

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line	: W40 NEMA Premium Efficiency Three-Phase	Product code :	14285047		
		Catalog # :	07518OT3ERB365T-W40		
Frame	: 364/5T	Cooling method	: IC01 - ODP		
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	: 792 lb		
Protection degree	: IP23	Moment of inertia (J)	: 16.8 sq.ft.lb		
Design	: B				
Output [HP]	75	60	60	60	60
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	171/85.5	84.4	82.1	80.1	80.1
L. R. Amperes [A]	1163/581	599	591	609	609
LRC [A]	6.8x(Code G)	7.1x(Code H)	7.2x(Code H)	7.6x(Code J)	7.6x(Code J)
No load current [A]	61.0/30.5	28.5	33.7	36.1	36.1
Rated speed [RPM]	1780	1480	1482	1484	1484
Slip [%]	1.11	1.33	1.20	1.07	1.07
Rated torque [ft.lb]	221	213	213	212	212
Locked rotor torque [%]	220	200	229	250	250
Breakdown torque [%]	260	240	260	280	280
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	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)	23s (cold) 13s (hot)
Noise level ²	69.0 dB(A)				
Efficiency (%)	25%	94.4	93.7	93.7	93.7
	50%	94.5	93.8	93.8	93.8
	75%	95.0	94.2	94.2	94.2
	100%	95.0	94.2	94.2	94.2
Power Factor	25%	0.48	0.48	0.43	0.40
	50%	0.73	0.73	0.69	0.66
	75%	0.82	0.82	0.80	0.77
	100%	0.85	0.86	0.84	0.83
Bearing type	: <u>Drive end</u> NU-314 C3	<u>Non drive end</u> 6314 C3	Foundation loads		
Sealing	: Without	Without	Max. traction	: 1641 lb	
	Bearing Seal	Bearing Seal	Max. compression	: 2433 lb	
Lubrication interval	: 20000 h	20000 h			
Lubricant amount	: 27 g	27 g			
Lubricant type	: Mobil Polyrex EM				
Notes USABLE @208V 189A SF 1.15 SFA 217A					
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



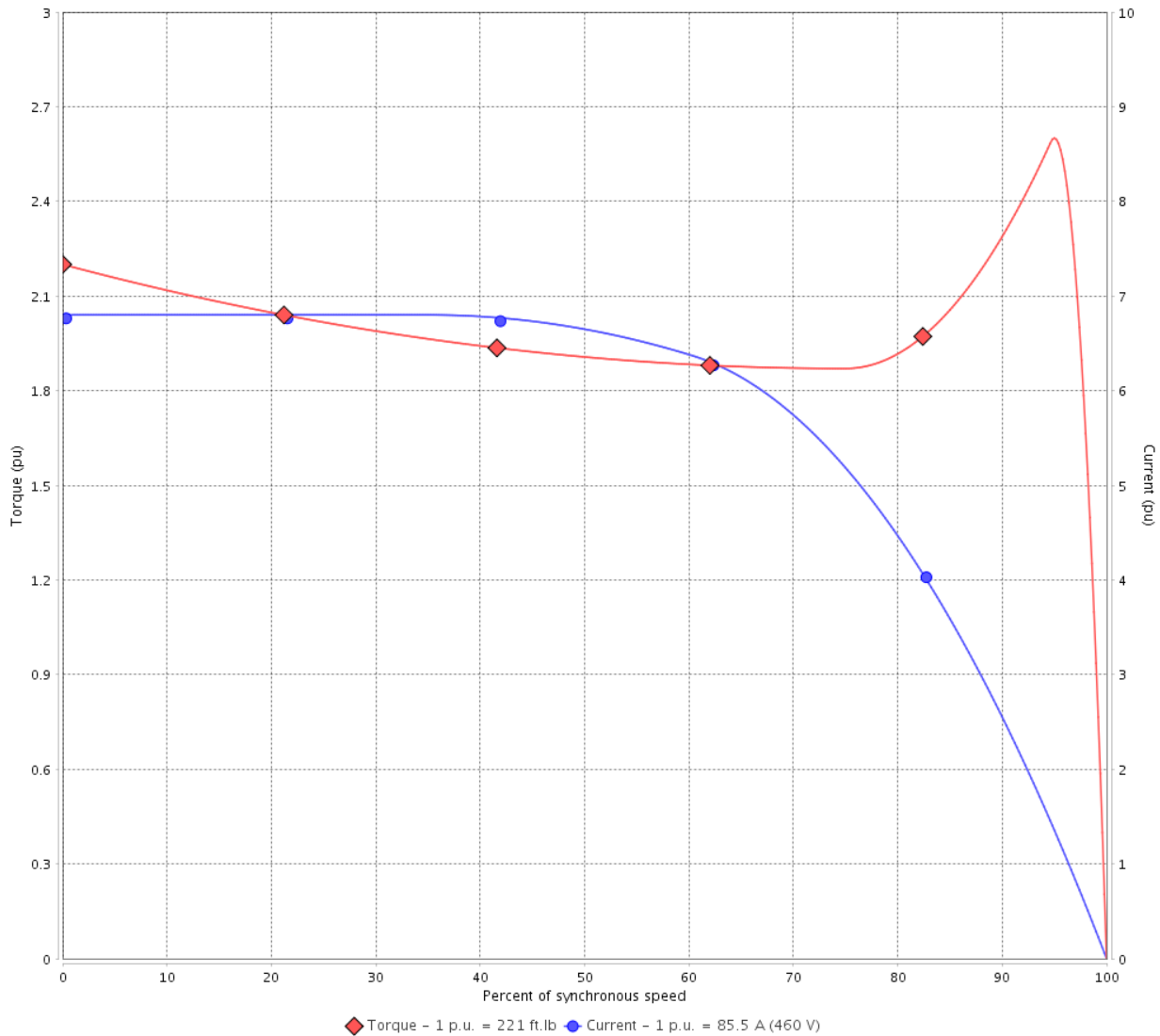
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current	: 171/85.5 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



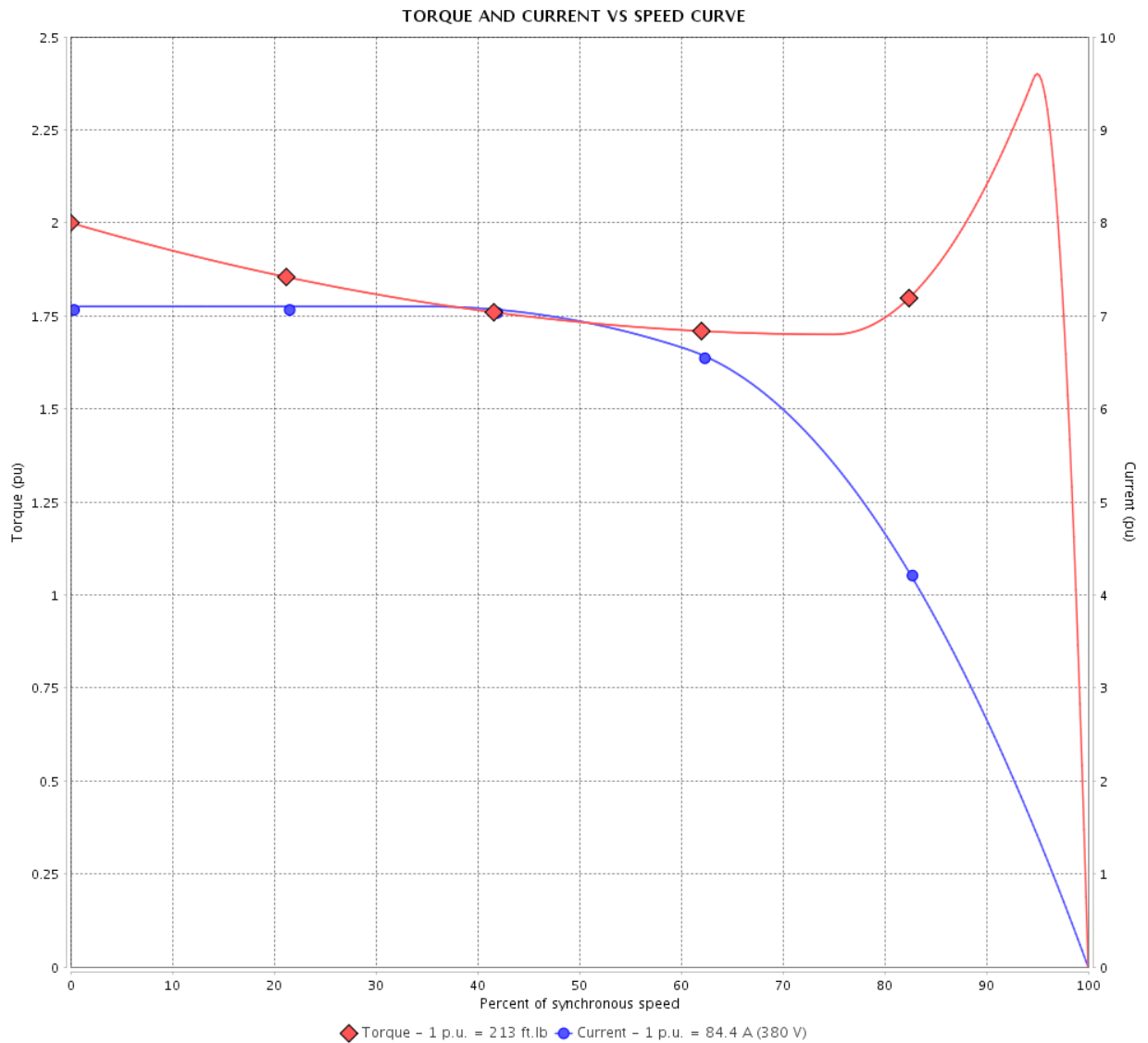
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-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



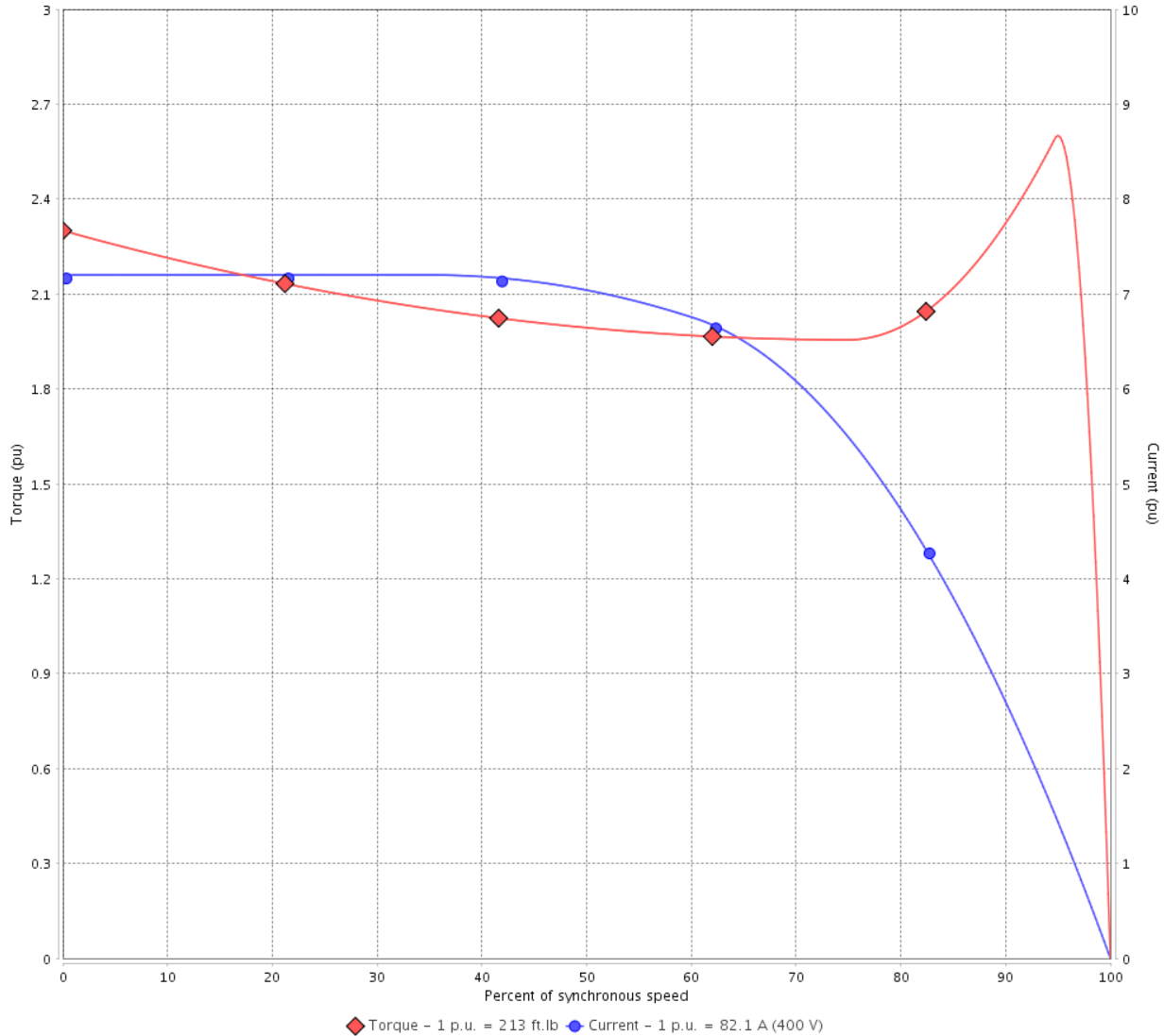
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-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



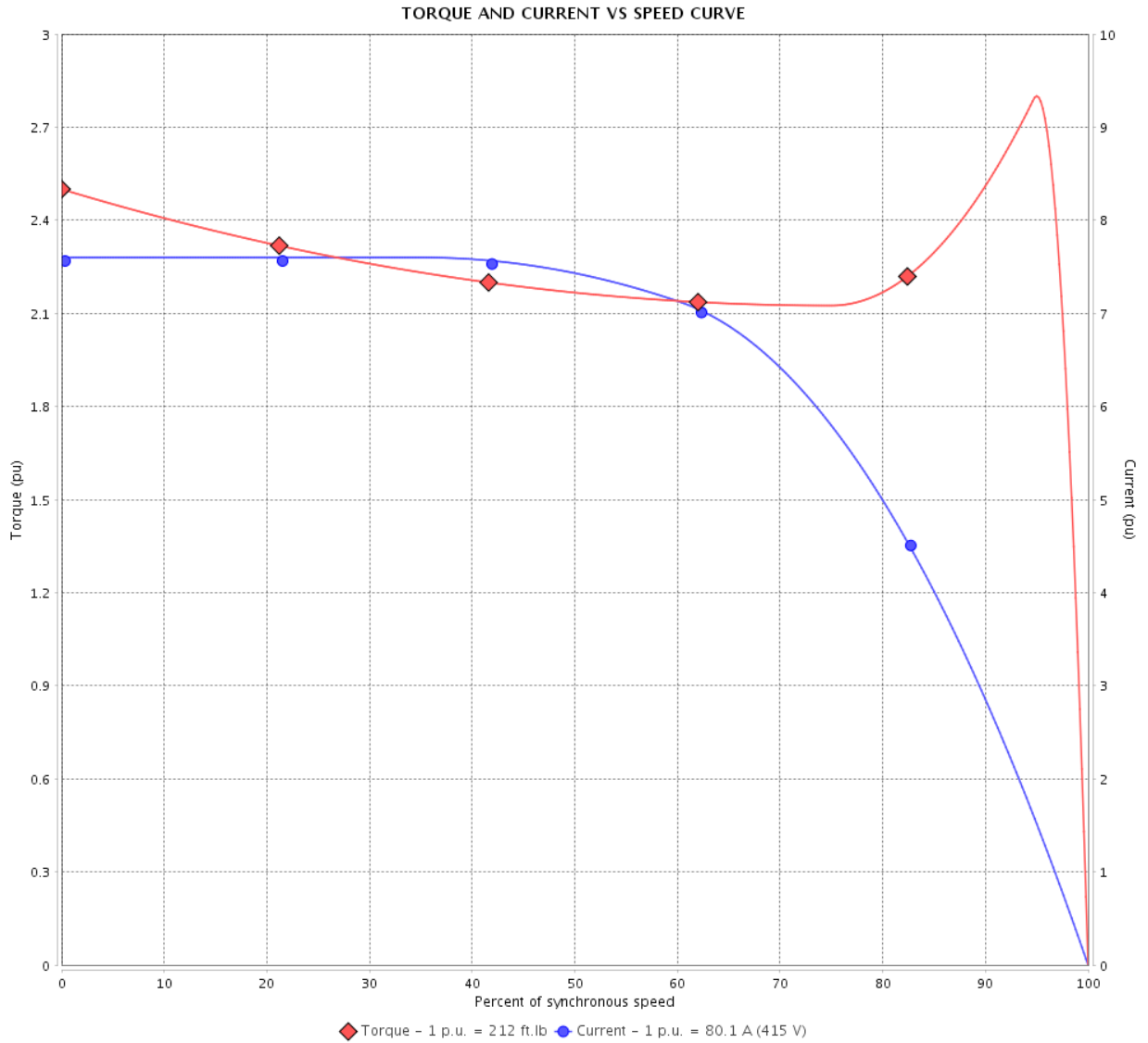
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-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

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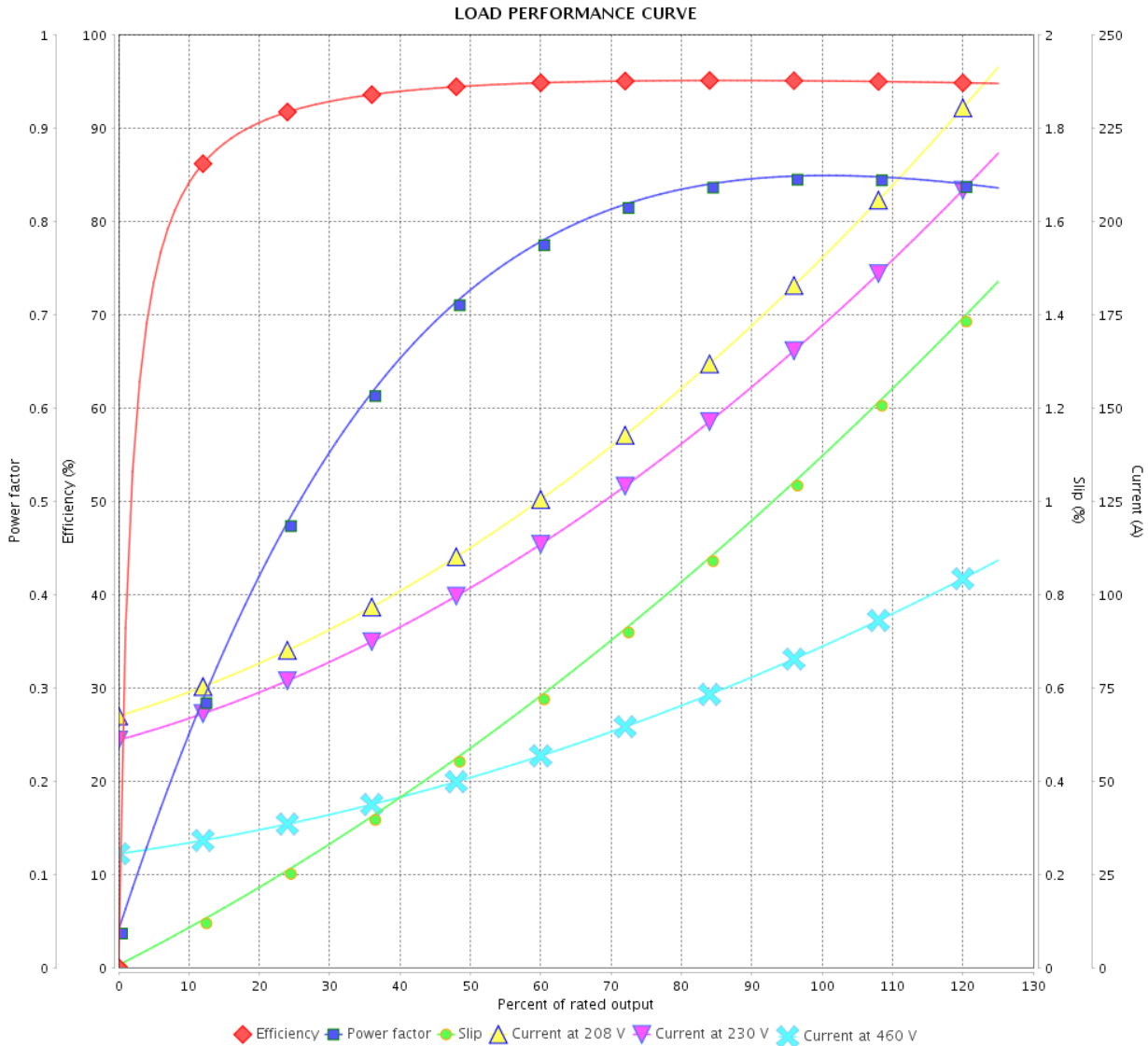


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-W40



Performance : 230/460 V 60 Hz 4P

Rated current : 171/85.5 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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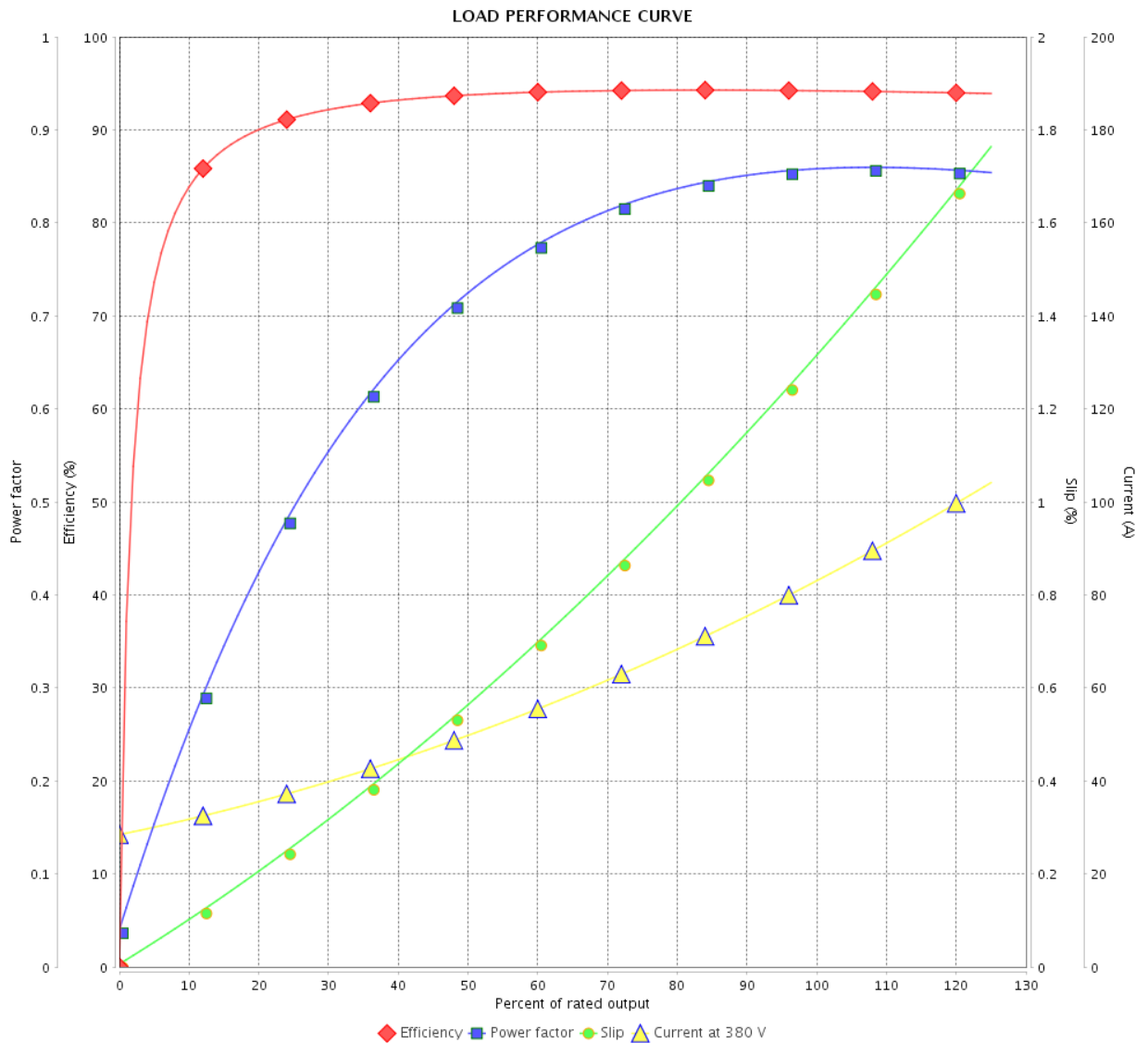


Customer :

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Product code : 14285047

Catalog # : 07518OT3ERB365T-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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Three Phase Induction Motor - Squirrel Cage

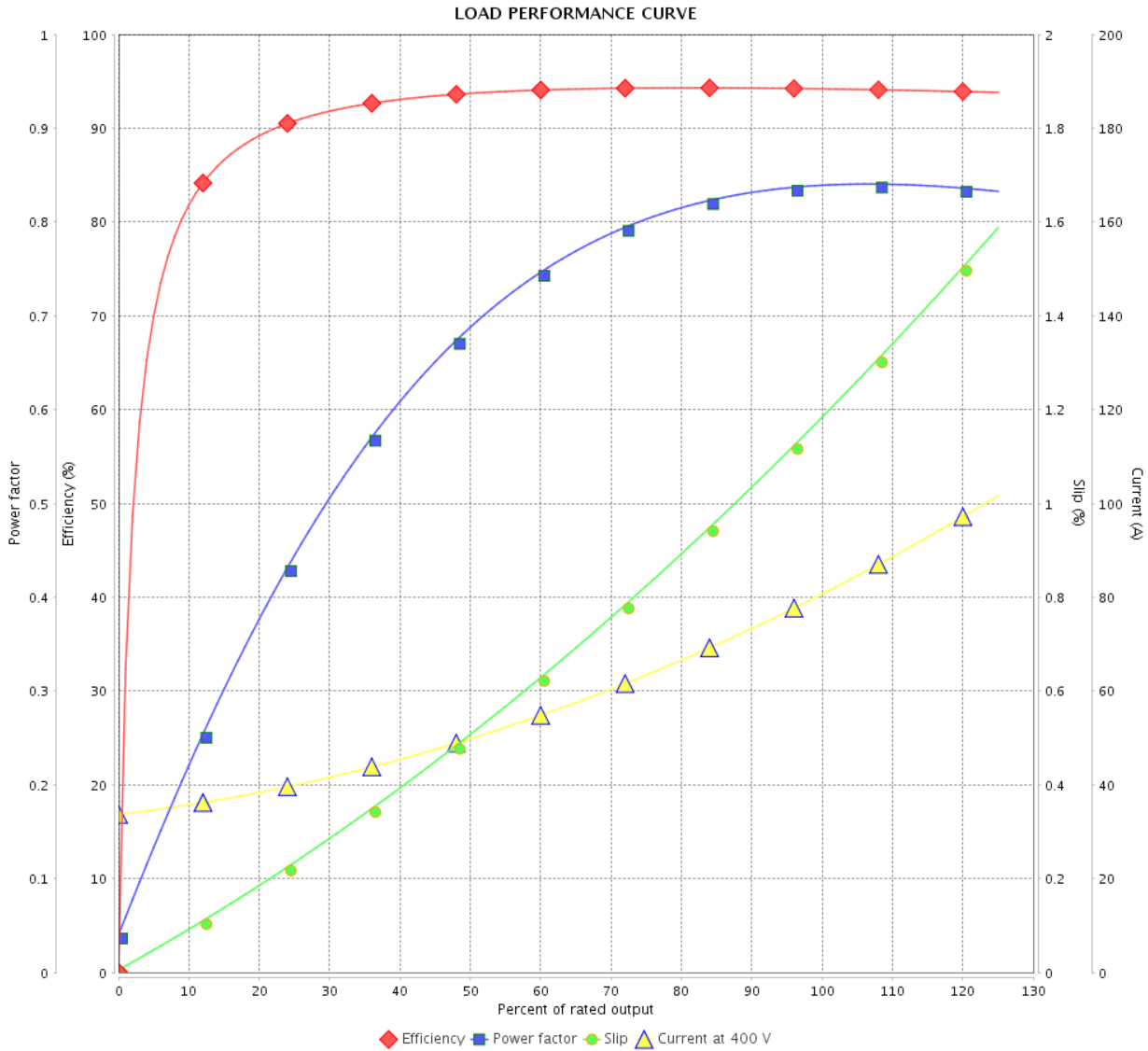


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Performance : 400 V 50 Hz 4P IE3

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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Three Phase Induction Motor - Squirrel Cage

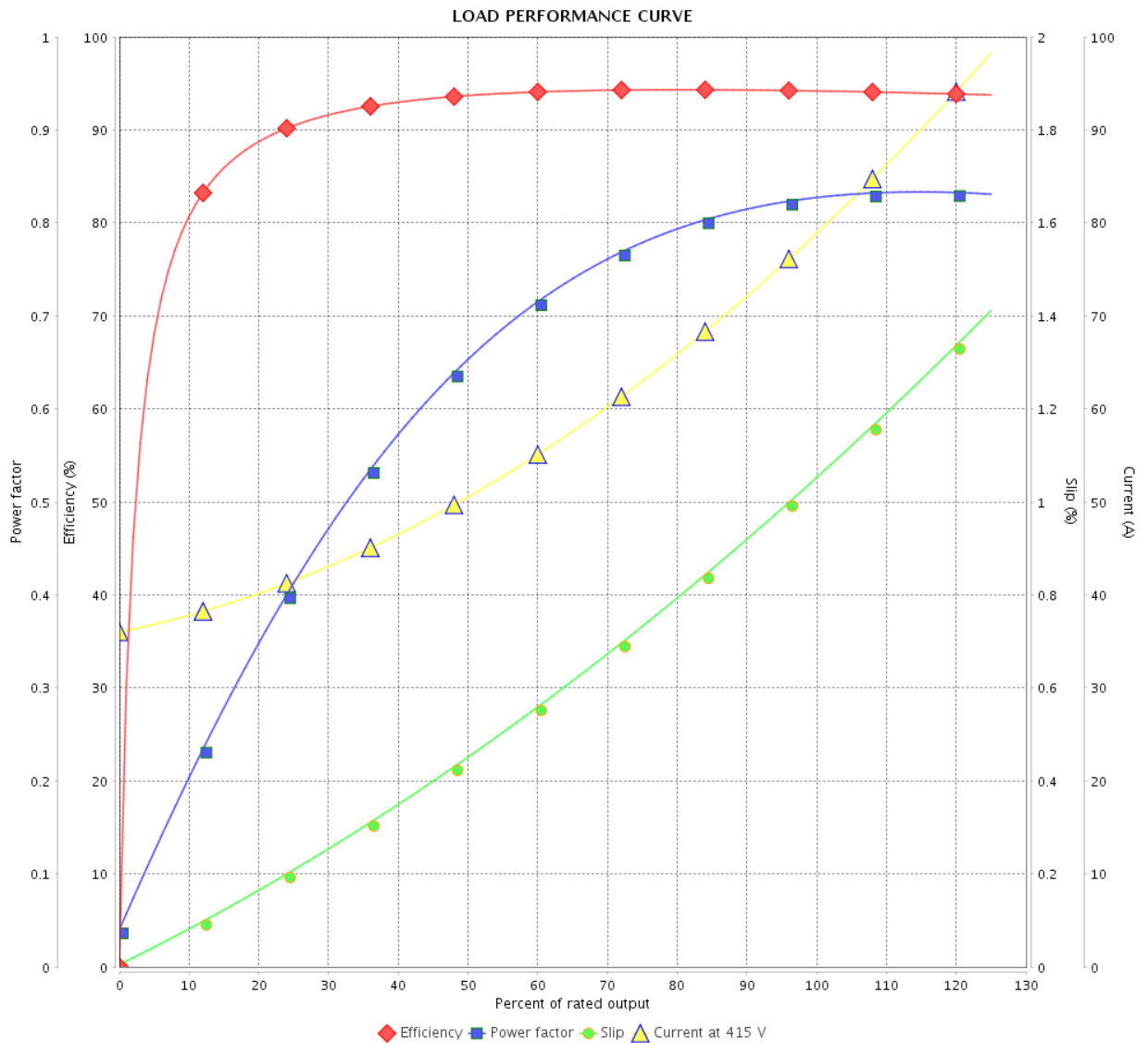


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Performance : 415 V 50 Hz 4P IE3

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



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LRC : 6.8

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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

Heating constant

Cooling constant

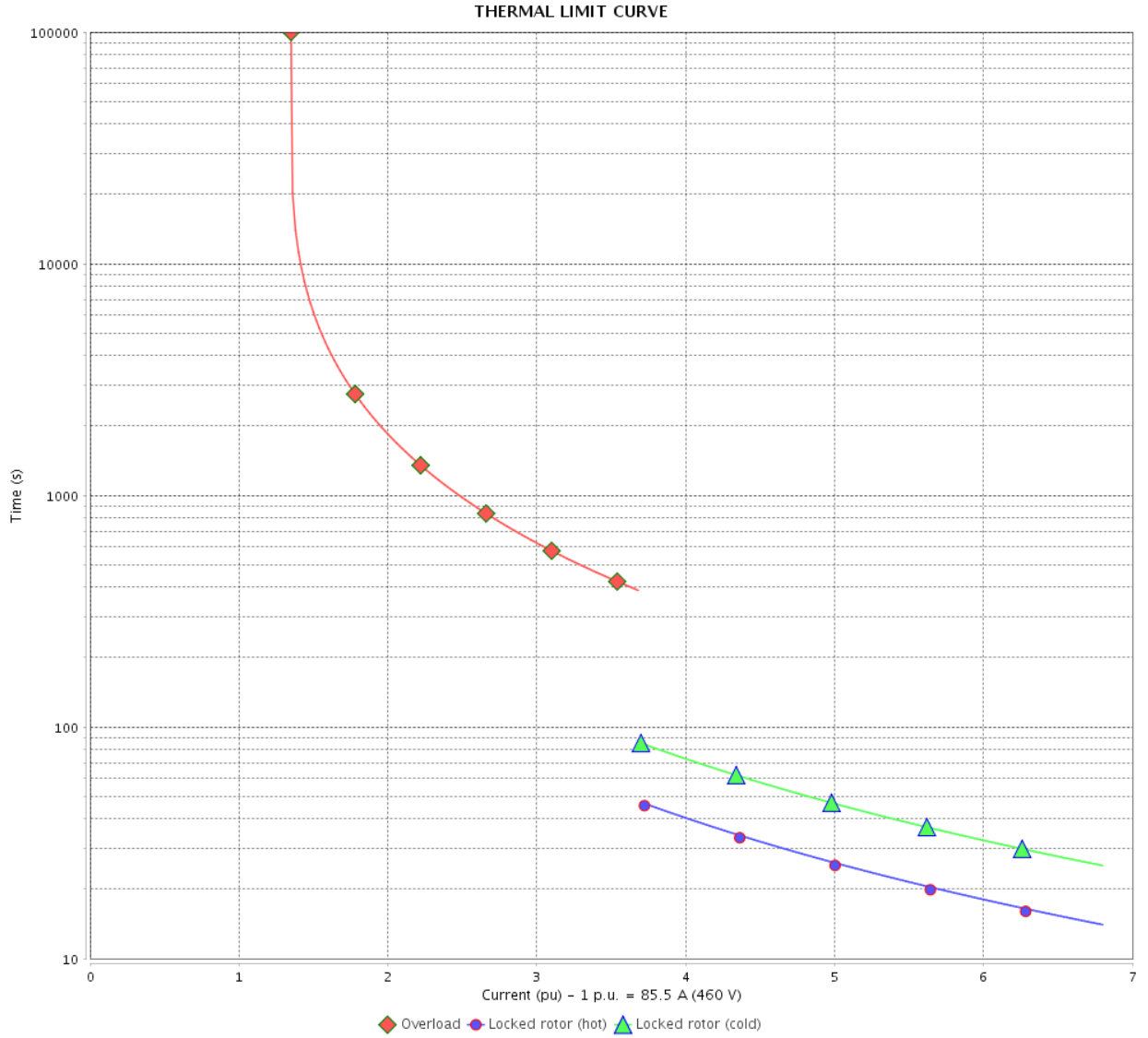
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Performance : 380 V 50 Hz 4P IE3

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

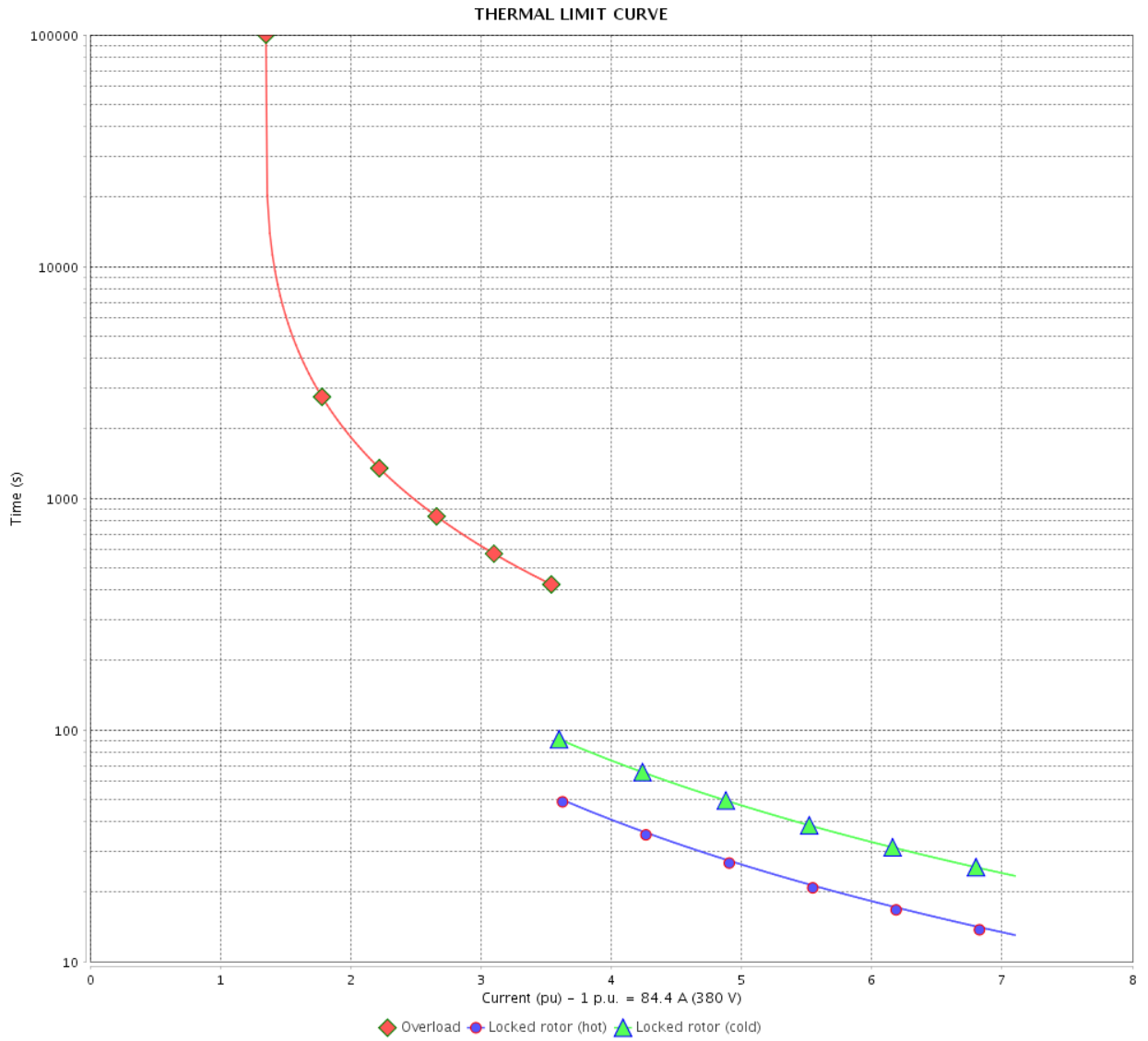
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Performance : 400 V 50 Hz 4P IE3

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

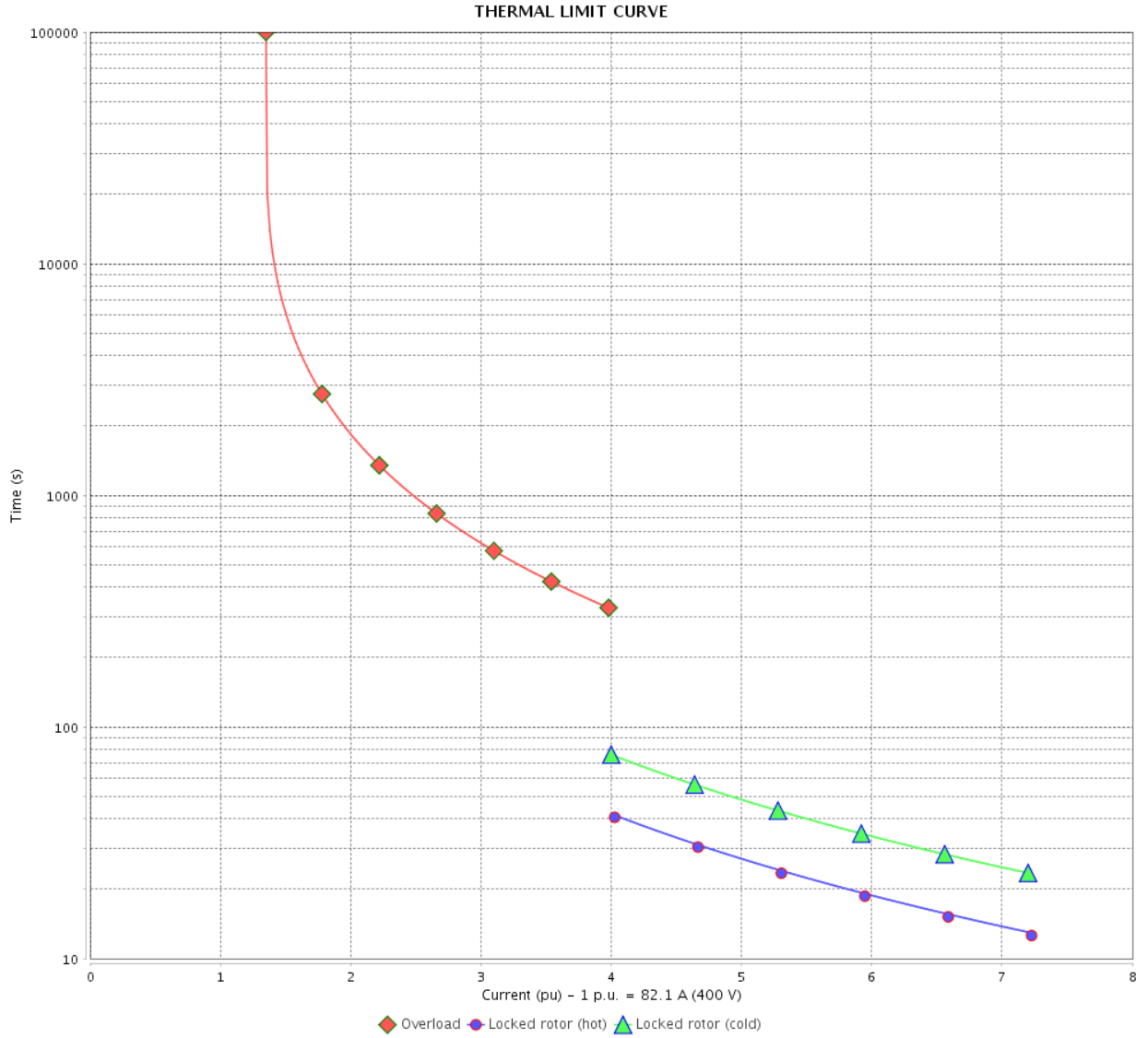
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THERMAL LIMIT CURVE

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THERMAL LIMIT CURVE



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Three-Phase

Product code : 14285047

Catalog # : 07518OT3ERB365T-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

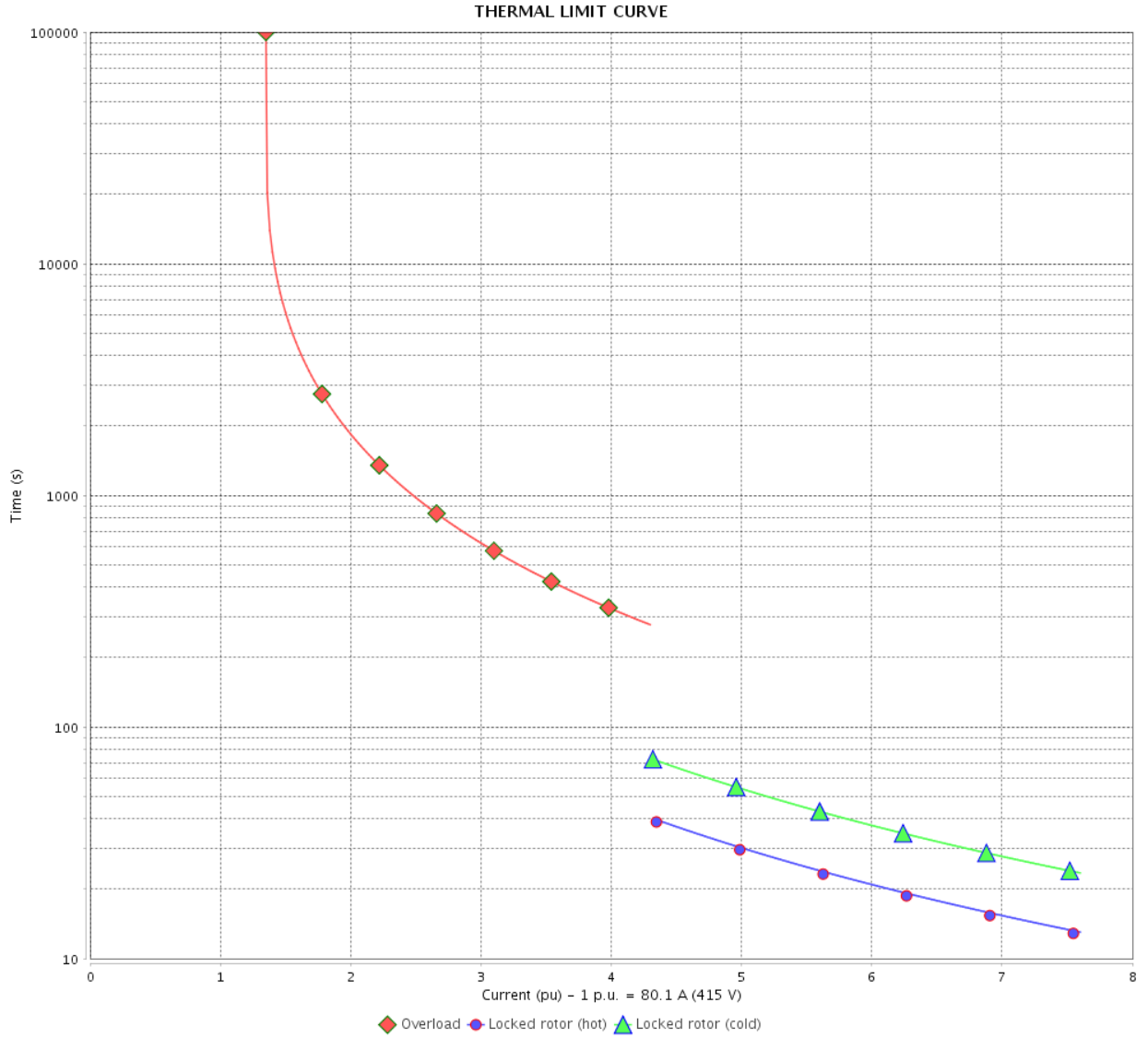
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



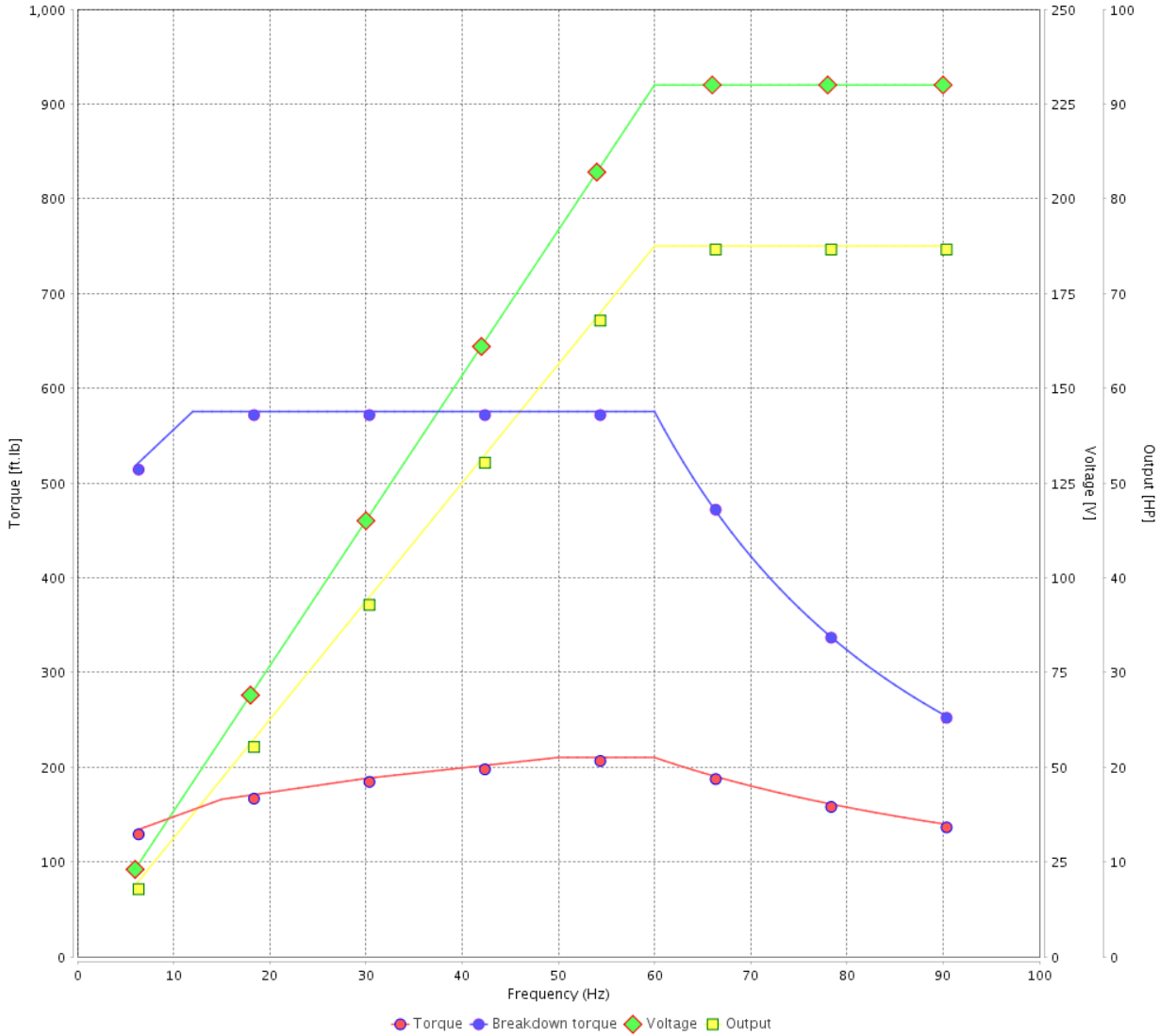
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Product code : 14285047

Catalog # : 07518OT3ERB365T-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 171/85.5 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

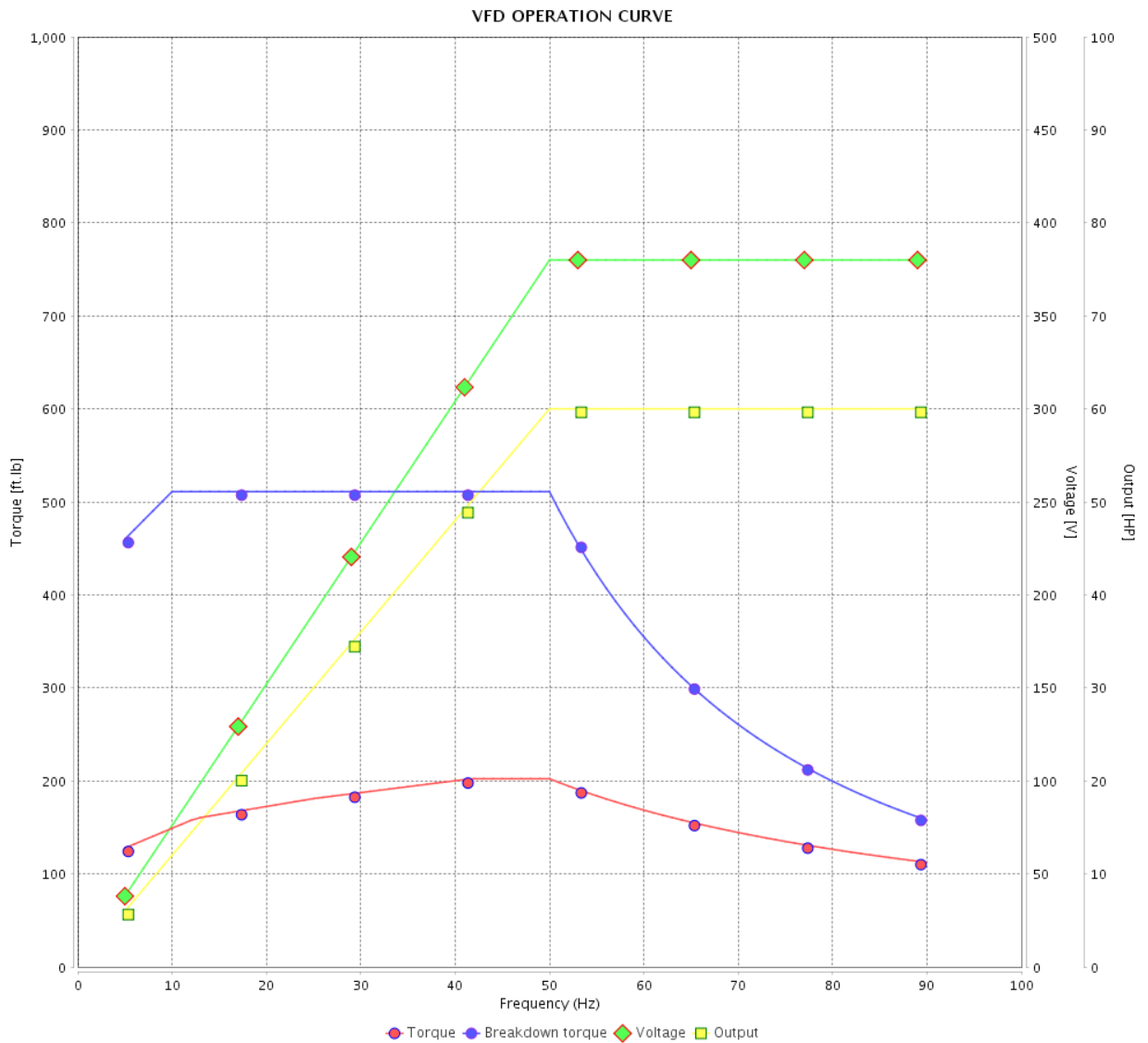


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Product code : 14285047

Catalog # : 07518OT3ERB365T-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

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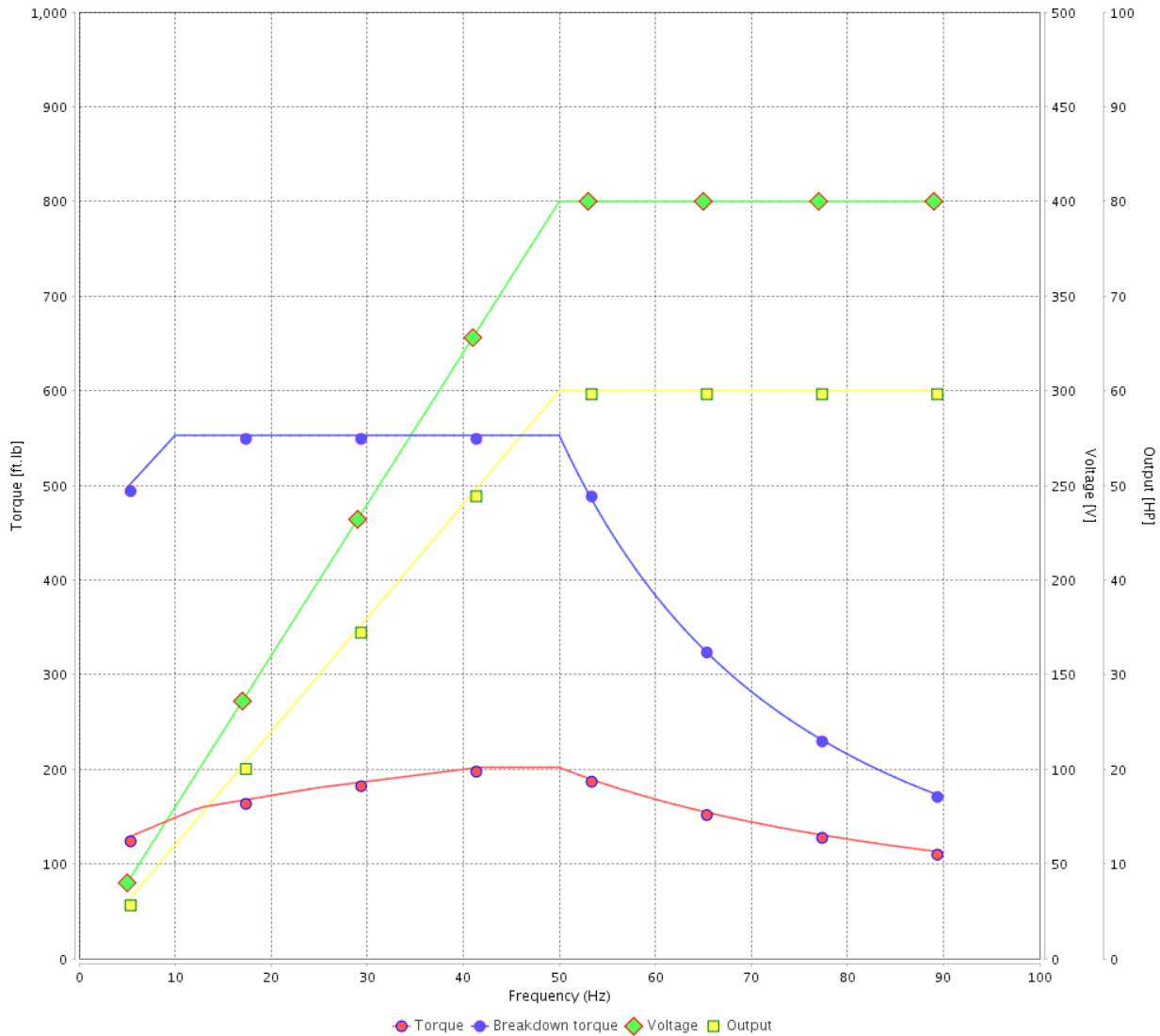
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Product code : 14285047

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VFD OPERATION 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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VFD OPERATION CURVE

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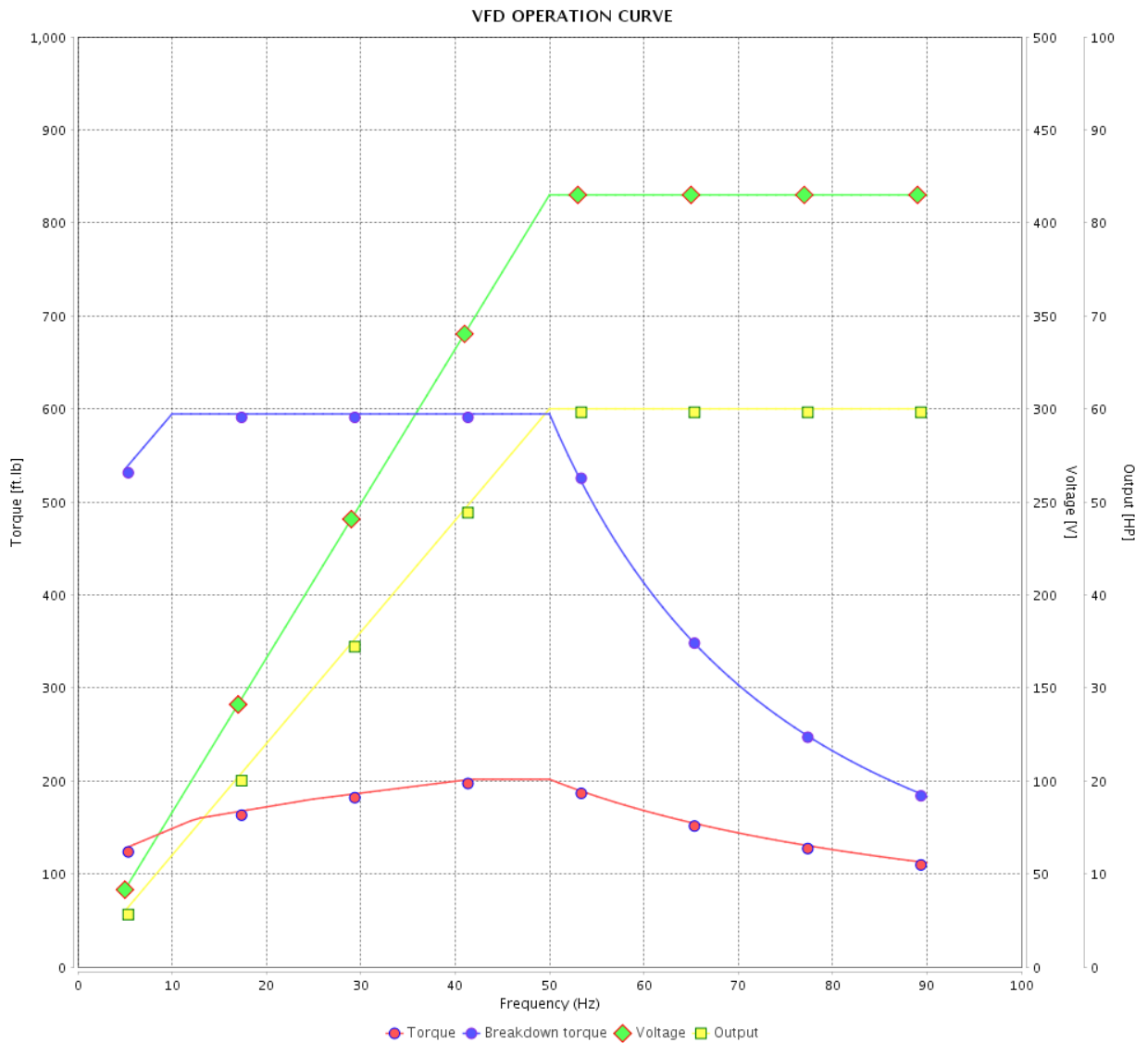


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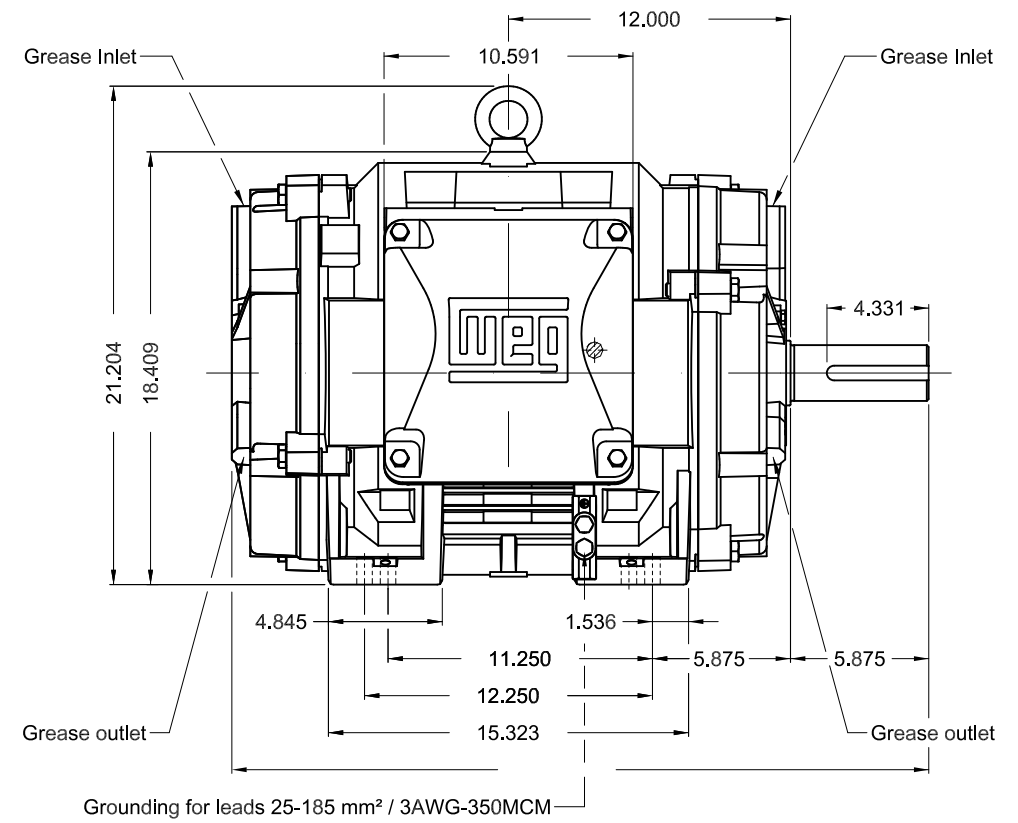
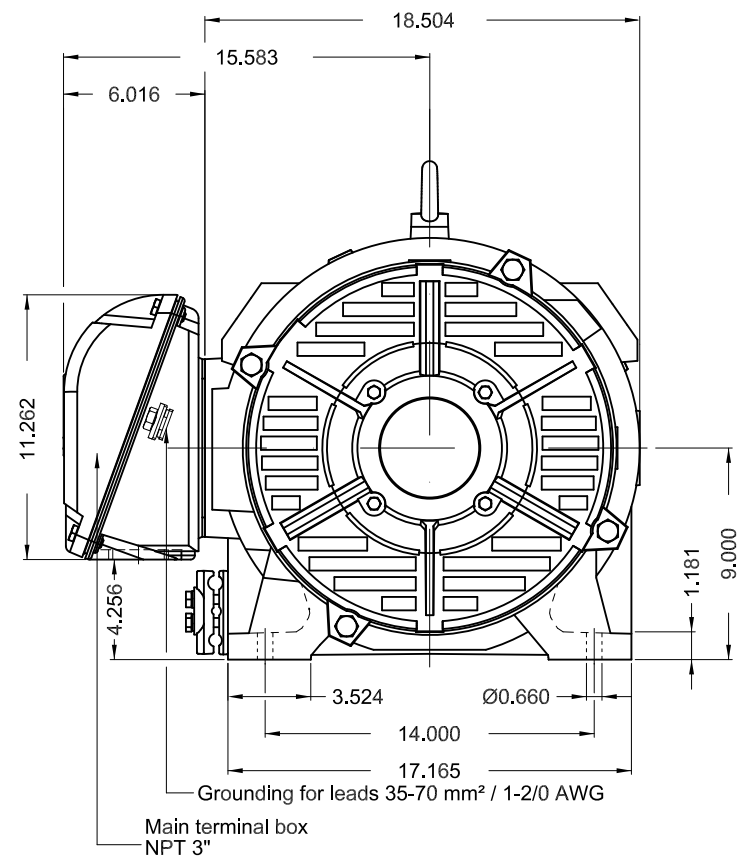


Performance : 415 V 50 Hz 4P IE3

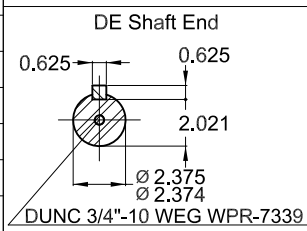
Rated current : 80.1 A
LRC : 7.6
Rated torque : 212 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 280 %
Rated speed : 1484 rpm

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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- 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

Dimensions in inches

XME A3

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