

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase	Product code :	14270887	
			Catalog # :	06018OT3G364TS-W40	
Frame		: 364/5TS	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>	: 739 lb	
Protection degree		: IP23	Moment of inertia (J)	: 15.6 sq.ft.lb	
Design		: B			
Output [HP]	60	50	50	50	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	69.9	69.6	66.9	65.3	
L. R. Amperes [A]	454	473	482	457	
LRC [A]	6.5x(Code G)	6.8x(Code G)	7.2x(Code H)	7.0x(Code H)	
No load current [A]	24.7	24.4	26.2	27.7	
Rated speed [RPM]	1780	1480	1480	1485	
Slip [%]	1.11	1.33	1.33	1.00	
Rated torque [ft.lb]	177	177	177	177	
Locked rotor torque [%]	200	200	220	240	
Breakdown torque [%]	240	229	250	270	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	34s (cold) 19s (hot)	32s (cold) 18s (hot)	30s (cold) 17s (hot)	28s (cold) 16s (hot)	
Noise level <sup>2</sup>	69.0 dB(A)				
Efficiency (%)	25%	94.4	93.4	93.4	
	50%	94.5	93.5	93.5	
	75%	95.0	93.9	93.9	
	100%	95.0	93.9	93.9	
Power Factor	25%	0.48	0.49	0.45	
	50%	0.73	0.74	0.71	
	75%	0.82	0.83	0.81	
	100%	0.85	0.86	0.85	
Bearing type		<u>Drive end</u> 6314 C3 <u>Non drive end</u> 6212 Z C3	Foundation loads		
Sealing		Without Without	Max. traction	: 1266 lb	
		Bearing Seal Bearing Seal	Max. compression	: 2006 lb	
Lubrication interval		: 20000 h 20000 h			
Lubricant amount		: 27 g 13 g			
Lubricant type		: Mobil Polyrex EM			
Notes					
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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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



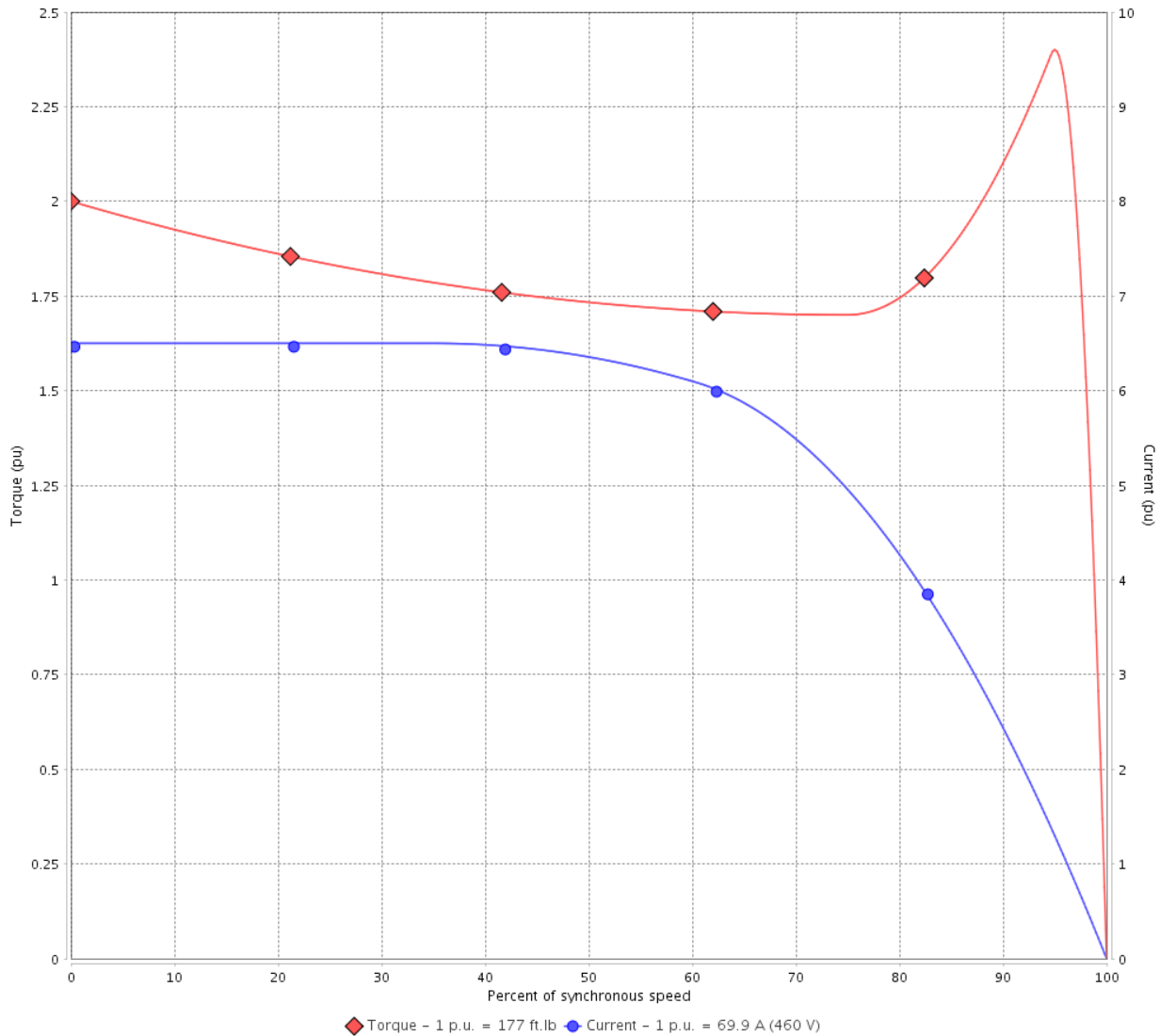
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 69.9 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 34s (cold) 19s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



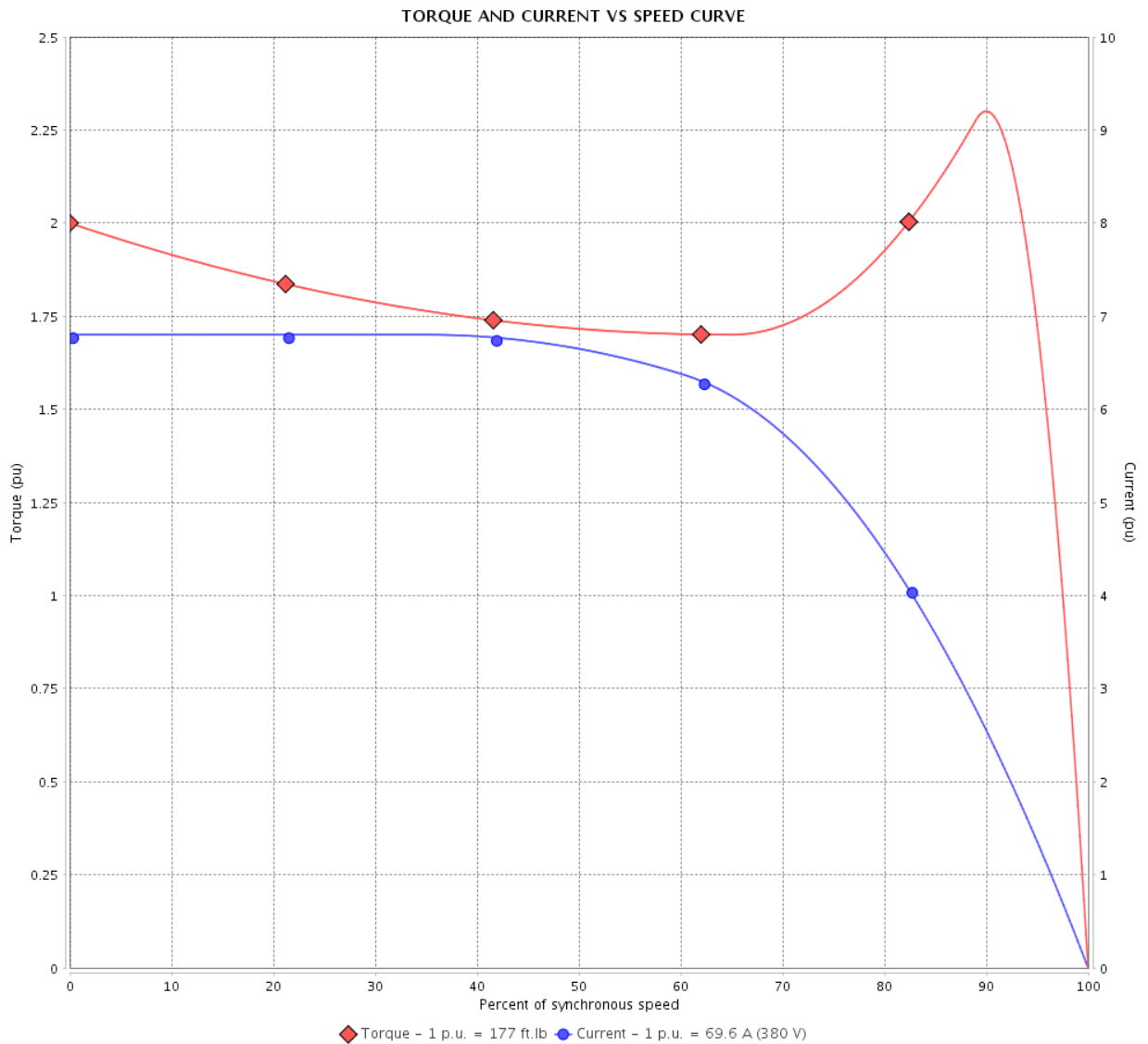
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 69.6 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



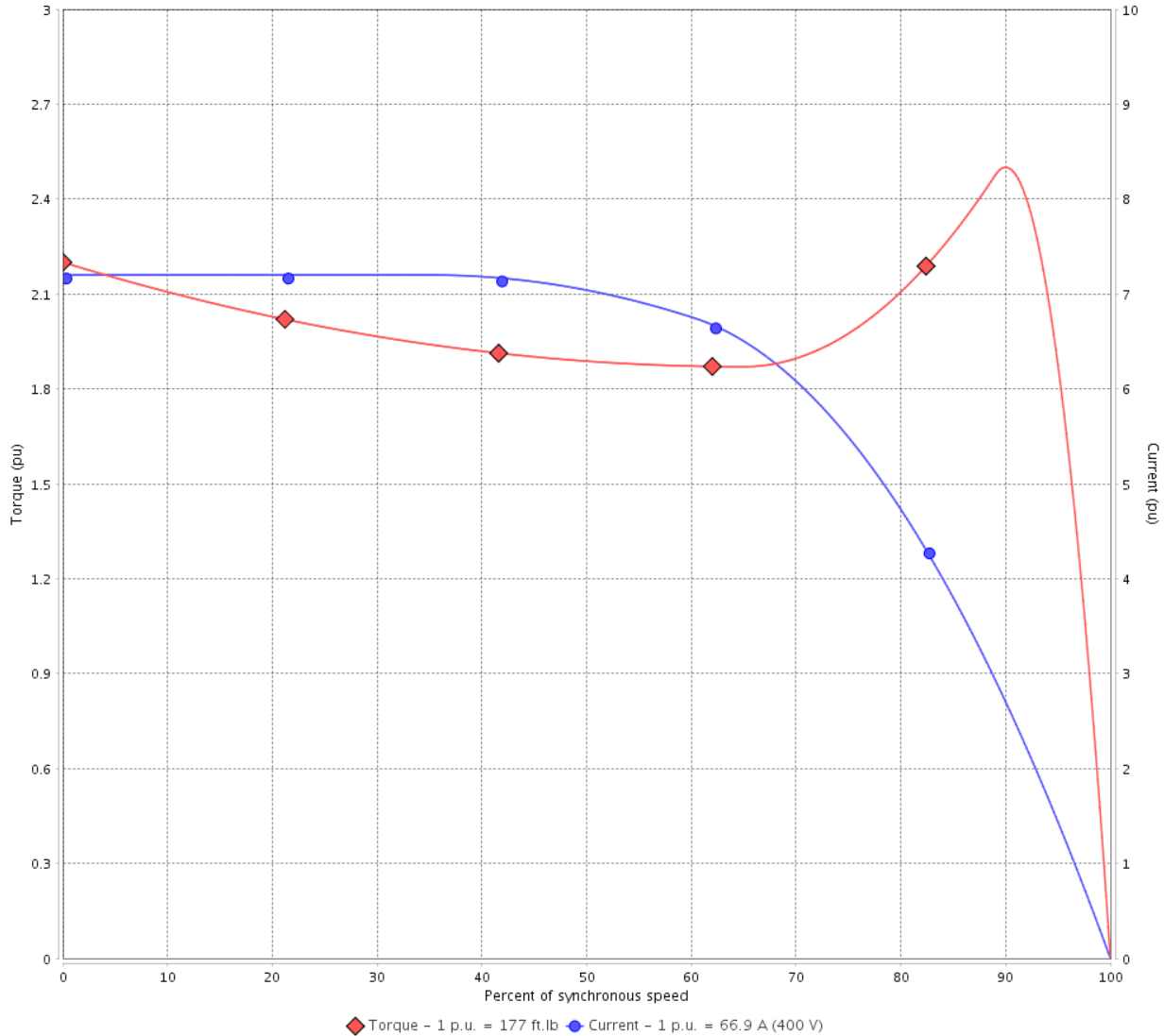
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 66.9 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



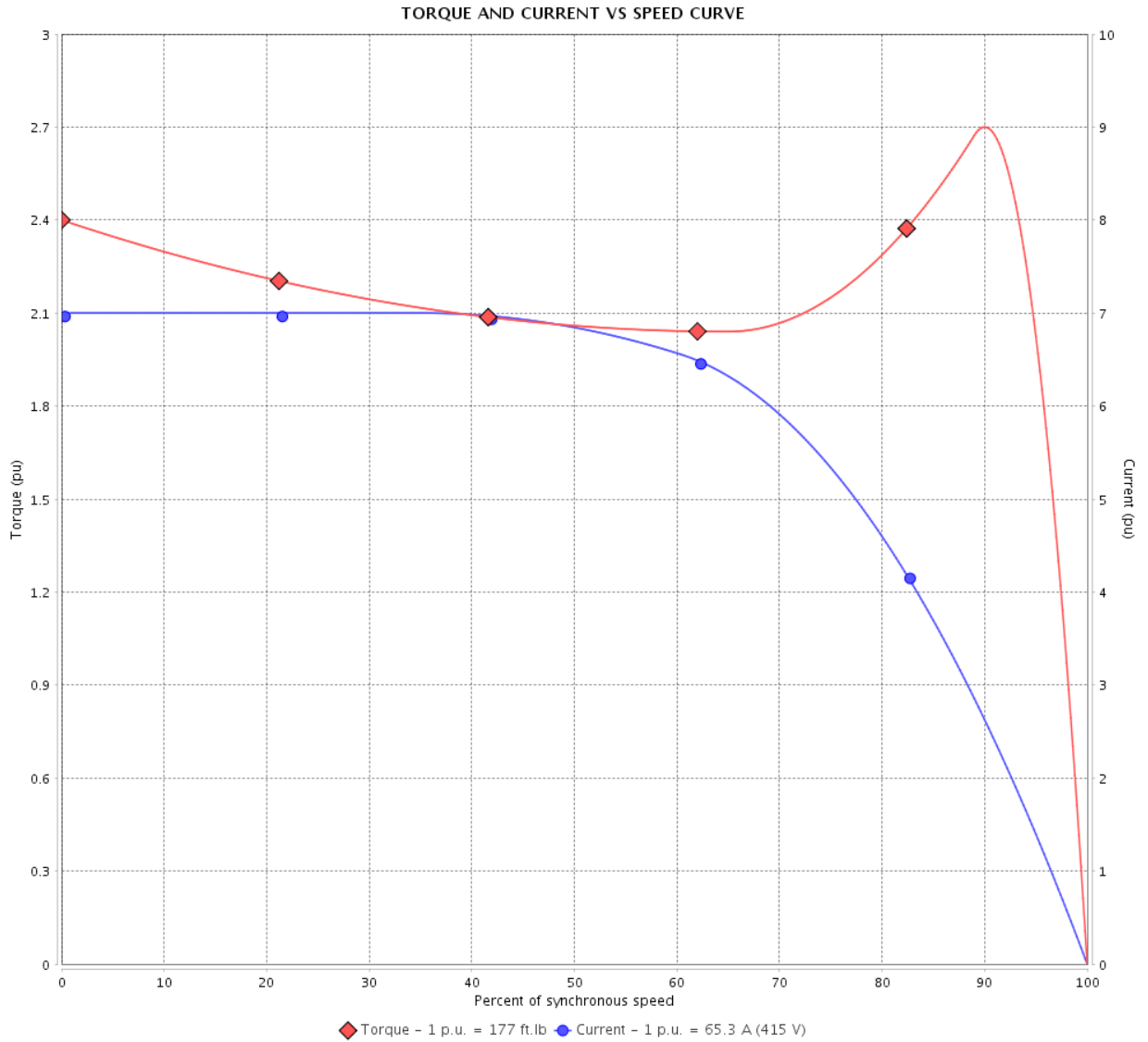
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 65.3 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

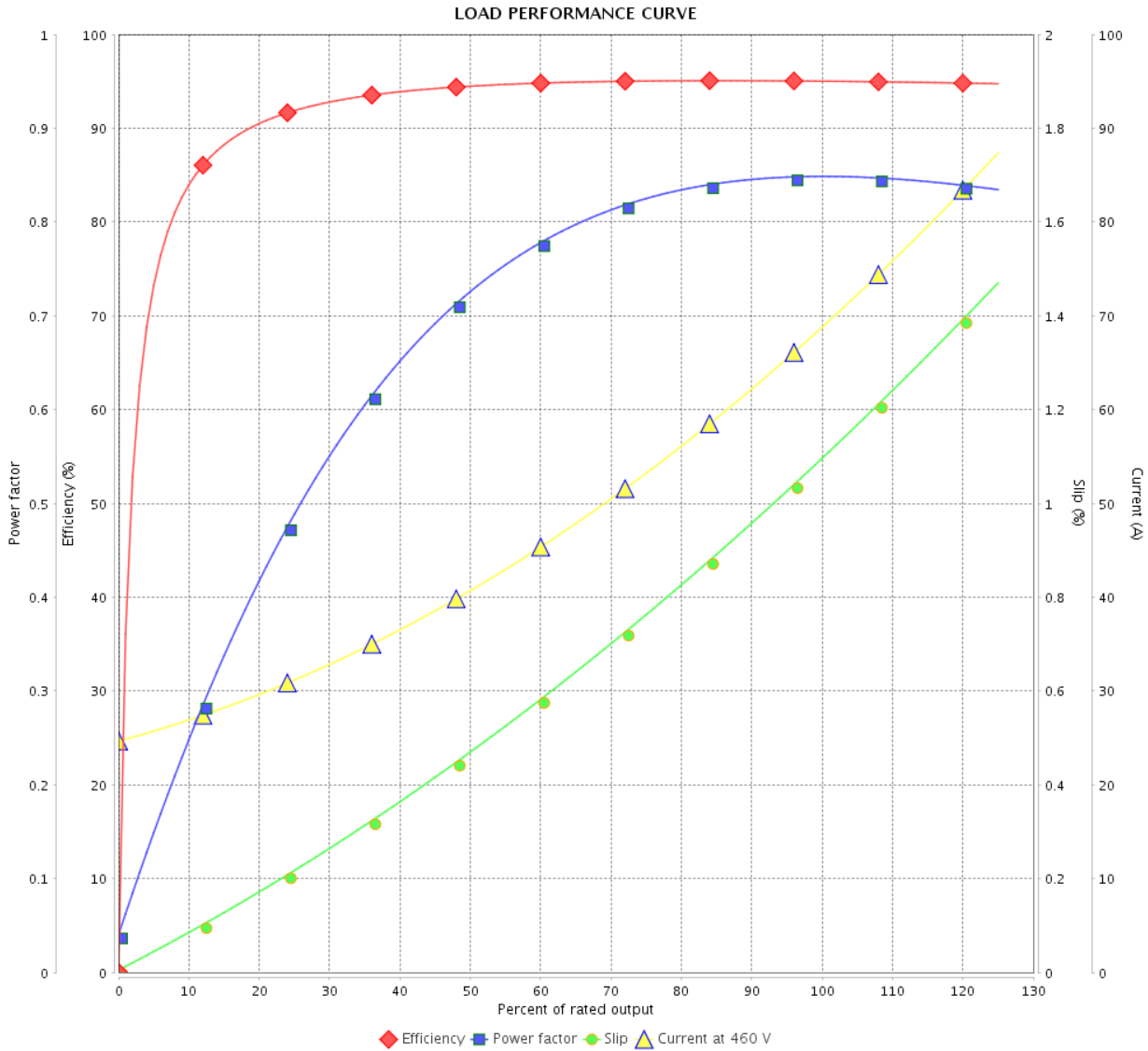


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 460 V 60 Hz 4P

Rated current : 69.9 A  
 LRC : 6.5  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 15.6 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

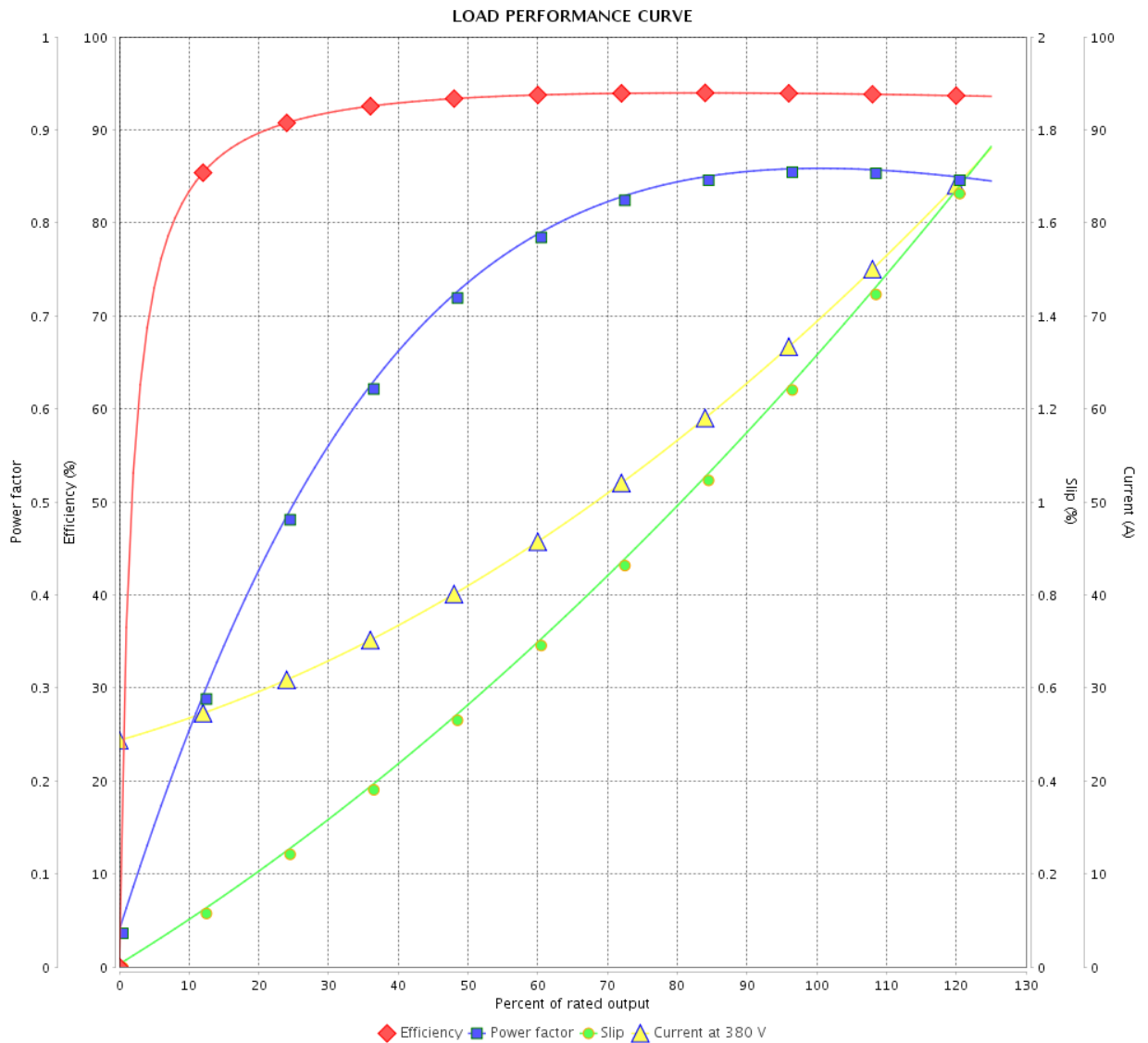


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 69.6 A  
 LRC : 6.8  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 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

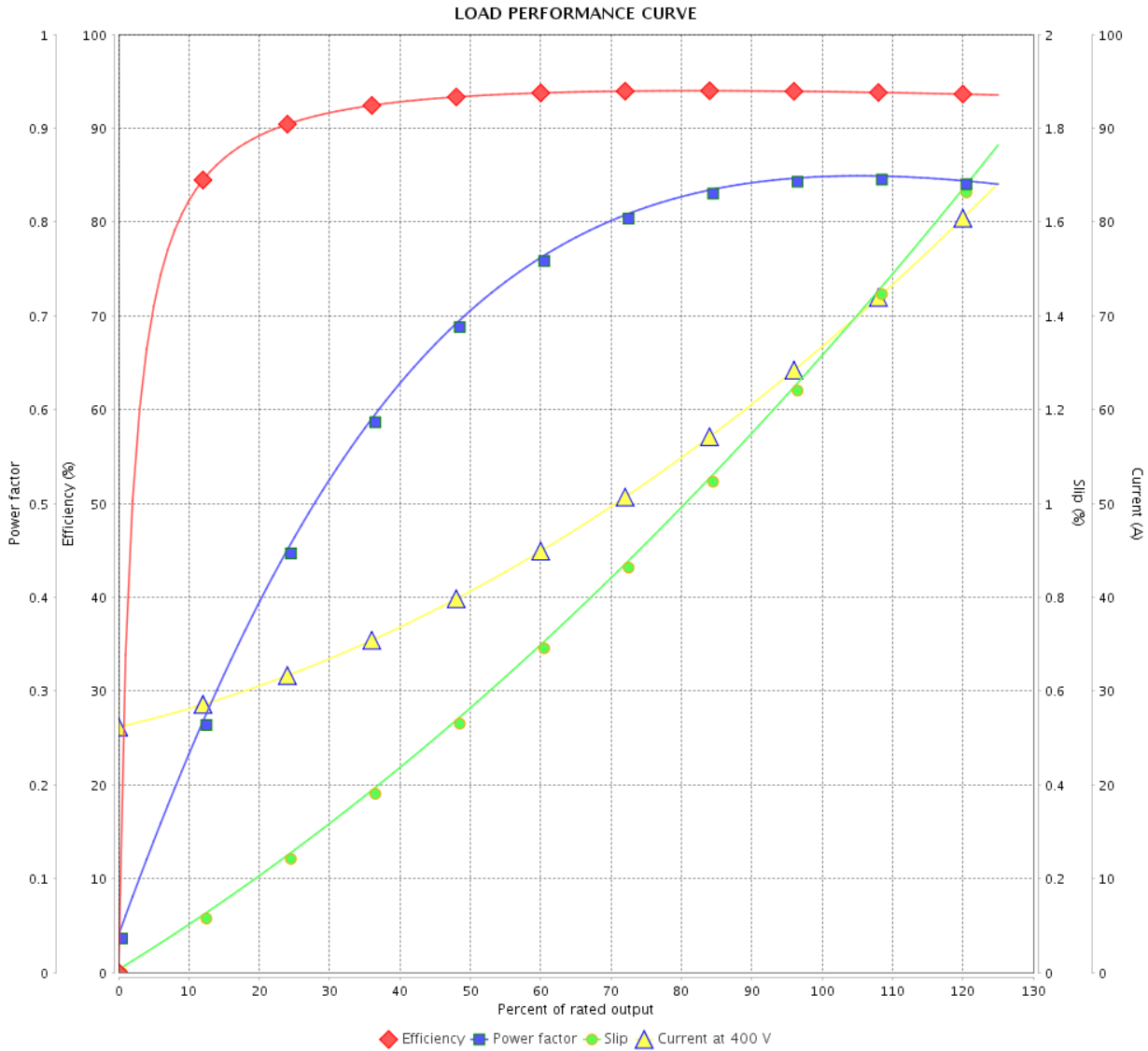


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 66.9 A  
 LRC : 7.2  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 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

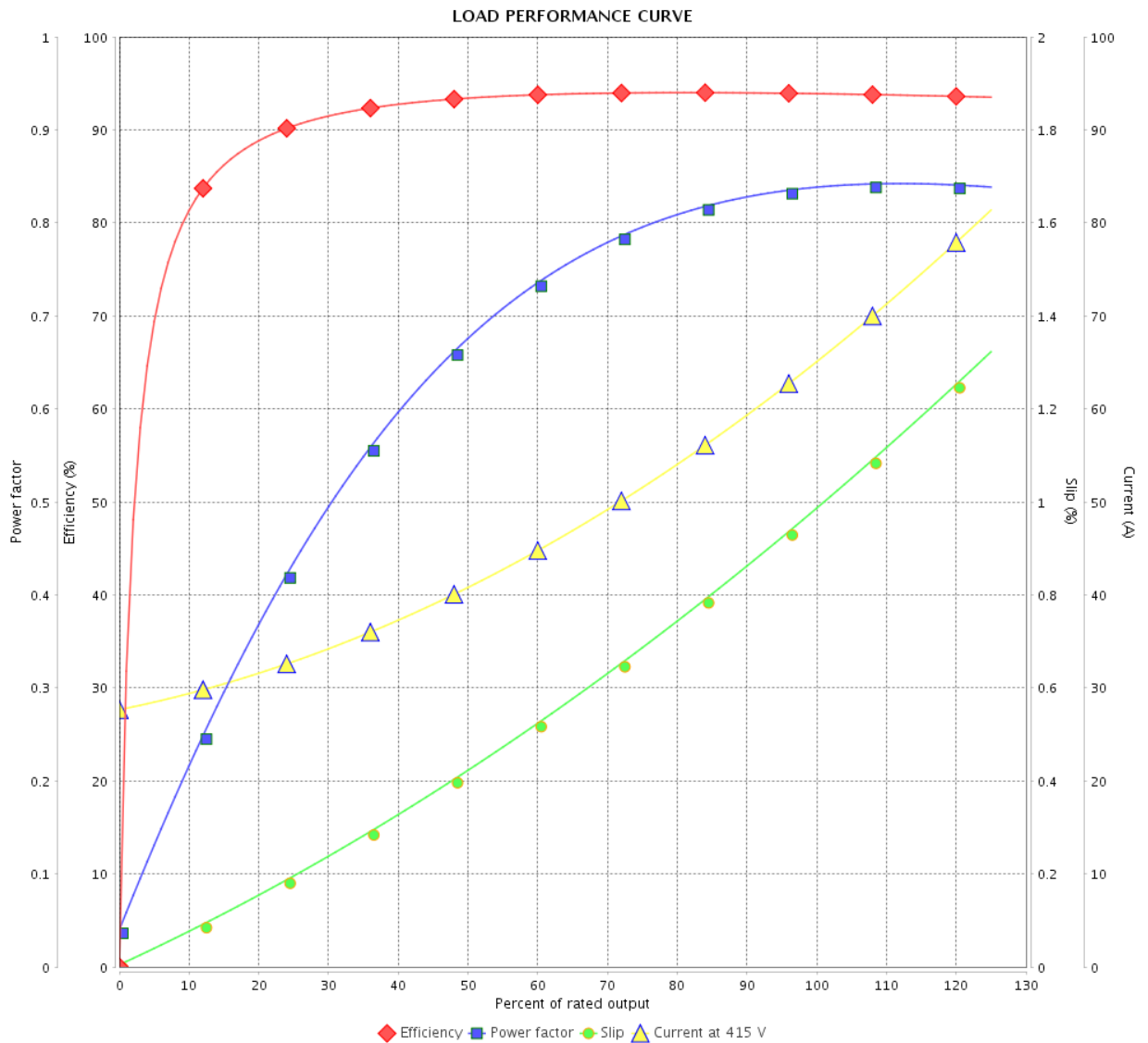


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 65.3 A  
 LRC : 7.0  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 270 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 15.6 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

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Three-Phase

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Performance : 460 V 60 Hz 4P

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LRC	: 6.5	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

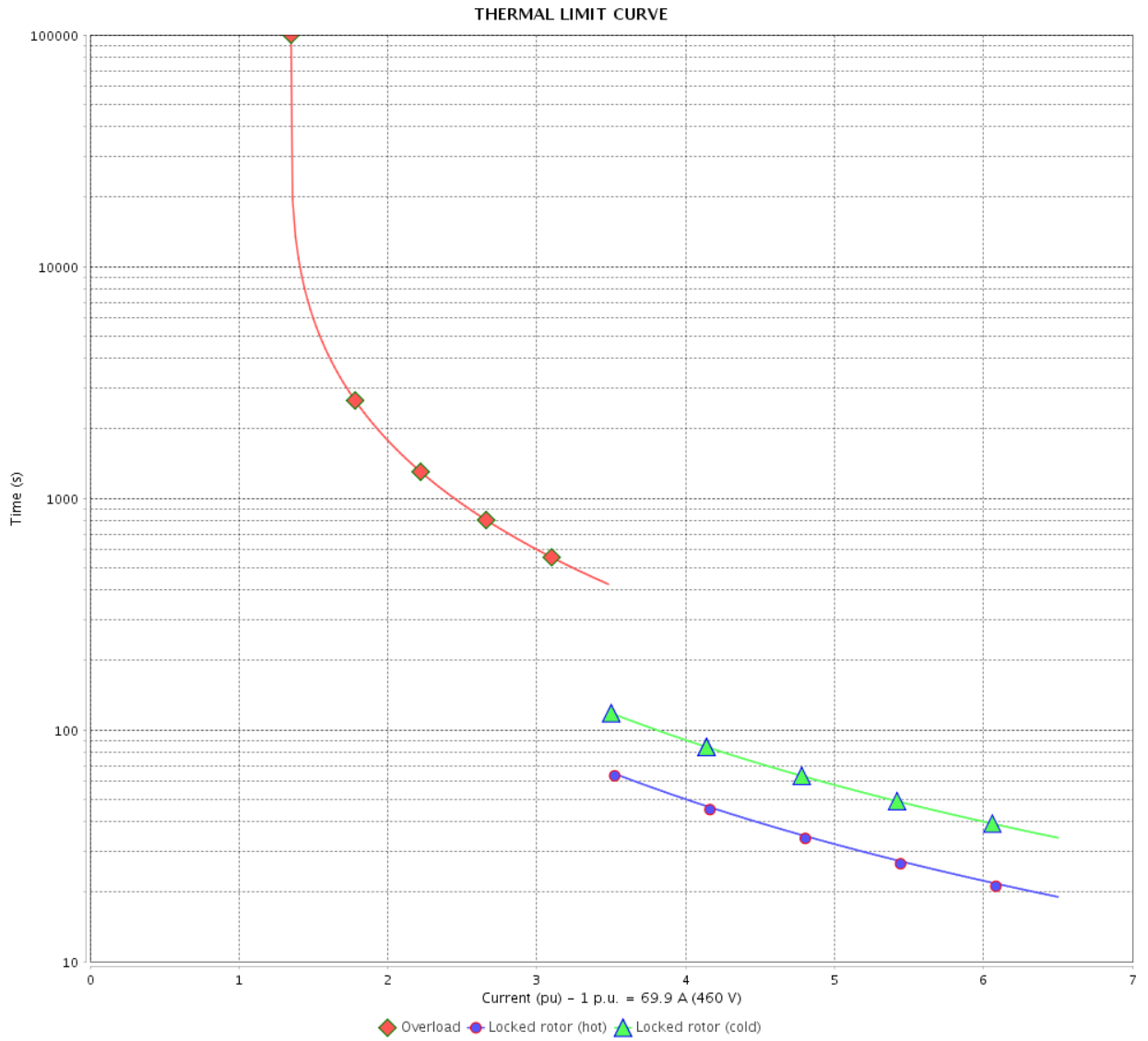
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40

Performance : 380 V 50 Hz 4P IE3

Rated current : 69.6 A	Moment of inertia (J) : 15.6 sq.ft.lb
LRC : 6.8	Duty cycle : Cont.(S1)
Rated torque : 177 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 229 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : B

Heating constant

Cooling constant

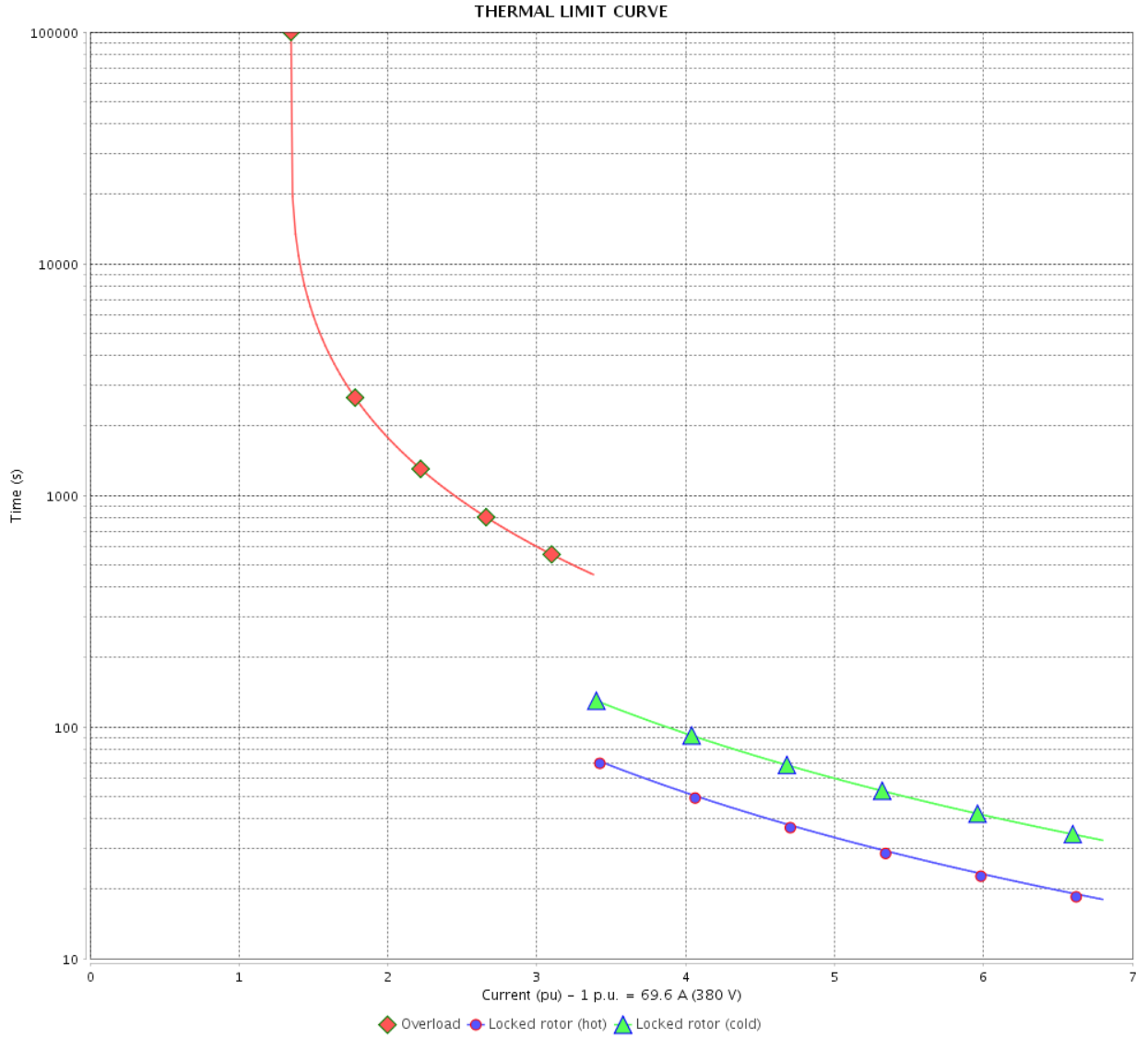
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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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 : 14270887

Catalog # : 06018OT3G364TS-W40

Performance : 400 V 50 Hz 4P IE3

Rated current	: 66.9 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

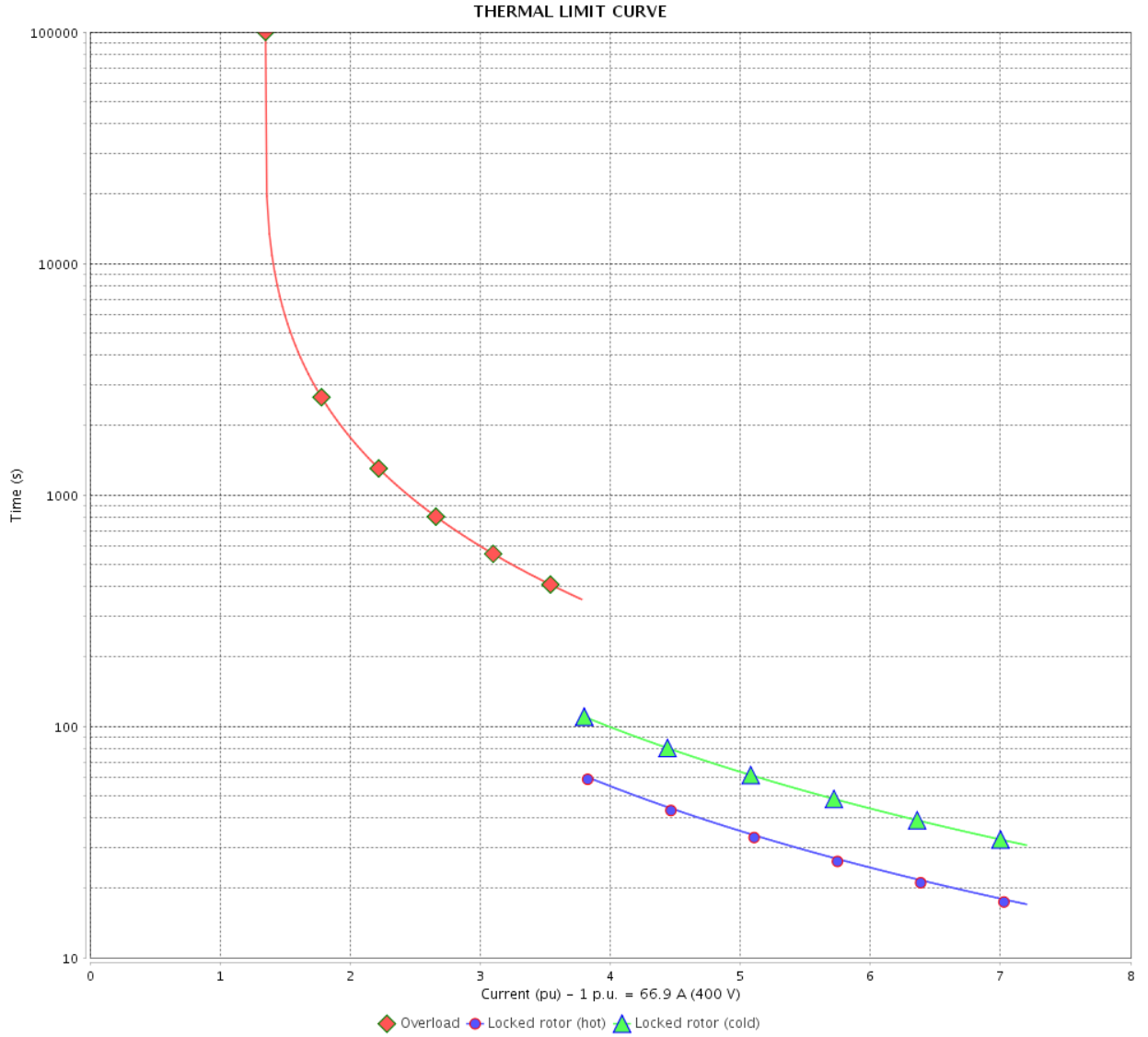
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 65.3 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Heating constant

Cooling constant

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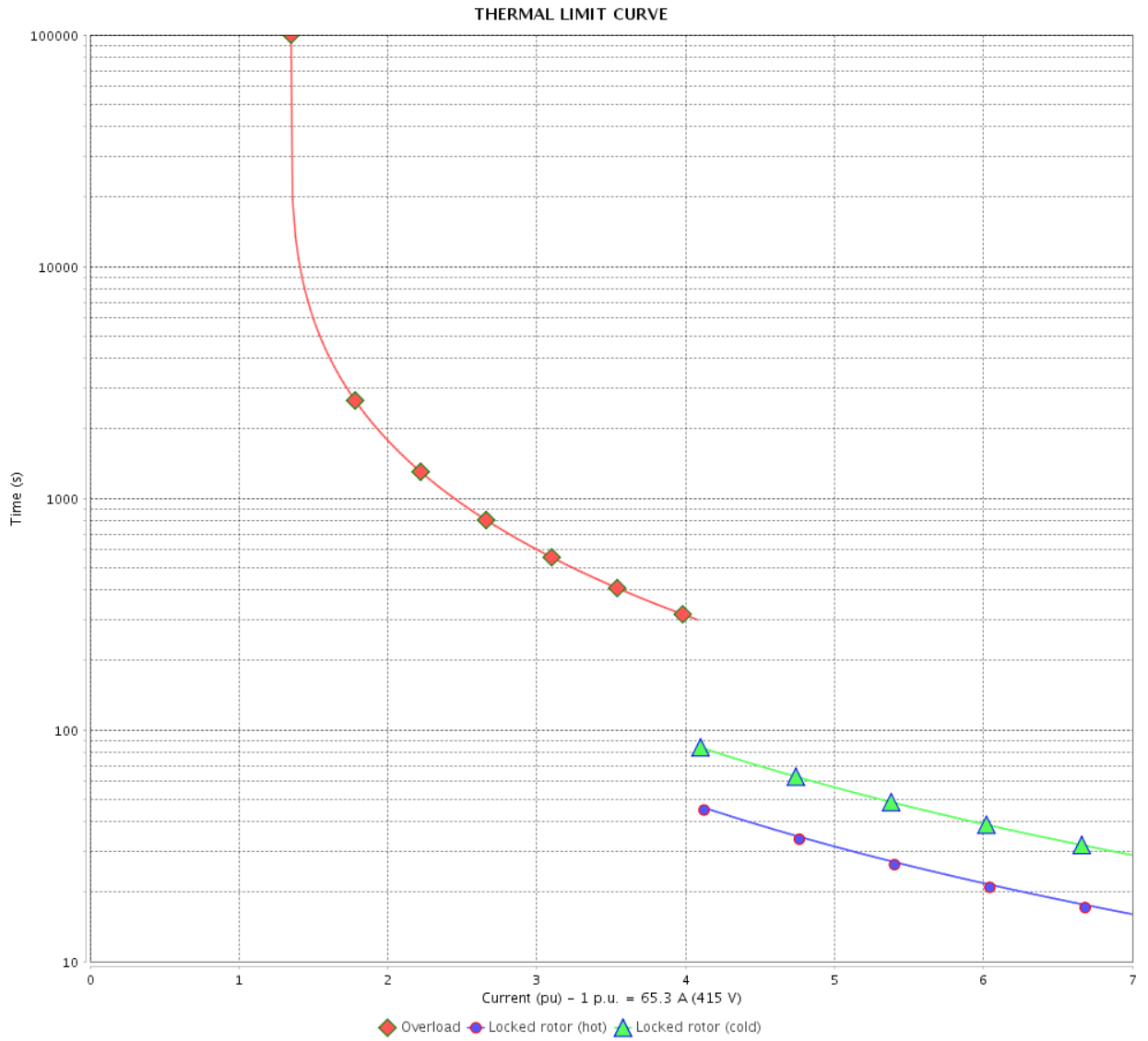


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



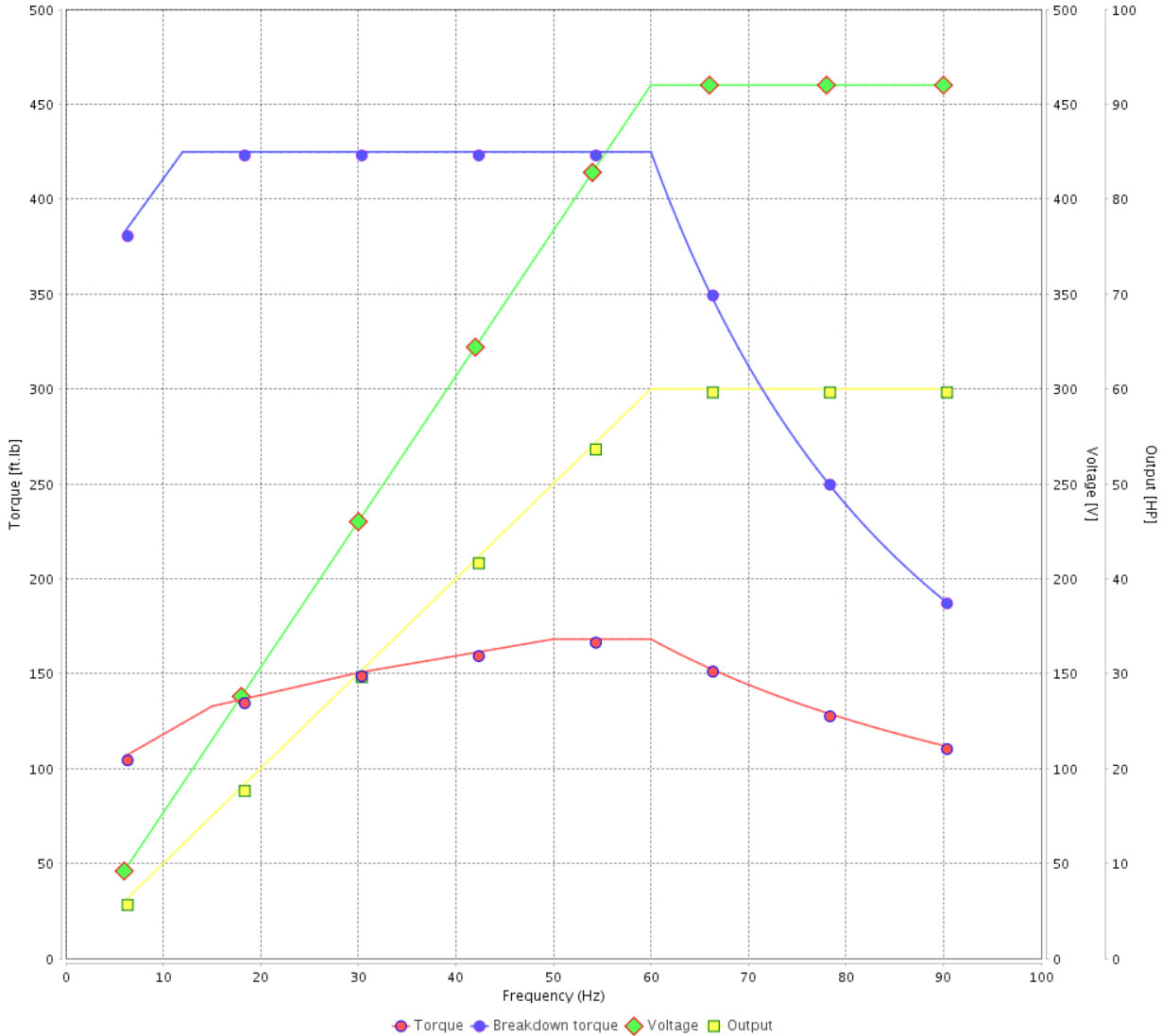
Customer :

Product line : W40 NEMA Premium Efficiency  
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Product code : 14270887

Catalog # : 06018OT3G364TS-W40

VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current : 69.9 A  
LRC : 6.5  
Rated torque : 177 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 1780 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

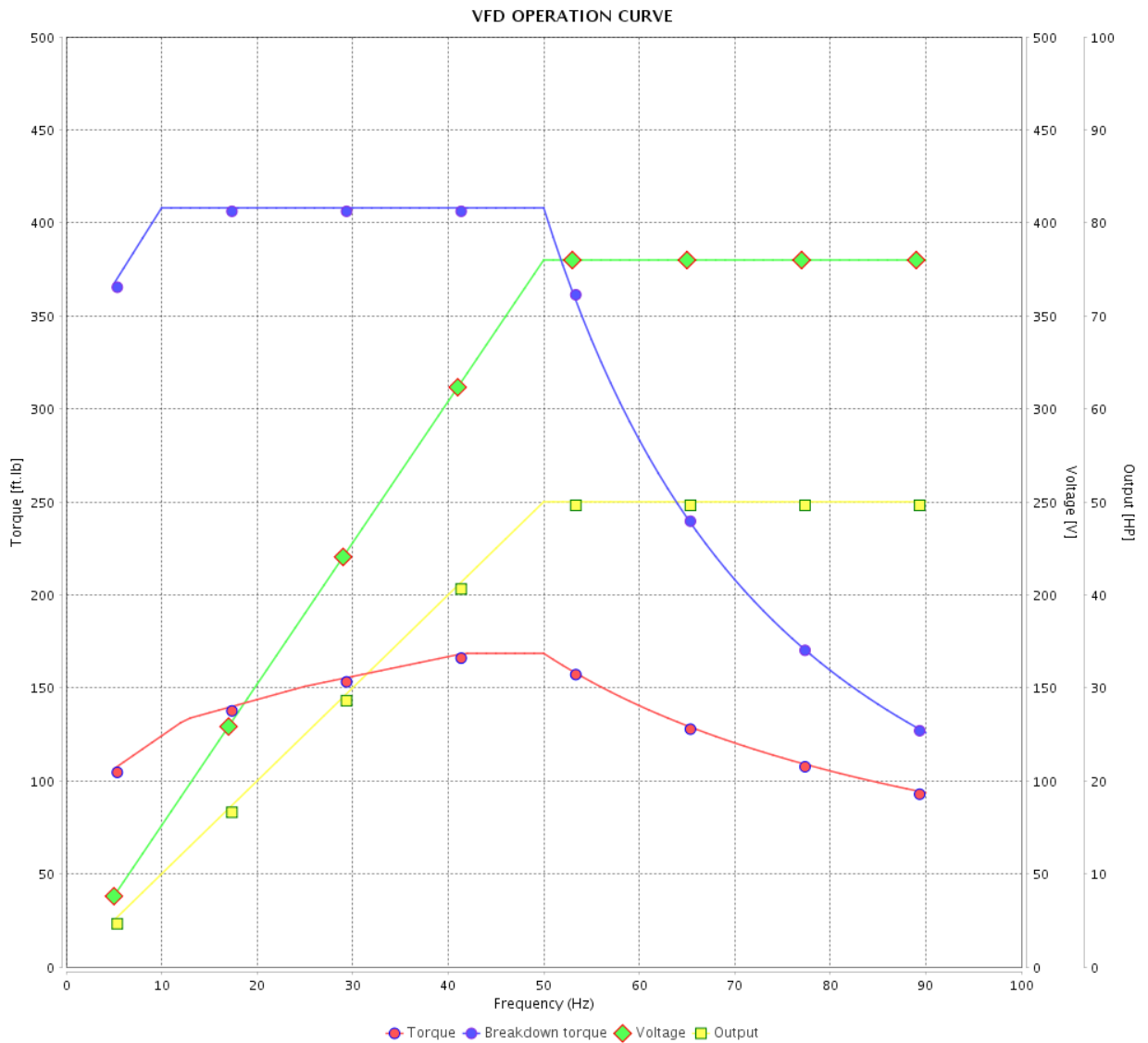


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14270887

Catalog # : 06018OT3G364TS-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 69.6 A  
LRC : 6.8  
Rated torque : 177 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 229 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 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



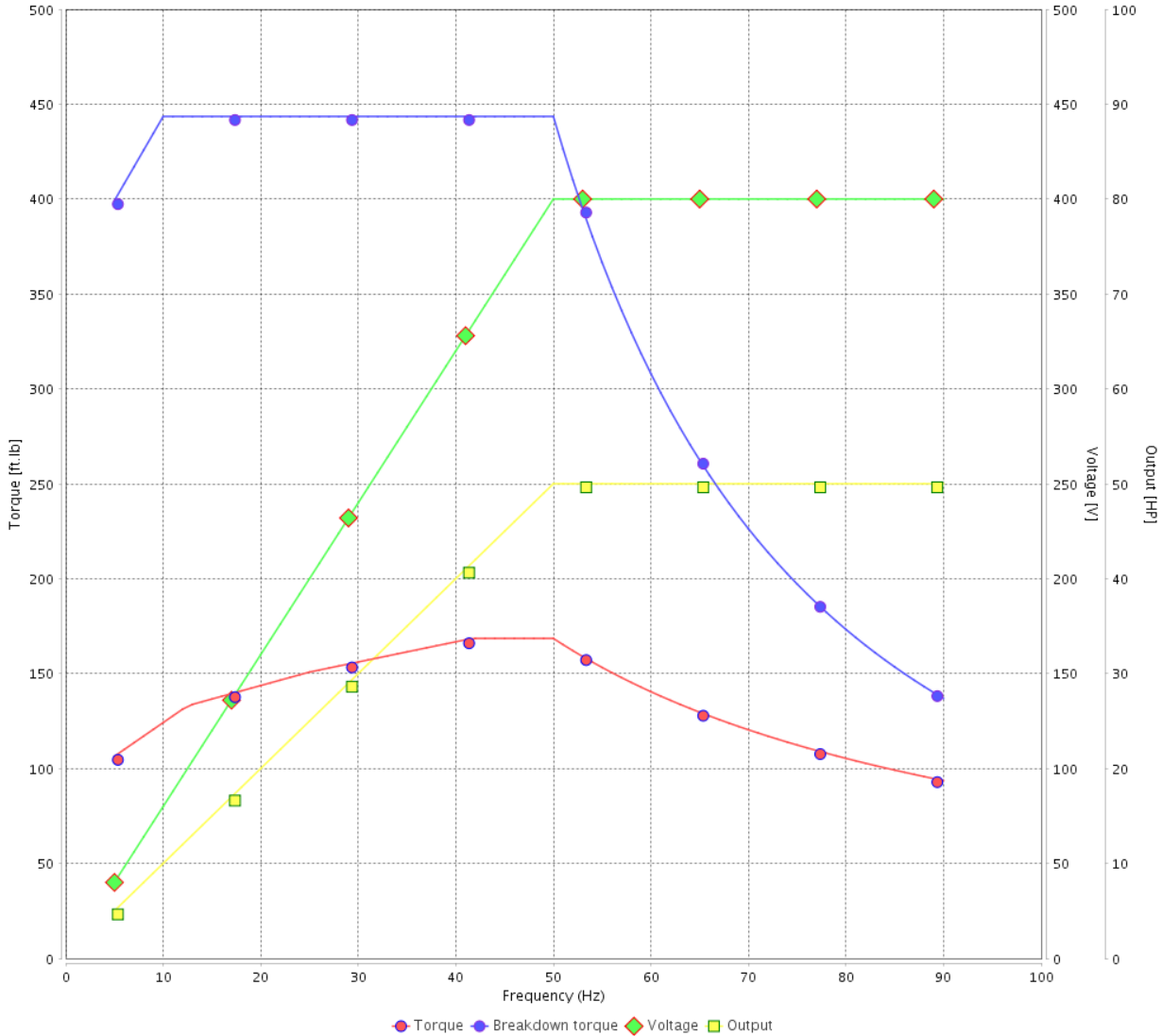
Customer :

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Product code : 14270887

Catalog # : 06018OT3G364TS-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 66.9 A  
 LRC : 7.2  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 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

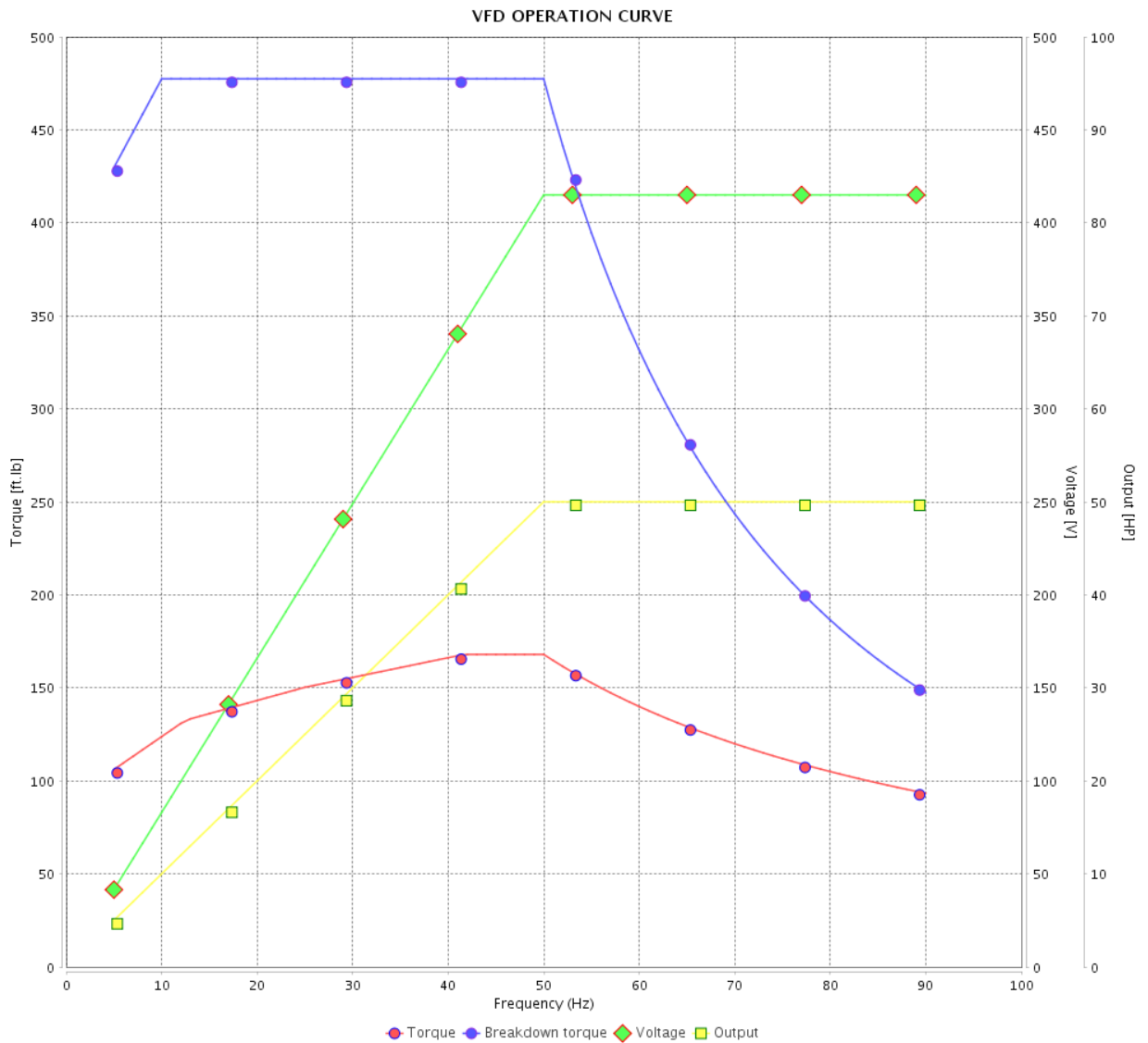


Customer :

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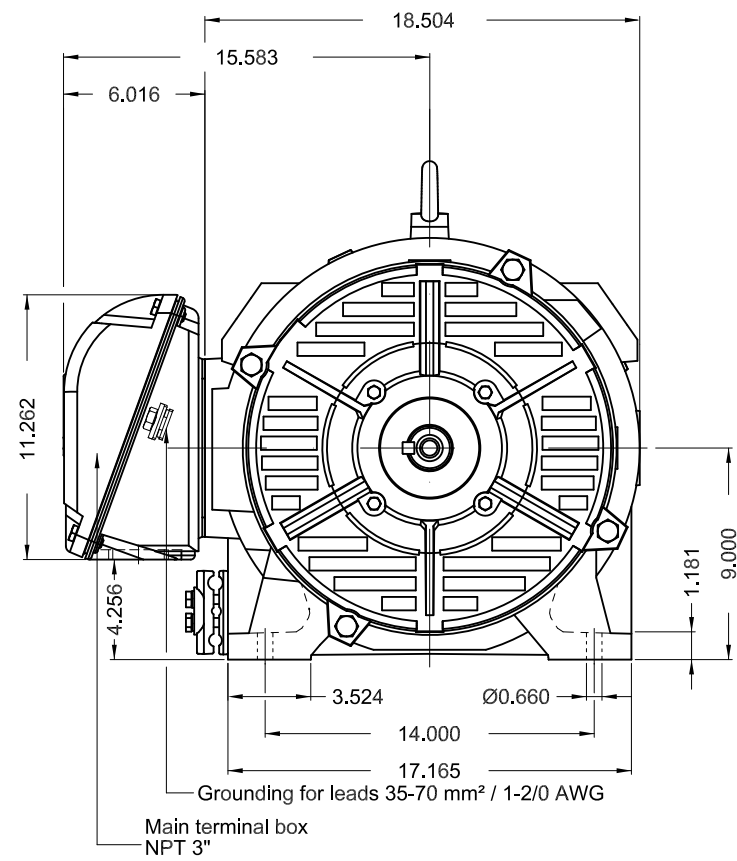


Performance : 415 V 50 Hz 4P IE3

Rated current : 65.3 A  
LRC : 7.0  
Rated torque : 177 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 270 %  
Rated speed : 1485 rpm

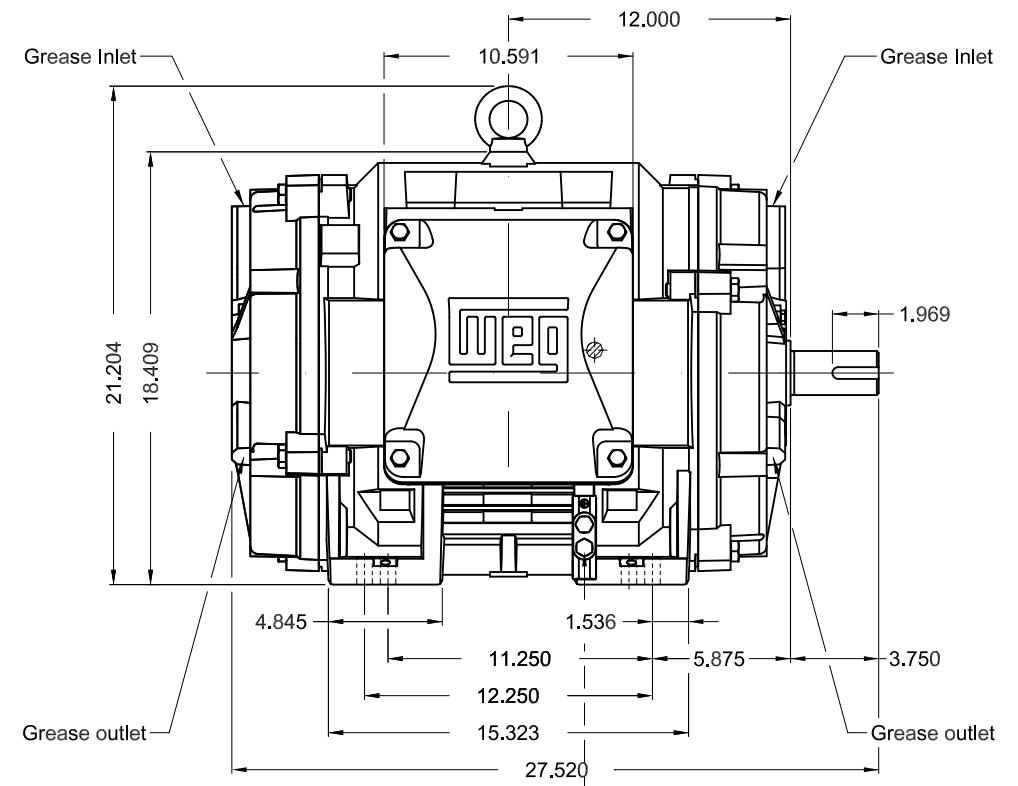
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Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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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

60 HP 04 Poles 60 Hz

A

1:8

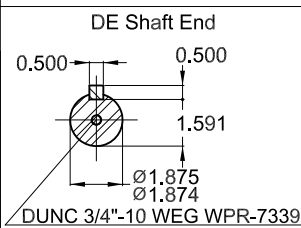
TS shaft end

Color RAL 5009

Painting plan 203A

Mounting NEMA F-1

Mounting B3R(D)



DUNC 3/4"-10 WEG WPR-7339

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

PREVIEW

WDD



SHEET 1 / 1

MODEL 060180T3G364TS-W40  
MADE IN BRAZIL  
14270887

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

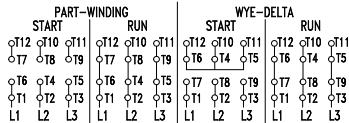



IEC 60034-1  
MOD.T01#FOXON



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

PH 3	FR 364/5TS	HP(kW) 60(45)		Hz 60
V 460		A 69.9		IP23
NEMA NOM EFF		95.0	%	RPM 1780
ENCL ODP	DUTY	CONT.		INS. CL. F $\Delta T$ 80 K
PF 0.85		DES B	CODE G	AMB. 40°C
SF 1.25		SFA 87.4		ALT 1000 m.a.s.l.
50HP 37kW 50Hz 380V 69.6A 1480RPM SF1.00 EFF 93.9% (IE3)				



 → 6314-C3(27g)      MOBIL POLYREX EM  
→ 6212-Z-C3(13g)      20000 h

741 Lbs