

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14272899		
		Catalog # :	05012OT3E365T-W40G		
Frame	: 364/5T	Cooling method	: IC01 - ODP		
Insulation class	: F	Mounting	: F-1		
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)		
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line		
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 820 lb		
Protection degree	: IP23	Moment of inertia (J)	: 23.9 sq.ft.lb		
Design	: B				
Output [HP]	50	40	40	40	
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	57.1	54.8	53.5	
L. R. Amperes [A]	779/389	400	395	412	
LRC [A]	6.7x(Code G)	7.0x(Code H)	7.2x(Code H)	7.7x(Code J)	
No load current [A]	40.8/20.4	20.2	21.7	23.0	
Rated speed [RPM]	1185	985	985	985	
Slip [%]	1.25	1.50	1.50	1.50	
Rated torque [ft.lb]	222	213	213	213	
Locked rotor torque [%]	220	200	229	250	
Breakdown torque [%]	240	240	270	290	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	27s (cold) 15s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	
Noise level <sup>2</sup>	68.0 dB(A)				
Efficiency (%)	25%	93.5	92.4	92.4	92.4
	50%	93.6	92.5	92.5	92.5
	75%	94.1	92.9	92.9	92.9
	100%	94.1	92.9	92.9	92.9
Power Factor	25%	0.48	0.48	0.44	0.42
	50%	0.74	0.74	0.70	0.68
	75%	0.82	0.83	0.80	0.79
	100%	0.85	0.86	0.85	0.84
Bearing type	: Drive end 6314 C3	Non drive end 6212 Z C3	Foundation loads		
Sealing	: Without	Without	Max. traction	: 1709 lb	
	Bearing Seal	Bearing Seal	Max. compression	: 2529 lb	
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 27 g	13 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 128A SF 1.15 SFA 148A					
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
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Checked by				Page	Revision
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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



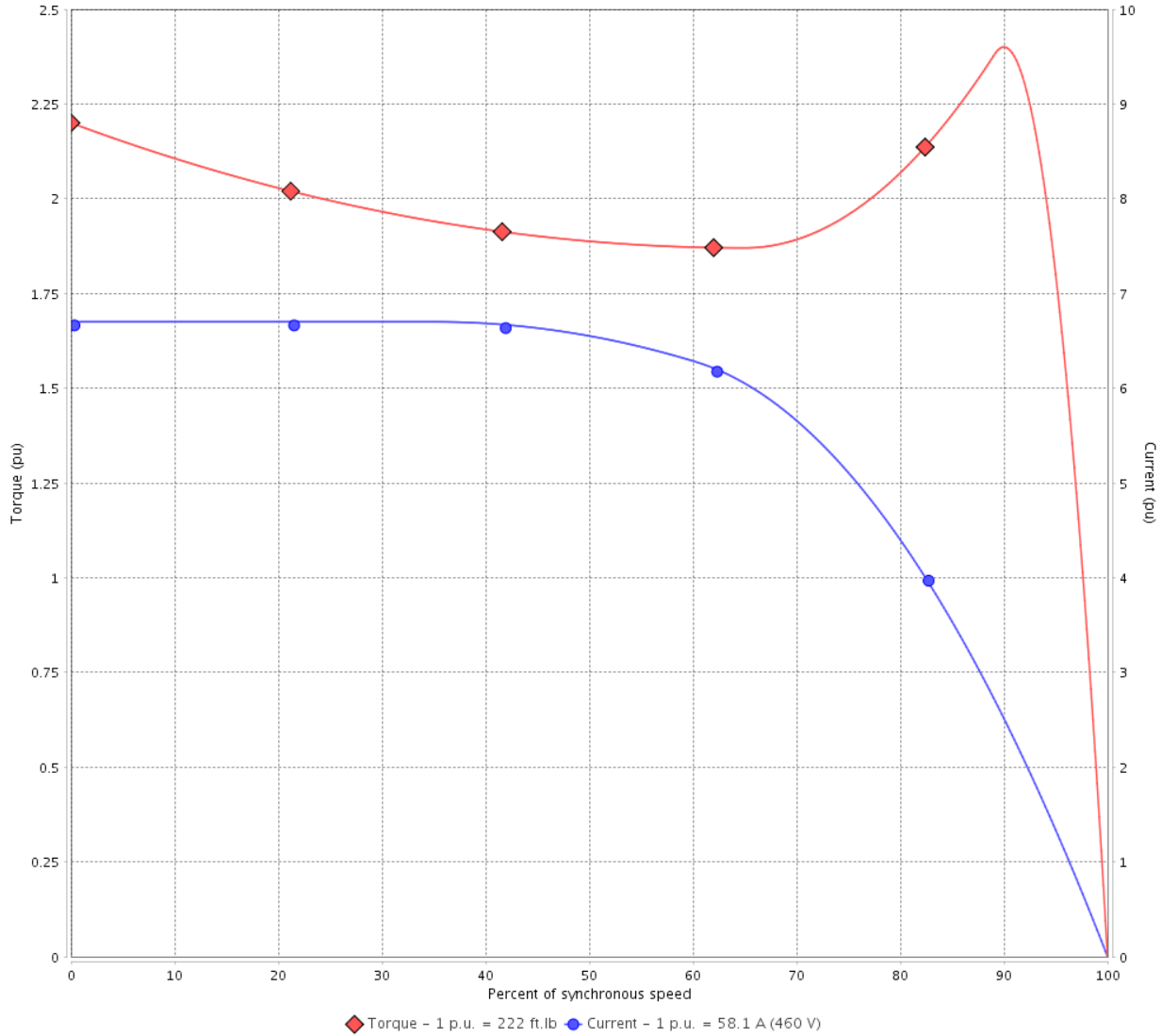
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 116/58.1 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 222 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



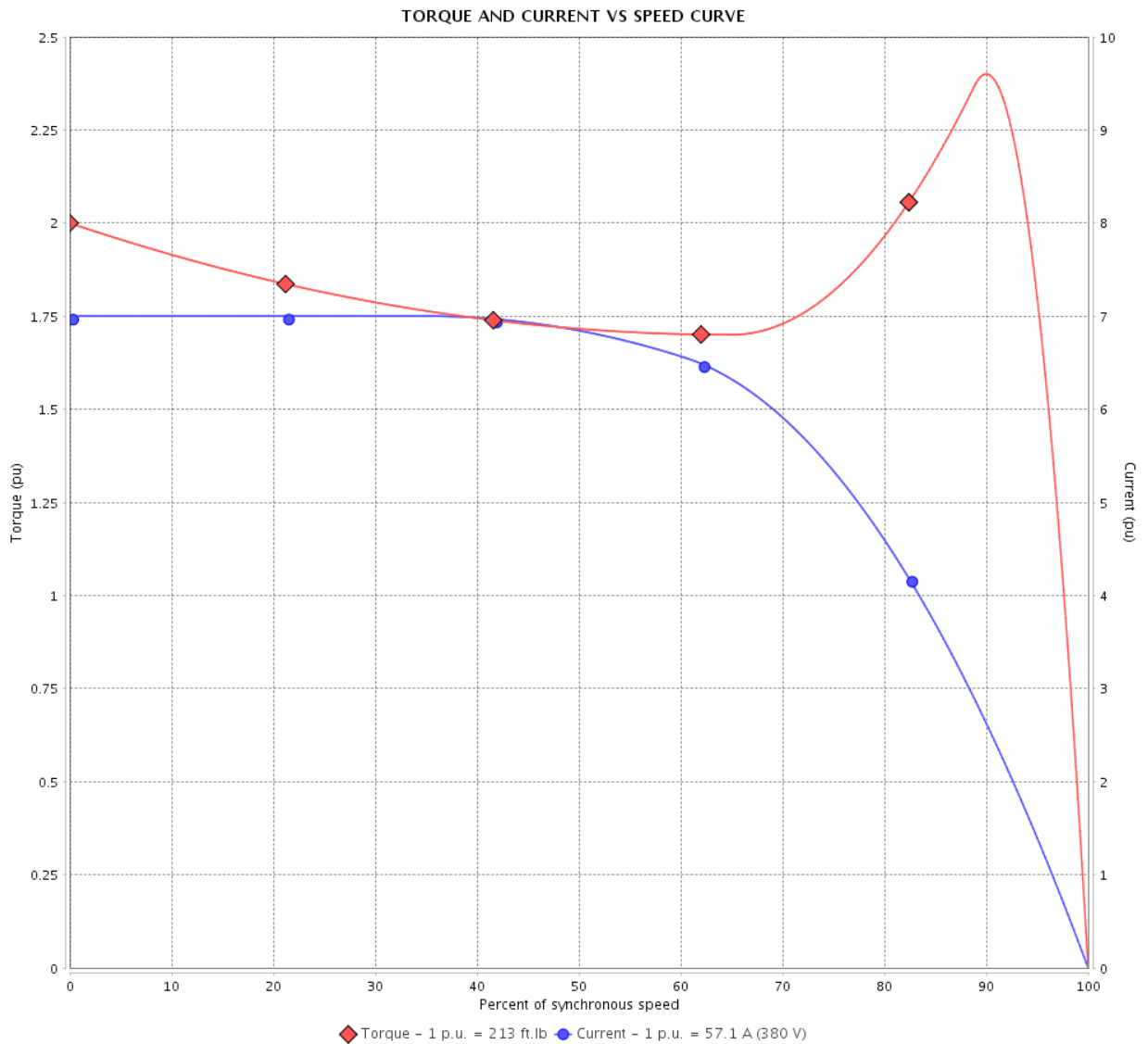
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G



Performance : 380 V 50 Hz 6P IE3

Rated current	: 57.1 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



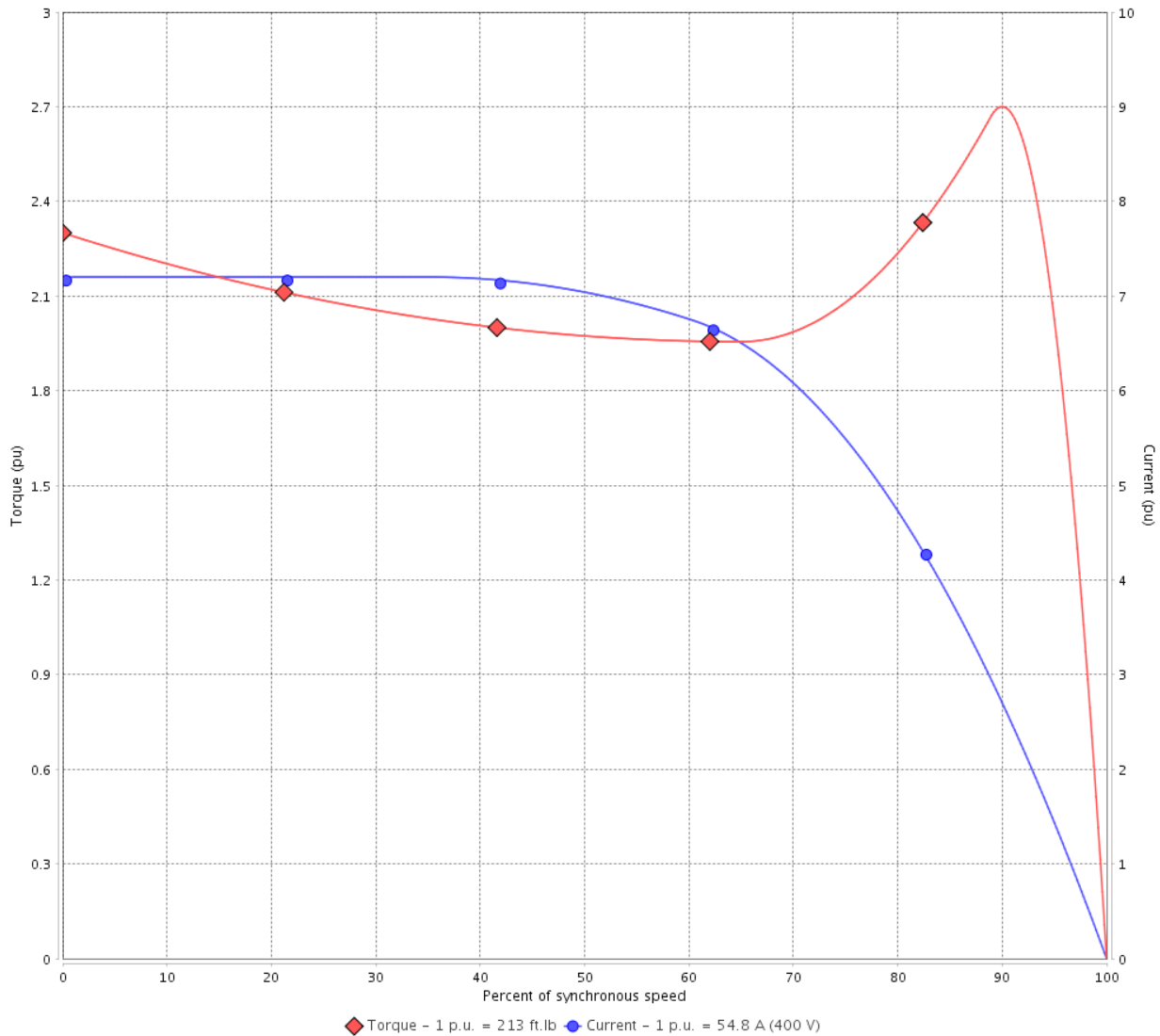
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 54.8 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



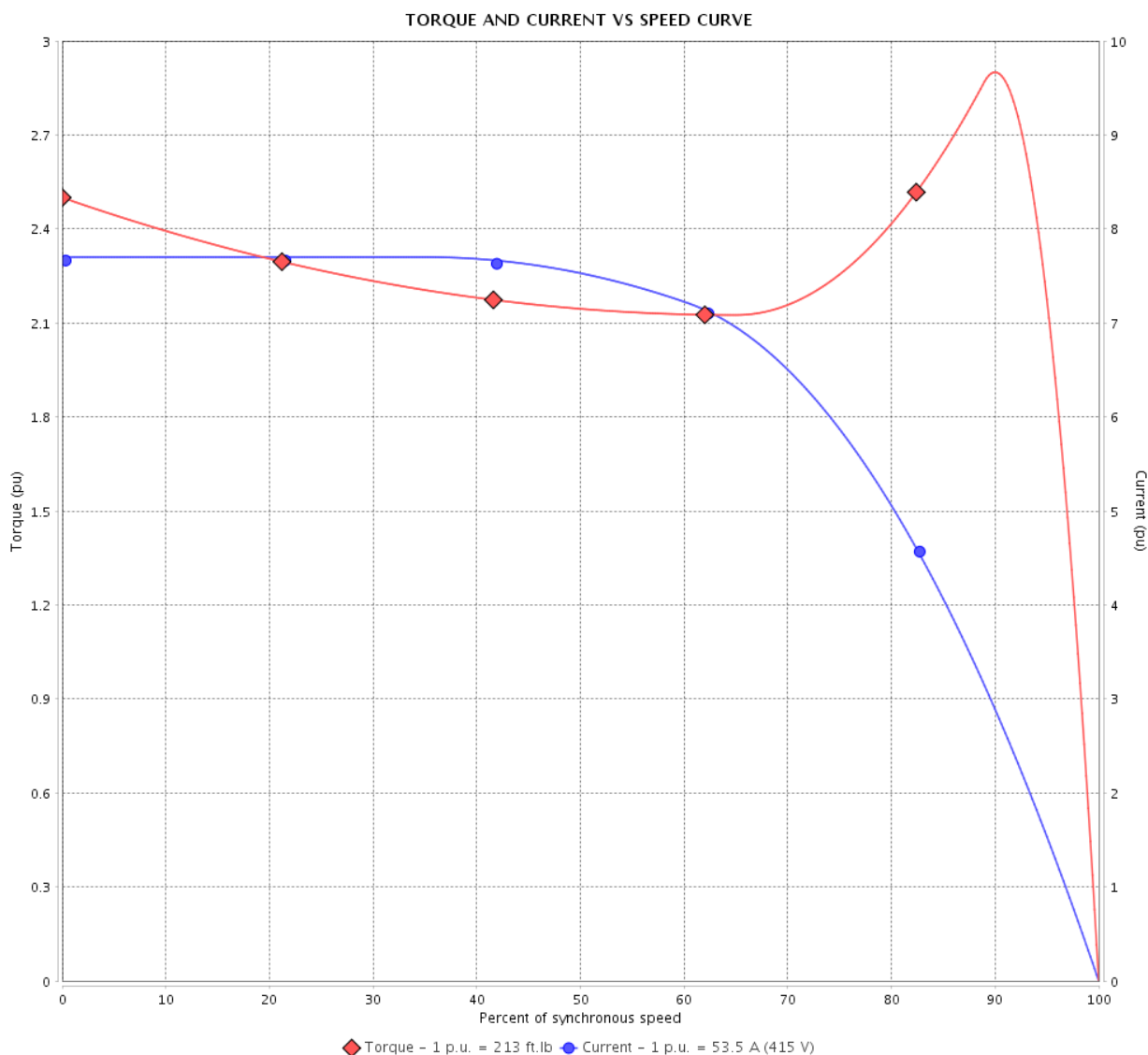
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G



Performance : 415 V 50 Hz 6P IE3

Rated current	: 53.5 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



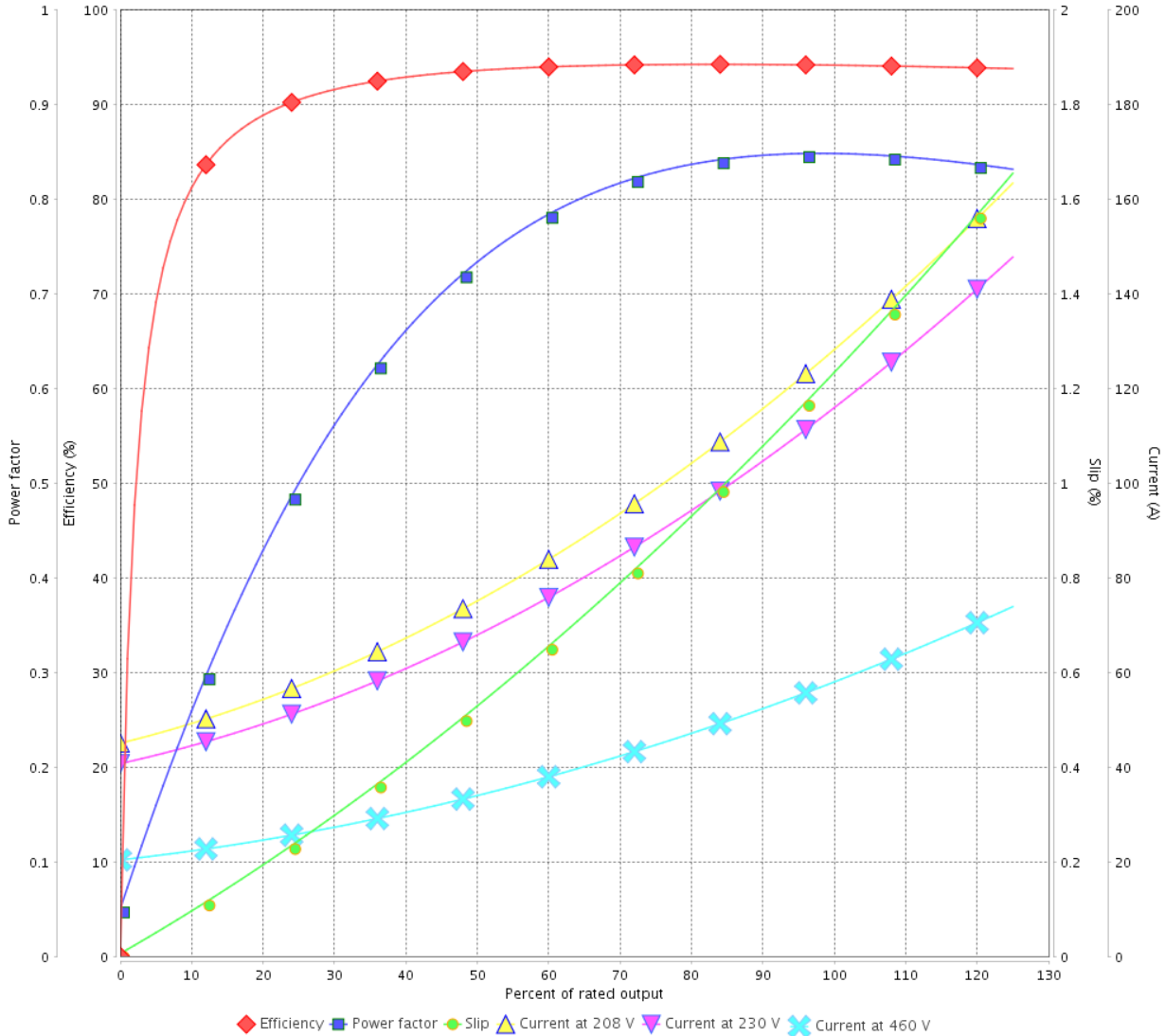
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A  
 LRC : 6.7  
 Rated torque : 222 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 1185 rpm

Moment of inertia (J) : 23.9 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

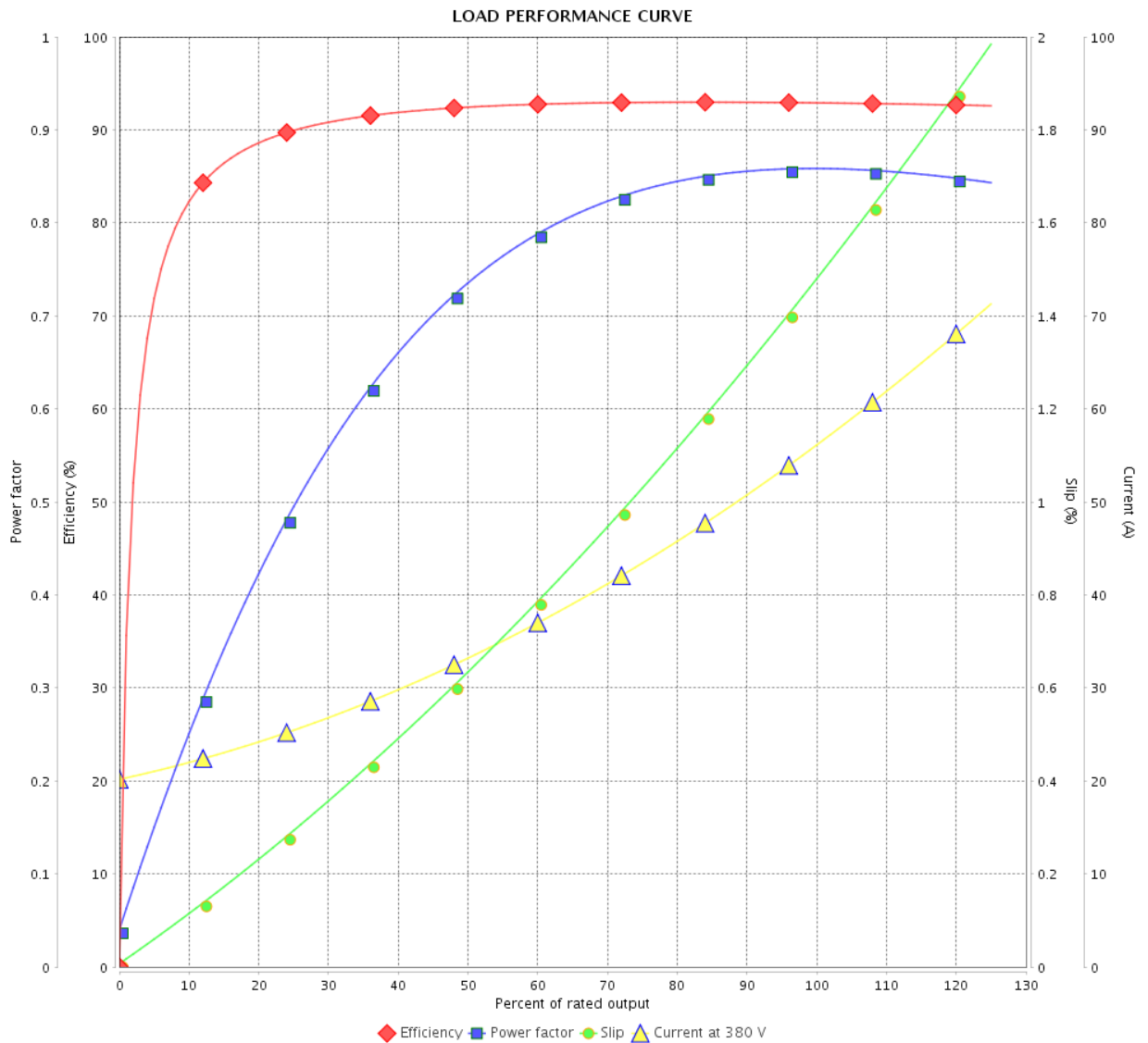


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G



Performance : 380 V 50 Hz 6P IE3

Rated current : 57.1 A  
 LRC : 7.0  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 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

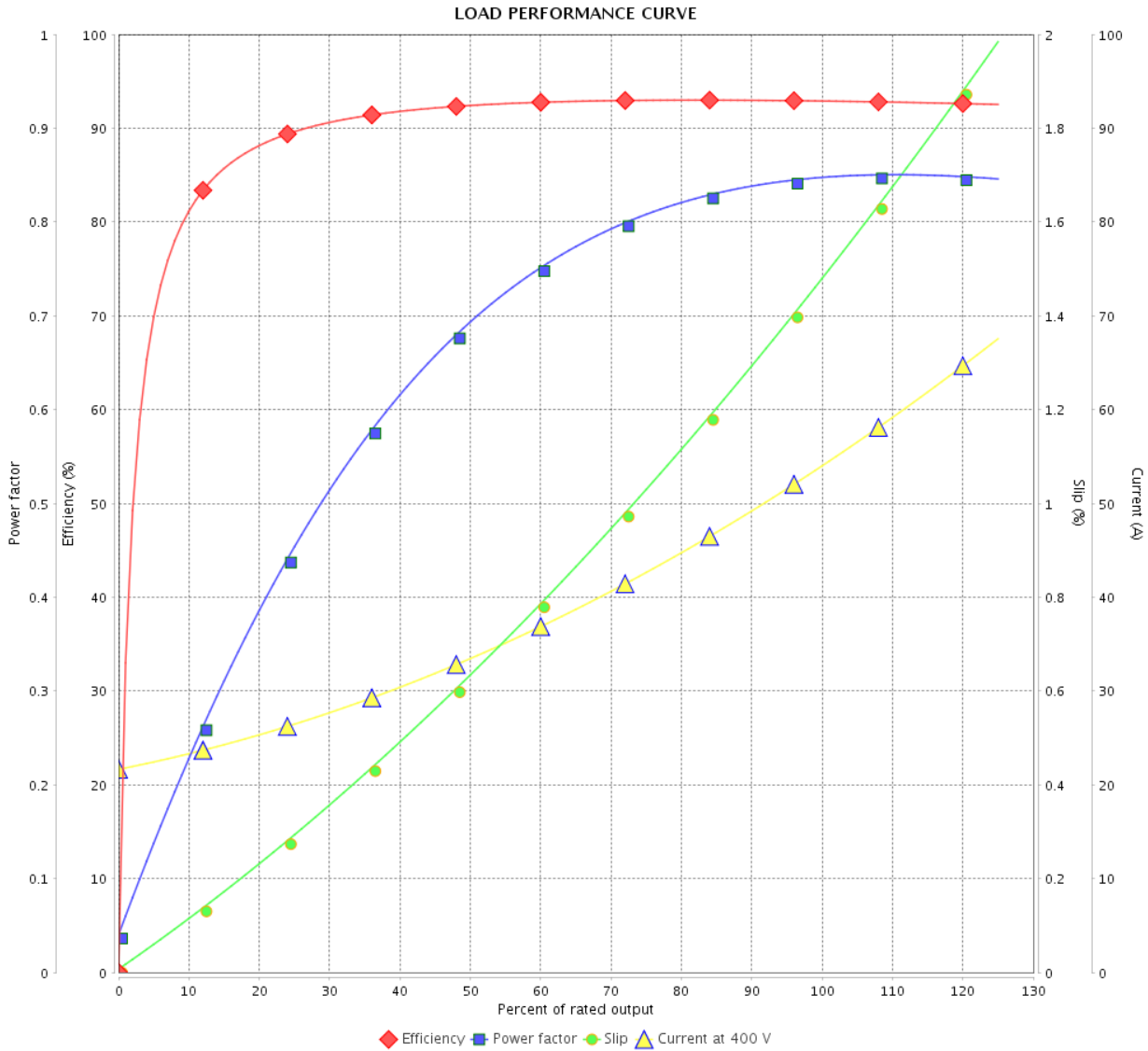


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G



Performance : 400 V 50 Hz 6P IE3

Rated current : 54.8 A  
 LRC : 7.2  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 270 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 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

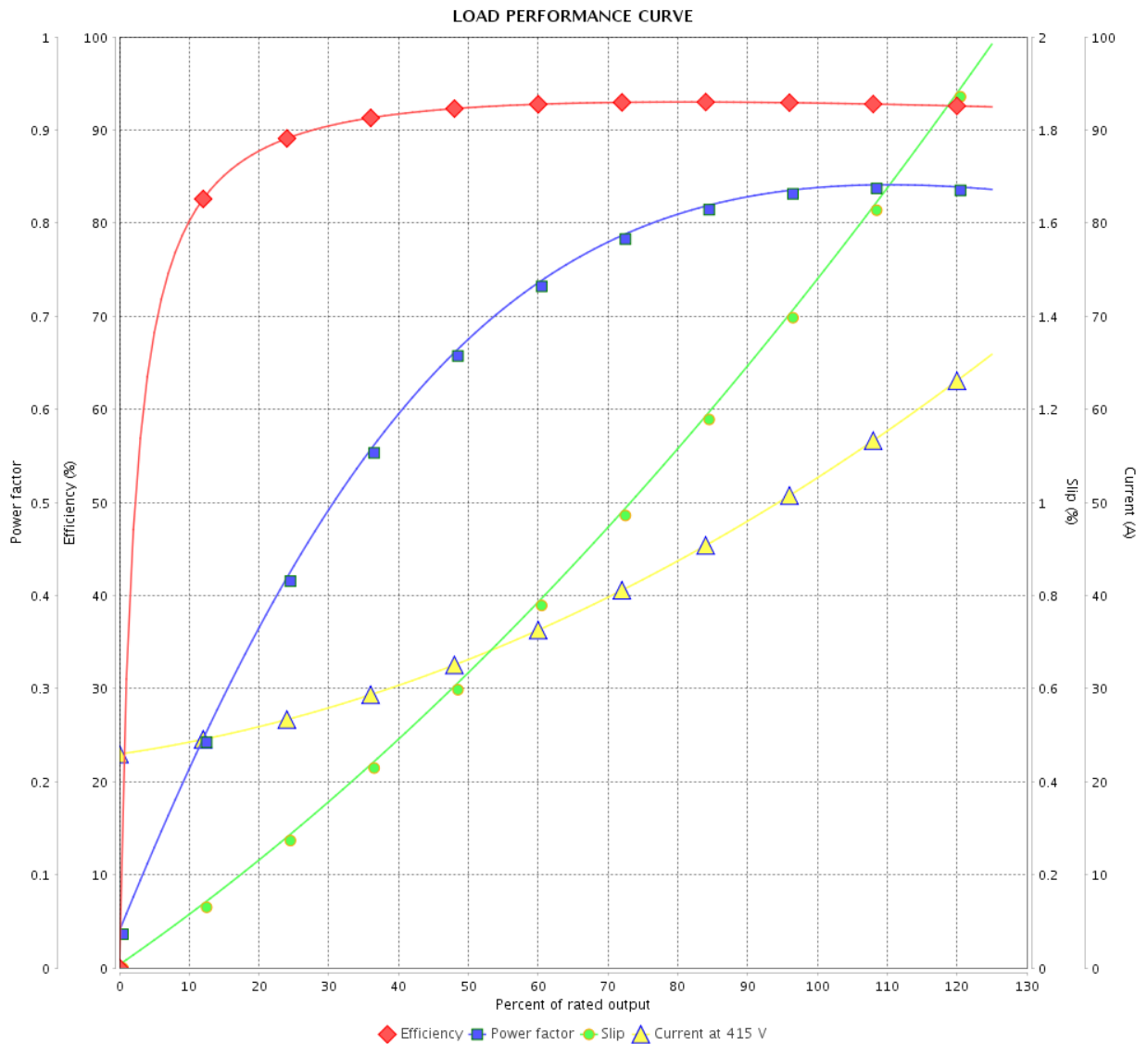


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G



Performance : 415 V 50 Hz 6P IE3

Rated current : 53.5 A  
 LRC : 7.7  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 290 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 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 : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G

Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A  
LRC : 6.7  
Rated torque : 222 ft.lb  
Locked rotor torque : 220 %  
Breakdown torque : 240 %  
Rated speed : 1185 rpm

Moment of inertia (J) : 23.9 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Heating constant

Cooling constant

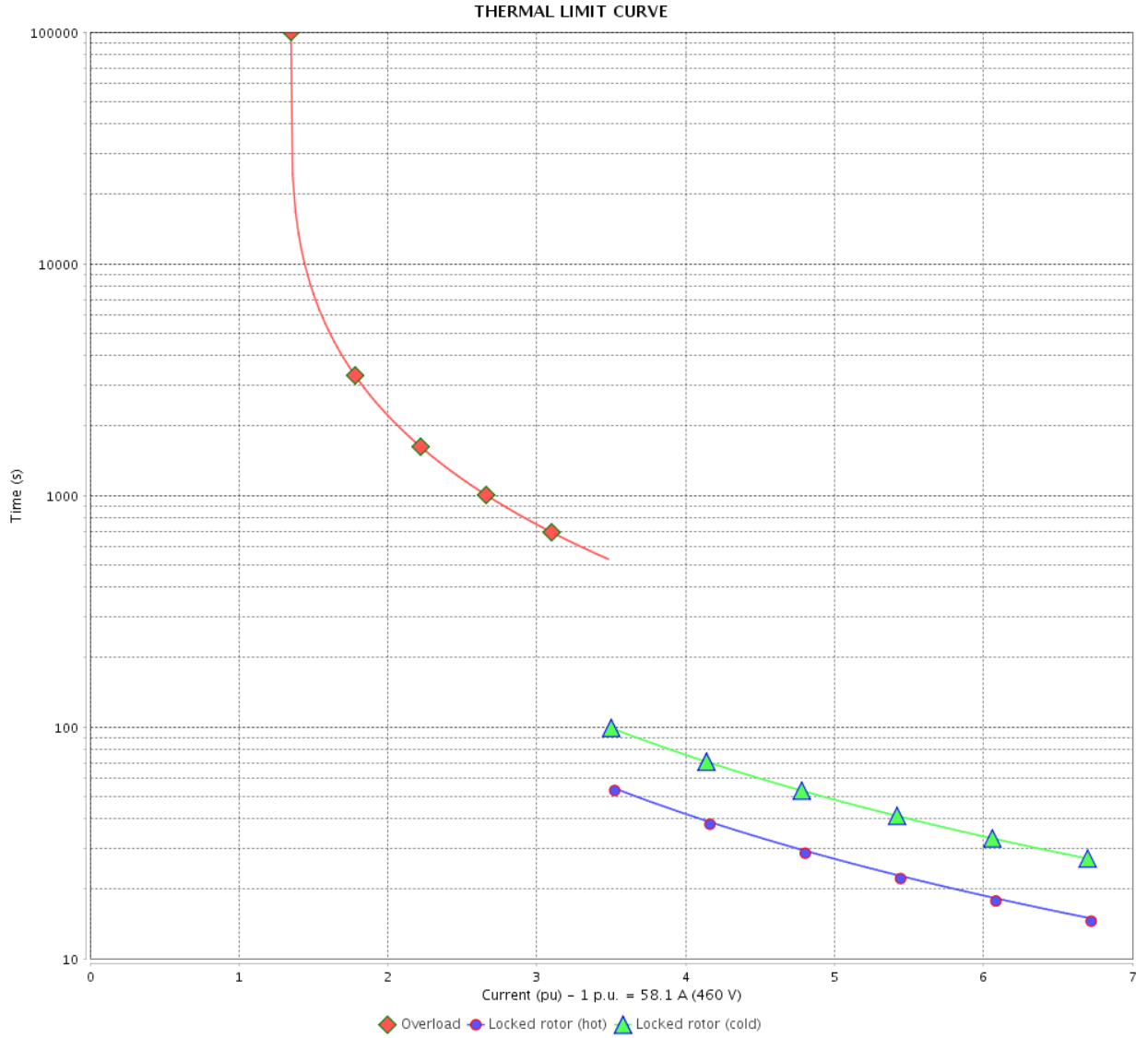
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G

Performance : 380 V 50 Hz 6P IE3

Rated current : 57.1 A	Moment of inertia (J) : 23.9 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 213 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 985 rpm	Design : B

Heating constant

Cooling constant

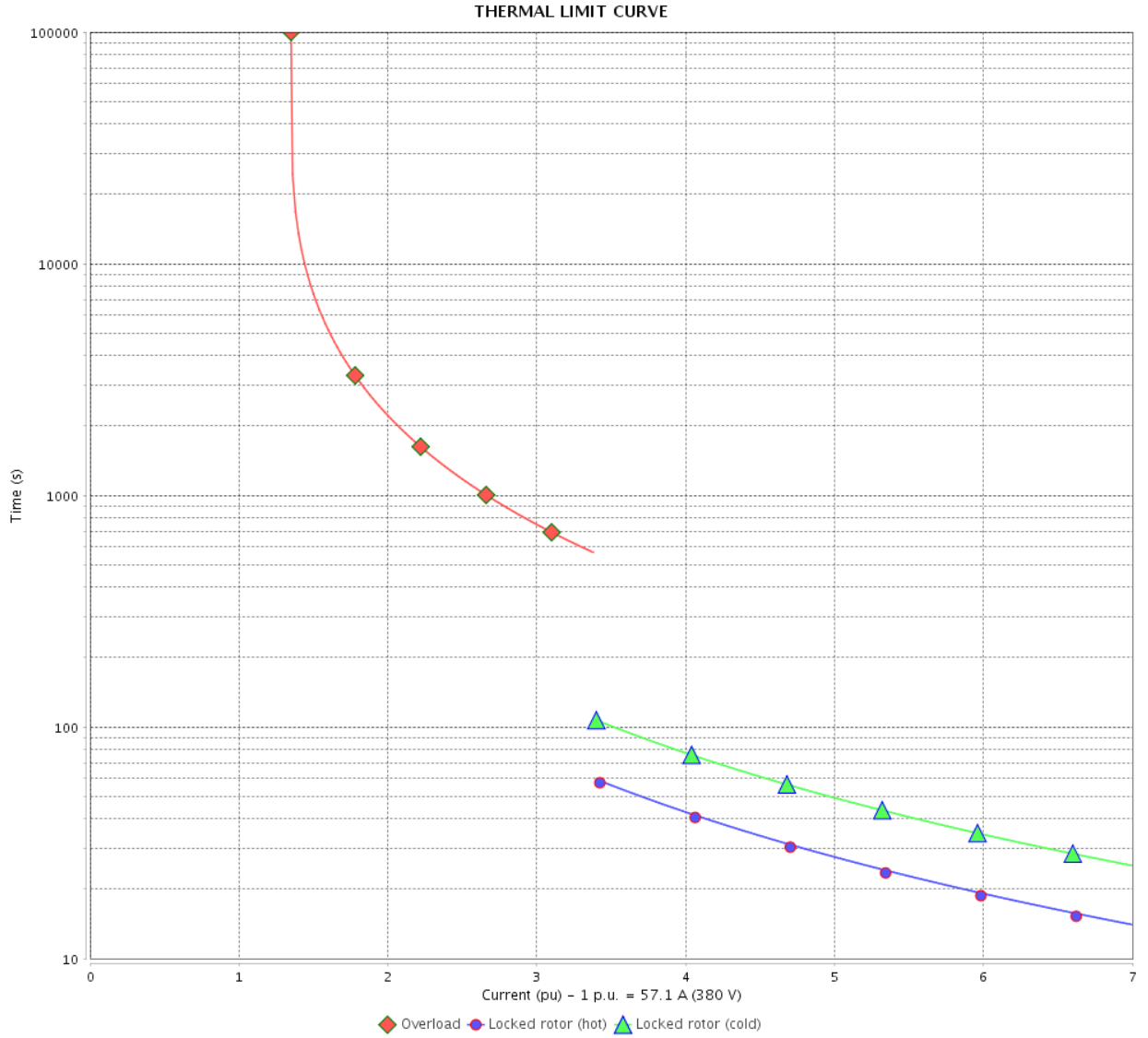
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G

Performance : 400 V 50 Hz 6P IE3

Rated current	: 54.8 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

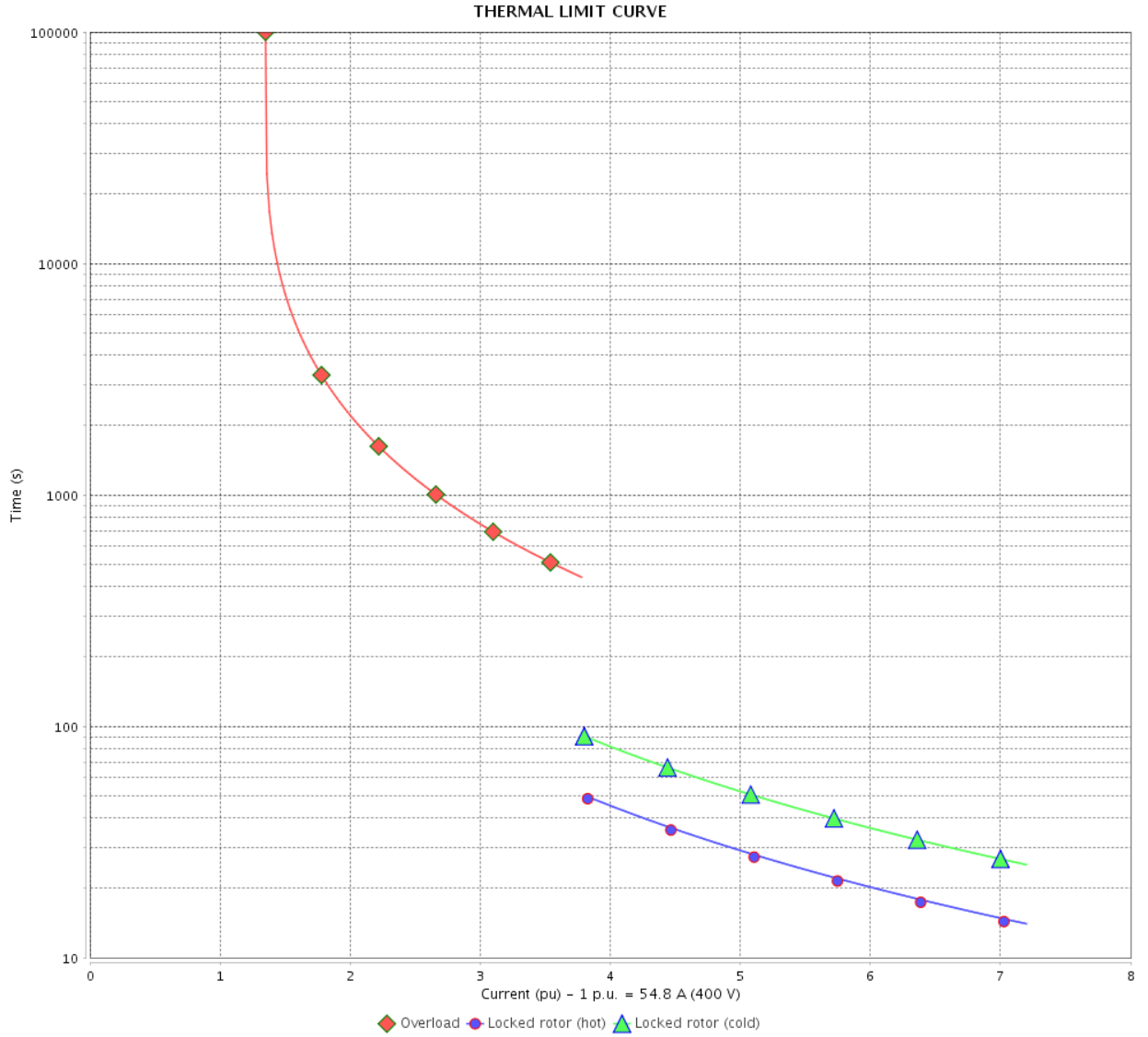
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Performed by				
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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Date				

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 05012OT3E365T-W40G

Performance : 415 V 50 Hz 6P IE3

Rated current	: 53.5 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

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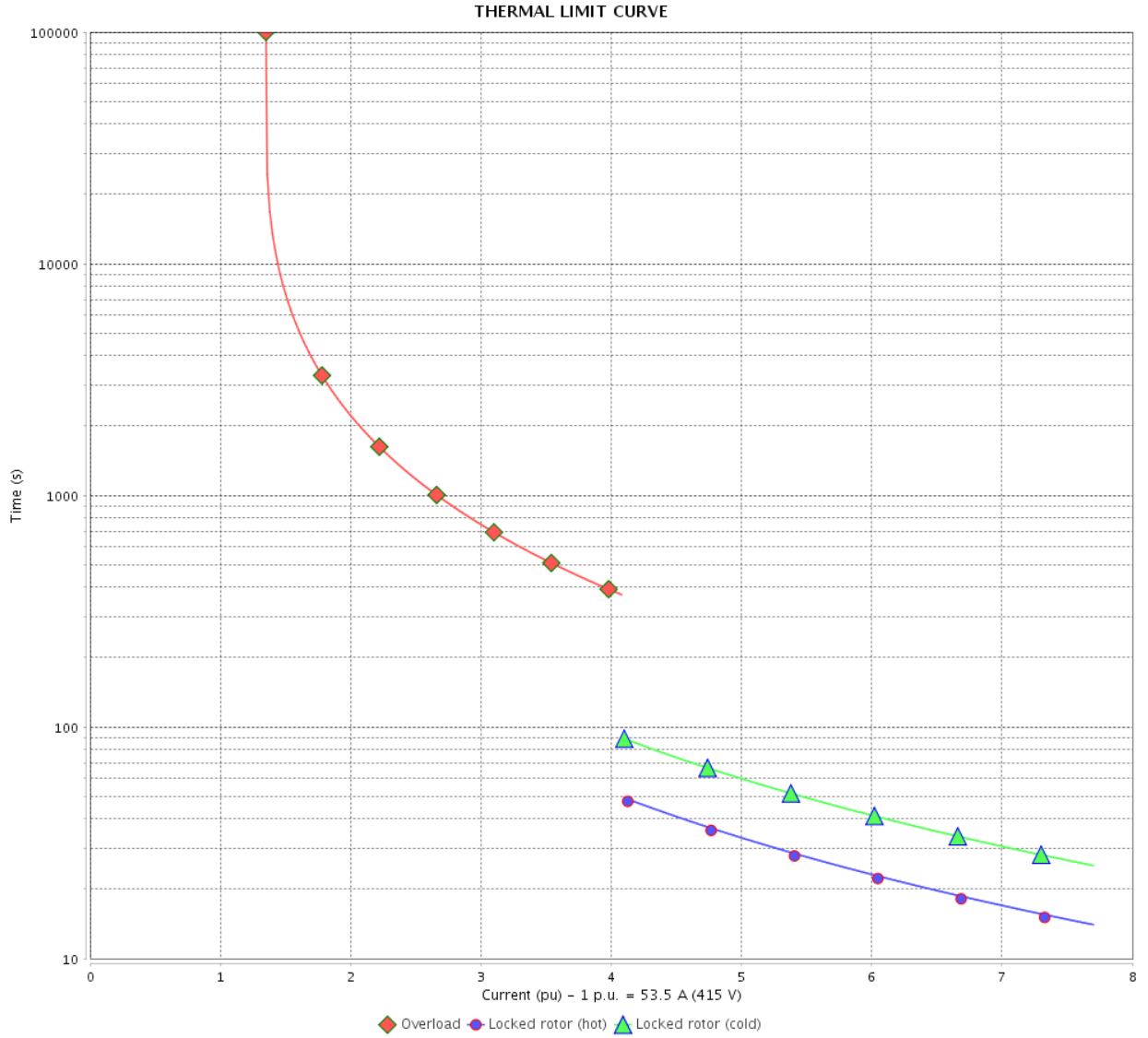


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



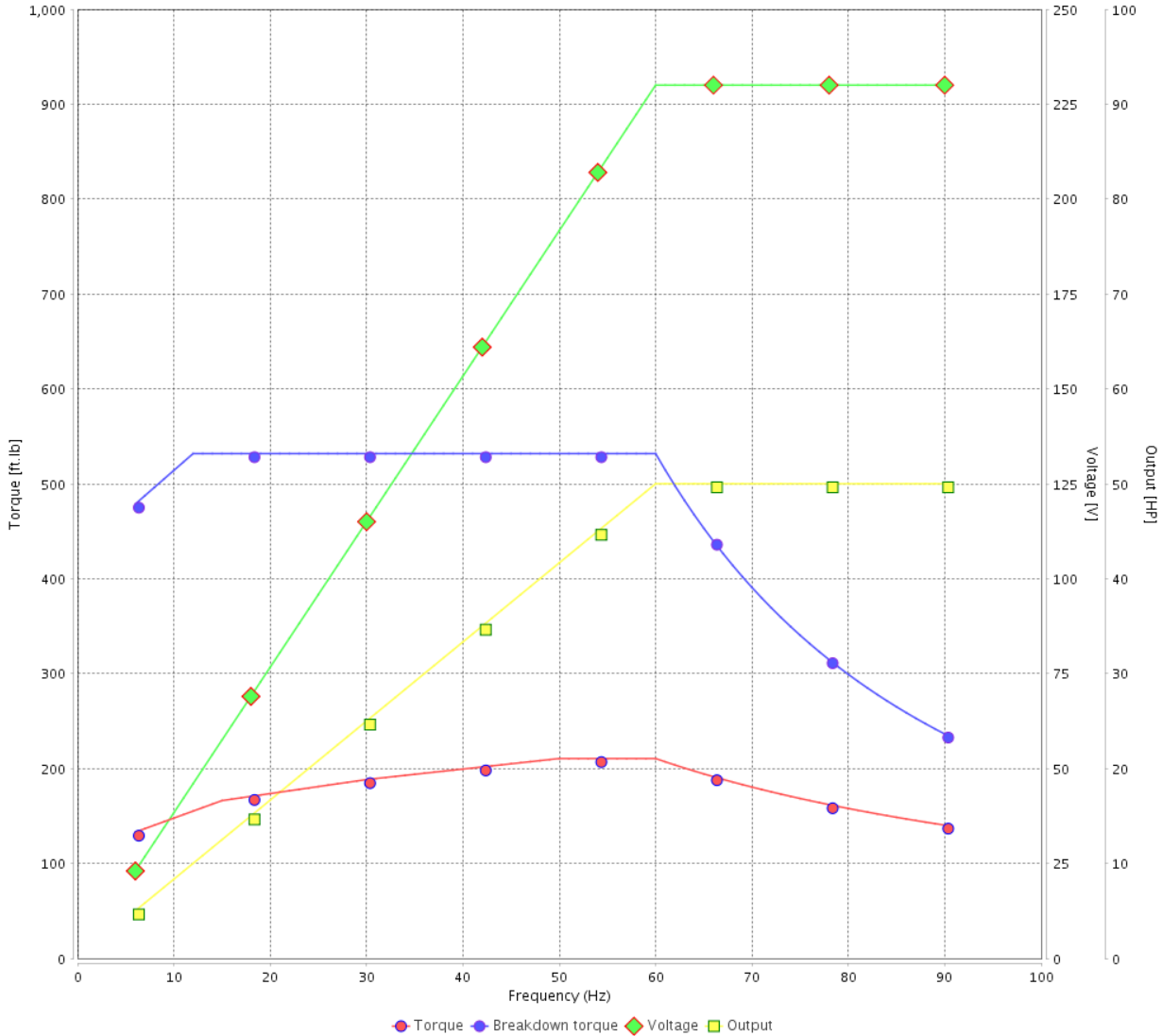
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A  
 LRC : 6.7  
 Rated torque : 222 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 240 %  
 Rated speed : 1185 rpm

Moment of inertia (J) : 23.9 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

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Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

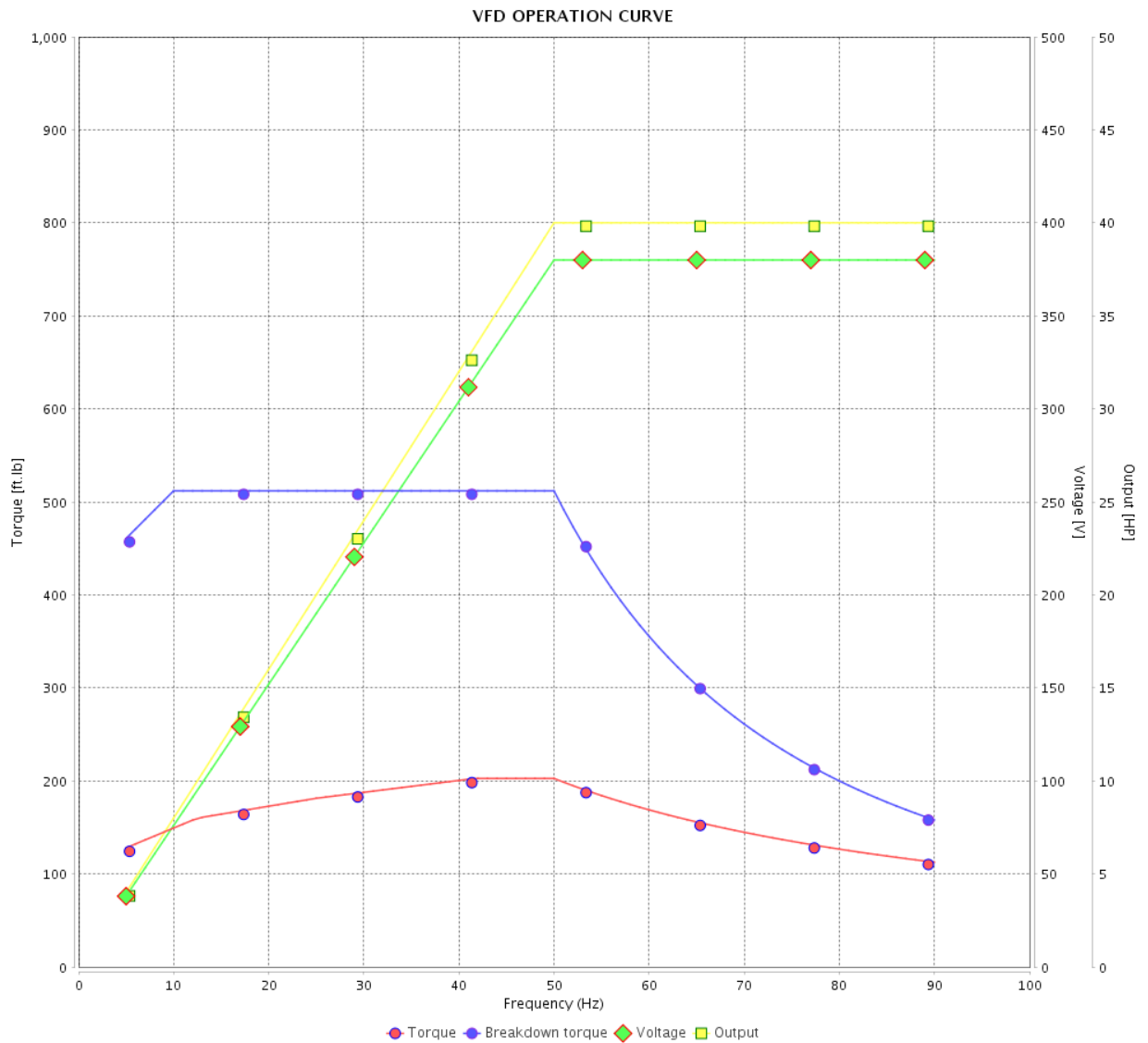


Customer :

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Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G



Performance : 380 V 50 Hz 6P IE3

Rated current : 57.1 A  
 LRC : 7.0  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 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



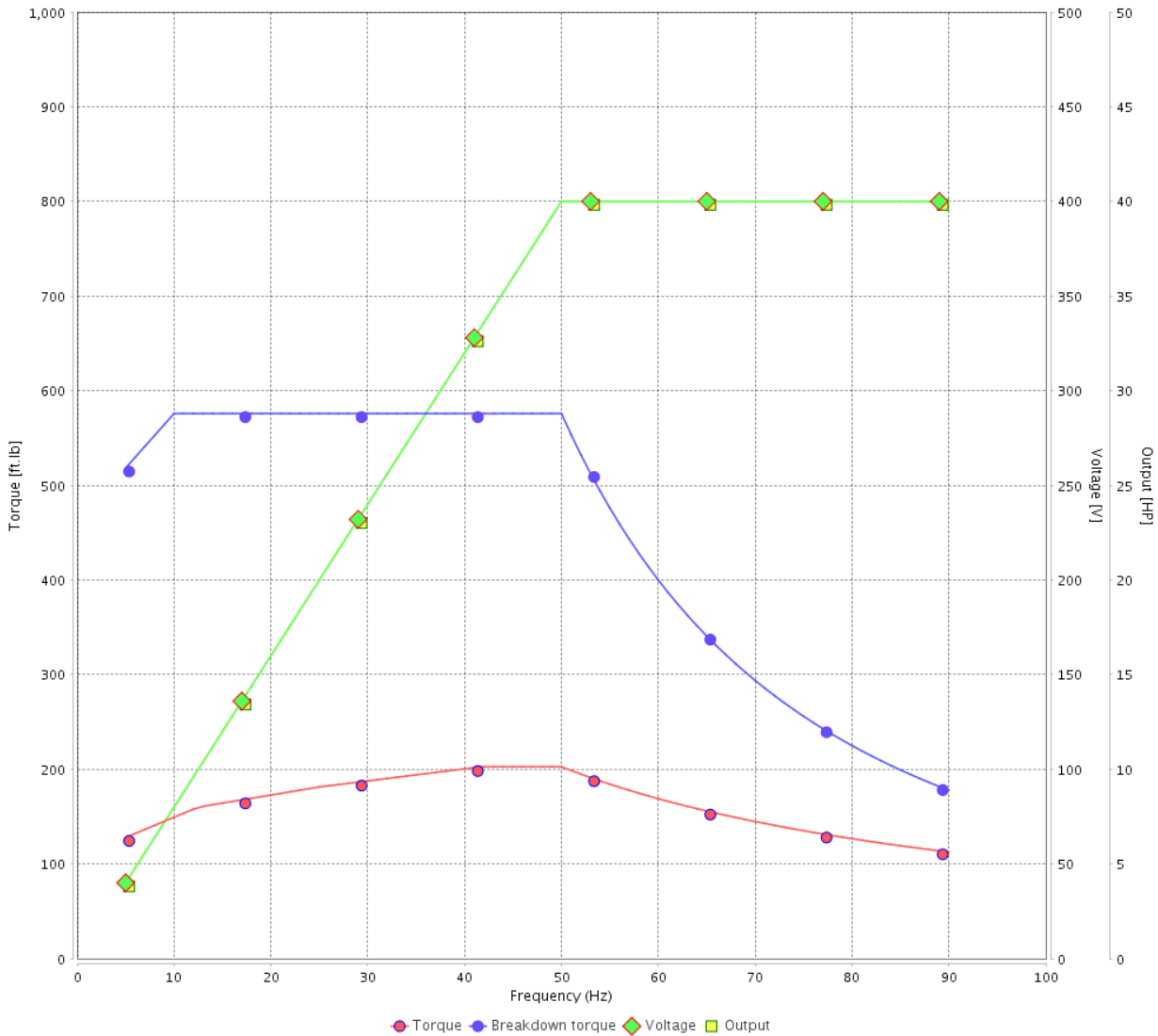
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272899

Catalog # : 050120T3E365T-W40G

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 54.8 A  
LRC : 7.2  
Rated torque : 213 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 270 %  
Rated speed : 985 rpm

Moment of inertia (J) : 23.9 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

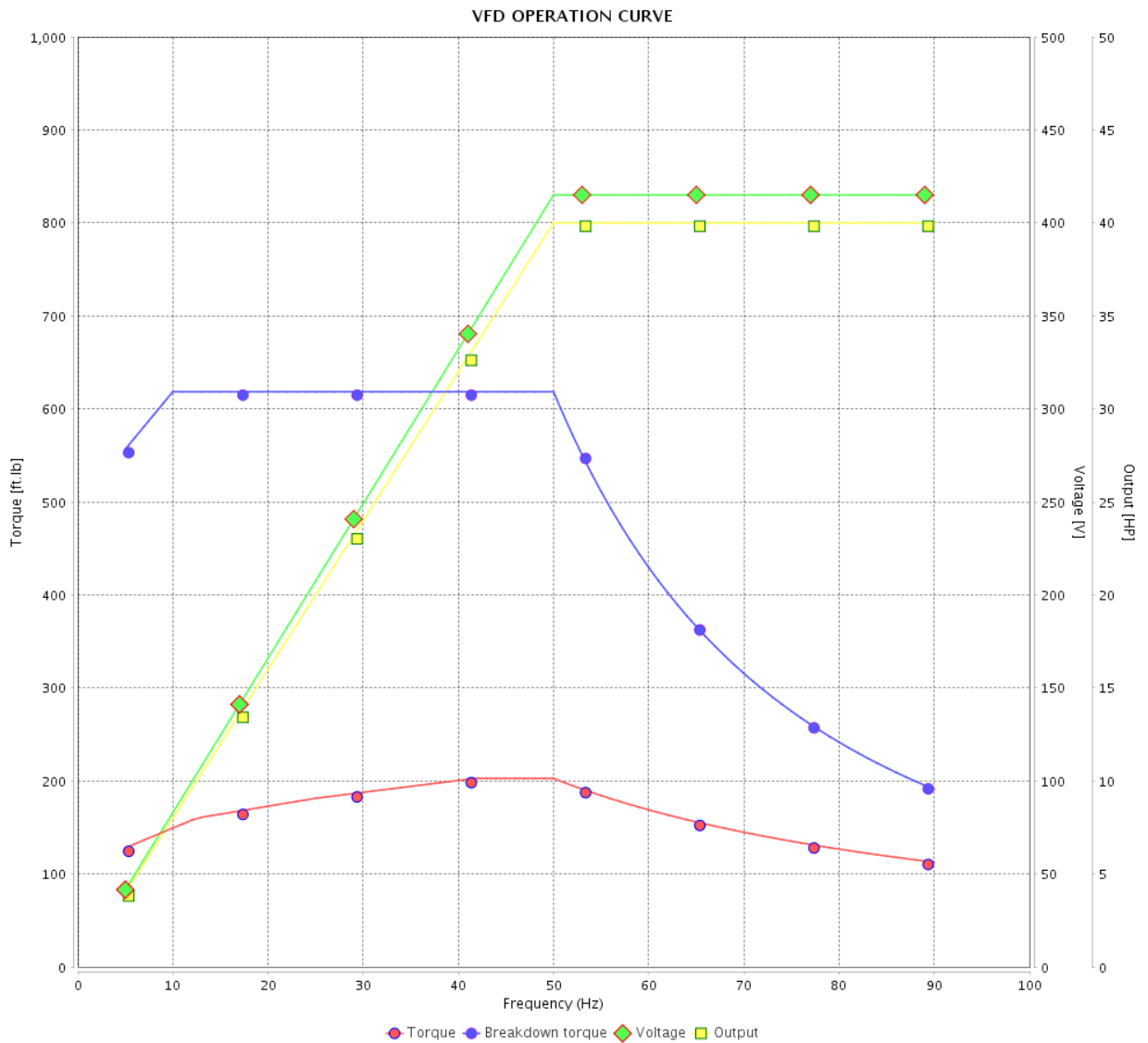


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Product code : 14272899

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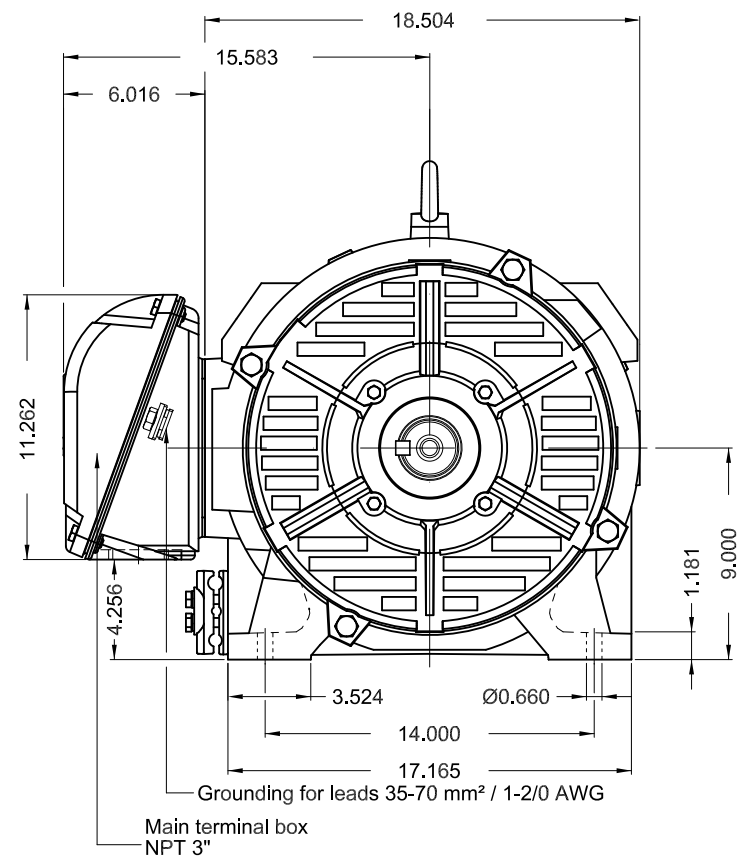


Performance : 415 V 50 Hz 6P IE3

Rated current : 53.5 A  
LRC : 7.7  
Rated torque : 213 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 290 %  
Rated speed : 985 rpm

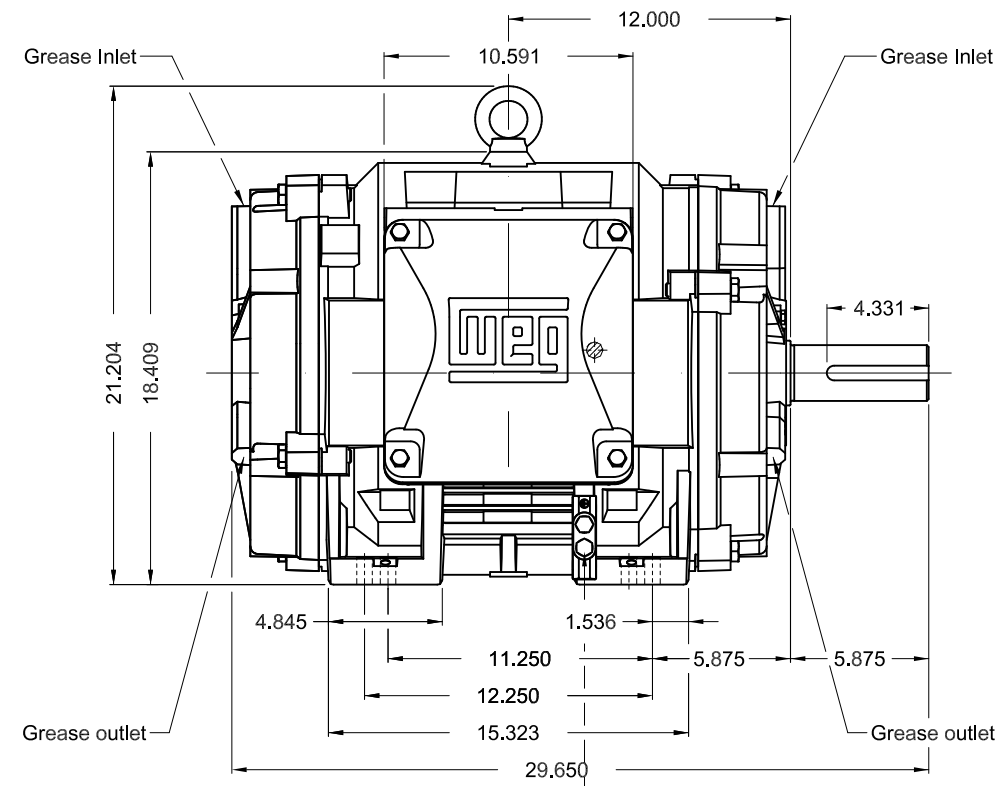
Moment of inertia (J) : 23.9 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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Main terminal box  
NPT 3"

Grounding for leads 35-70 mm<sup>2</sup> / 1-2/0 AWG



Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM

50 HP 06 Poles 60 Hz

A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 364/5T IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

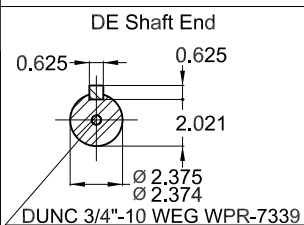
Internal AEGIS ground ring on the DE

Color RAL 5009

Painting plan 203A

Mounting NEMA F-1

Mounting B3R(D)



PREVIEW  
WDD

**WEG** **W40 NEMA**  
**CC029A Premium**  
*Inverter Duty Motor*



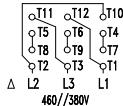
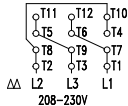
IEC 60034-1  
 MOD.T01#FOXON




For 60Hz use on PWM, VT 1000:1, CT 2:1, 1.0SF

MODEL 050120T3E365T-W40G  
 MADE IN BRAZIL  
 14272899

PH 3	FR 364/5T	HP(kW) 50.0(37.0)	Hz 60
V 230/460	A 116/58.1	RPM 1185	DES B
NEMA NOM EFF 94.1 %	INS. CL. F $\Delta$ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.85	SF 1.25	SFA 145/72.6
USABLE @208V 128 A	SF 1.15	SFA 147	
40HP 30kW 50Hz 380V 57.1A 985RPM SF1.00 EFF 92.9% (IE3)	ALT 1000 m.a.s.l.	776 Lbs	



-  → 6314-C3(27g)
- 6212-Z-C3(13g)

MOBIL POLYREX EM  
 20000 h