

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 JM Pump NEMA Premium Efficiency Three-Phase		Product code : 14483184	
				Catalog # : 01512OT3E284JM-W40	
Frame : 284JM		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 : 332 lb			
Protection degree : IP23		Moment of inertia (J) : 4.80 sq.ft.lb			
Design : B					
Output [HP]	15	10	10	10	10
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]	36.8/18.4	15.8	15.4	15.4	15.4
L. R. Amperes [A]	232/116	115	116	122	122
LRC [A]	6.3x(Code G)	7.3x(Code J)	7.5x(Code K)	7.9x(Code K)	7.9x(Code K)
No load current [A]	15.6/7.80	7.80	8.40	8.90	8.90
Rated speed [RPM]	1180	980	985	985	985
Slip [%]	1.67	2.00	1.50	1.50	1.50
Rated torque [ft.lb]	66.8	53.6	53.3	53.3	53.3
Locked rotor torque [%]	260	290	330	360	360
Breakdown torque [%]	260	320	350	380	380
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	28s (cold) 16s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	32s (cold) 18s (hot)	28s (cold) 16s (hot)
Noise level ²	59.0 dB(A)				
Efficiency (%)	25%	90.8	88.3	88.4	88.4
	50%	91.0	88.6	88.6	88.6
	75%	91.7	89.0	89.0	89.0
	100%	91.7	89.1	89.1	89.1
Power Factor	25%	0.42	0.37	0.33	0.31
	50%	0.67	0.62	0.58	0.55
	75%	0.77	0.75	0.71	0.68
	100%	0.82	0.81	0.79	0.76
Bearing type	: Drive end : 6311 Z C3	: Non drive end : 6211 Z C3	Foundation loads		
Sealing	: Without	: Without	Max. traction		
	: Bearing Seal	: Bearing Seal	Max. compression		
Lubrication interval	: 20000 h	: 20000 h			
Lubricant amount	: 18 g	: 11 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 40.7A SF 1.15 SFA 46.8A					
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



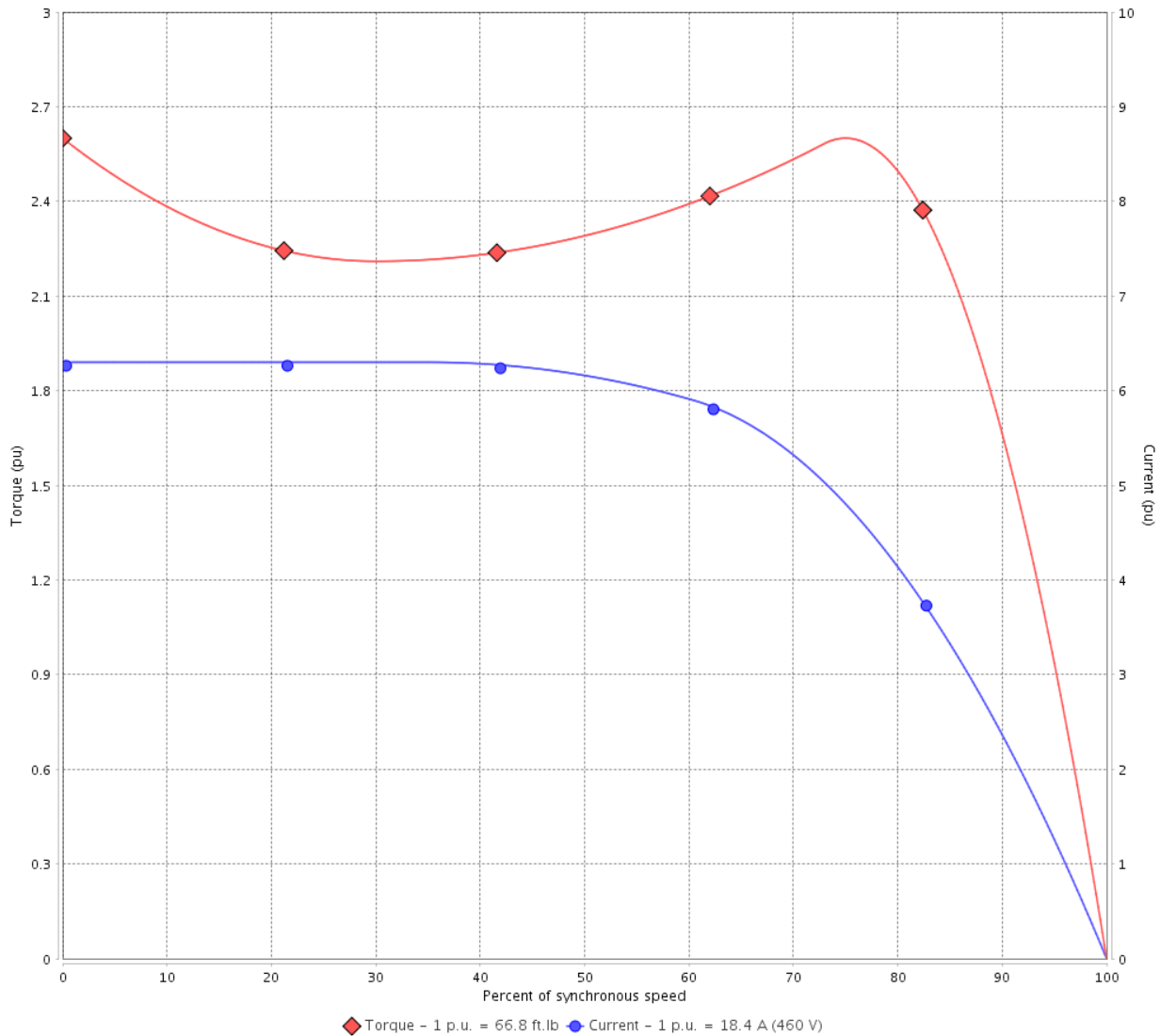
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14483184

Catalog # : 015120T3E284JM-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 36.8/18.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 66.8 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1180 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



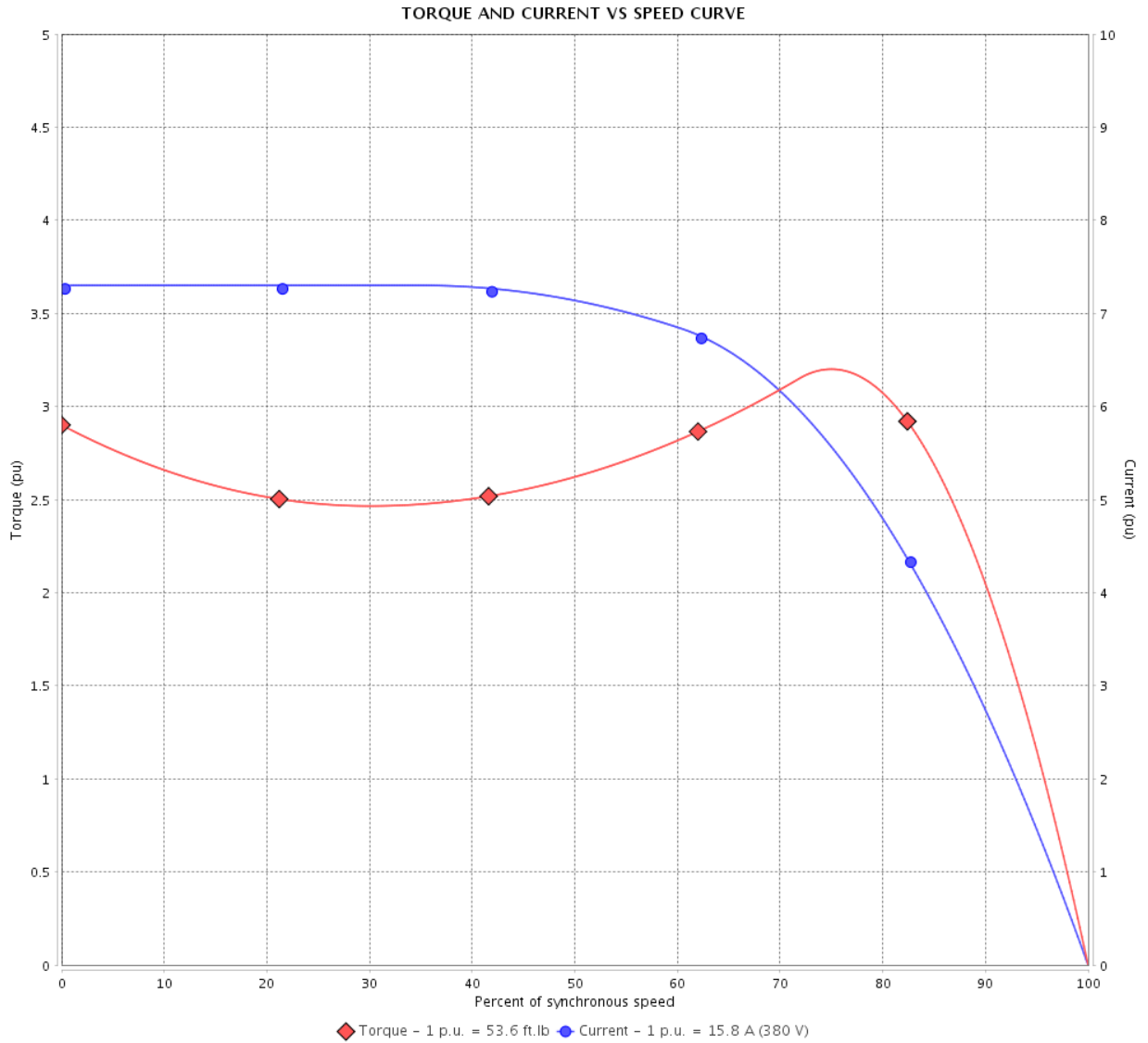
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14483184

Catalog # : 01512OT3E284JM-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 15.8 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 53.6 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 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



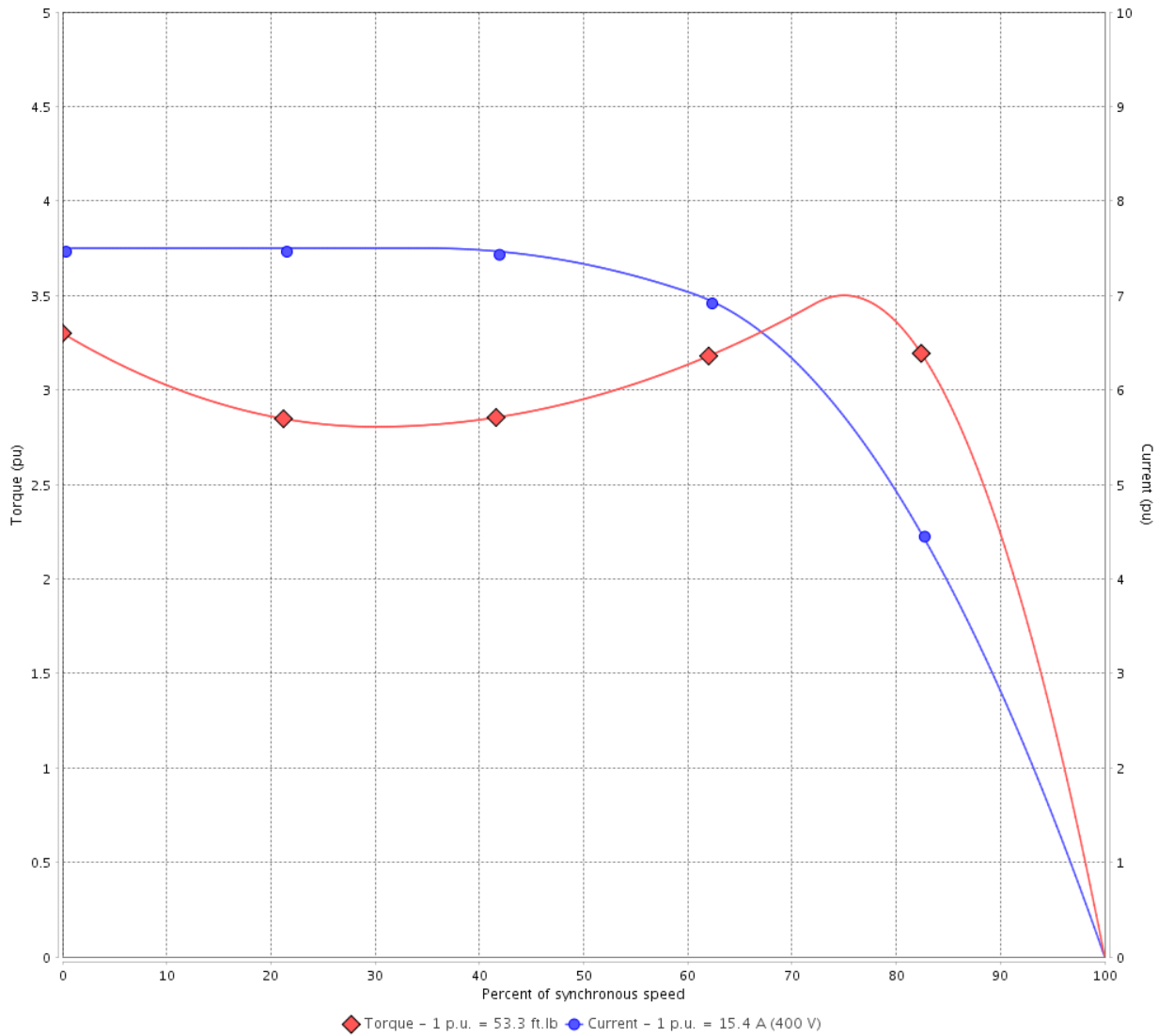
Customer :

Product line : W40 JM Pump NEMA Premium Efficiency Three-Phase

Product code : 14483184

Catalog # : 015120T3E284JM-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 15.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 330 %	Service factor	: 1.00
Breakdown torque	: 350 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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

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TORQUE AND CURRENT VS SPEED CURVE



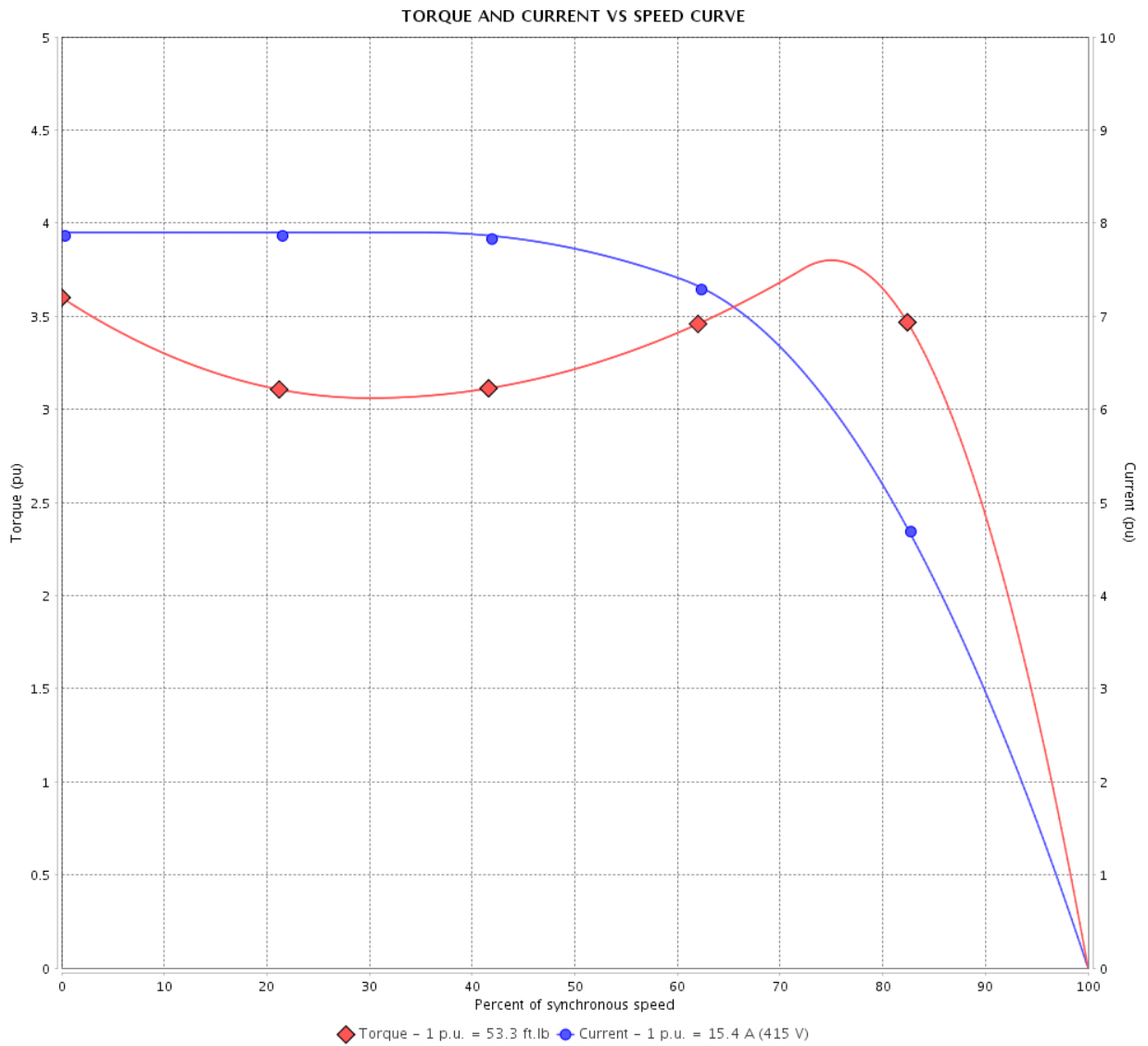
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Performance : 415 V 50 Hz 6P IE3

Rated current	: 15.4 A	Moment of inertia (J)	: 4.80 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

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

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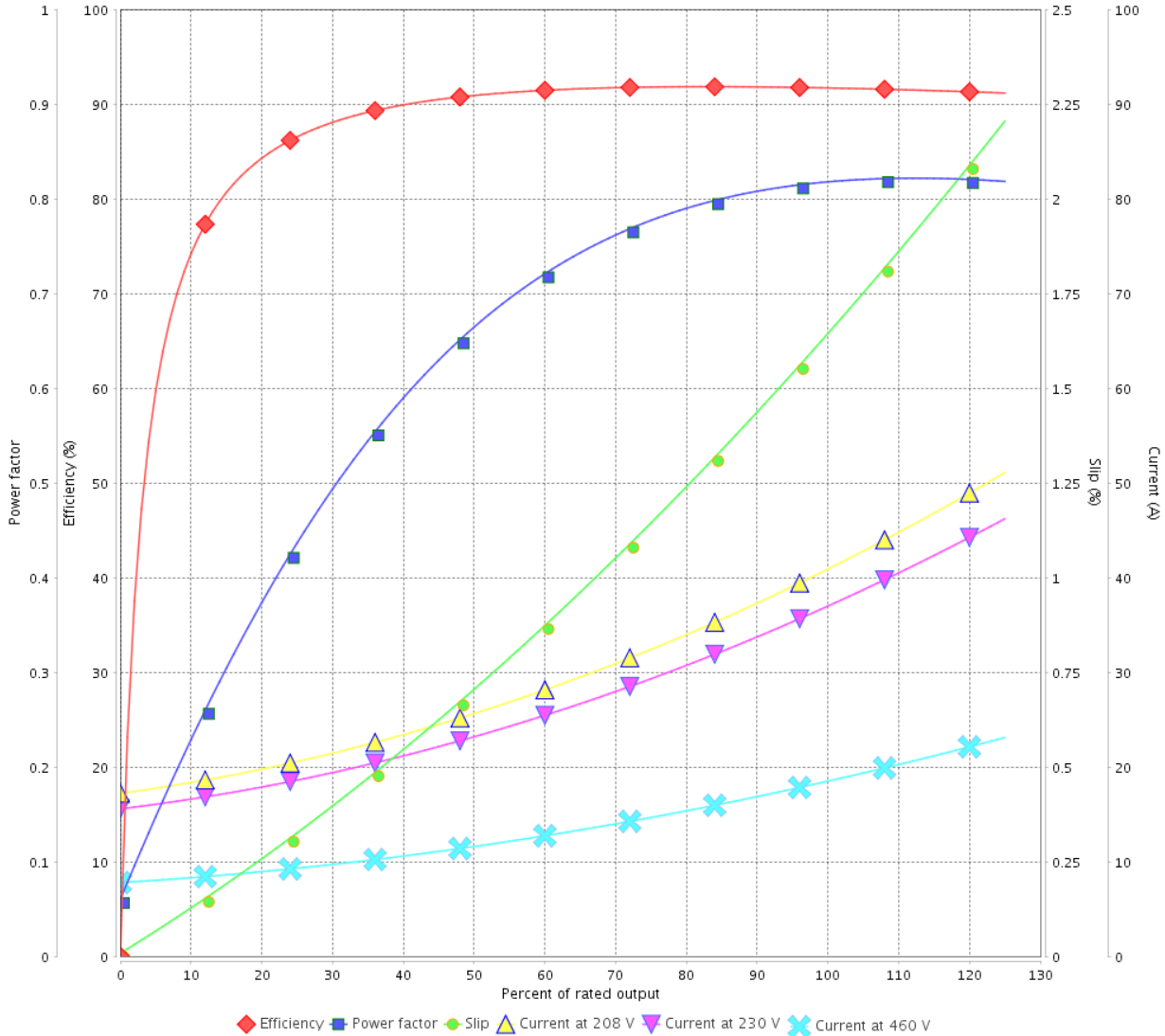
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Product code : 14483184

Catalog # : 015120T3E284JM-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 36.8/18.4 A
 LRC : 6.3
 Rated torque : 66.8 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 4.80 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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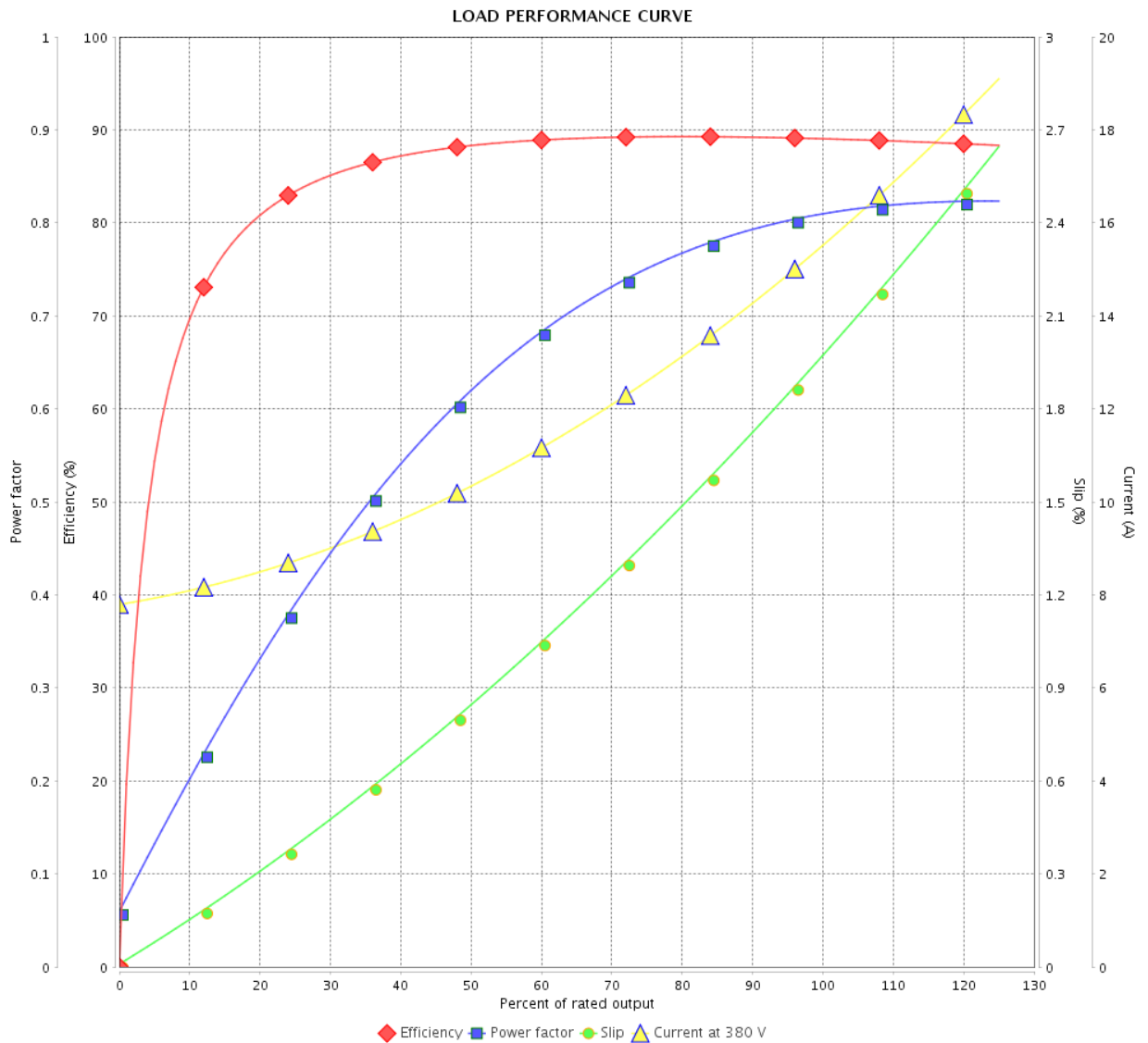


Customer :

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Product code : 14483184

Catalog # : 01512OT3E284JM-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 15.8 A
 LRC : 7.3
 Rated torque : 53.6 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 320 %
 Rated speed : 980 rpm

Moment of inertia (J) : 4.80 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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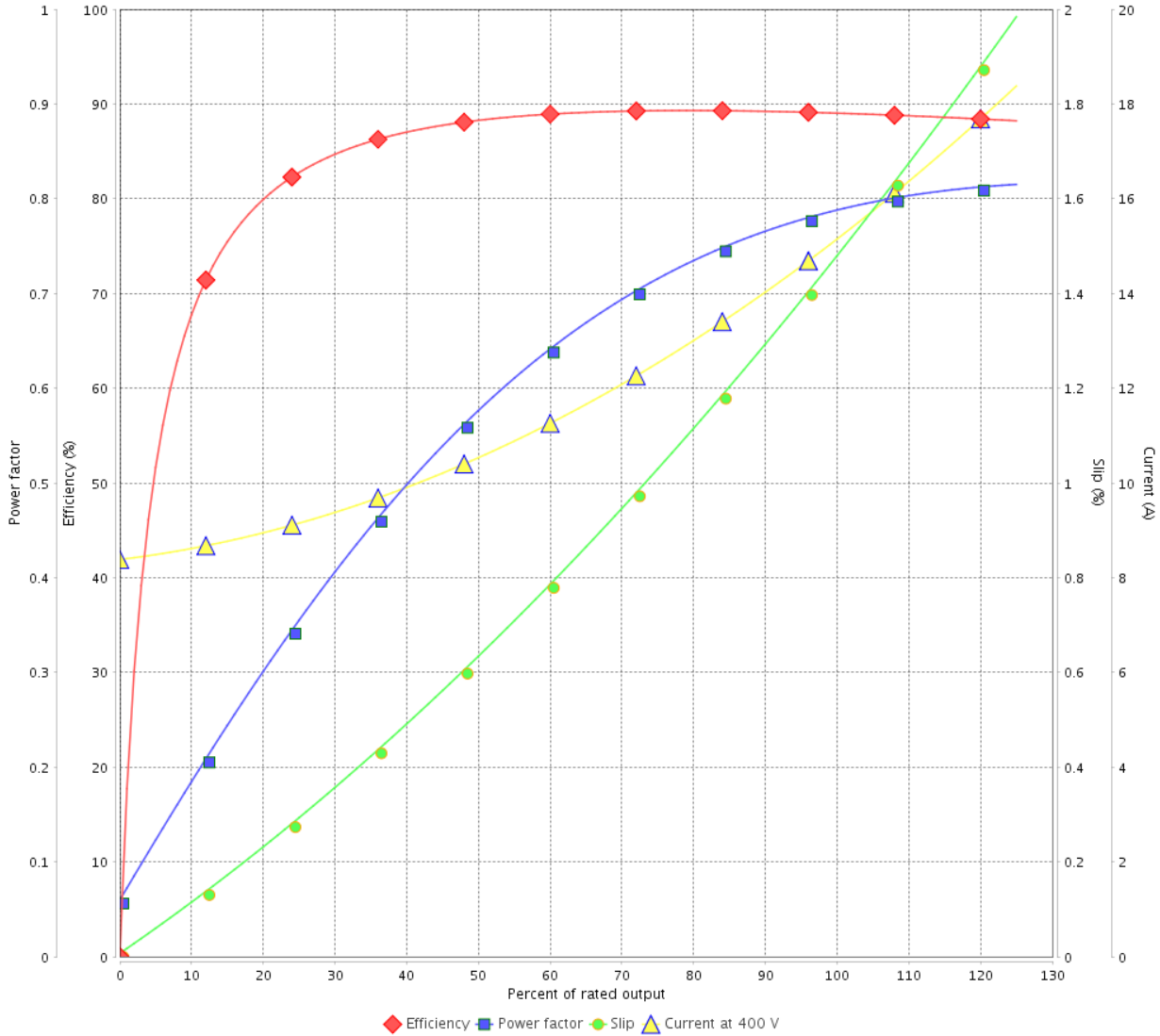
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Performance : 400 V 50 Hz 6P IE3

Rated current : 15.4 A
 LRC : 7.5
 Rated torque : 53.3 ft.lb
 Locked rotor torque : 330 %
 Breakdown torque : 350 %
 Rated speed : 985 rpm

Moment of inertia (J) : 4.80 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

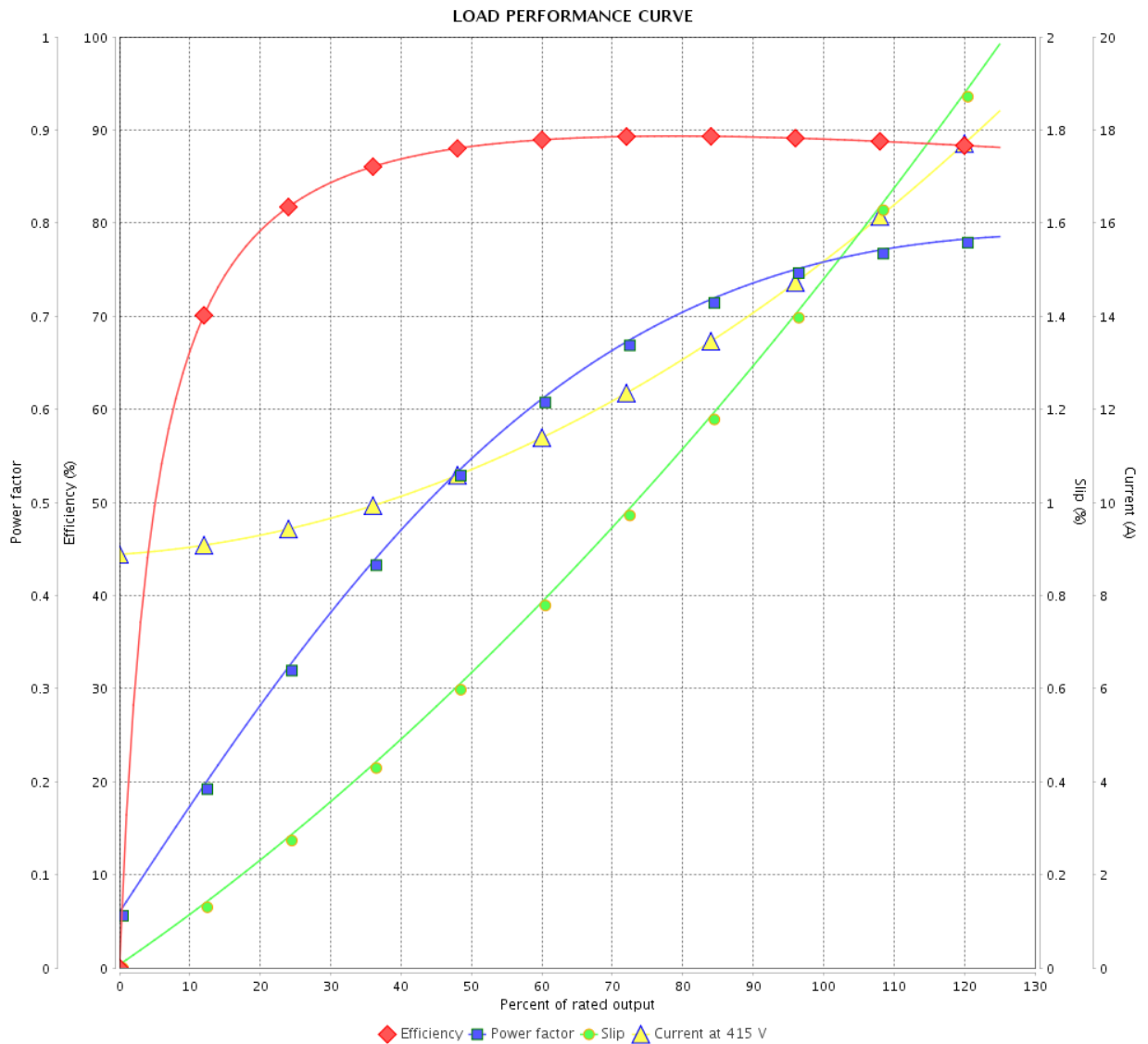


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 LRC : 7.9
 Rated torque : 53.3 ft.lb
 Locked rotor torque : 360 %
 Breakdown torque : 380 %
 Rated speed : 985 rpm

Moment of inertia (J) : 4.80 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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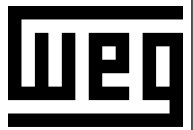
Heating constant

Cooling constant

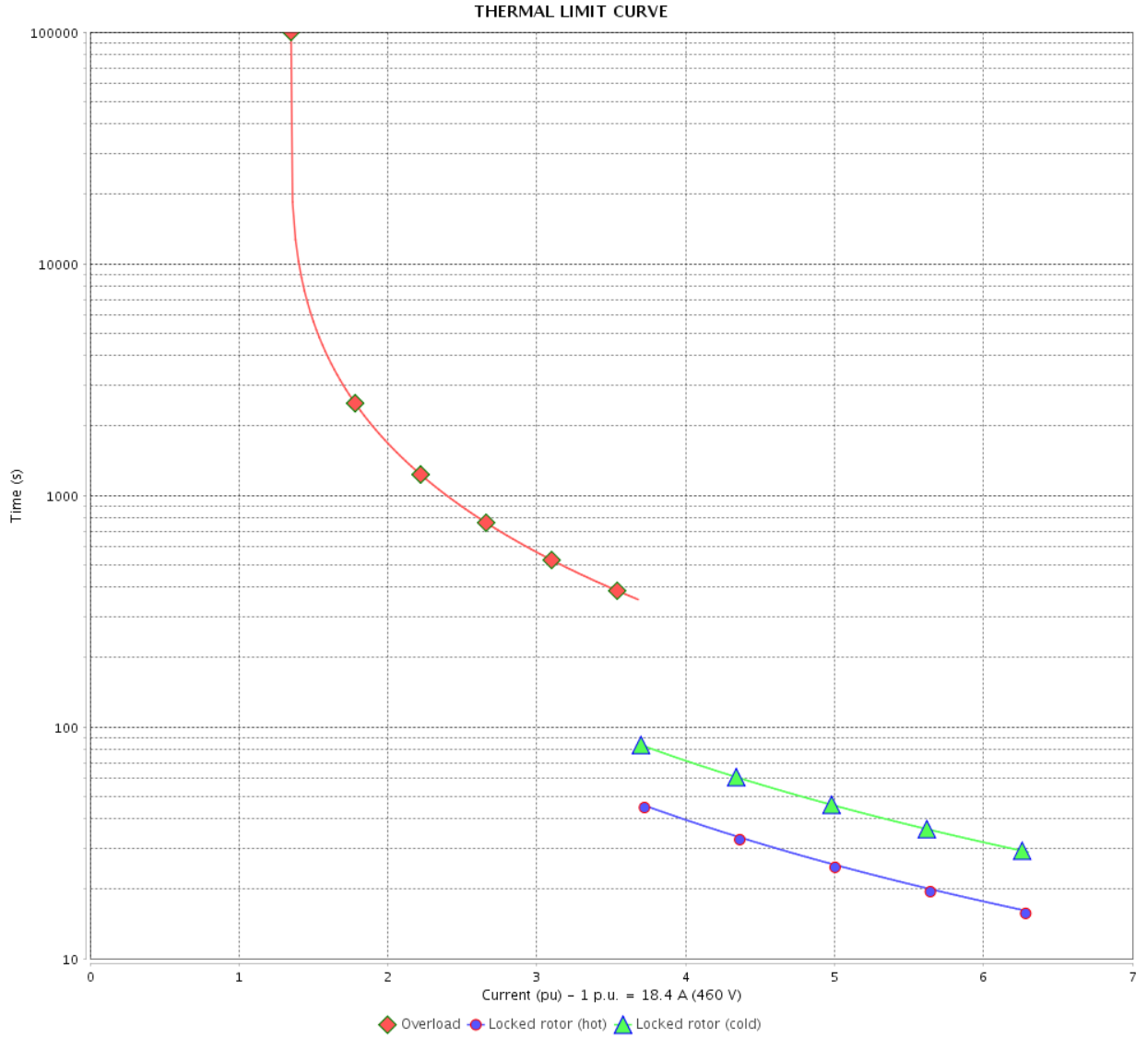
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LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 53.6 ft.lb	Insulation class	: F
Locked rotor torque	: 290 %	Service factor	: 1.00
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 980 rpm	Design	: B

Heating constant

Cooling constant

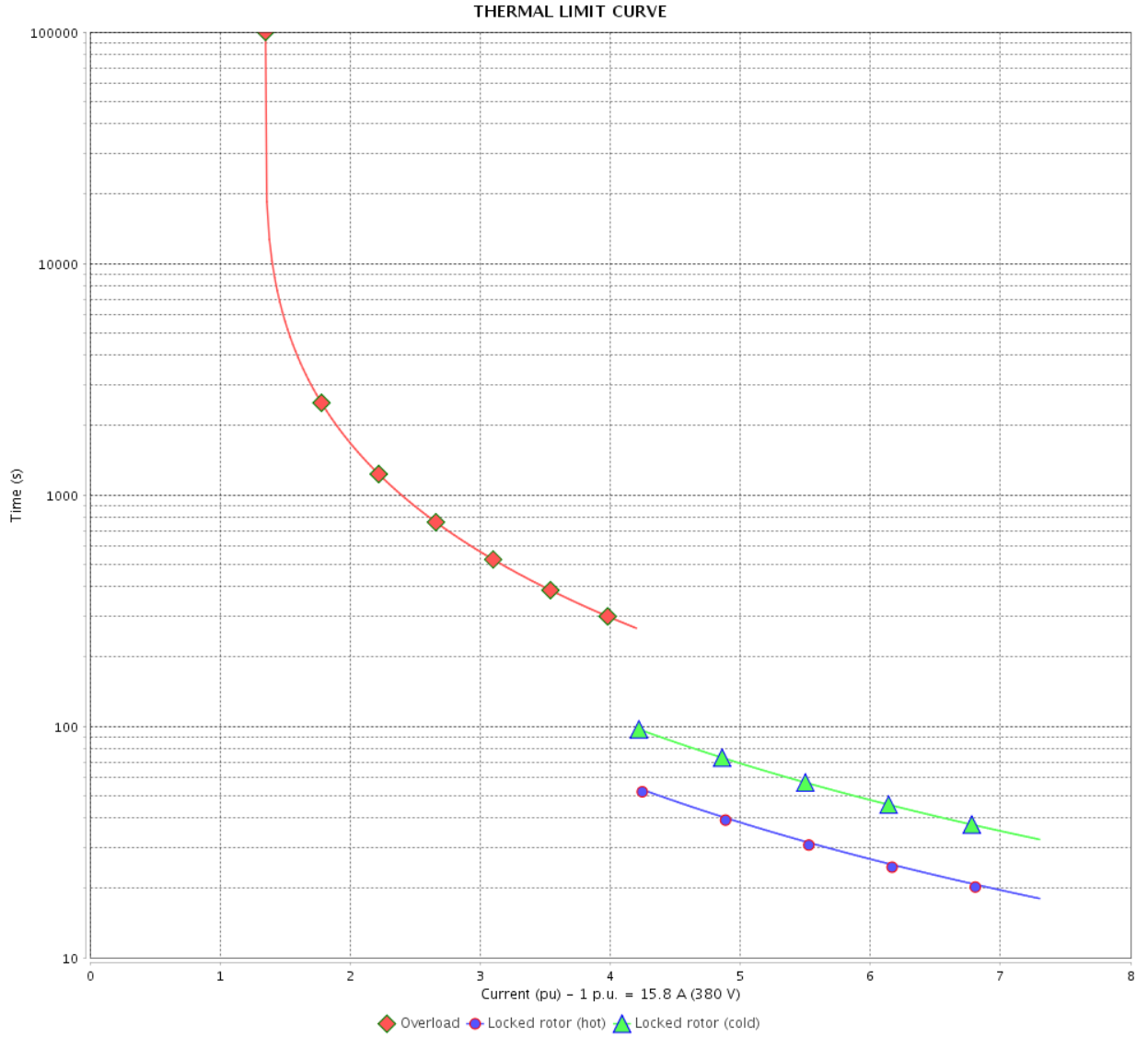
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LRC : 7.5	Duty cycle : Cont.(S1)
Rated torque : 53.3 ft.lb	Insulation class : F
Locked rotor torque : 330 %	Service factor : 1.00
Breakdown torque : 350 %	Temperature rise : 80 K
Rated speed : 985 rpm	Design : B

Heating constant

Cooling constant

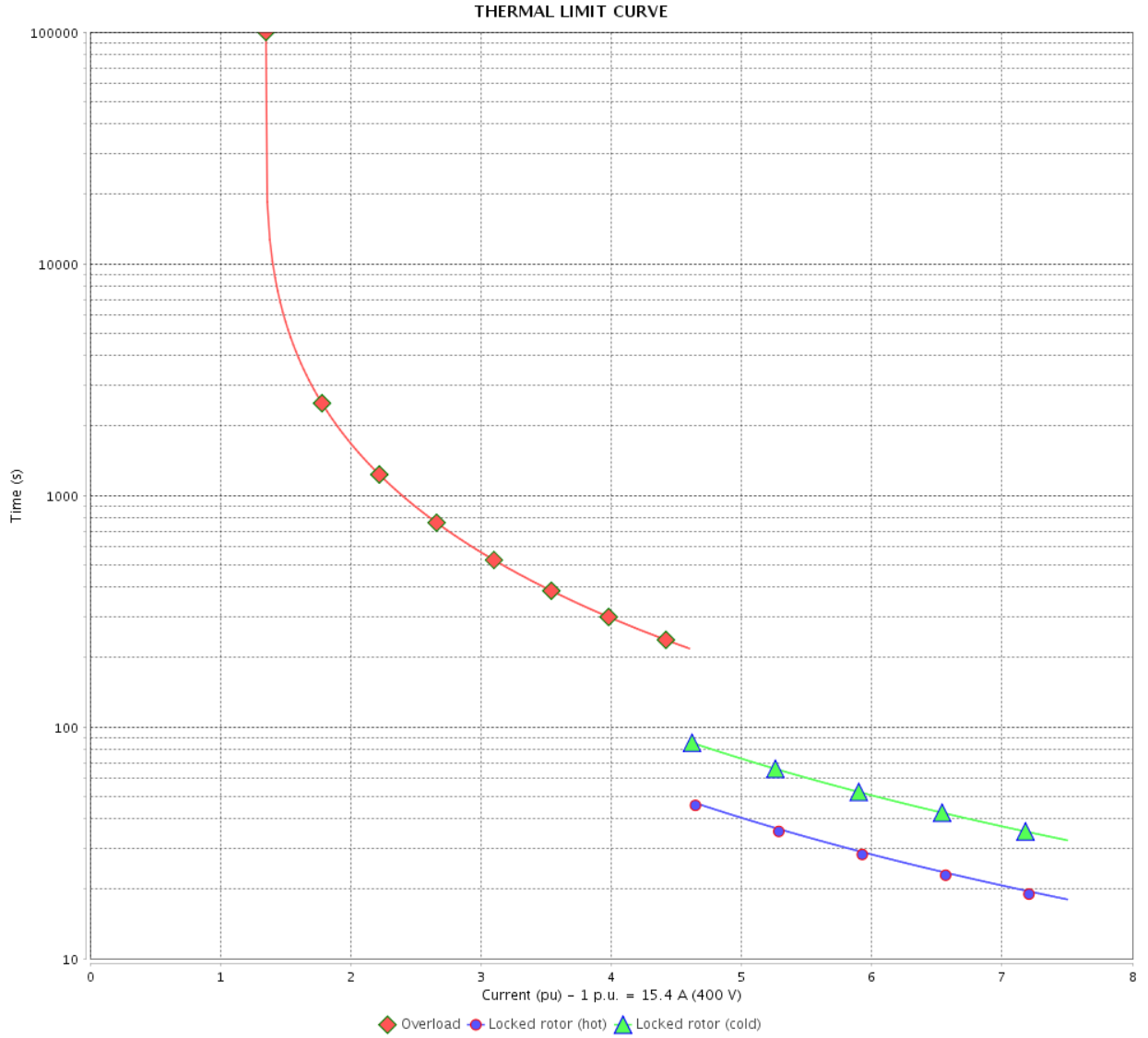
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Rated torque	: 53.3 ft.lb	Insulation class	: F
Locked rotor torque	: 360 %	Service factor	: 1.00
Breakdown torque	: 380 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

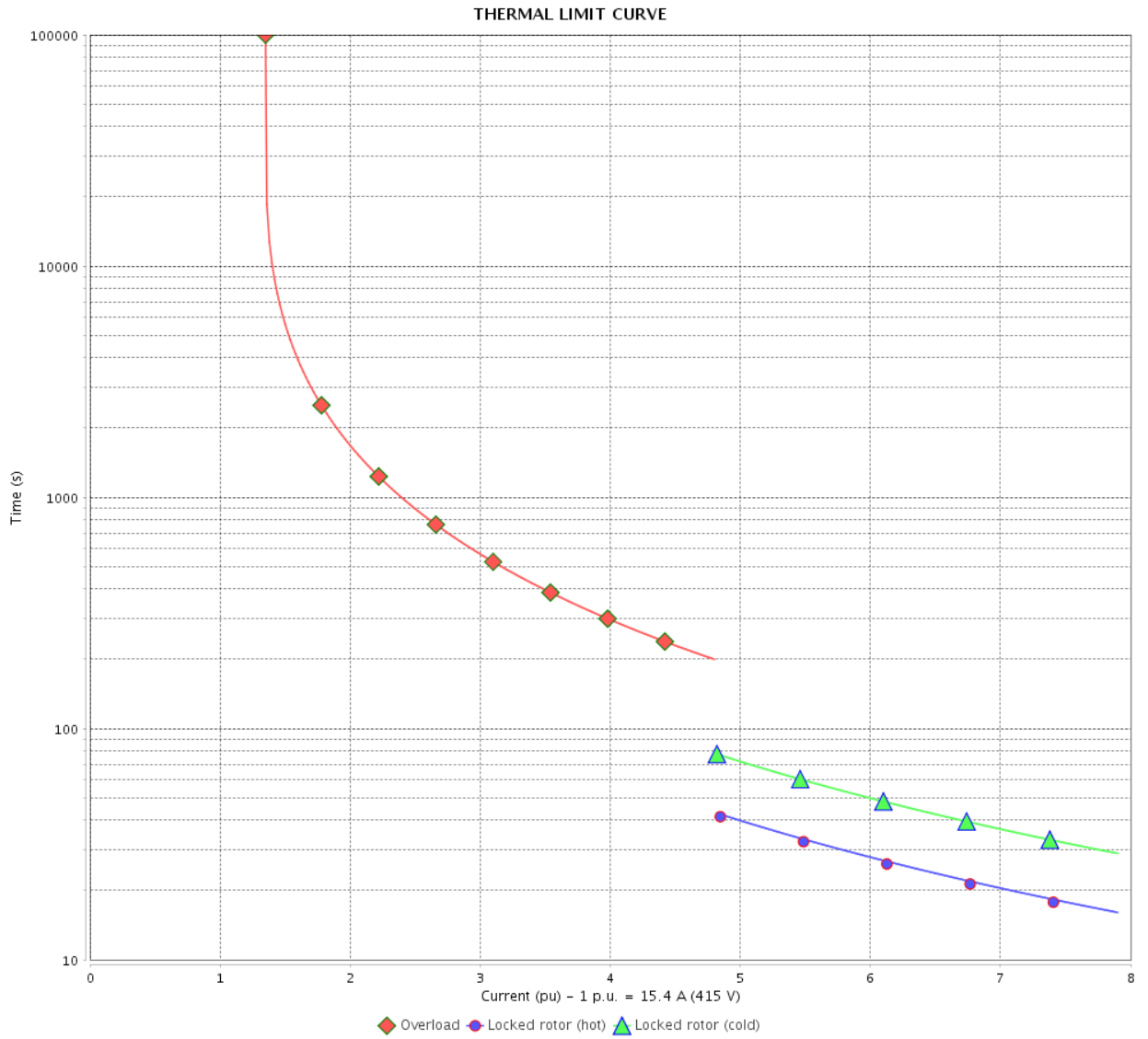
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

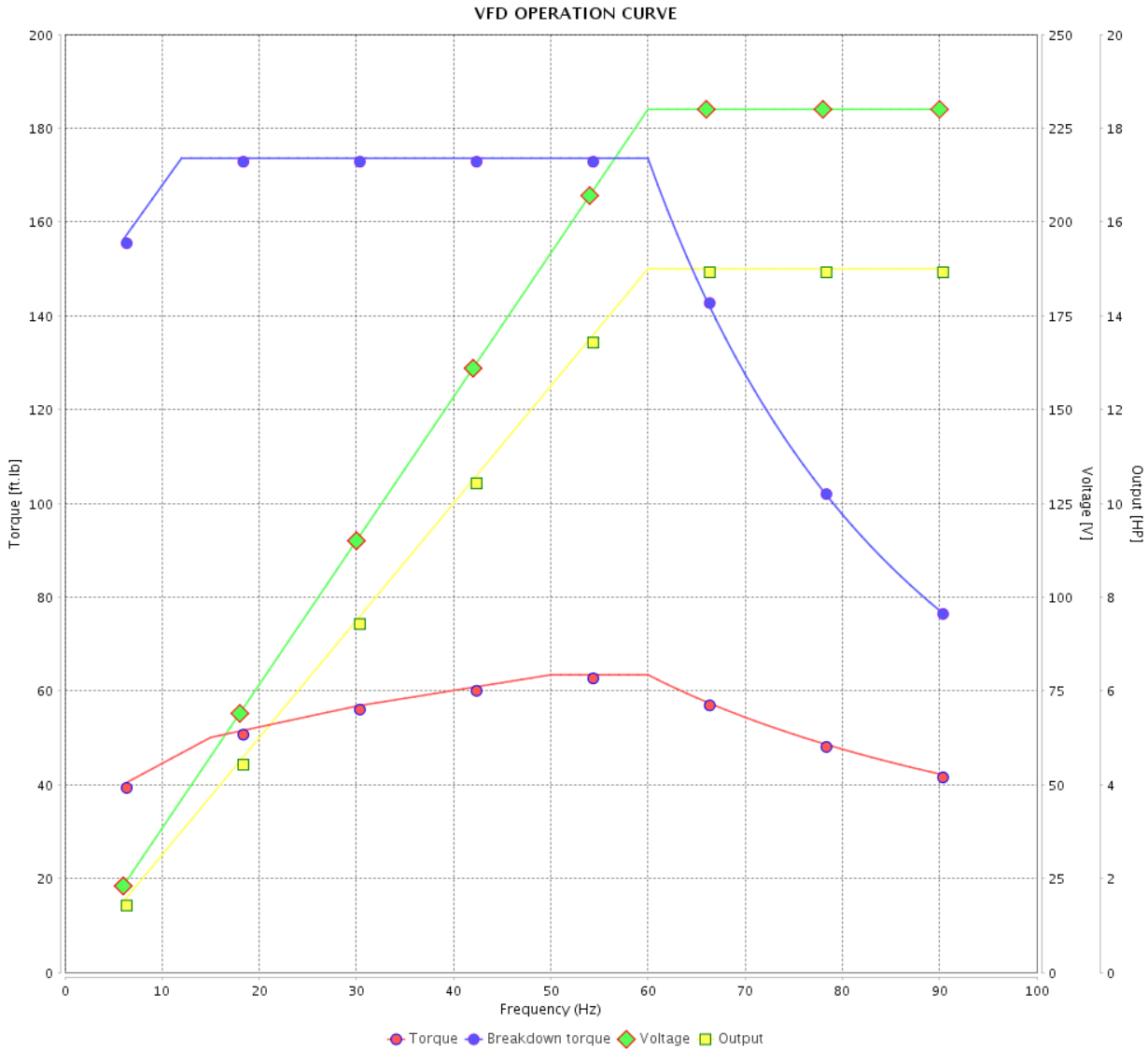


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Performance : 230/460 V 60 Hz 6P

Rated current : 36.8/18.4 A
 LRC : 6.3
 Rated torque : 66.8 ft.lb
 Locked rotor torque : 260 %
 Breakdown torque : 260 %
 Rated speed : 1180 rpm

Moment of inertia (J) : 4.80 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

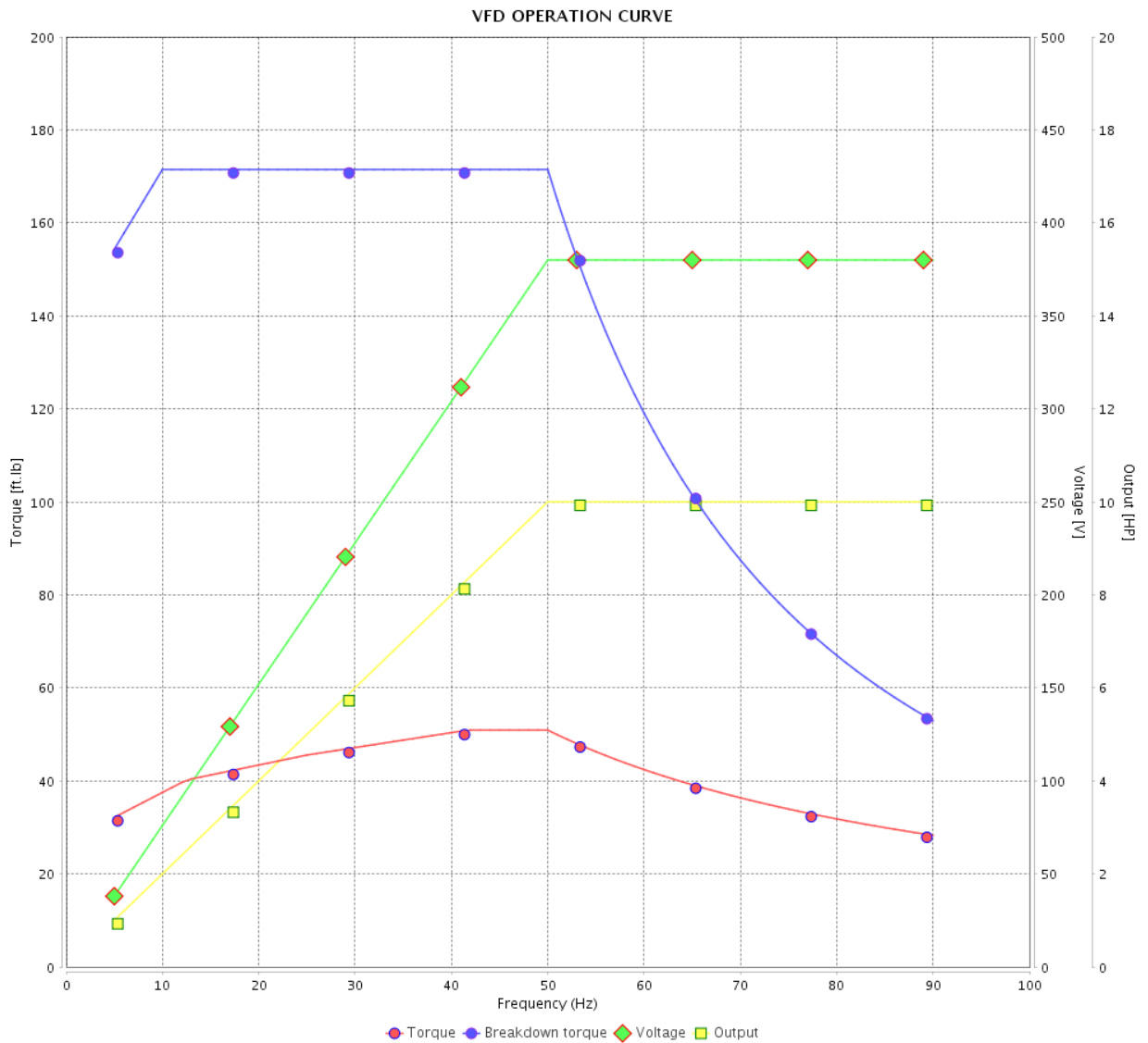


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Performance : 380 V 50 Hz 6P IE3

Rated current : 15.8 A
 LRC : 7.3
 Rated torque : 53.6 ft.lb
 Locked rotor torque : 290 %
 Breakdown torque : 320 %
 Rated speed : 980 rpm

Moment of inertia (J) : 4.80 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

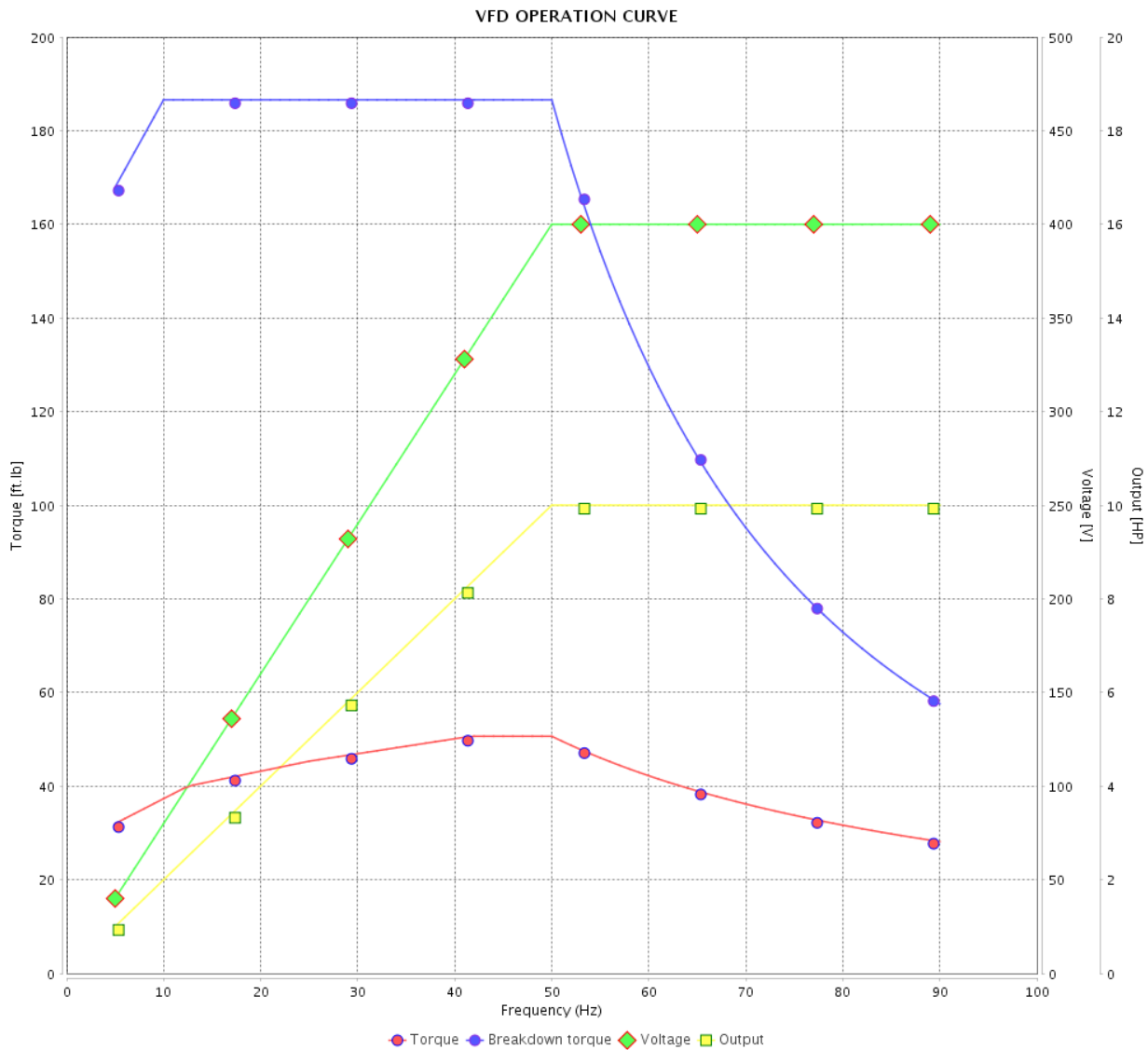


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Locked rotor torque	: 330 %	Service factor	: 1.00
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

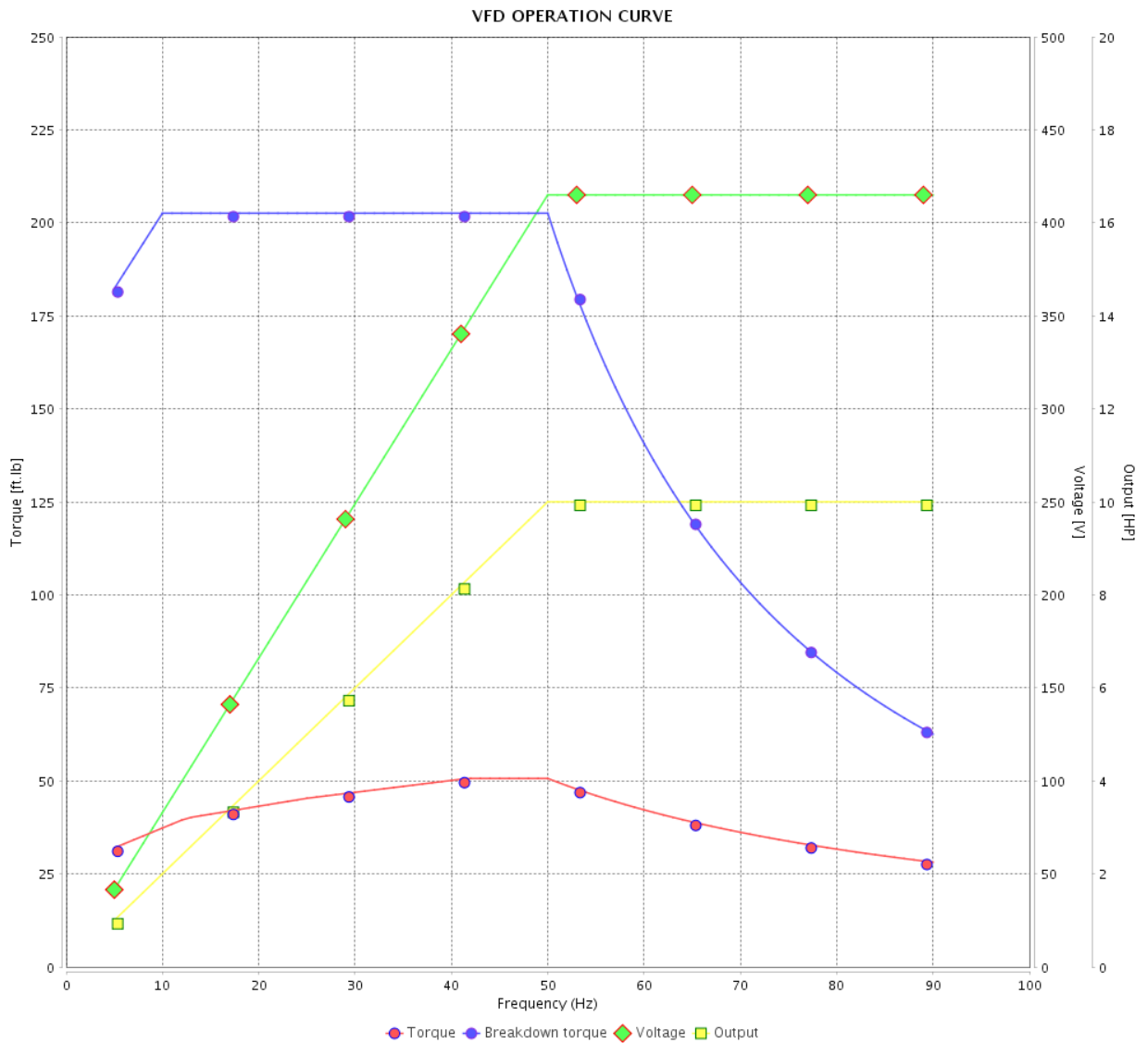


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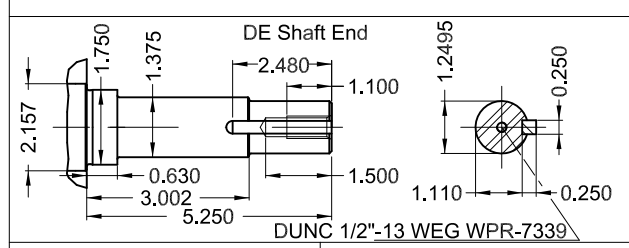
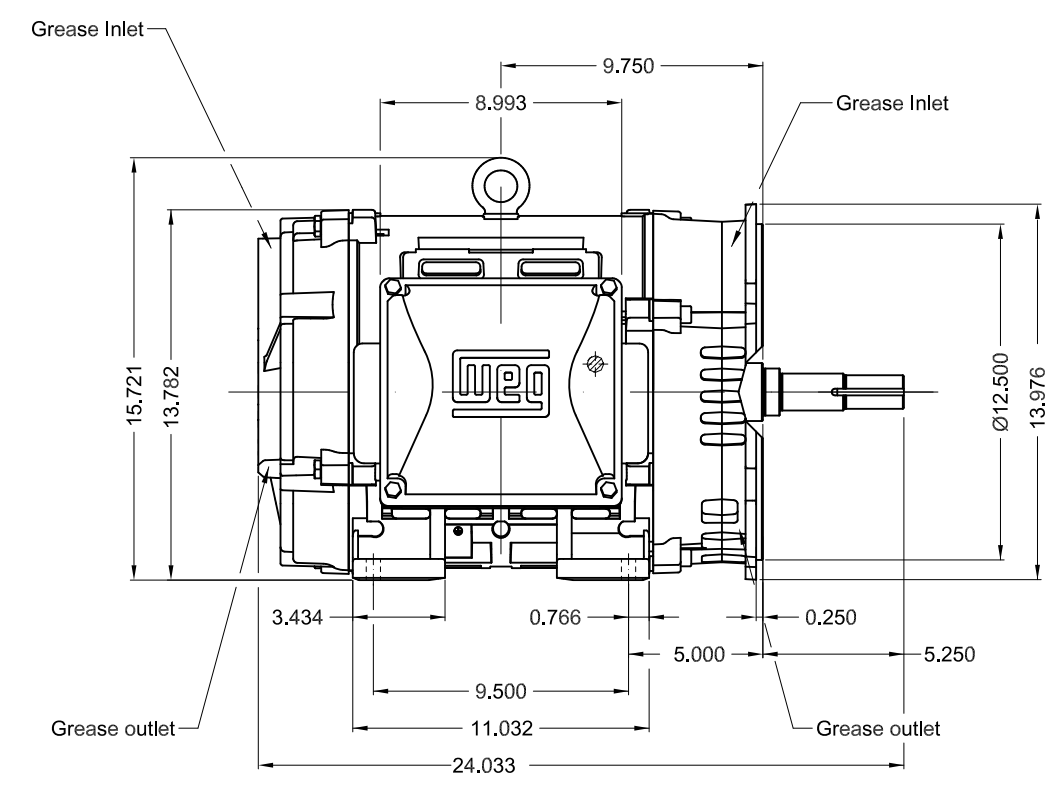
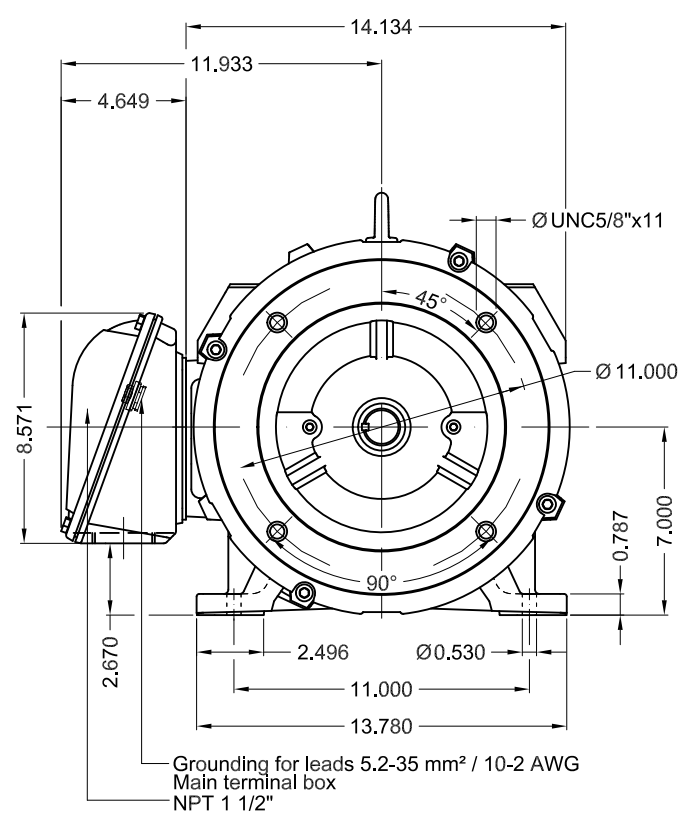


Performance : 415 V 50 Hz 6P IE3

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 Locked rotor torque : 360 %
 Breakdown torque : 380 %
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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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15 HP 06 Poles 60 Hz A

1:7

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 CLOSE COUPLED PUMP JM TYPE PREM-EST.					
CHECKED		FRAME 284JM IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

Color RAL 5009
Painting plan 203A
Mounting NEMA F-1
Mounting B34R(D)

PREVIEW
WDD

