

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14045967	
				Catalog # : 07512OT3E405T-W40	
Frame : 404/5T		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 : 967 lb			
Protection degree : IP23		Moment of inertia (J) : 31.6 sq.ft.lb			
Design : B					
Output [HP]	75	60	60	60	60
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	172/85.9	84.8	81.6	79.5	79.5
L. R. Amperes [A]	1151/576	585	571	596	596
LRC [A]	6.7x(Code G)	6.9x(Code H)	7.0x(Code H)	7.5x(Code J)	7.5x(Code J)
No load current [A]	60.0/30.0	29.6	32.1	34.2	34.2
Rated speed [RPM]	1185	985	985	985	985
Slip [%]	1.25	1.50	1.50	1.50	1.50
Rated torque [ft.lb]	332	320	320	320	320
Locked rotor torque [%]	240	220	250	270	270
Breakdown torque [%]	270	250	280	300	300
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	19s (cold) 11s (hot)	18s (cold) 10s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)	19s (cold) 11s (hot)
Noise level ²	68.0 dB(A)				
Efficiency (%)	25%	94.0	93.2	93.2	93.2
	50%	94.1	93.3	93.3	93.3
	75%	94.5	93.7	93.7	93.7
	100%	94.5	93.7	93.7	93.7
Power Factor	25%	0.47	0.49	0.45	0.42
	50%	0.72	0.75	0.71	0.68
	75%	0.81	0.83	0.81	0.79
	100%	0.85	0.86	0.85	0.84
Bearing type		Drive end : 6316 C3	Non drive end : 6212 Z C3	Foundation loads	
Sealing		Without	Without	Max. traction : 2394 lb	
Lubrication interval		Bearing Seal : 20000 h	Bearing Seal : 20000 h	Max. compression : 3361 lb	
Lubricant amount		34 g	13 g		
Lubricant type		Mobil Polyrex EM			
Notes					
USABLE @208V 190A SF 1.15 SFA 218A					
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



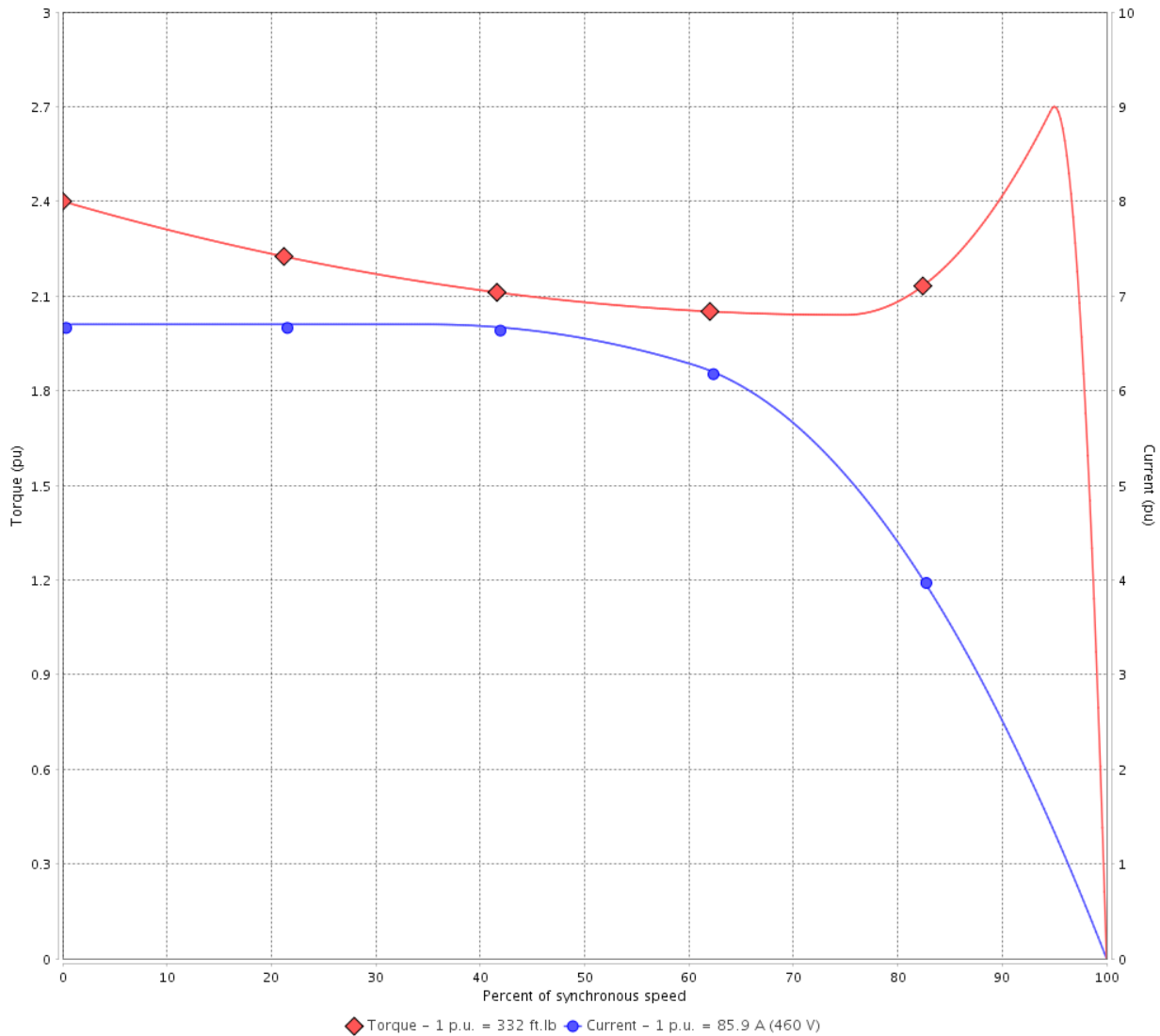
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14045967

Catalog # : 075120T3E405T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 172/85.9 A	Moment of inertia (J)	: 31.6 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 332 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



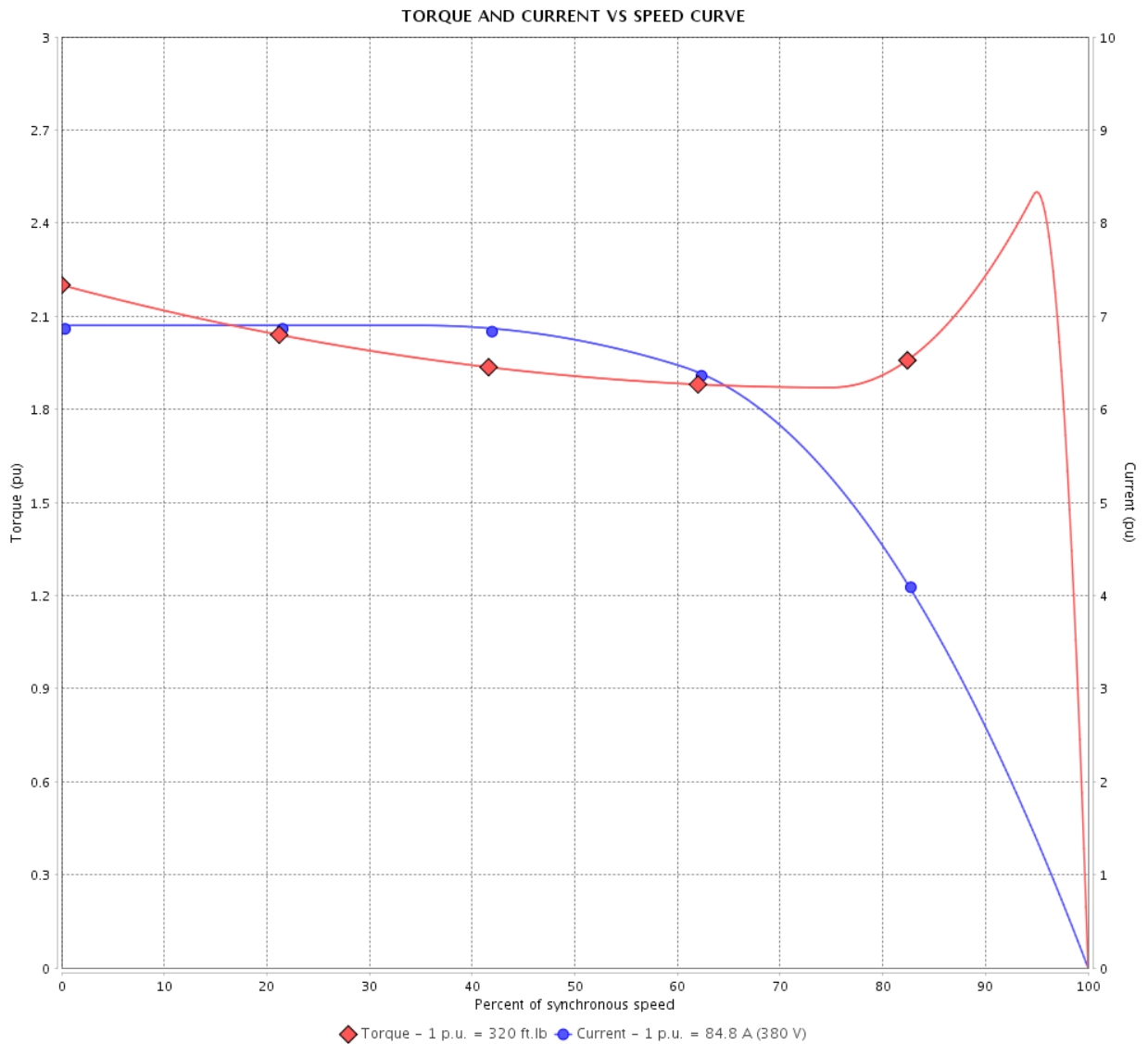
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14045967

Catalog # : 07512OT3E405T-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 84.8 A	Moment of inertia (J)	: 31.6 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



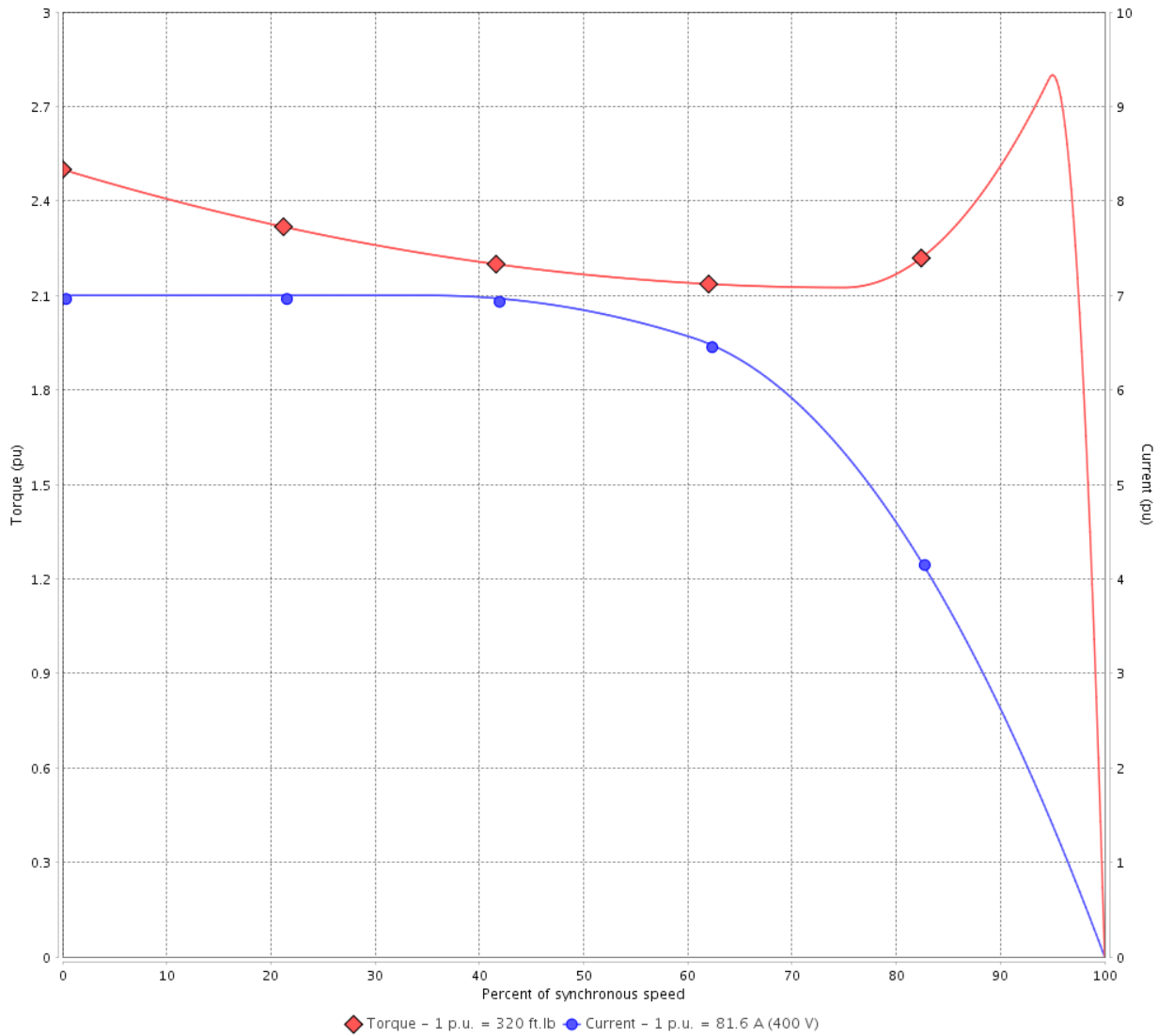
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14045967

Catalog # : 075120T3E405T-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 81.6 A	Moment of inertia (J)	: 31.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



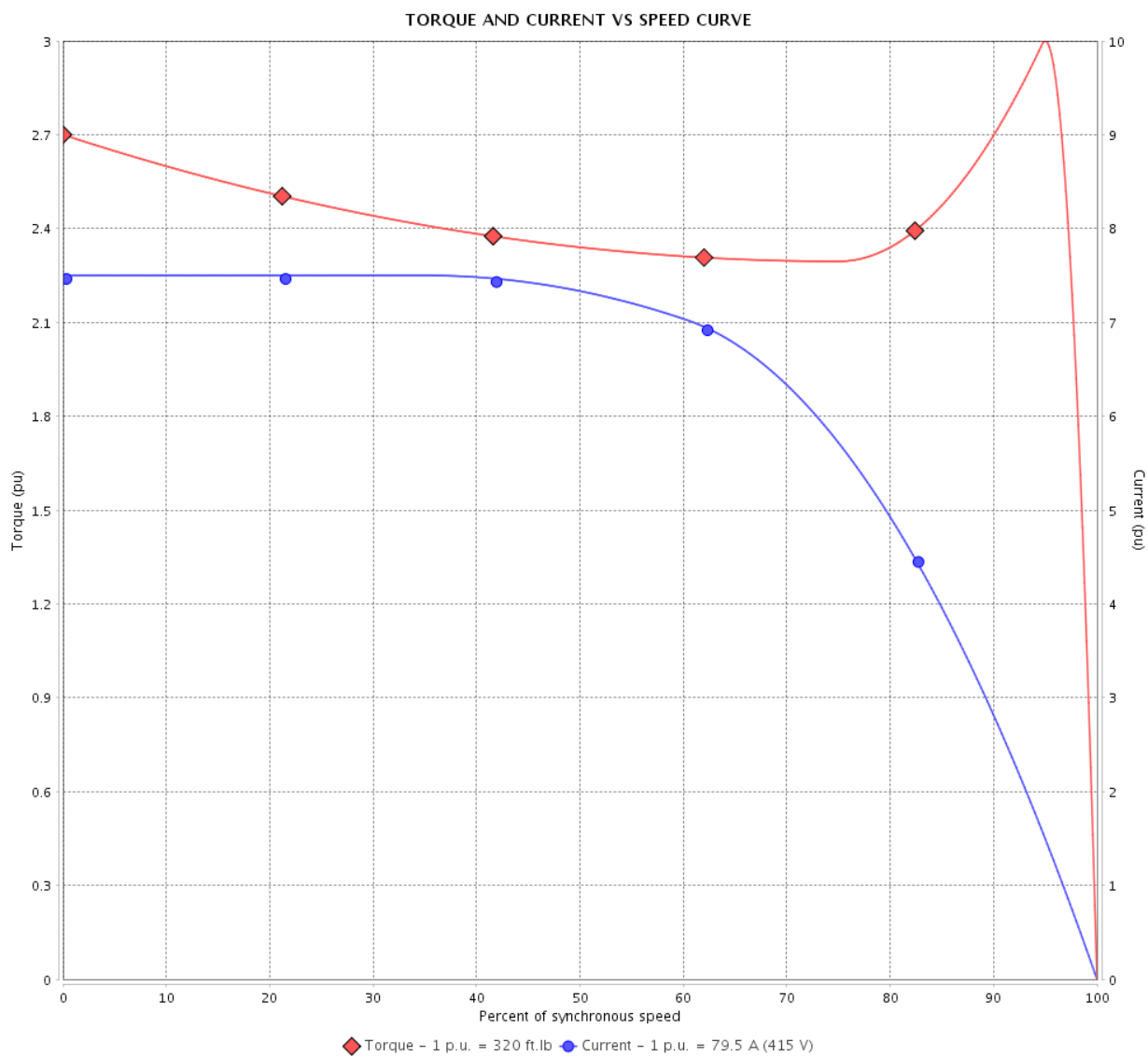
Three Phase Induction Motor - Squirrel Cage

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Three-Phase

Product code : 14045967

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LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 19s (cold) 11s (hot)

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LOAD PERFORMANCE CURVE

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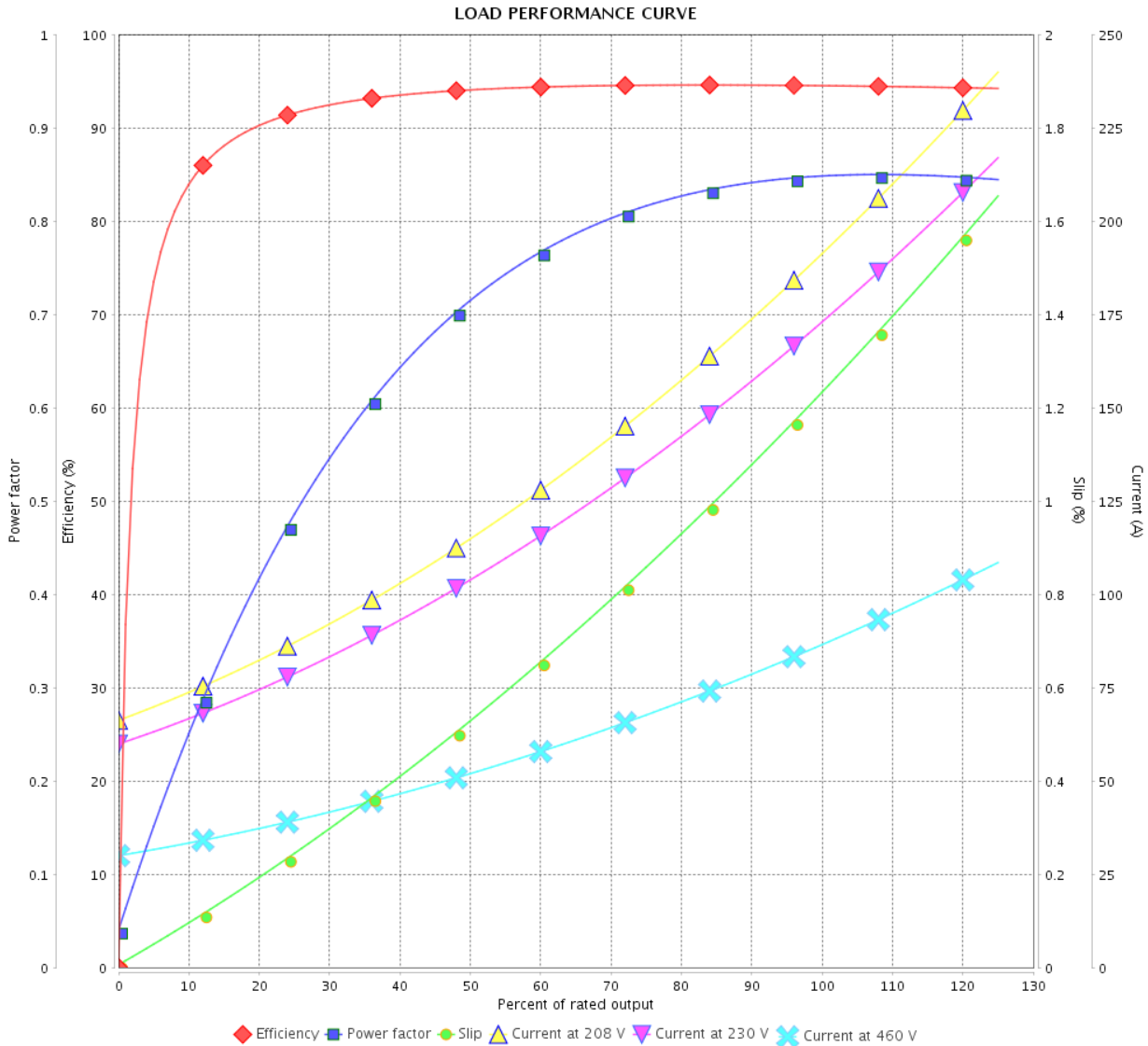


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Product code : 14045967

Catalog # : 075120T3E405T-W40



Performance : 230/460 V 60 Hz 6P

Rated current : 172/85.9 A
 LRC : 6.7
 Rated torque : 332 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 270 %
 Rated speed : 1185 rpm

Moment of inertia (J) : 31.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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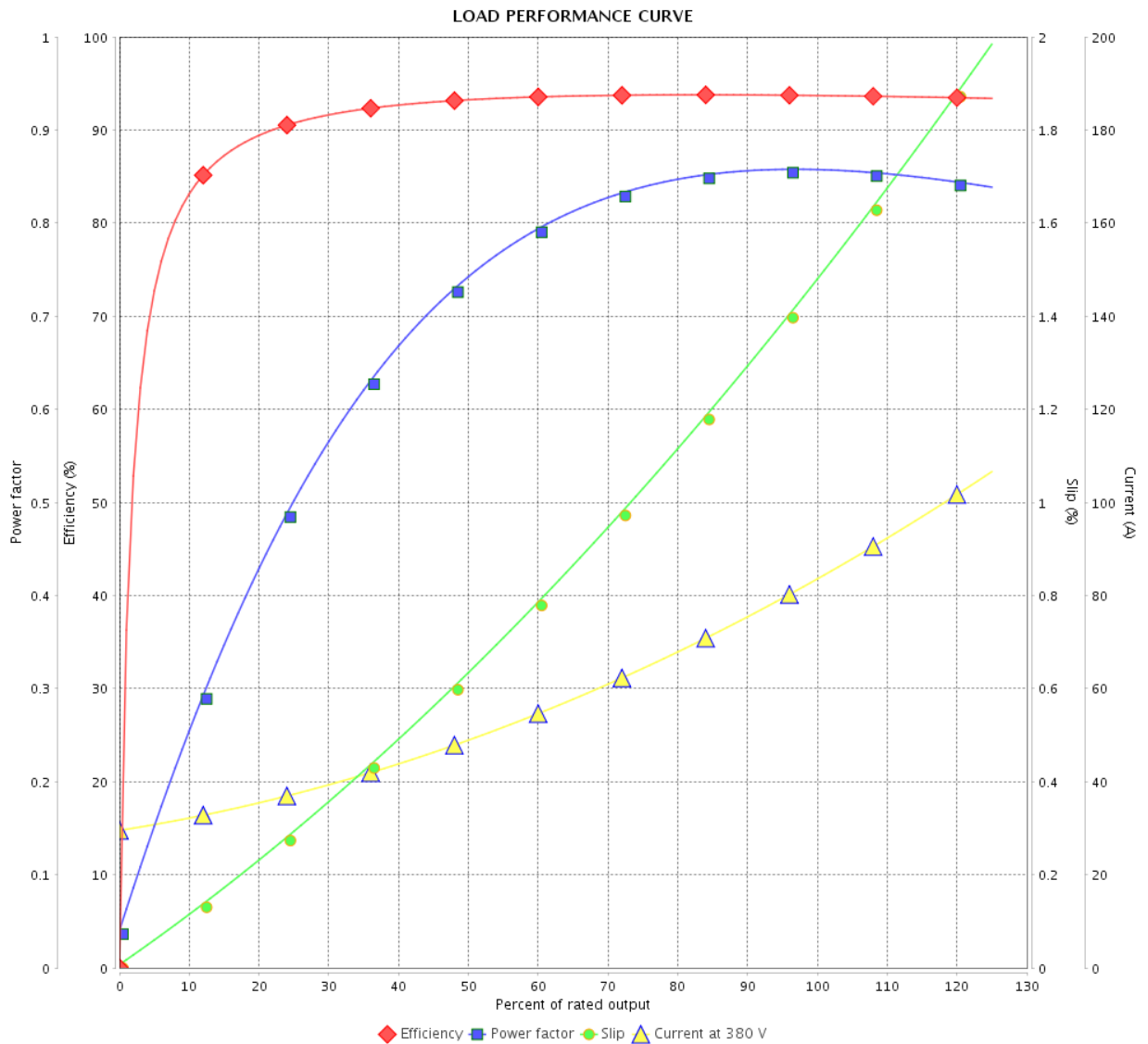


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Performance : 380 V 50 Hz 6P IE3

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 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 985 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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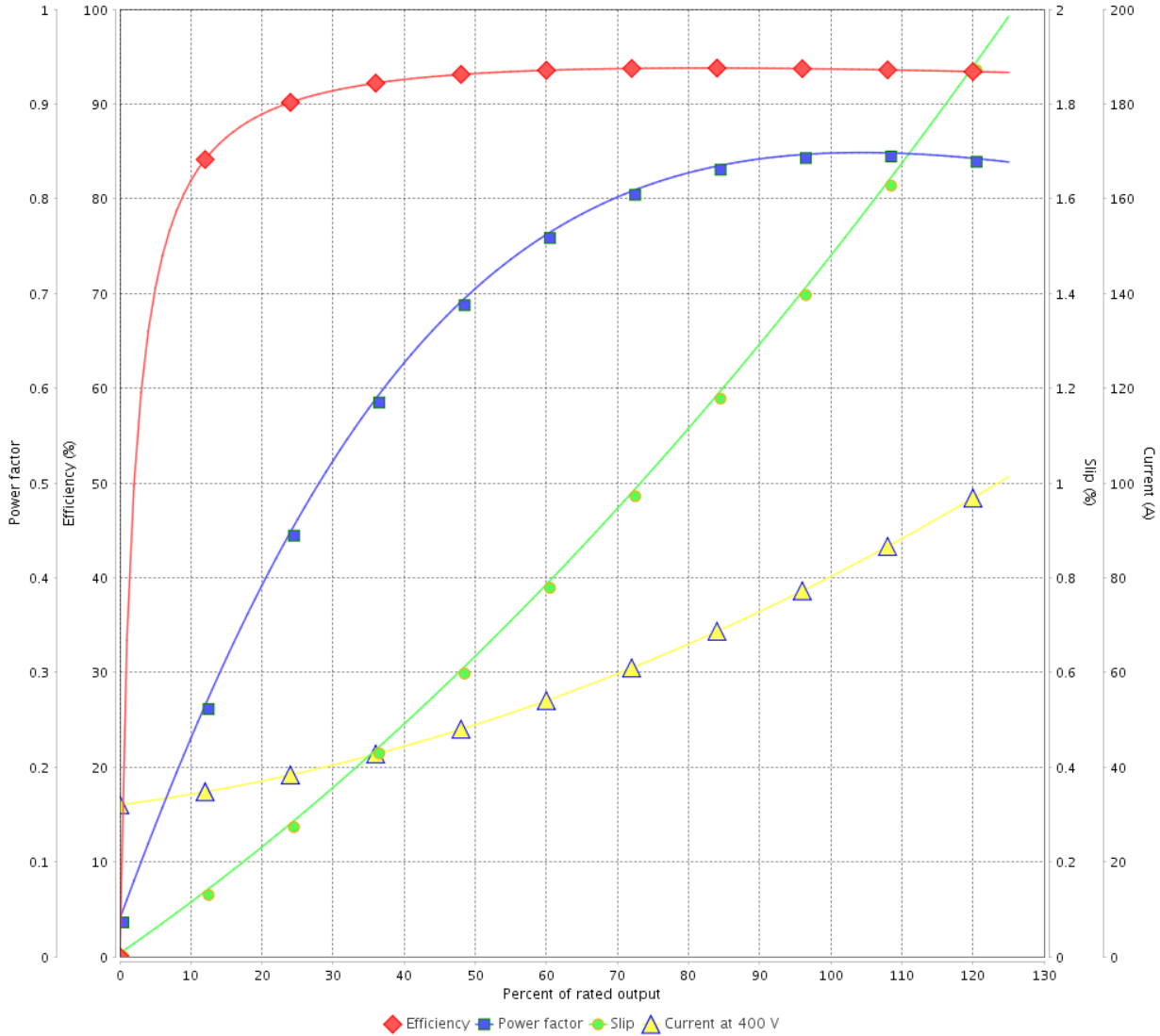
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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 81.6 A
 LRC : 7.0
 Rated torque : 320 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 280 %
 Rated speed : 985 rpm

Moment of inertia (J) : 31.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

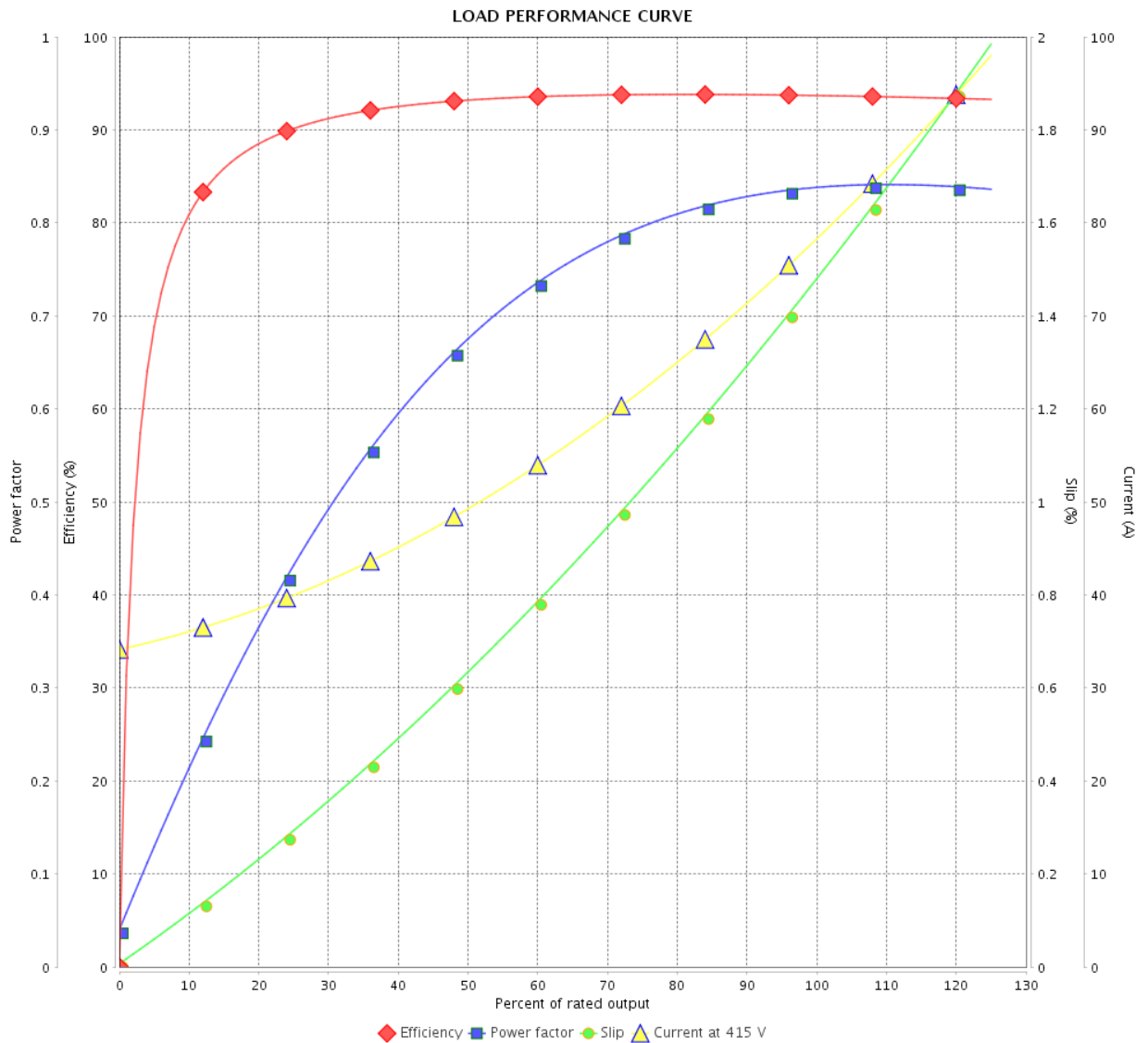


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 Rated speed : 985 rpm

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 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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Duty cycle : Cont.(S1)
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Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

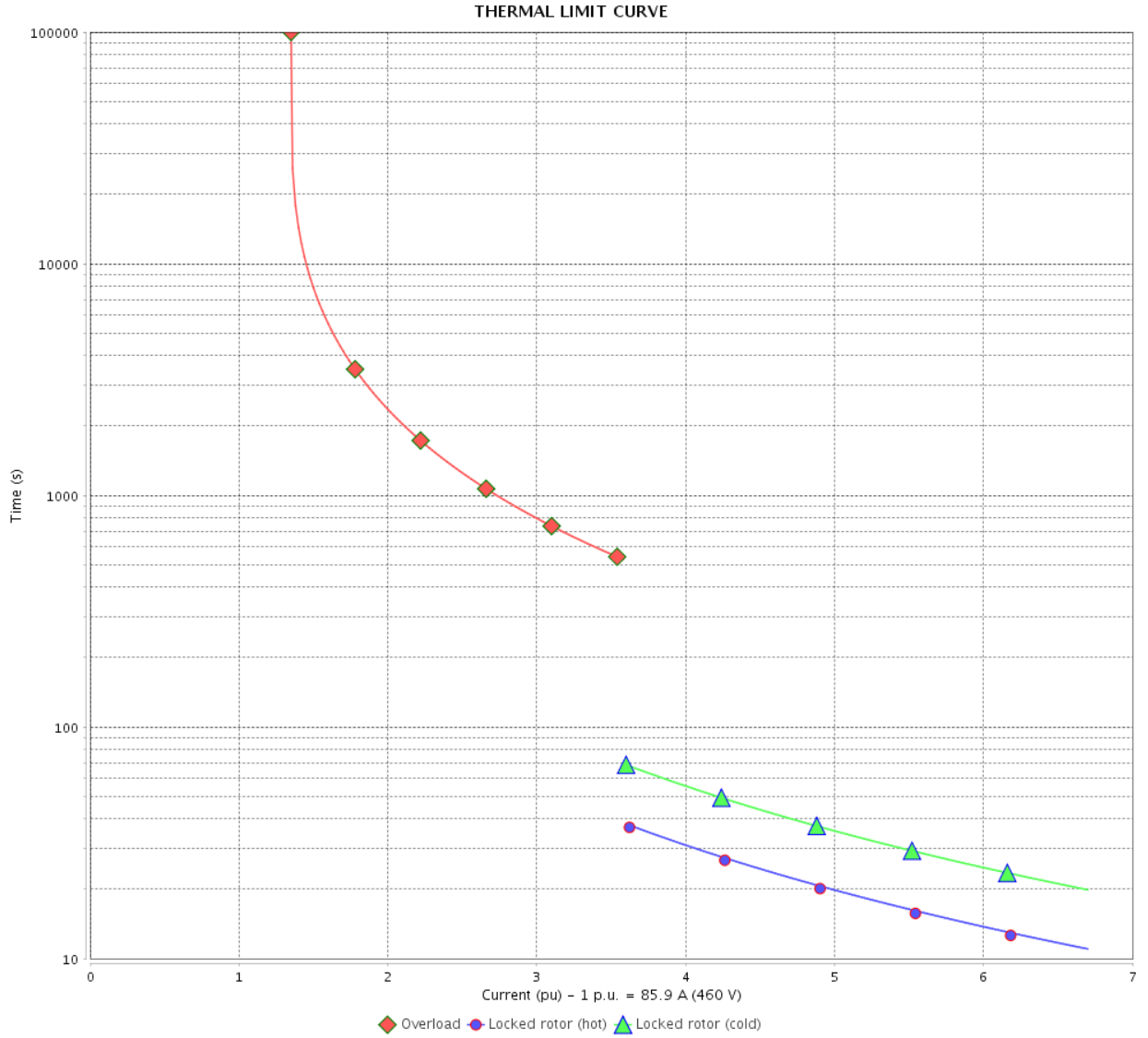
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THERMAL LIMIT CURVE

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Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

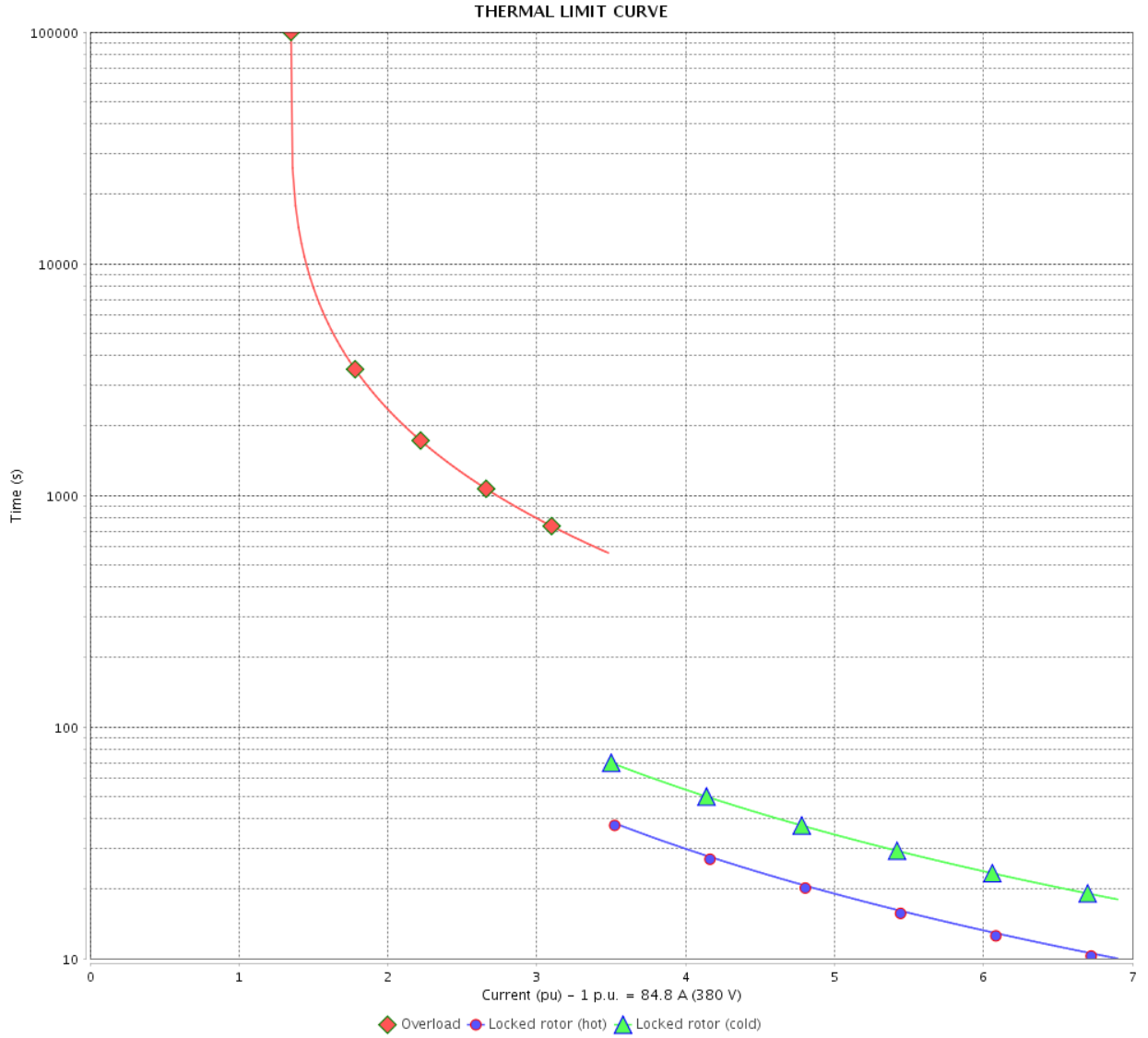
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Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

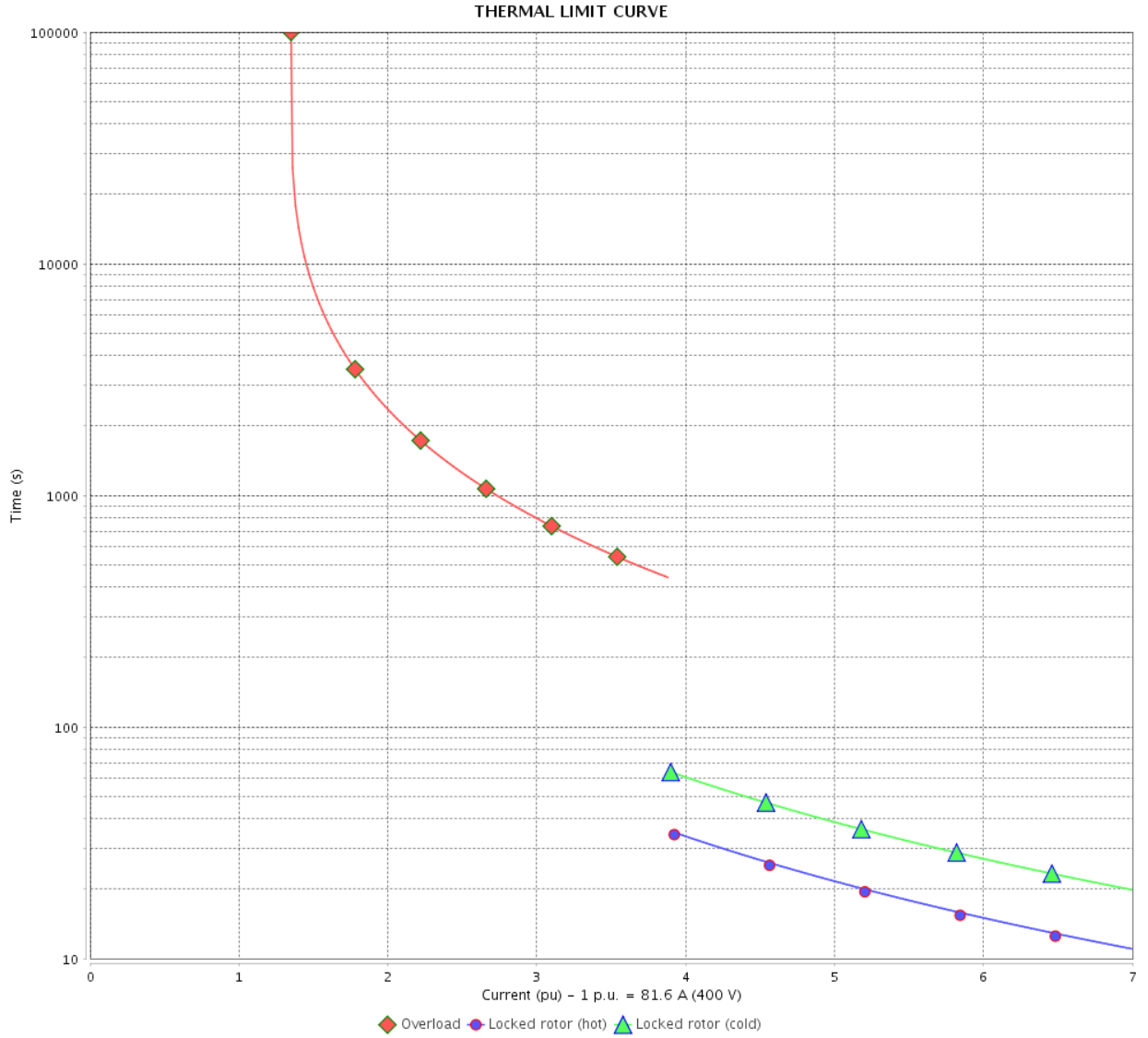
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



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LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 320 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

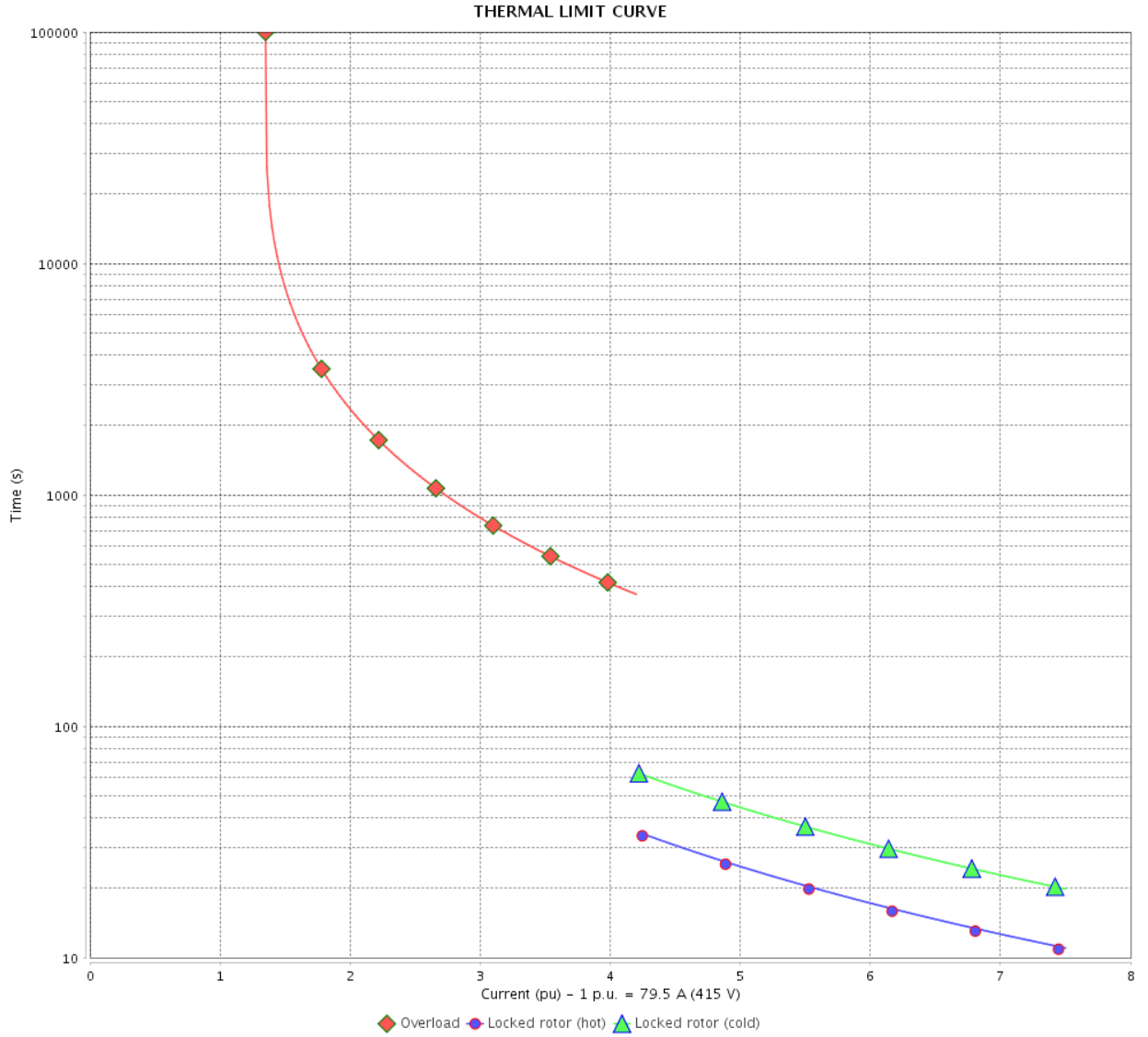
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



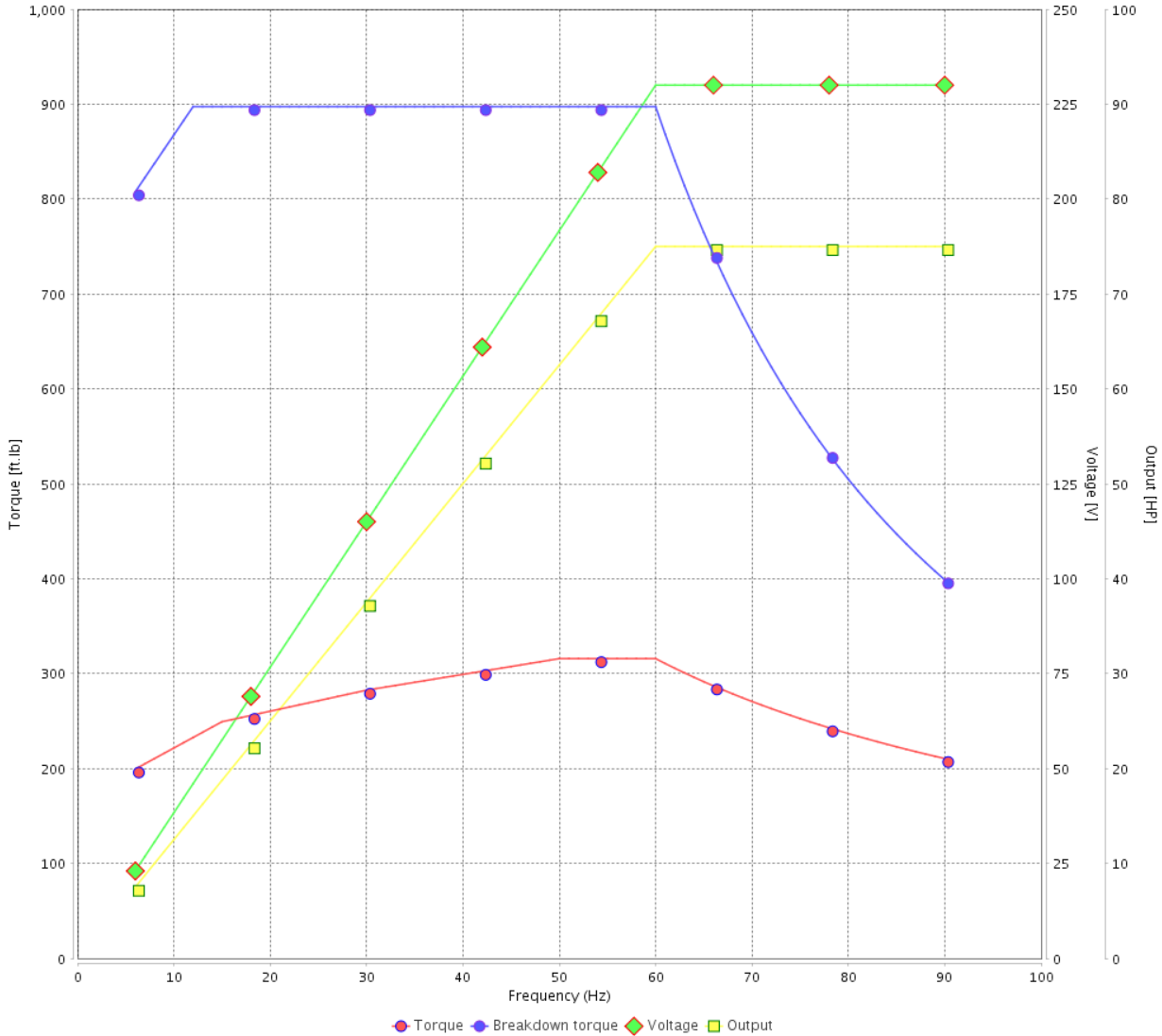
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 Rated speed : 1185 rpm

Moment of inertia (J) : 31.6 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
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 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

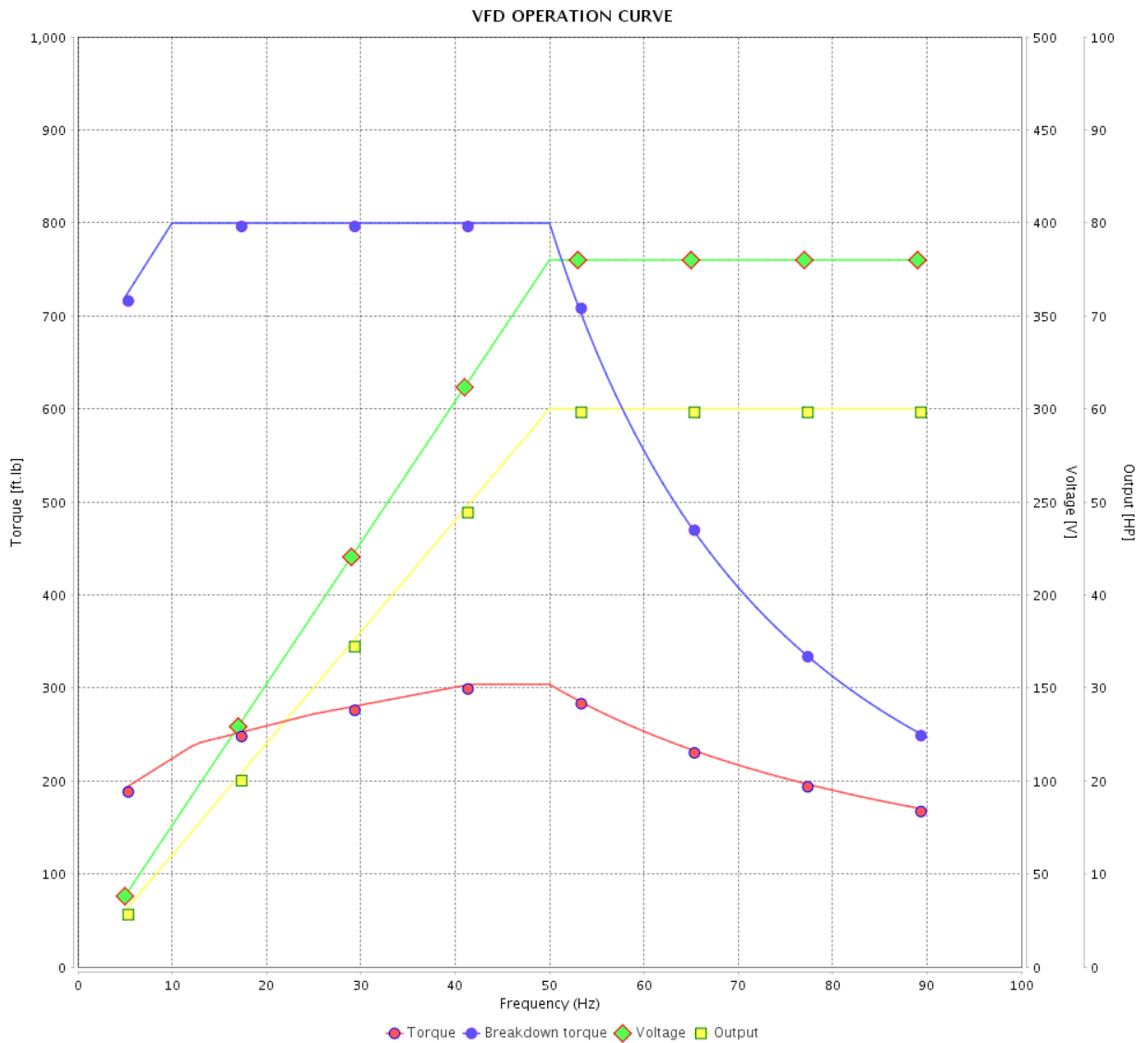


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Performance : 380 V 50 Hz 6P IE3

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 Breakdown torque : 250 %
 Rated speed : 985 rpm

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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



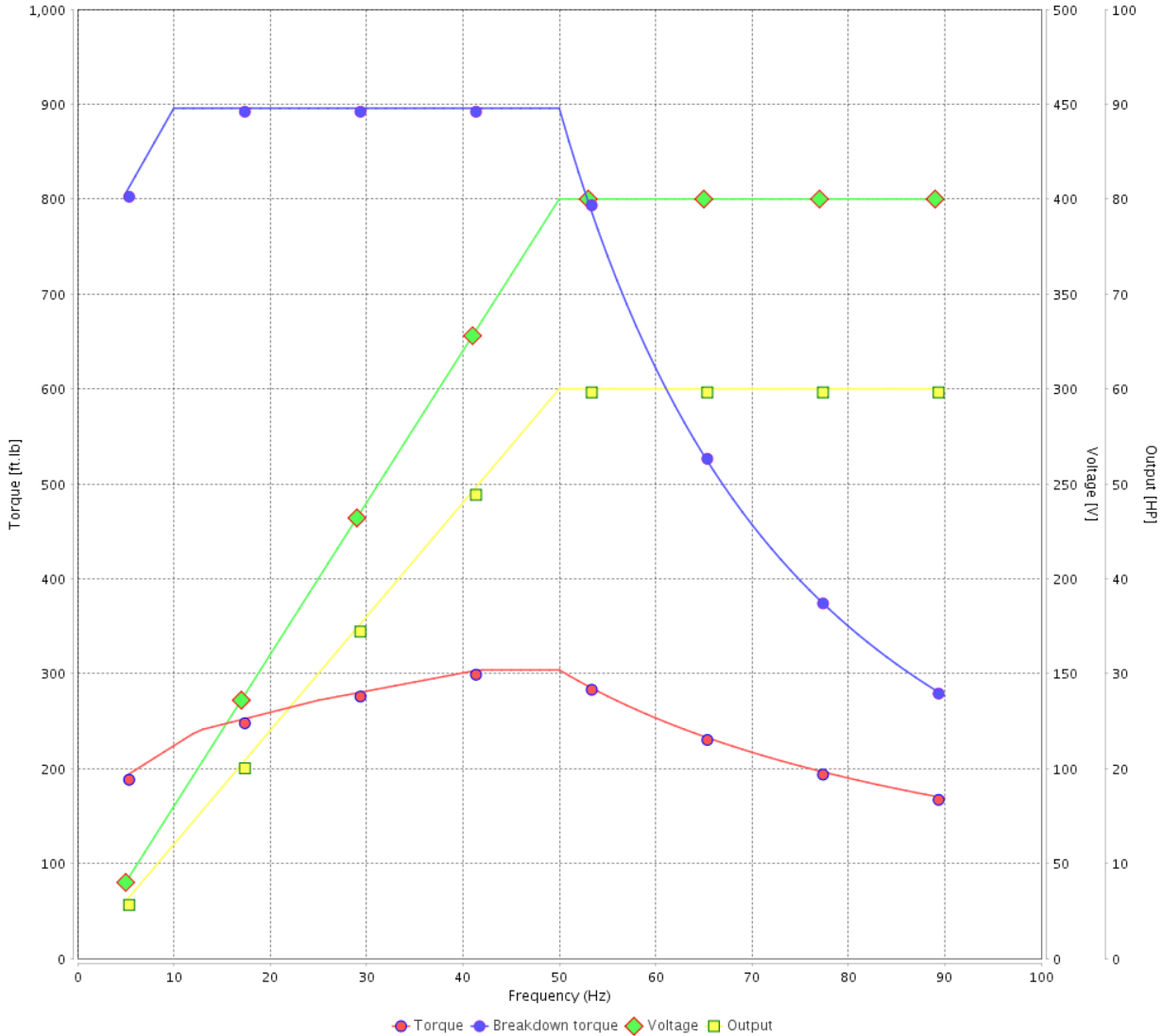
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VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

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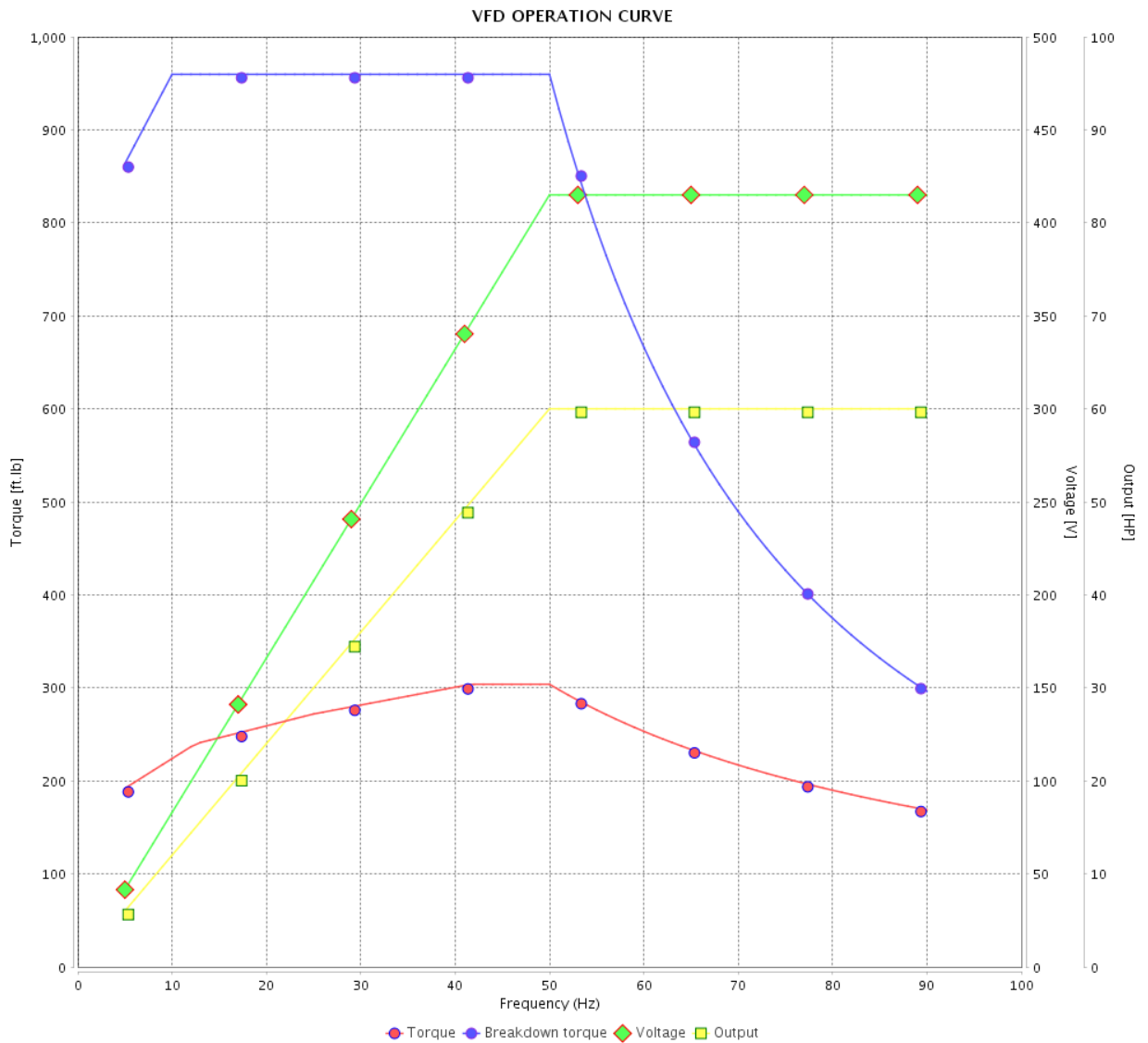


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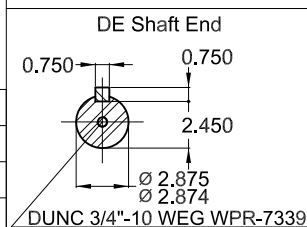
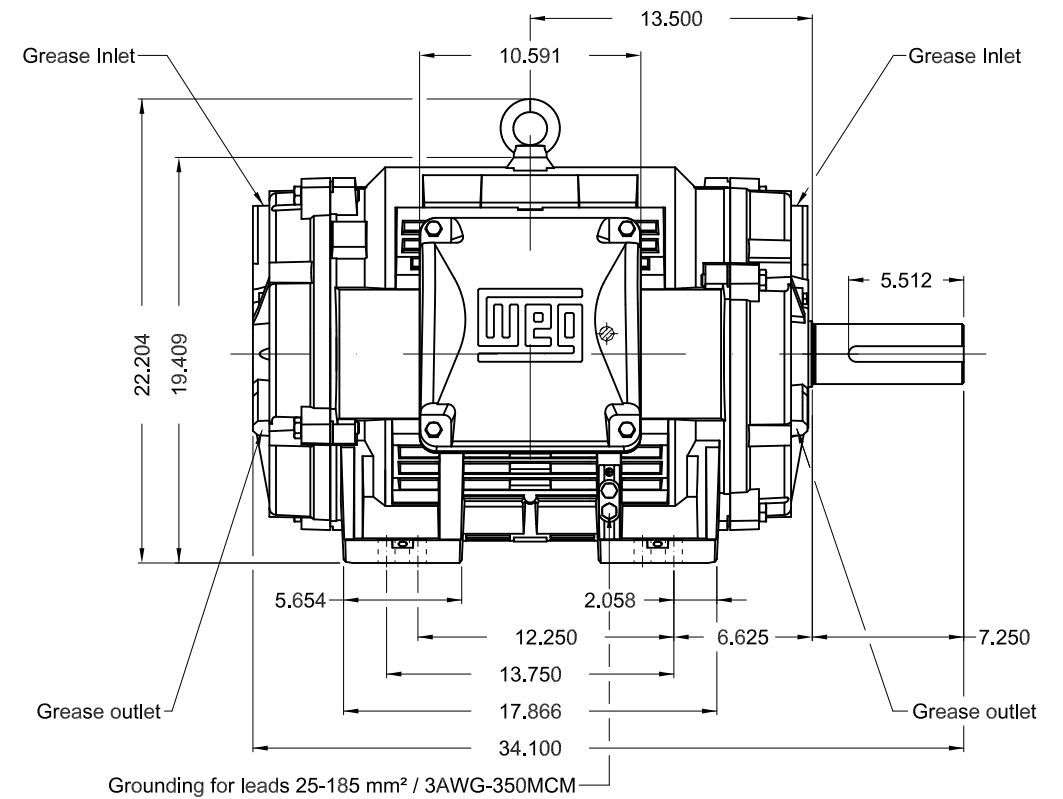
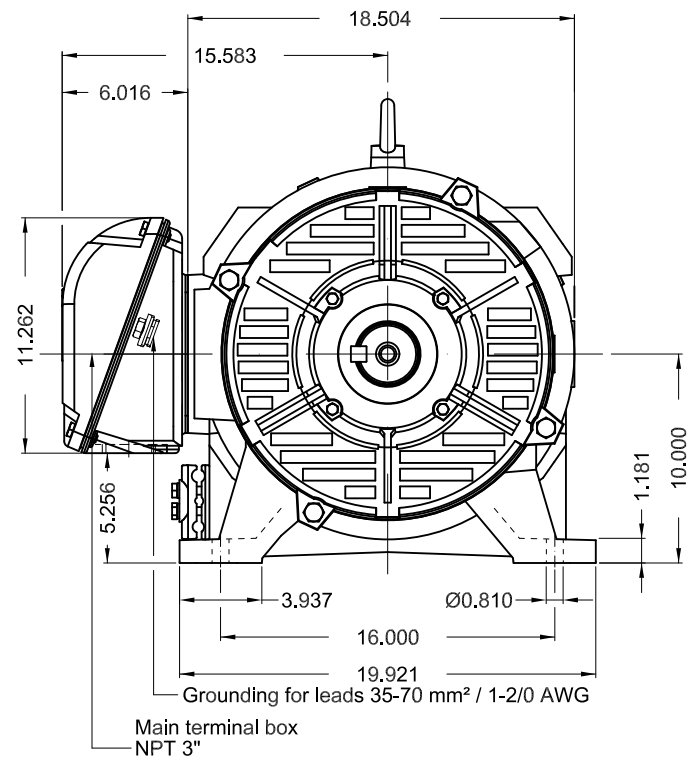


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Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B3R(D)

75 HP 06 Poles 60 Hz

A

1:9

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 404/5T IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD



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



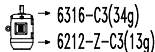
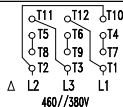
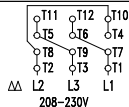
IEC 60034-1
 MOD.T01#FOXON



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

MODEL 075120T3E405T-W40
 MADE IN BRAZIL
 14045967

PH 3	FR 404/5T	HP(kW) 75.0(55.0)	Hz 60
V 230/460	A 172/85.9	RPM 1185	DES B
NEMA NOM EFF 94.5 %	INS. CL. F Δ T 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.85	SF 1.25	SFA 215/107
USABLE @208V 190 A	SF 1.15	SFA 218	
60HP 45kW 50Hz 380V 84.8A 985RPM SF1.00 EFF 93.7% (IE3)	ALT 1000 m.a.s.l.	968 Lbs	



MOBIL POLYREX EM
 20000 h