

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: W40 NEMA Premium Efficiency Three-Phase	Product code :	14285069	
			Catalog # :	07518OT3GRB365T-W40	
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>	: 789 lb		
Protection degree	: IP23	Moment of inertia (J)	: 16.8 sq.ft.lb		
Design	: B				
Output [HP]	75	60	60	60	
Poles	4	4	4	4	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	85.5	84.4	82.1	80.1	
L. R. Amperes [A]	581	599	591	609	
LRC [A]	6.8x(Code G)	7.1x(Code H)	7.2x(Code H)	7.6x(Code J)	
No load current [A]	30.5	28.5	33.7	36.1	
Rated speed [RPM]	1780	1480	1482	1484	
Slip [%]	1.11	1.33	1.20	1.07	
Rated torque [ft.lb]	221	213	213	212	
Locked rotor torque [%]	220	200	229	250	
Breakdown torque [%]	260	240	260	280	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	25s (cold) 14s (hot)	23s (cold) 13s (hot)	23s (cold) 13s (hot)	23s (cold) 13s (hot)	
Noise level <sup>2</sup>	69.0 dB(A)				
Efficiency (%)	25%	94.4	93.7	93.7	
	50%	94.5	93.8	93.8	
	75%	95.0	94.2	94.2	
	100%	95.0	94.2	94.2	
Power Factor	25%	0.48	0.48	0.43	
	50%	0.73	0.73	0.69	
	75%	0.82	0.82	0.80	
	100%	0.85	0.86	0.84	
Bearing type	: <u>Drive end</u> NU-314 C3	<u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Without	Without	Max. traction	: 1643 lb	
	Bearing Seal	Bearing Seal	Max. compression	: 2432 lb	
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 27 g	27 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



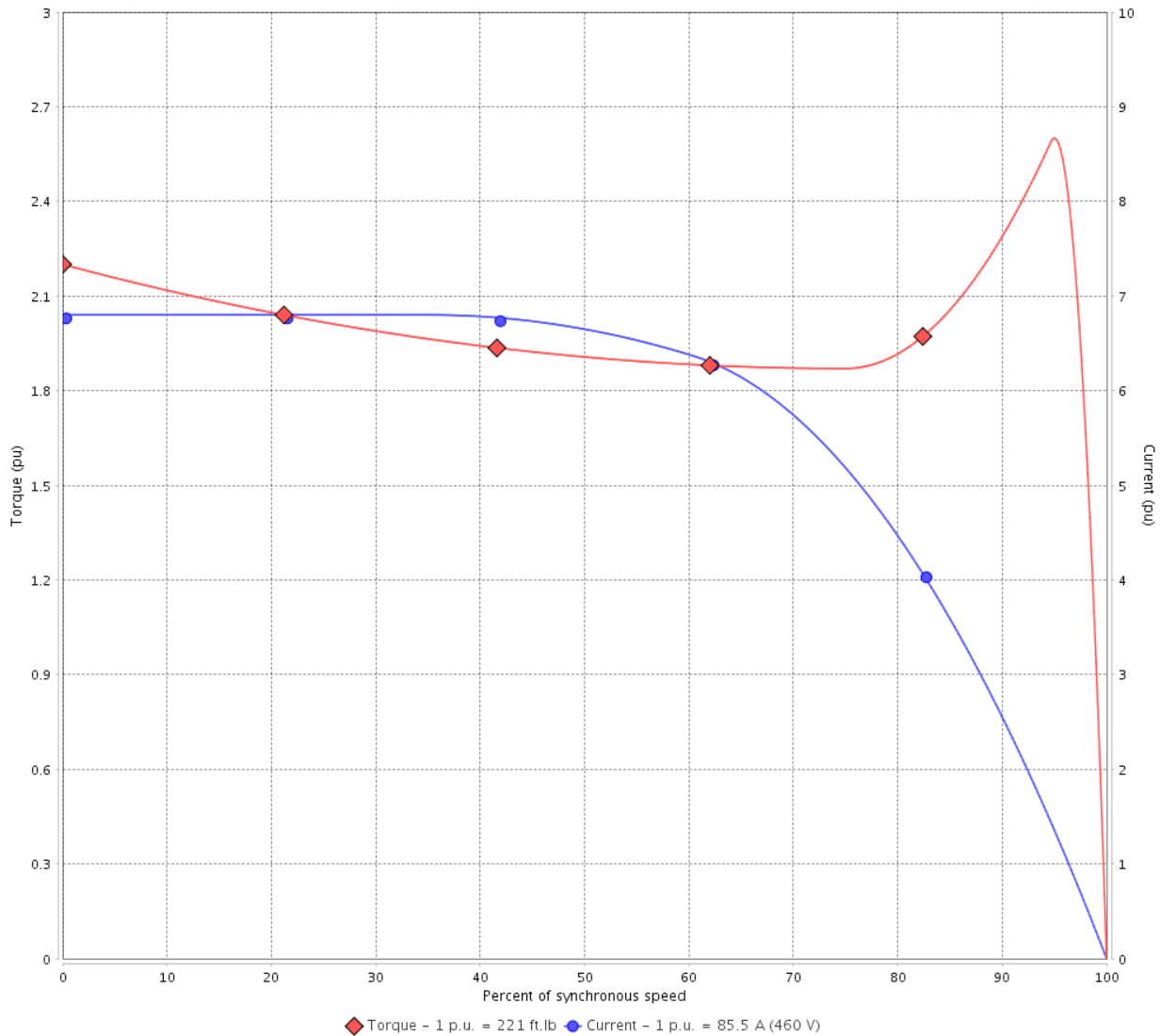
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 460 V 60 Hz 4P

Rated current	: 85.5 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

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

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# TORQUE AND CURRENT VS SPEED CURVE



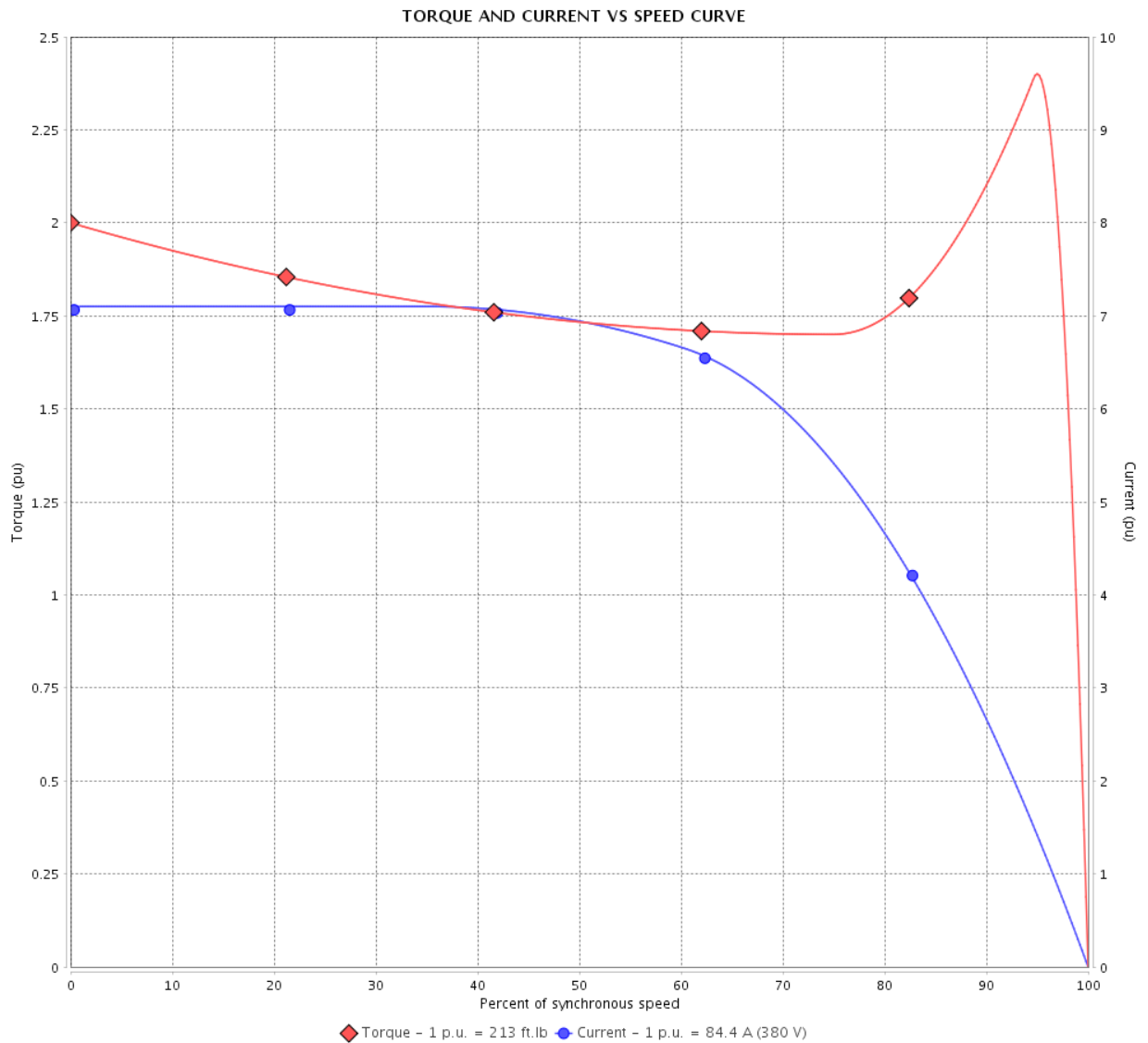
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 84.4 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 7.1	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	: 1480 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

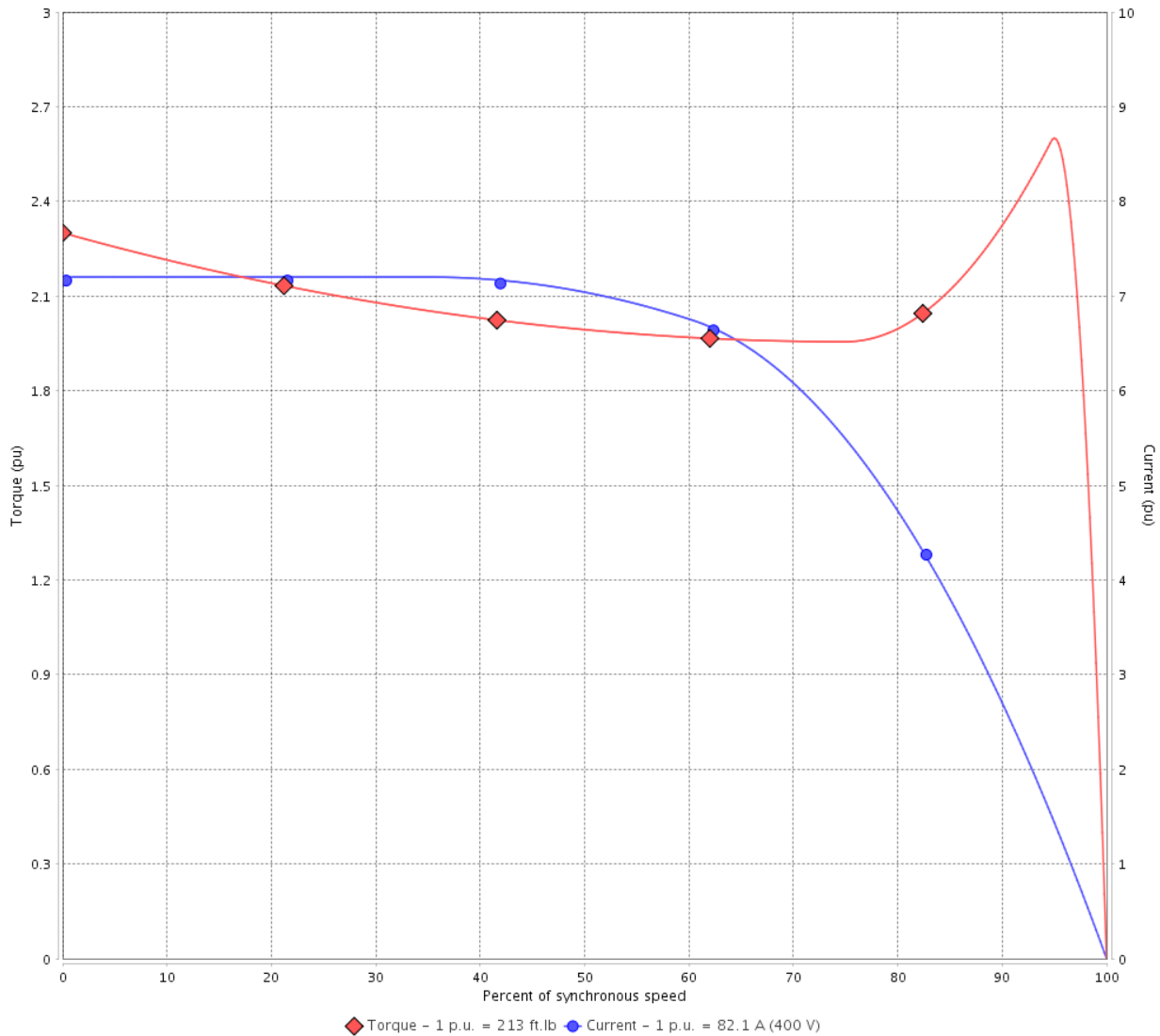
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 82.1 A	Moment of inertia (J)	: 16.8 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	: 260 %	Temperature rise	: 80 K
Rated speed	: 1482 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE



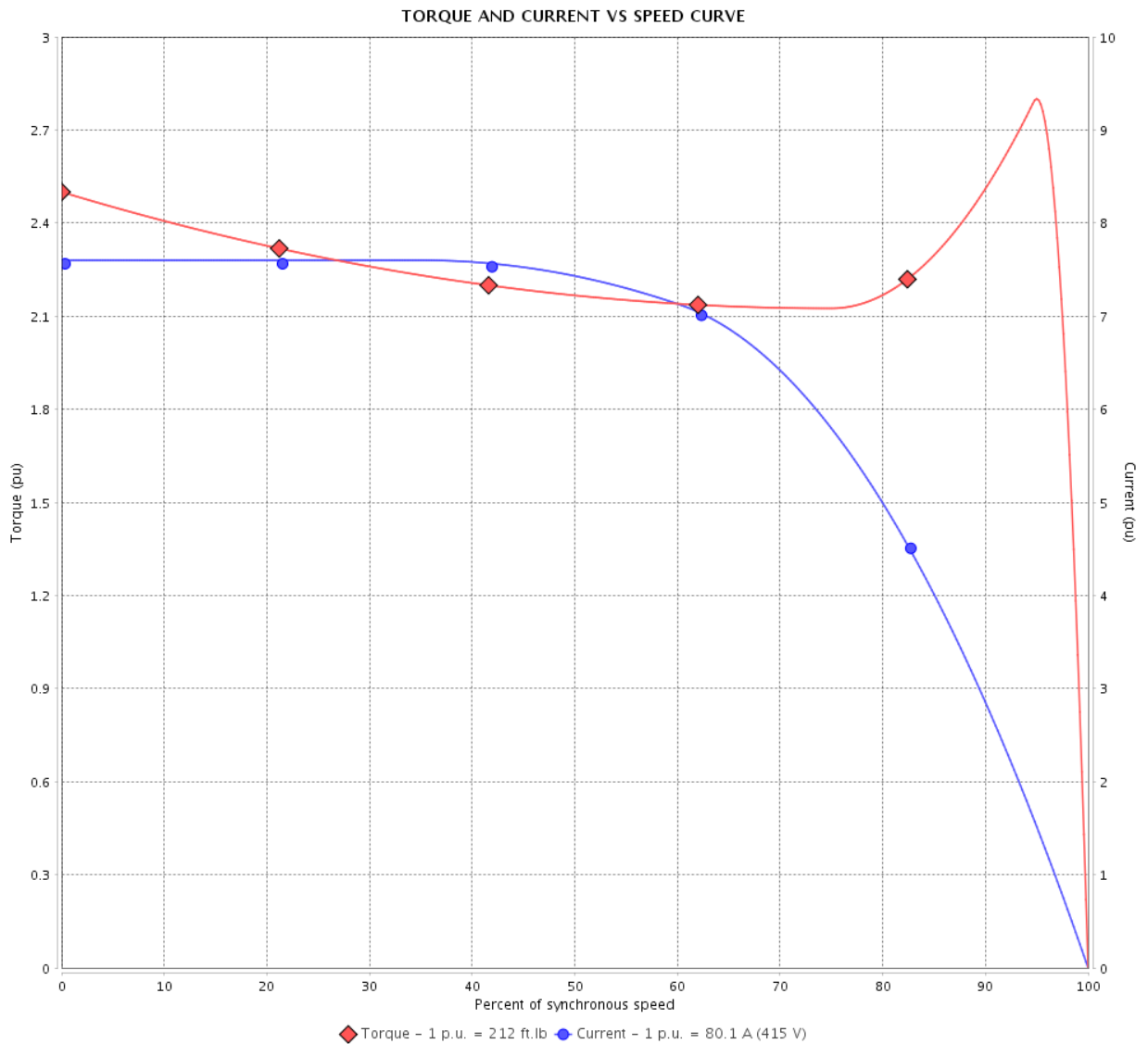
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 80.1 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 212 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1484 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

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# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

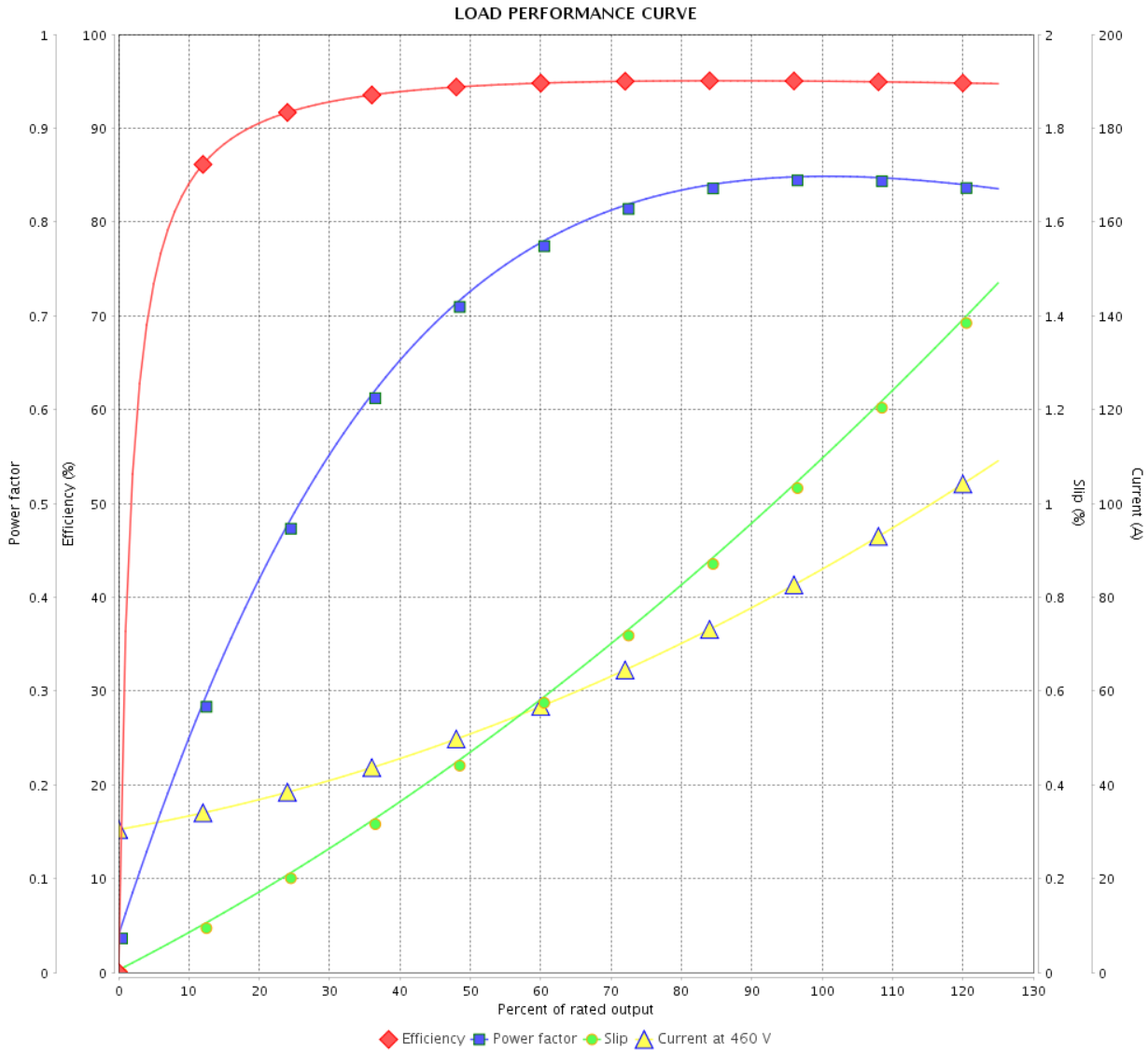


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 460 V 60 Hz 4P

Rated current : 85.5 A  
 LRC : 6.8  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 16.8 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

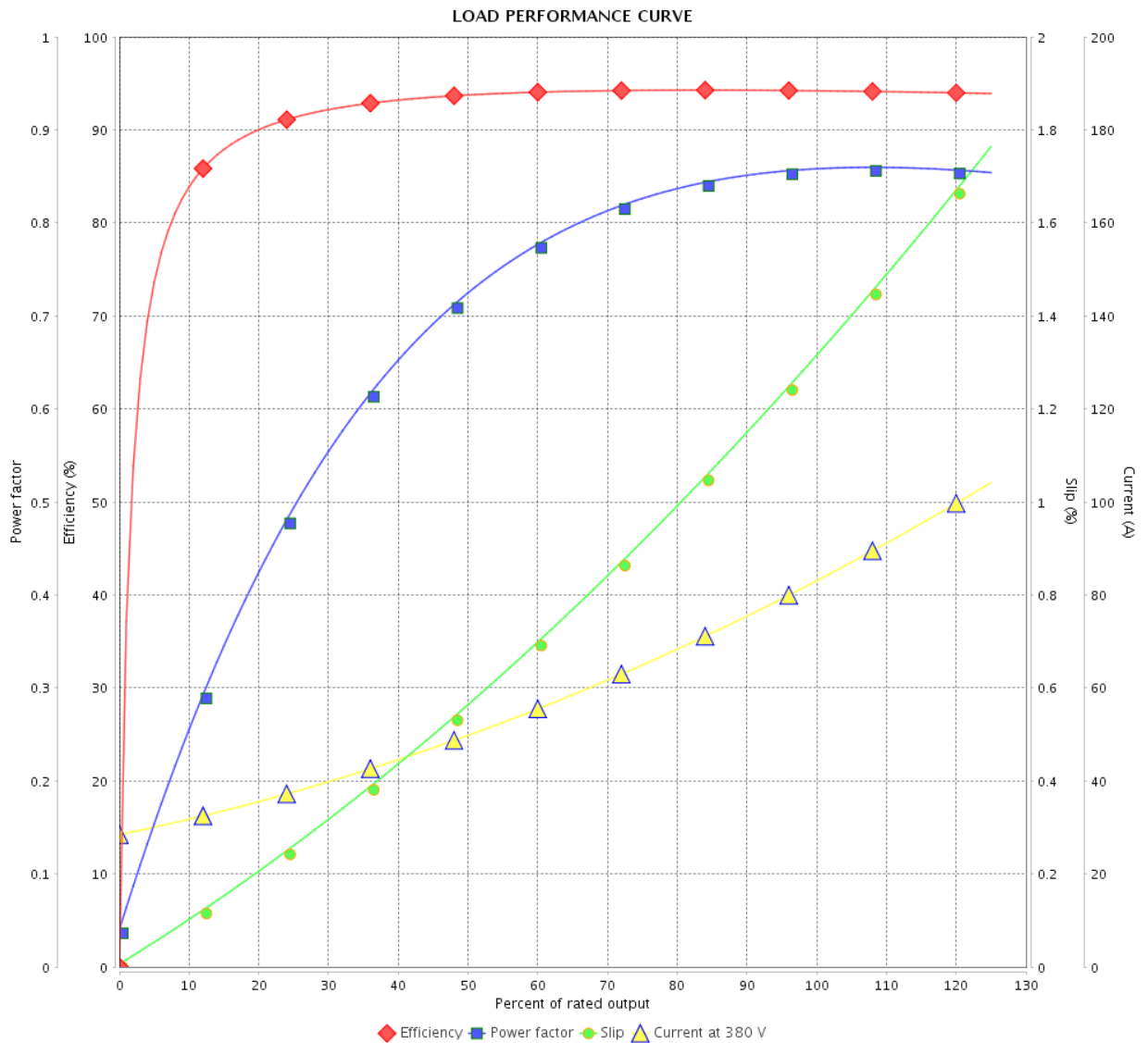


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 84.4 A  
 LRC : 7.1  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 16.8 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



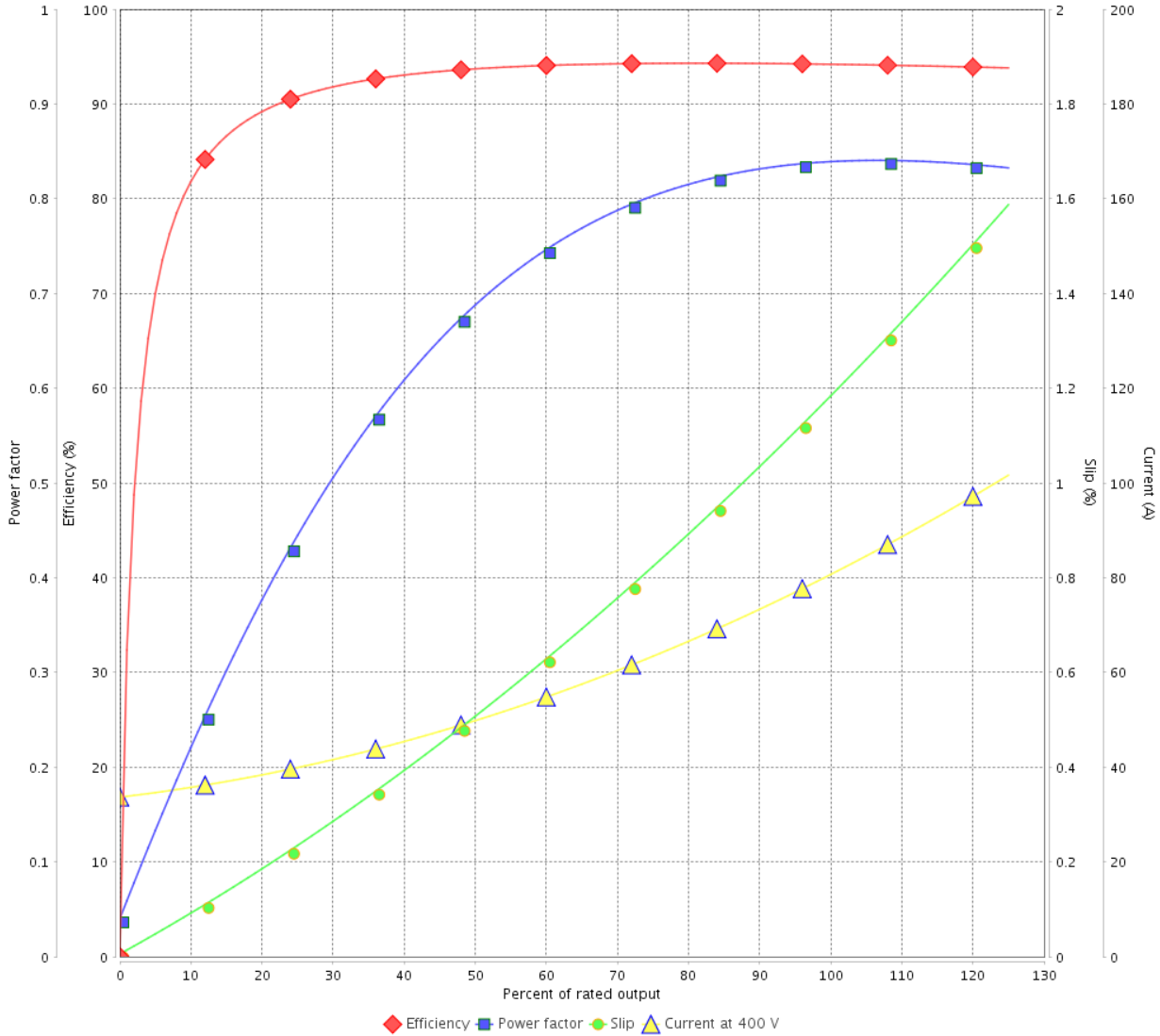
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current : 82.1 A  
 LRC : 7.2  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 16.8 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

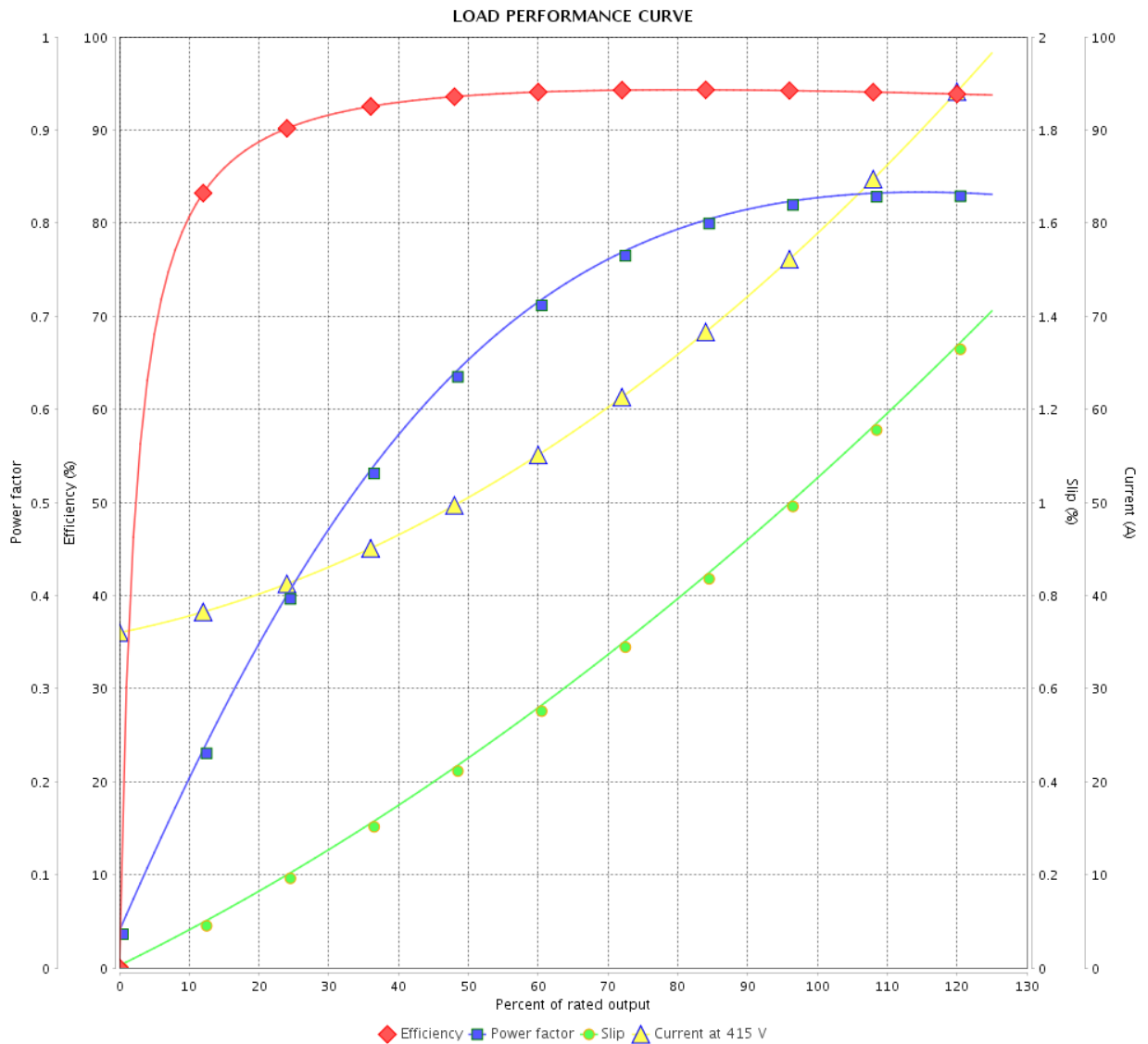


Customer : \_\_\_\_\_

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 80.1 A  
 LRC : 7.6  
 Rated torque : 212 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 280 %  
 Rated speed : 1484 rpm

Moment of inertia (J) : 16.8 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

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

Performance : 460 V 60 Hz 4P

Rated current	: 85.5 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Heating constant

Cooling constant

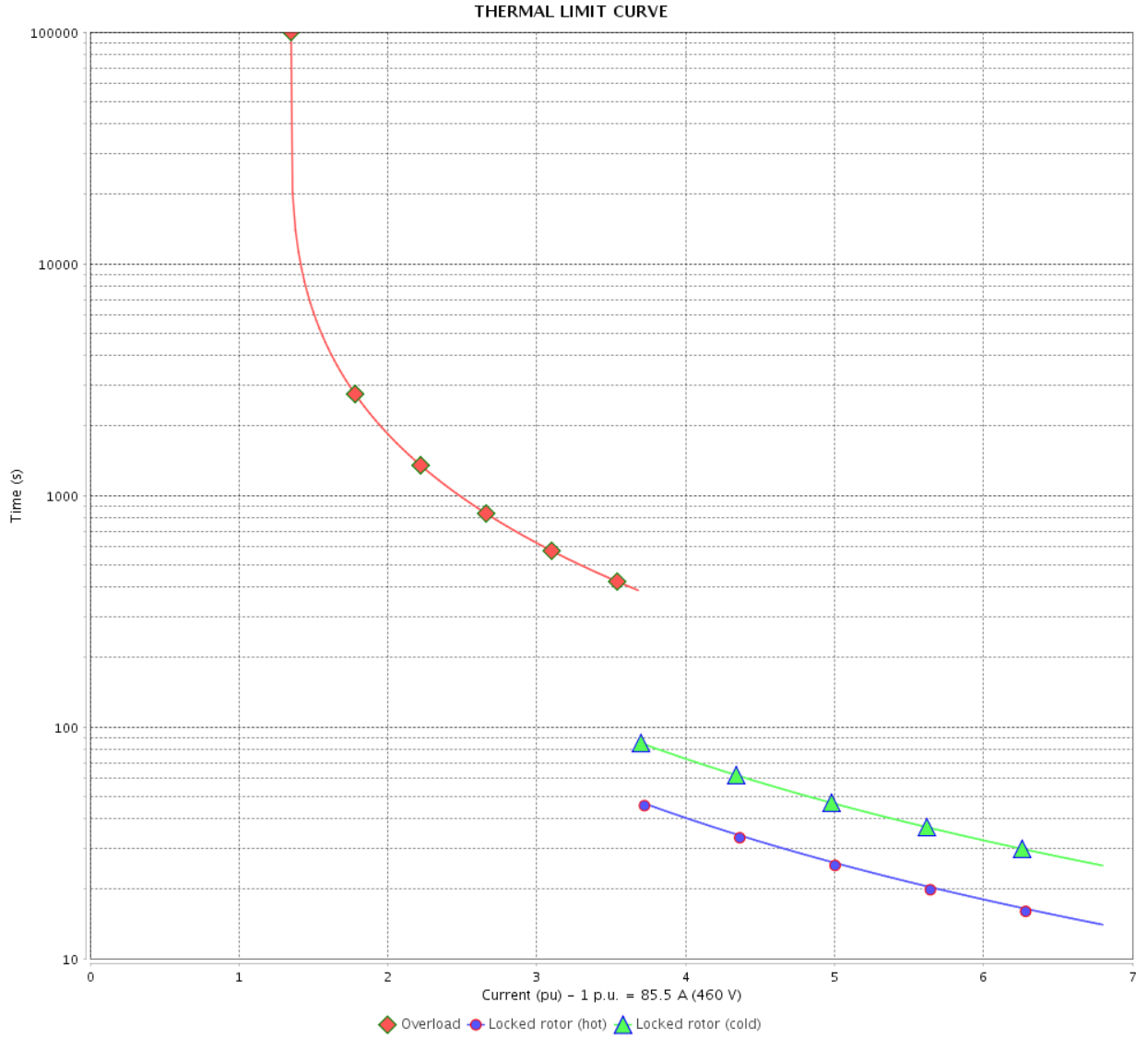
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# THERMAL LIMIT CURVE

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 : 14285069

Catalog # : 07518OT3GRB365T-W40

Performance : 380 V 50 Hz 4P IE3

Rated current	: 84.4 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 7.1	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	: 1480 rpm	Design	: B

Heating constant

Cooling constant

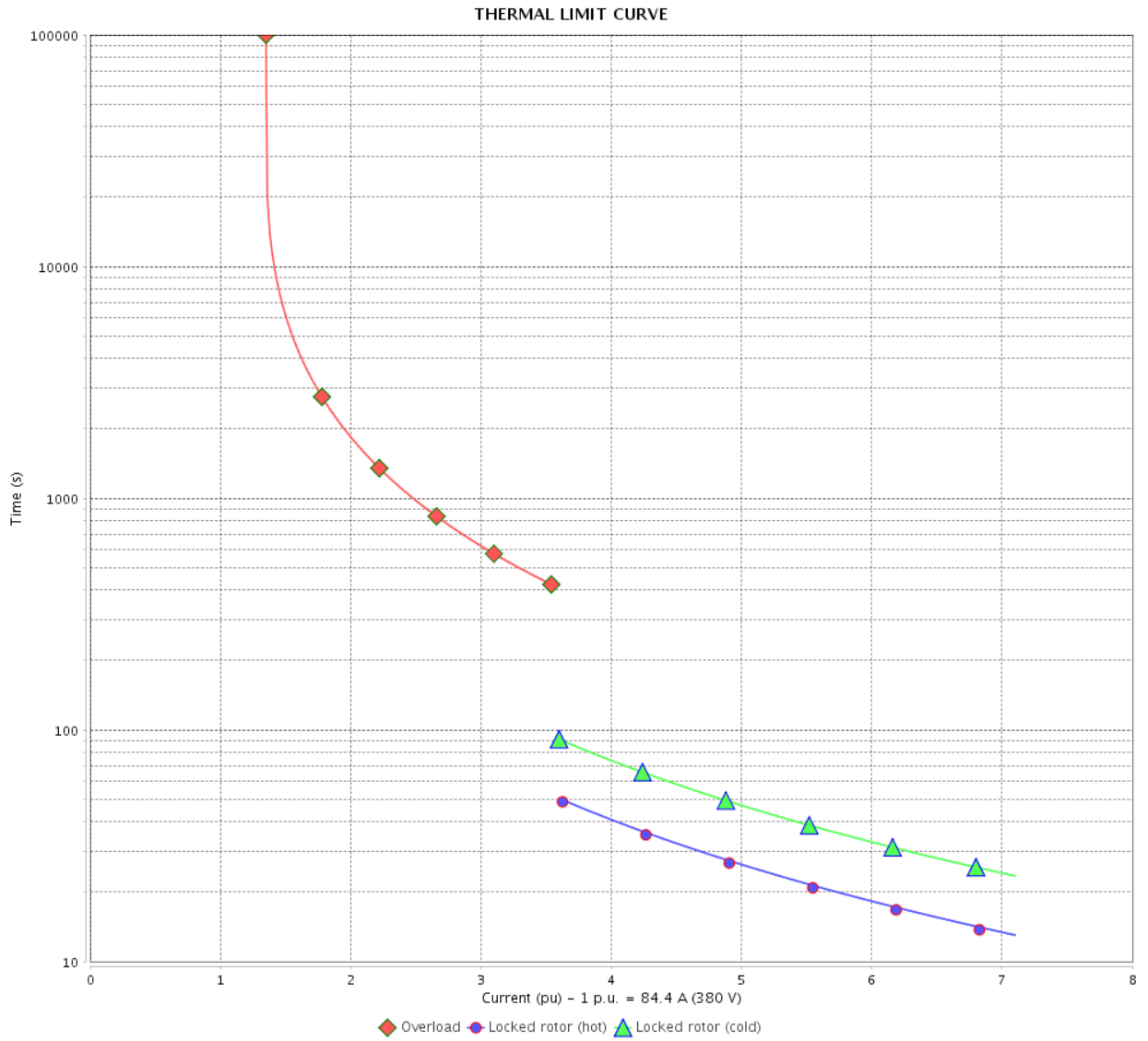
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# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

Performance : 400 V 50 Hz 4P IE3

Rated current : 82.1 A	Moment of inertia (J) : 16.8 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 : 260 %	Temperature rise : 80 K
Rated speed : 1482 rpm	Design : B

Heating constant

Cooling constant

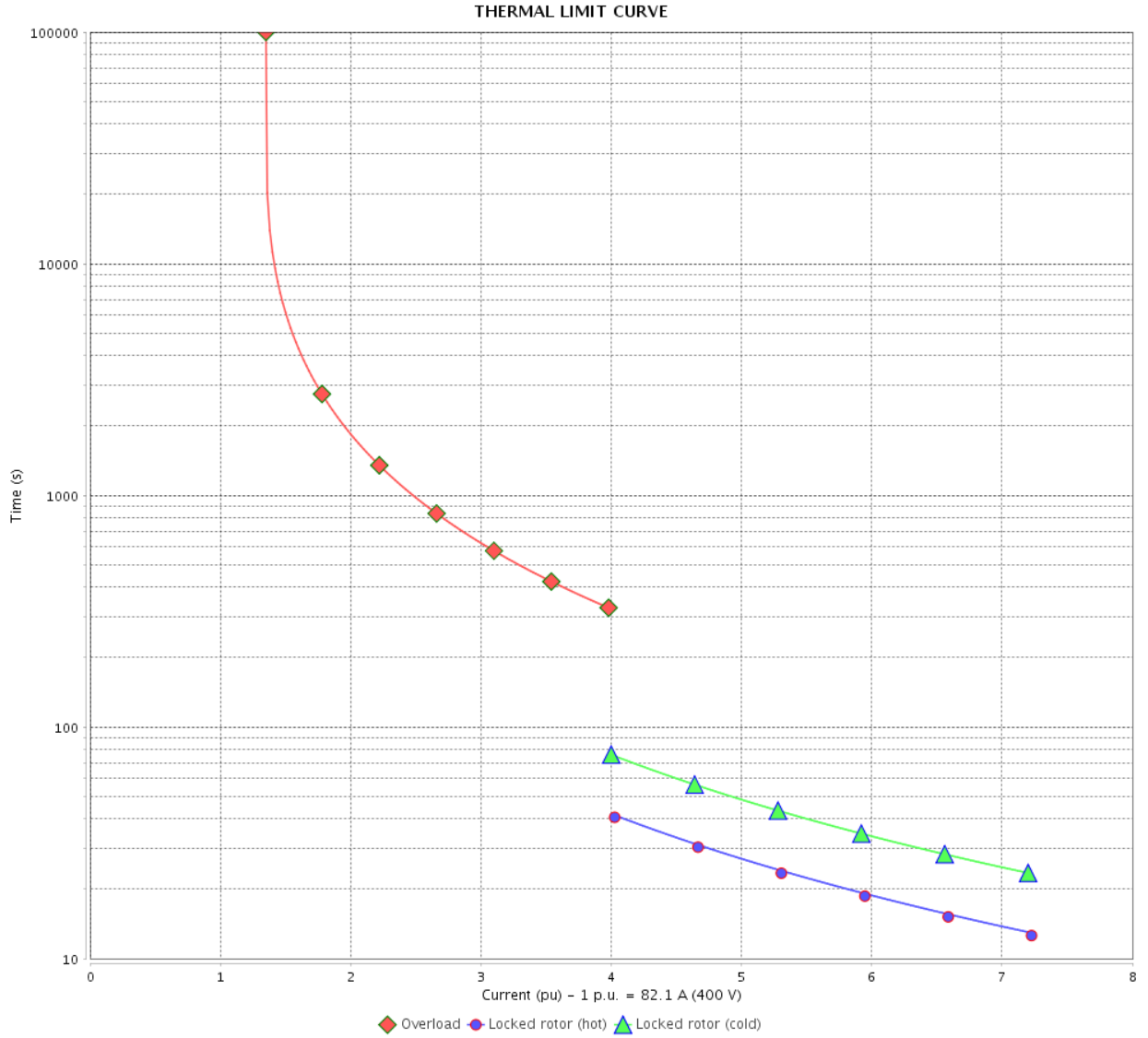
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# THERMAL LIMIT CURVE

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 : 14285069

Catalog # : 07518OT3GRB365T-W40

Performance : 415 V 50 Hz 4P IE3

Rated current	: 80.1 A	Moment of inertia (J)	: 16.8 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 212 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1484 rpm	Design	: B

Heating constant

Cooling constant

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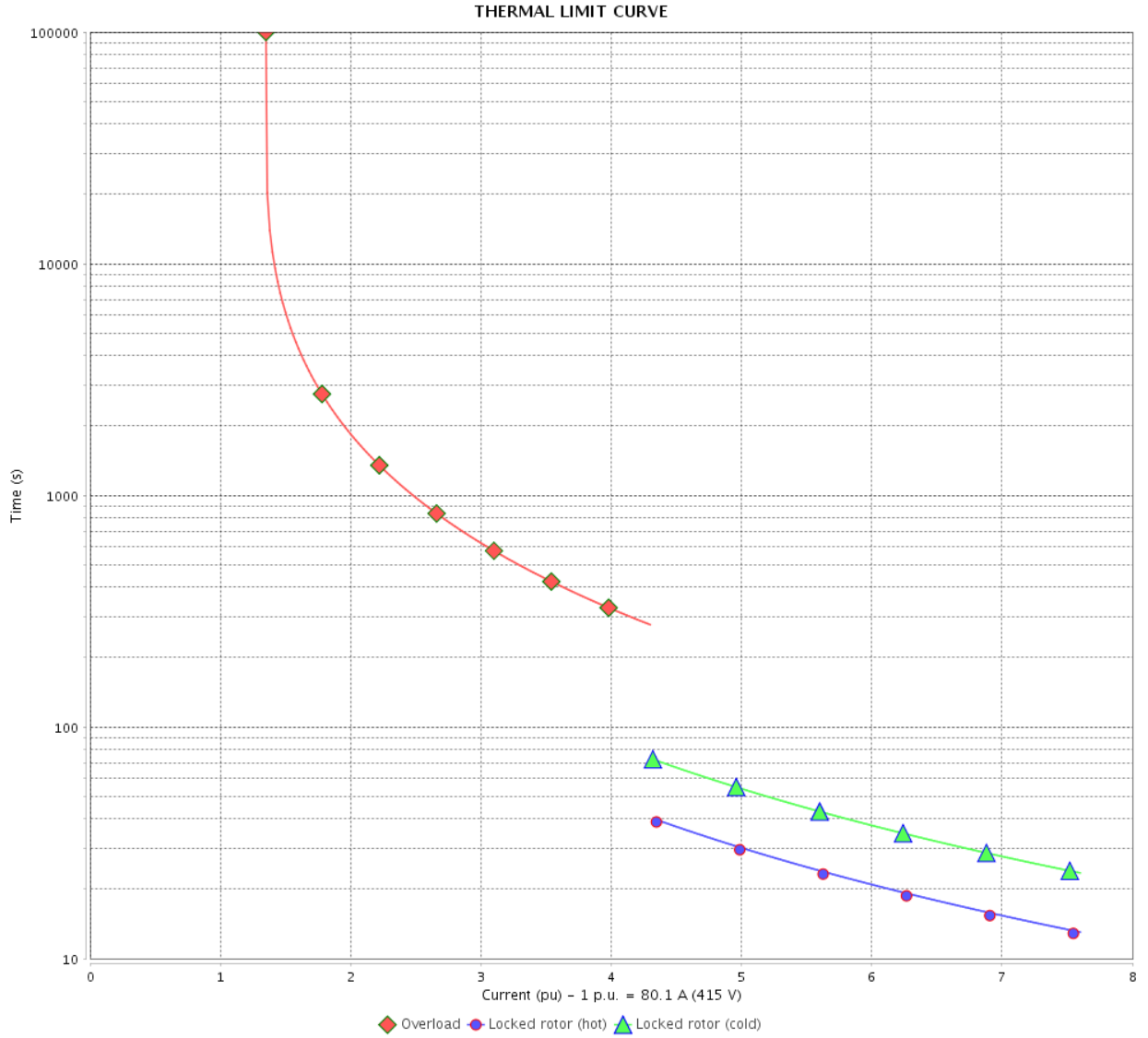


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



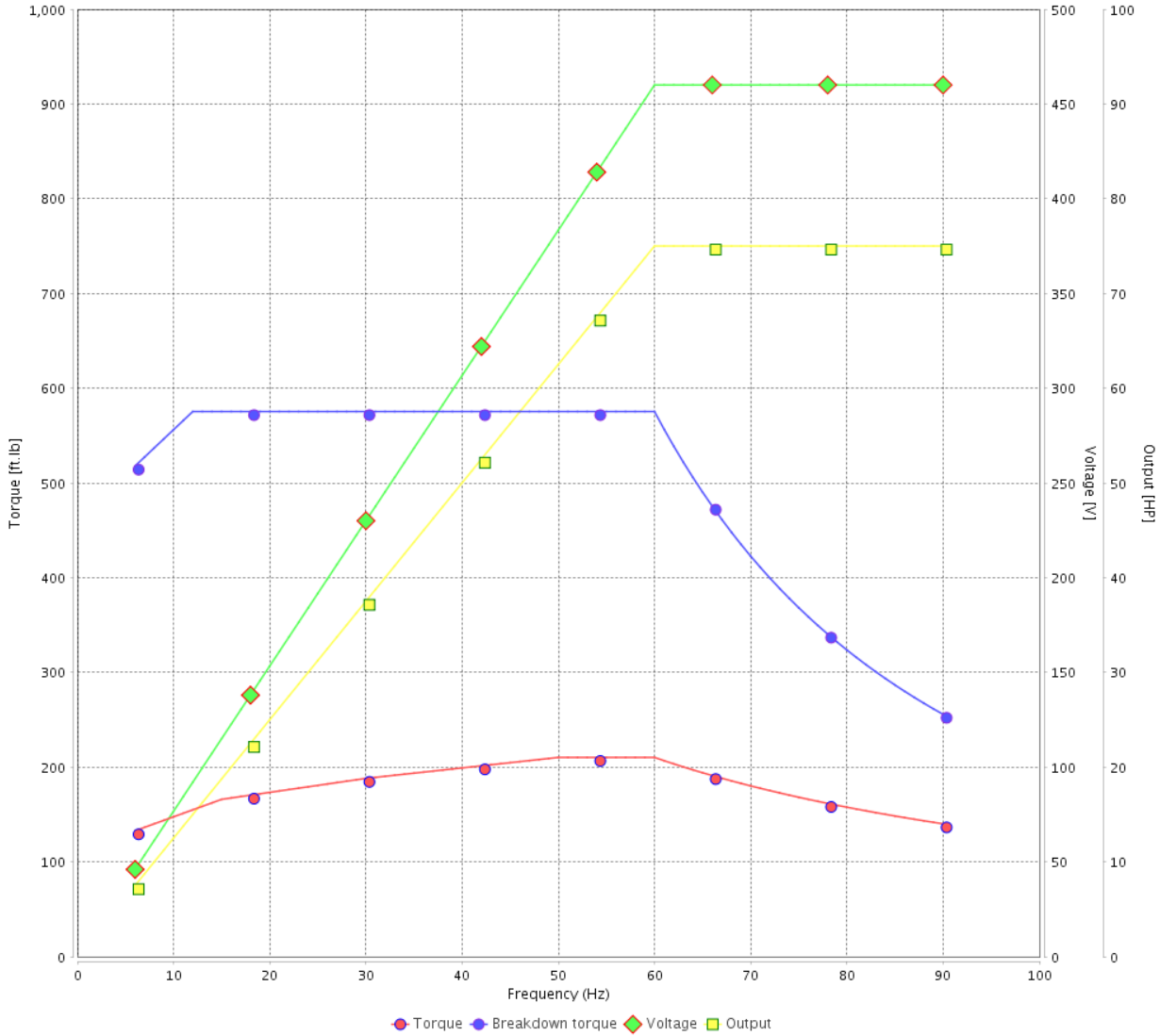
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

VFD OPERATION CURVE



Performance : 460 V 60 Hz 4P

Rated current : 85.5 A  
 LRC : 6.8  
 Rated torque : 221 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 260 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 16.8 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

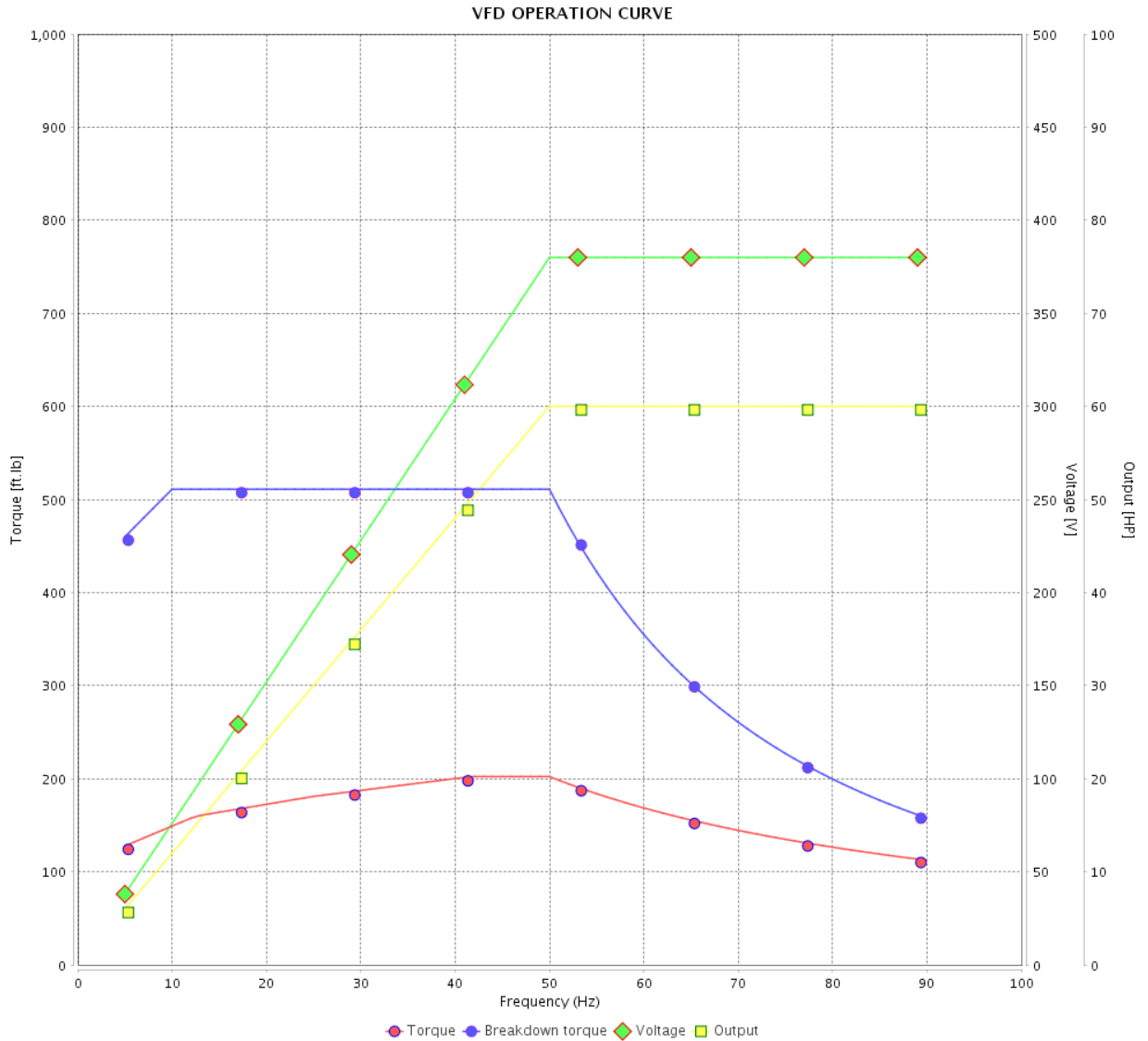


Customer :

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Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 84.4 A  
LRC : 7.1  
Rated torque : 213 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 16.8 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

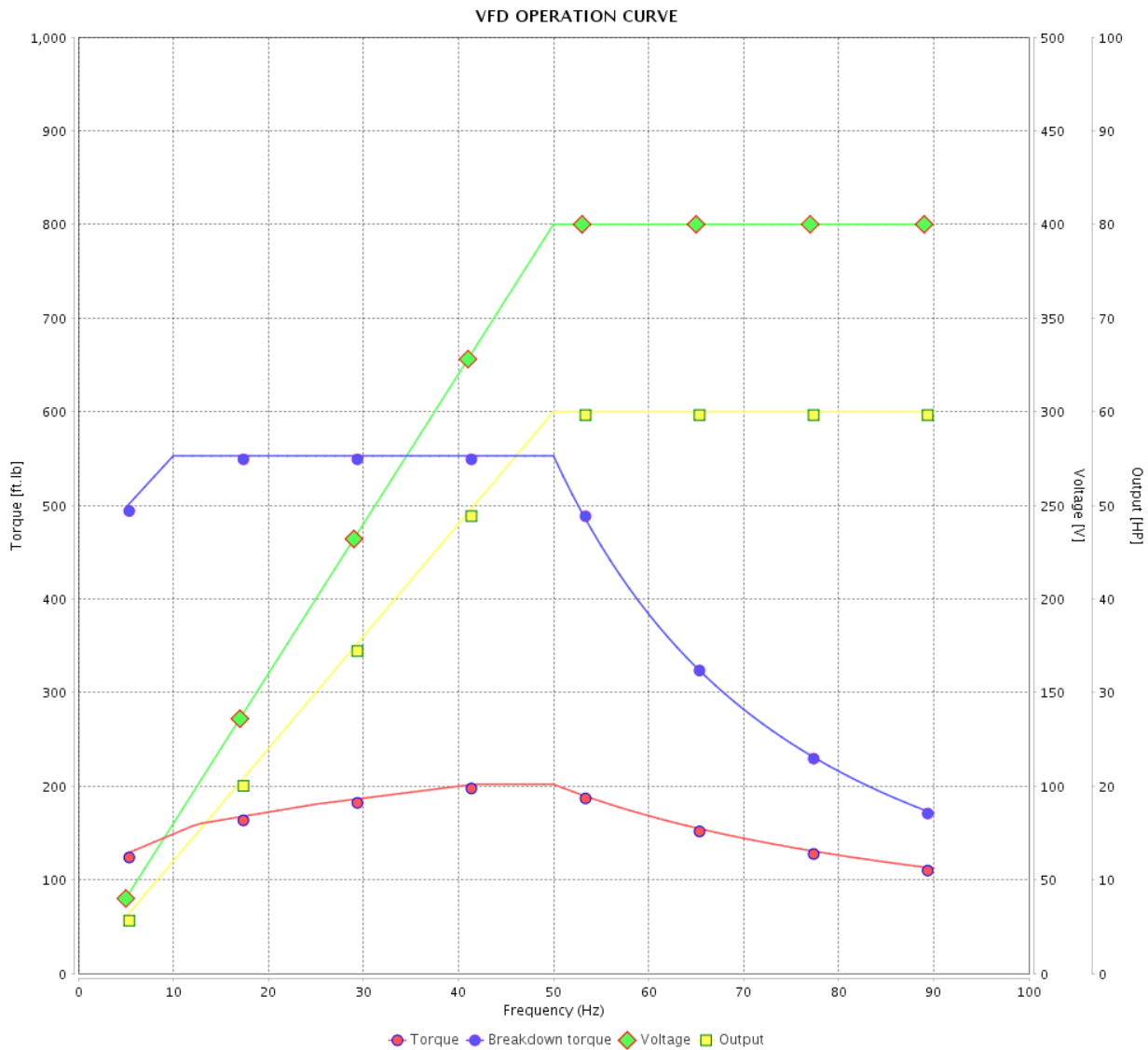


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 82.1 A  
 LRC : 7.2  
 Rated torque : 213 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 260 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 16.8 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

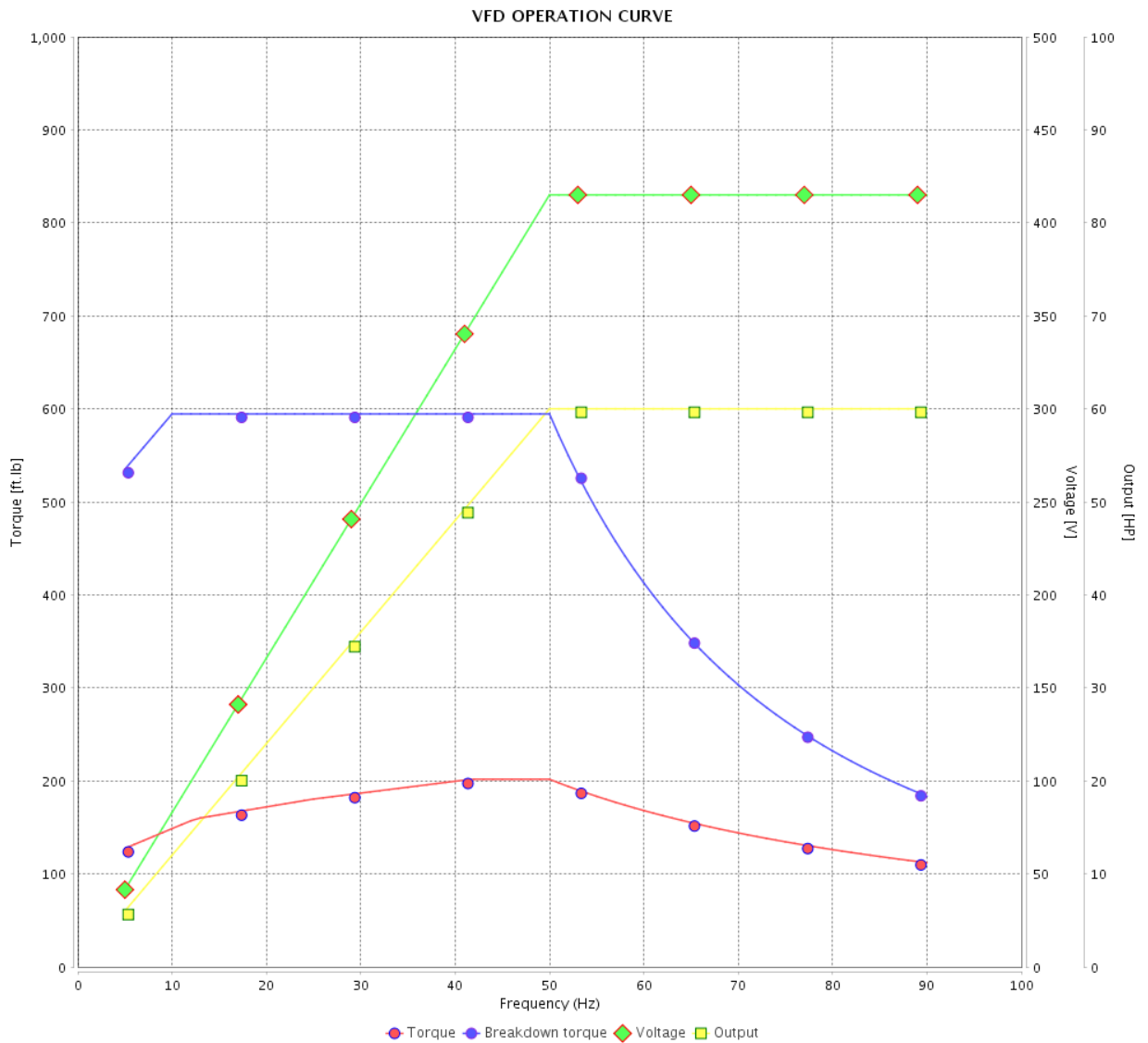


Customer :

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Three-Phase

Product code : 14285069

Catalog # : 07518OT3GRB365T-W40

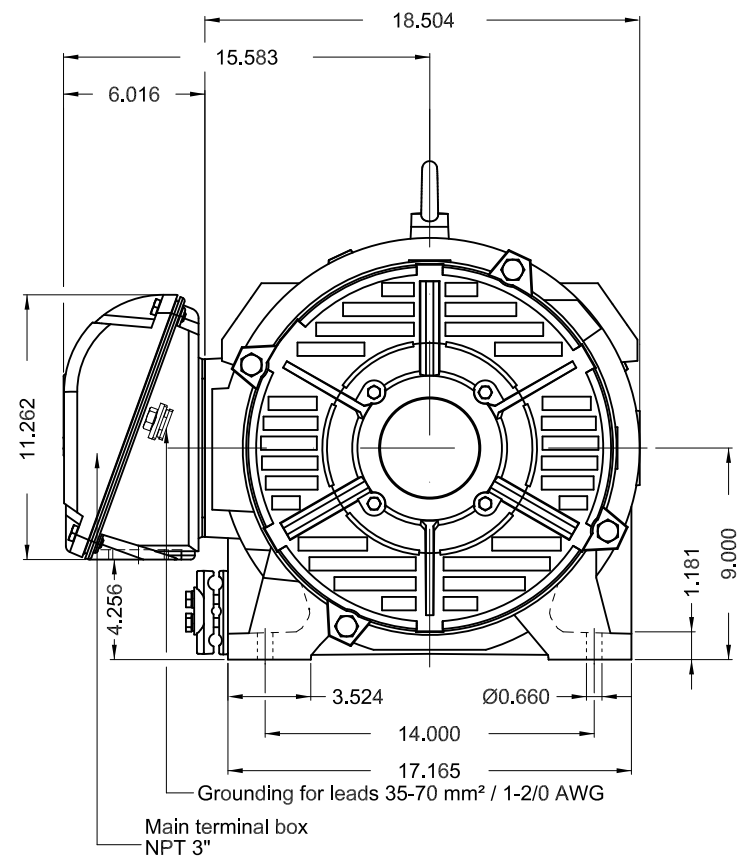


Performance : 415 V 50 Hz 4P IE3

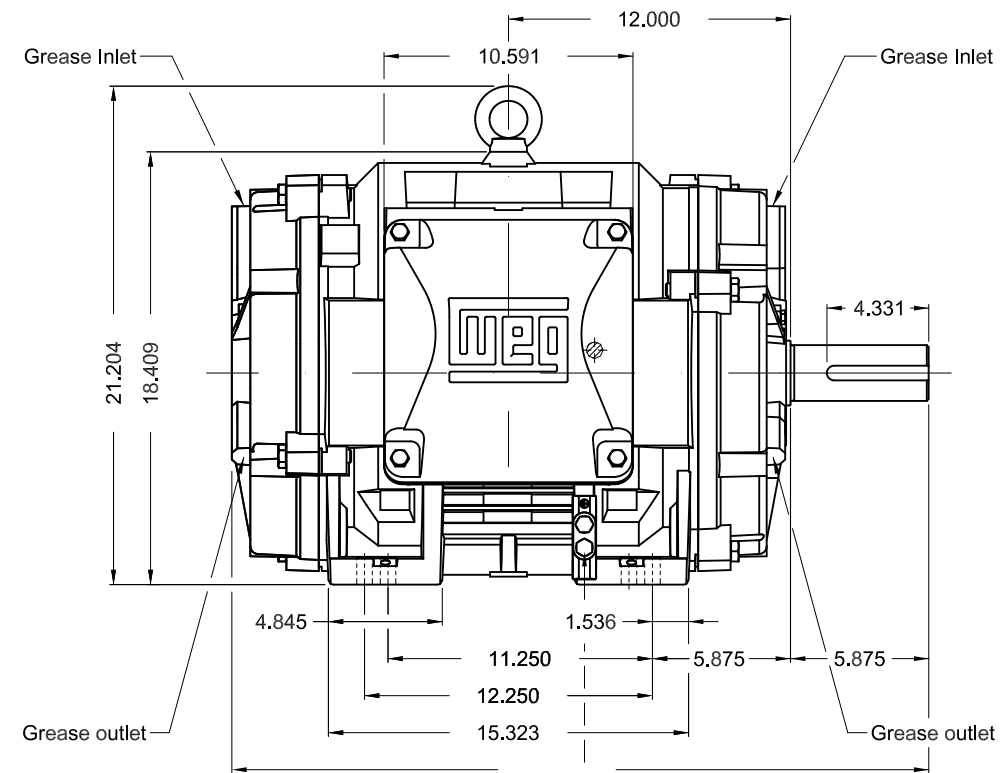
Rated current : 80.1 A  
LRC : 7.6  
Rated torque : 212 ft.lb  
Locked rotor torque : 250 %  
Breakdown torque : 280 %  
Rated speed : 1484 rpm

Moment of inertia (J) : 16.8 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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Date	13/04/2022			

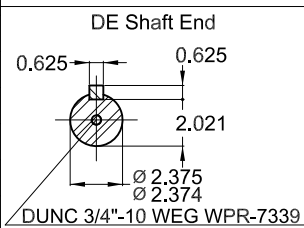


Grounding for leads 35-70 mm<sup>2</sup> / 1-2/0 AWG  
Main terminal box  
NPT 3"



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

- DE roller bearing
- C3 NDE bearing
- Shaft locking device
- Shaft material - AISI/SAE 4140
- Color RAL 5009
- Painting plan 203A
- Mounting NEMA F-1
- Mounting B3R(D)



75 HP 04 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		

PREVIEW  
WDD

