3E365T



Performance : 400 V 50 Hz 6P IE2

Rated current : 67.2 A
 LRC : 6.4
 Rated torque : 268 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 240 %
 Rated speed : 980 rpm

Moment of inertia (J) : 29.4 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

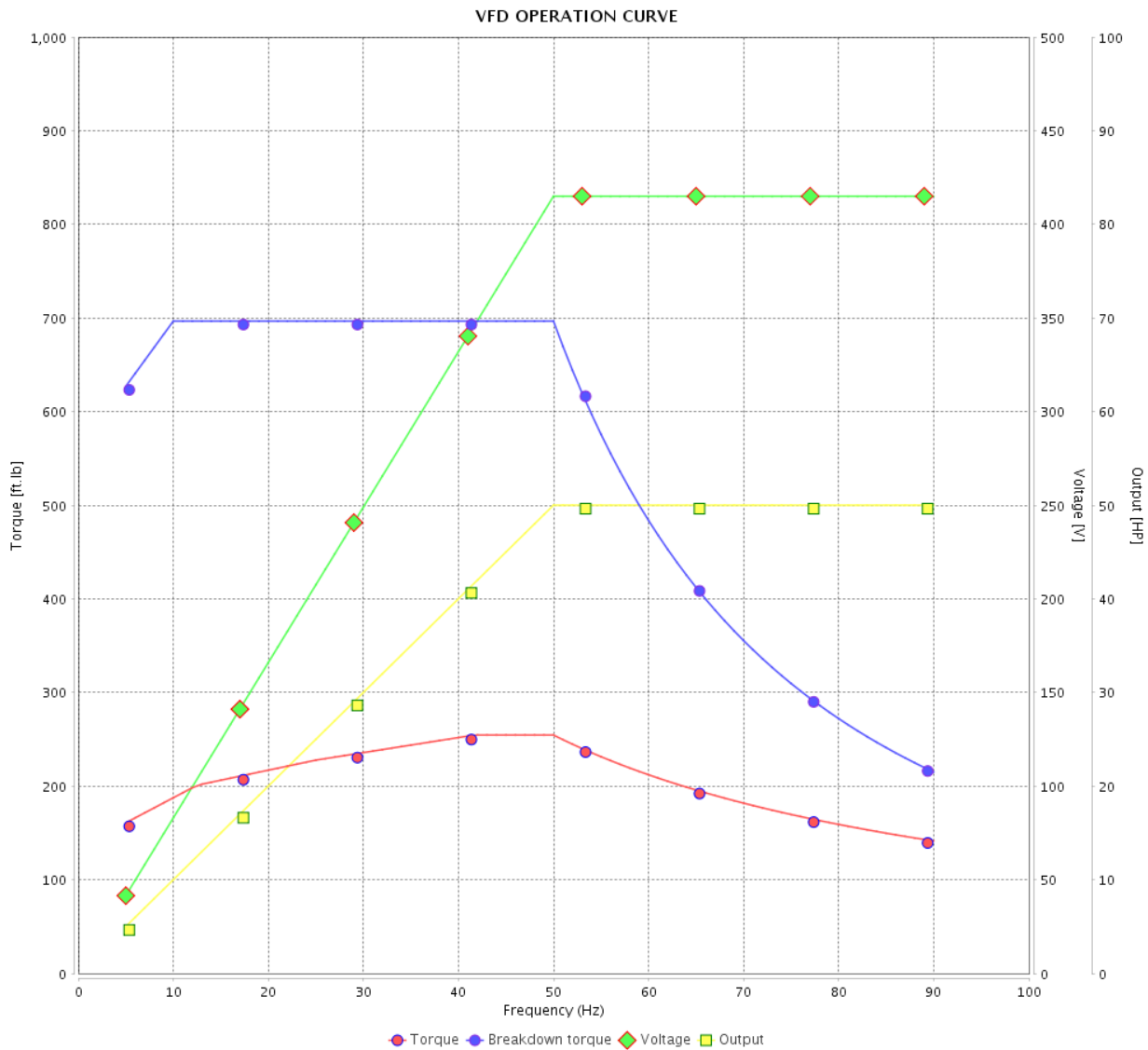


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11341754

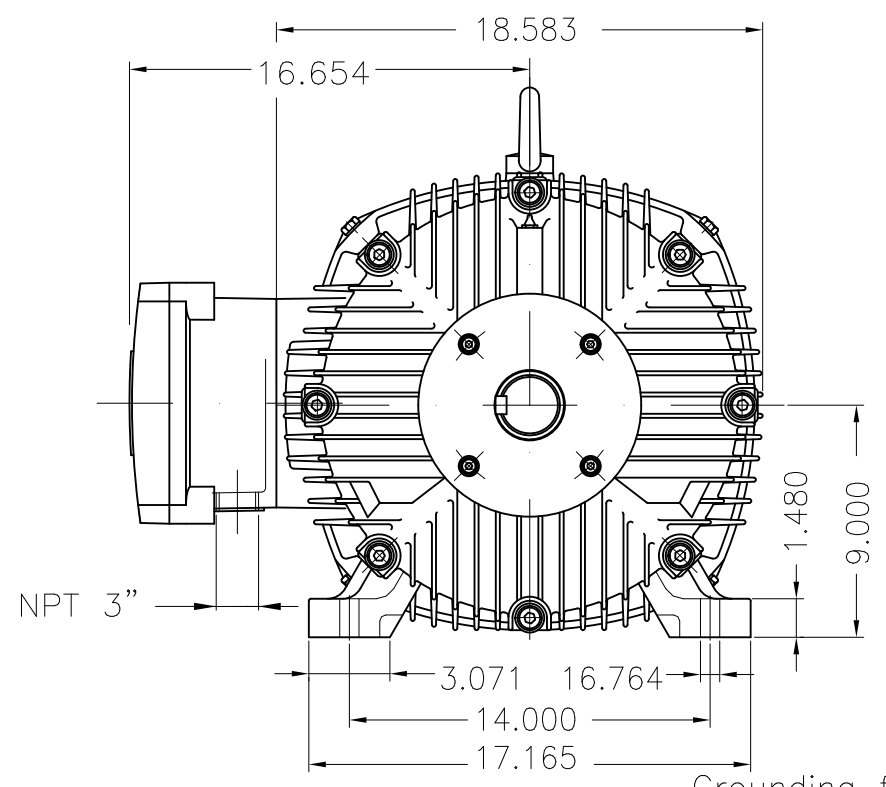
Catalog # : 05012XT3E365T



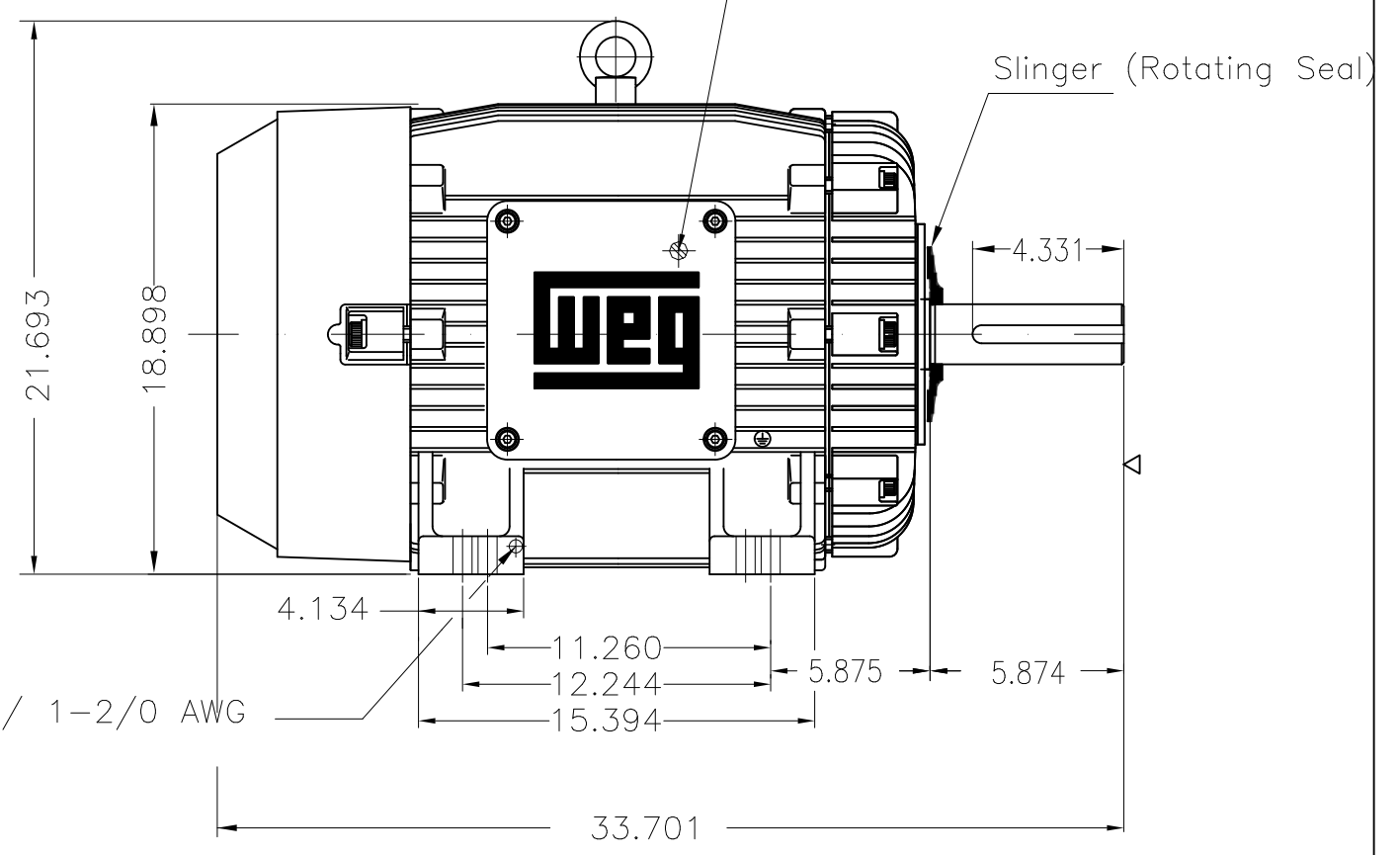
Performance : 415 V 50 Hz 6P IE2

Rated current	: 65.1 A	Moment of inertia (J)	: 29.4 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 268 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

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Checked by				
Date	12/04/2022			



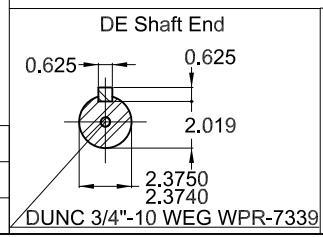
Grounding for leads 25-50 mm² / 3-1 AWG



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

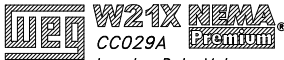
50 HP 06 Poles 60 Hz A

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 364/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	PREVIEW	WDD	SHEET	1 / 1





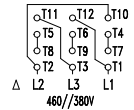
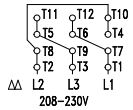
W21X NEMA
CC029A Premium
Inverter Duty Motor
Severe Duty



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 05012XT3E365T
 MADE IN BRAZIL
 11341754

PH 3	FR 364/5T	HP(kW) 50.0(37.0)	Hz 60
V 230/460		A 116/58.1	RPM 1182
NEMA NOM. EFF. 94.1%		INS CL F Δ T 80 K	IP55
PF 0.85	DUTY CONT.		CODE H
ENCL. TEFC	SF 1.15	SFA 133/66.8	
AMB 40°C	DES B	USABLE @208V 128 A SF 1.00	
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		
50HP 37kW 50Hz 380V 71.3A 977RPM SF1.00 EFF 91.7% (IE1)			



→ 6314-C3(27g) MOBIL POLYREX EM
 → 6314-C3(27g) 14267 h
 ALT 1000 m.a.s.l 1 O 1 O Lbs