

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :					
Product line		: NEMA Premium Efficiency Three-Phase	Product code :	12376315	
			Catalog # :	00209ST3QIE213TC-W22	
Frame	: 213/5TC	Cooling method	: IC411 - TEFC		
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	: 175 lb		
Protection degree	: IP55	Moment of inertia (J)	: 1.79 sq.ft.lb		
Design	: B				
Output [HP]	2	2	2	2	
Poles	8	8	8	8	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	460	380	400	415	
Rated current [A]	3.39	3.91	3.80	3.78	
L. R. Amperes [A]	25.7	29.7	28.9	28.7	
LRC [A]	7.6x(Code M)	7.6x(Code L)	7.6x(Code M)	7.6x(Code M)	
No load current [A]	2.30	2.30	2.42	2.54	
Rated speed [RPM]	875	715	720	720	
Slip [%]	2.78	4.67	4.00	4.00	
Rated torque [ft.lb]	12.0	14.7	14.6	14.6	
Locked rotor torque [%]	240	190	229	270	
Breakdown torque [%]	290	210	250	280	
Service factor	1.25	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	70s (cold) 39s (hot)	70s (cold) 39s (hot)	70s (cold) 39s (hot)	70s (cold) 39s (hot)	
Noise level ²	52.0 dB(A)	48.0 dB(A)	48.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%	81.0	81.2	81.2	
	50%	82.5	81.5	81.5	
	75%	84.0	82.0	82.5	
	100%	85.5	82.0	82.5	
Power Factor	25%	0.24	0.29	0.27	
	50%	0.45	0.52	0.49	
	75%	0.55	0.62	0.59	
	100%	0.65	0.71	0.69	
Bearing type	: <u>Drive end</u> 6308 C3 <u>Non drive end</u> 6207 C3	Foundation loads			
Sealing	: Inpro/Seal Inpro/Seal	Max. traction	: 142 lb		
Lubrication interval	: 20000 h 20000 h	Max. compression	: 318 lb		
Lubricant amount	: 11 g 7 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

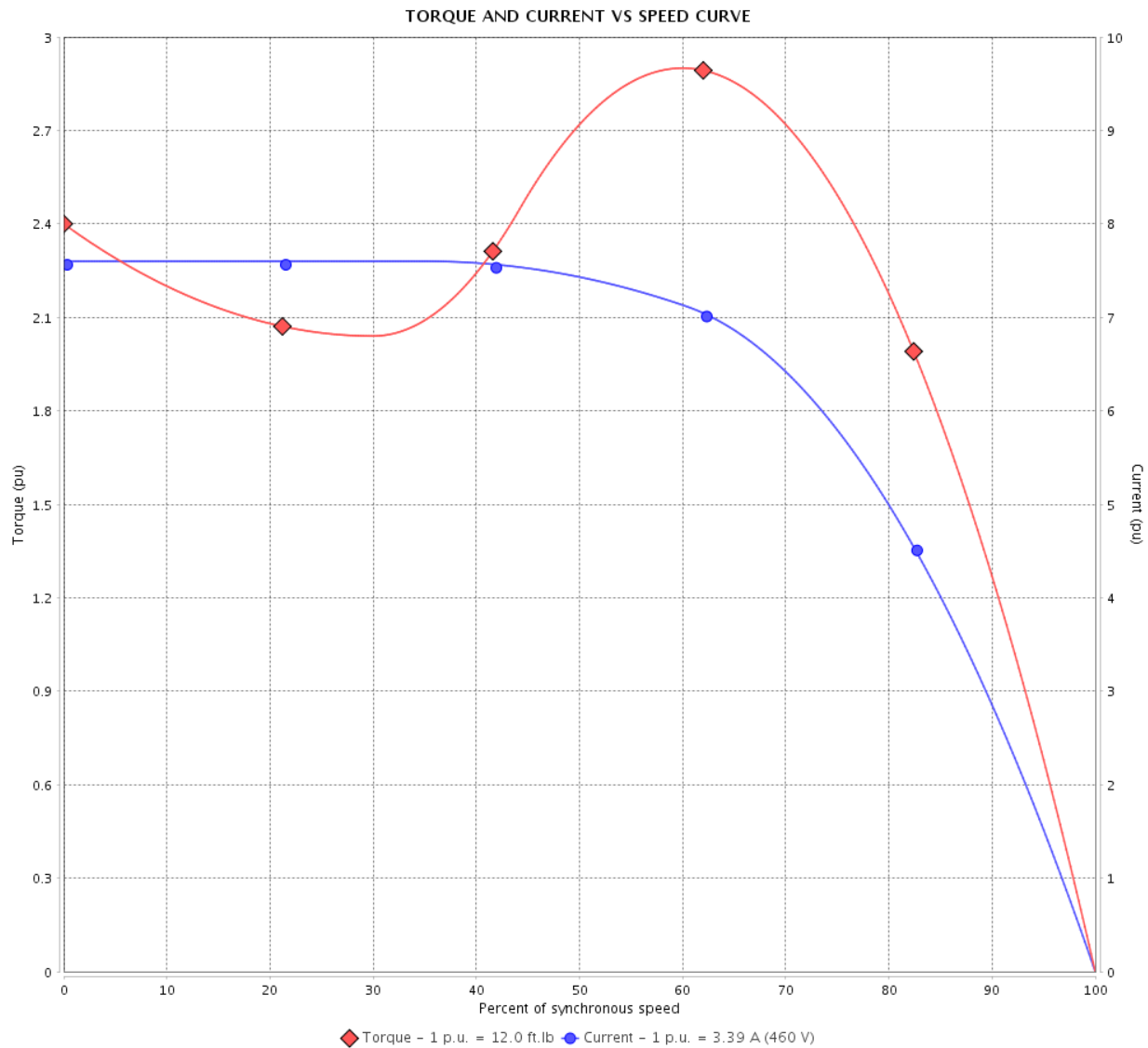


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376315

Catalog # : 00209ST3QIE213TC-W22



Performance : 460 V 60 Hz 8P

Rated current	: 3.39 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 12.0 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

Locked rotor time : 70s (cold) 39s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



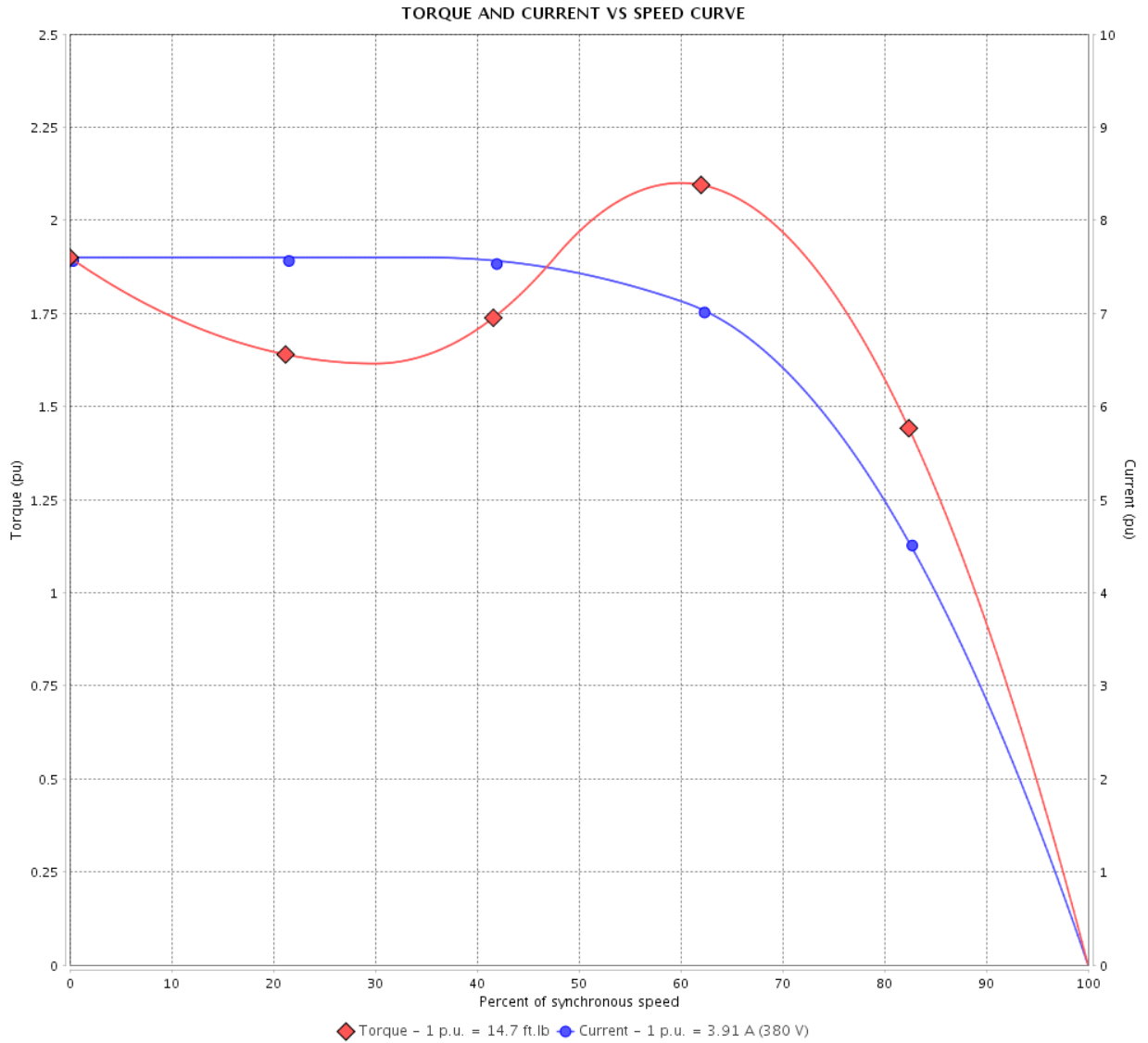
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376315

Catalog # : 00209ST3QIE213TC-W22



Performance : 380 V 50 Hz 8P IE3

Rated current	: 3.91 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 14.7 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Locked rotor time : 70s (cold) 39s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



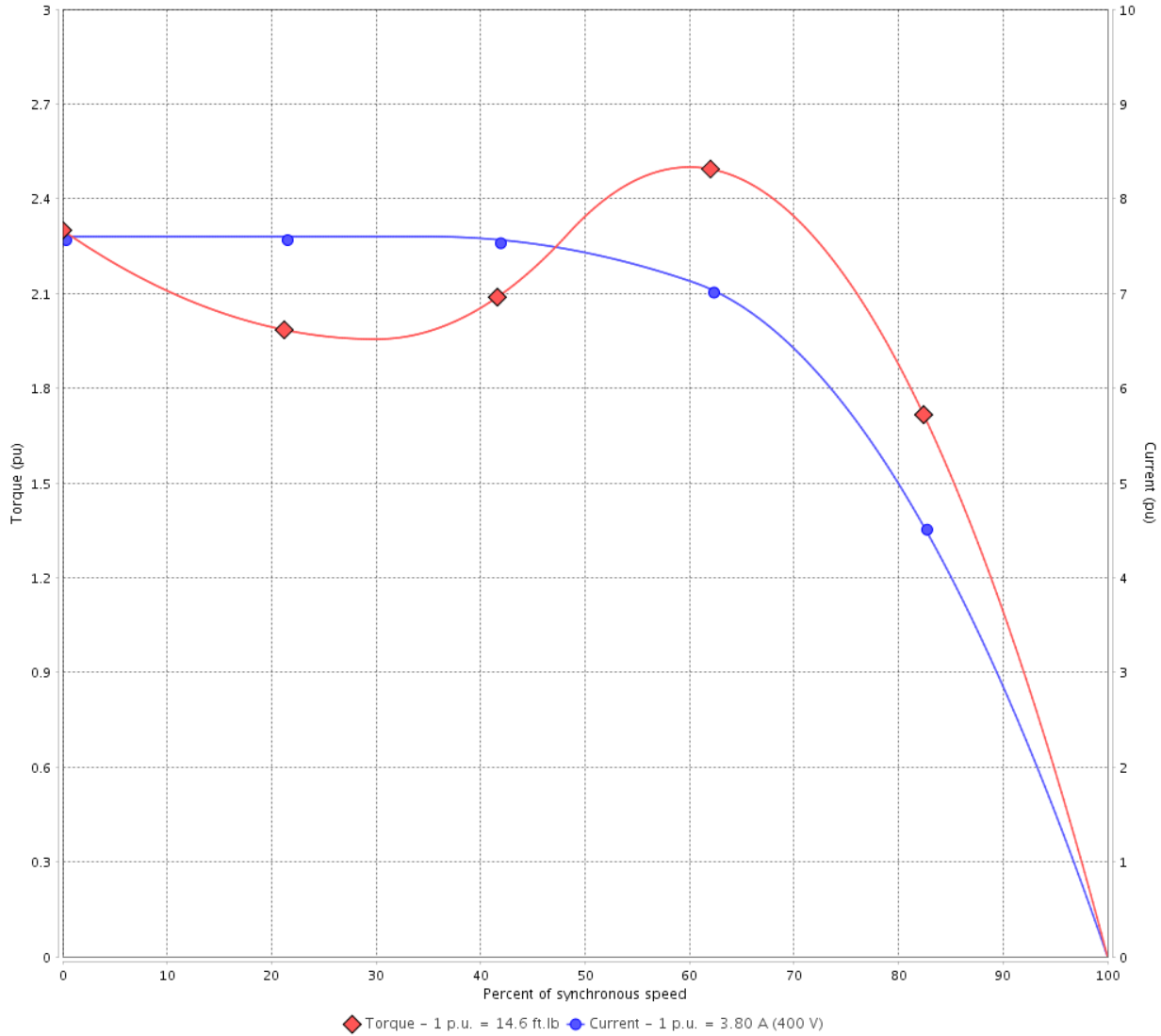
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12376315

Catalog # : 00209ST3QIE213TC-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 8P IE3

Rated current	: 3.80 A	Moment of inertia (J)	: 1.79 sq.ft.lb
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 14.6 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 70s (cold) 39s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



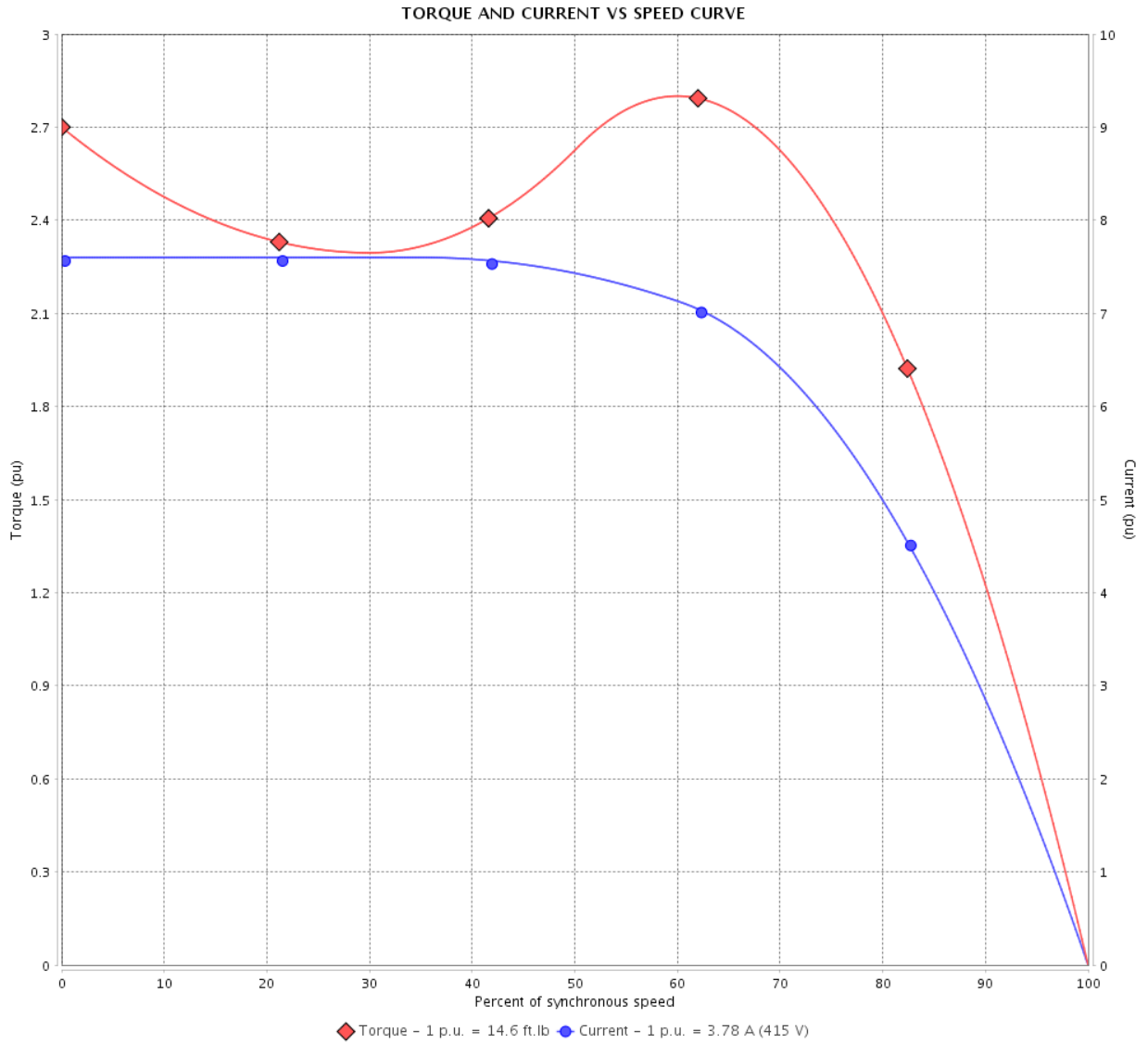
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Catalog # : 00209ST3QIE213TC-W22



Performance : 415 V 50 Hz 8P IE3

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LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 14.6 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Locked rotor time : 70s (cold) 39s (hot)

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LOAD PERFORMANCE CURVE

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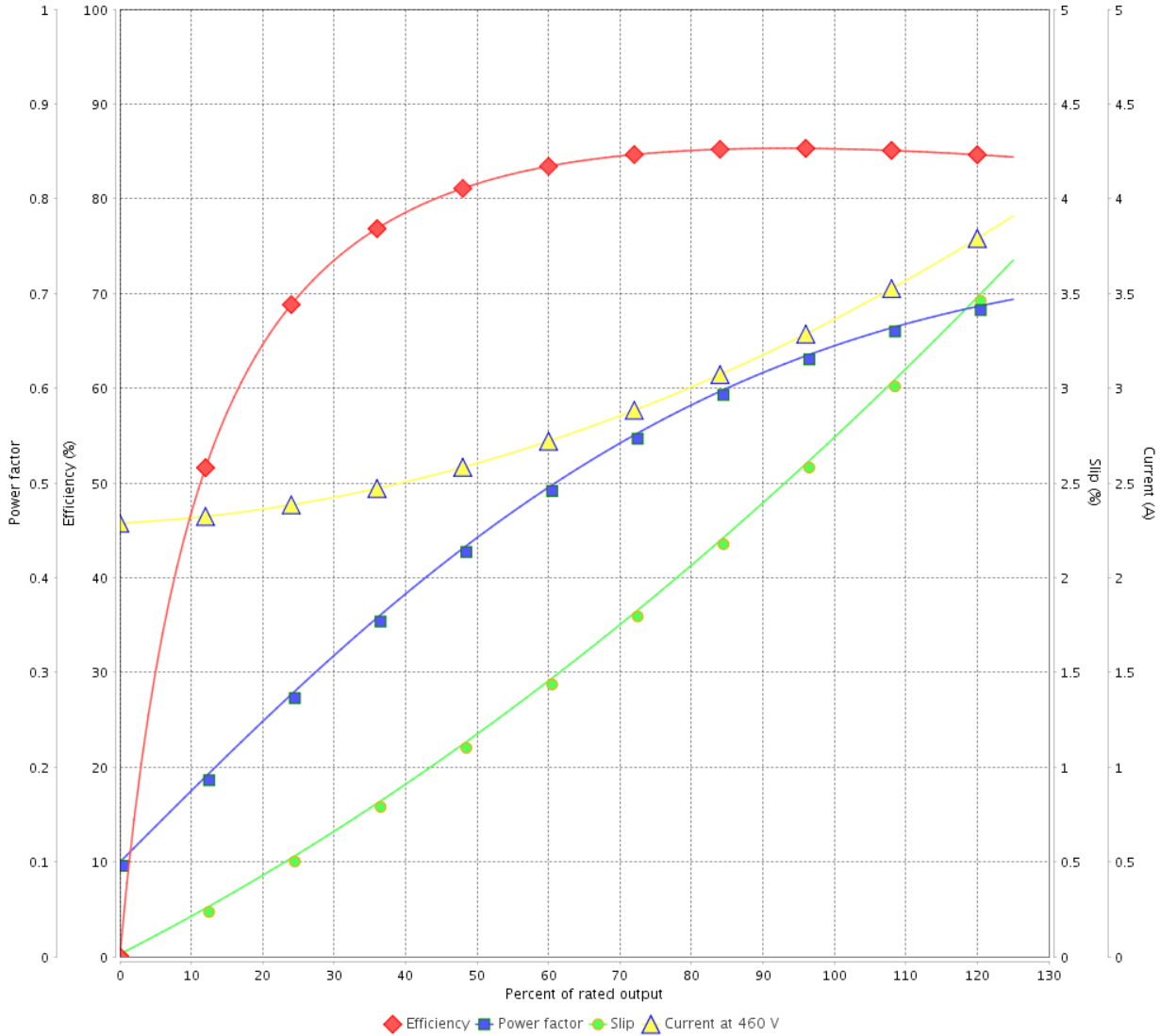
Customer : _____

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Product code : 12376315

Catalog # : 00209ST3QIE213TC-W22

LOAD PERFORMANCE CURVE



Performance : 460 V 60 Hz 8P

Rated current : 3.39 A
 LRC : 7.6
 Rated torque : 12.0 ft.lb
 Locked rotor torque : 240 %
 Breakdown torque : 290 %
 Rated speed : 875 rpm

Moment of inertia (J) : 1.79 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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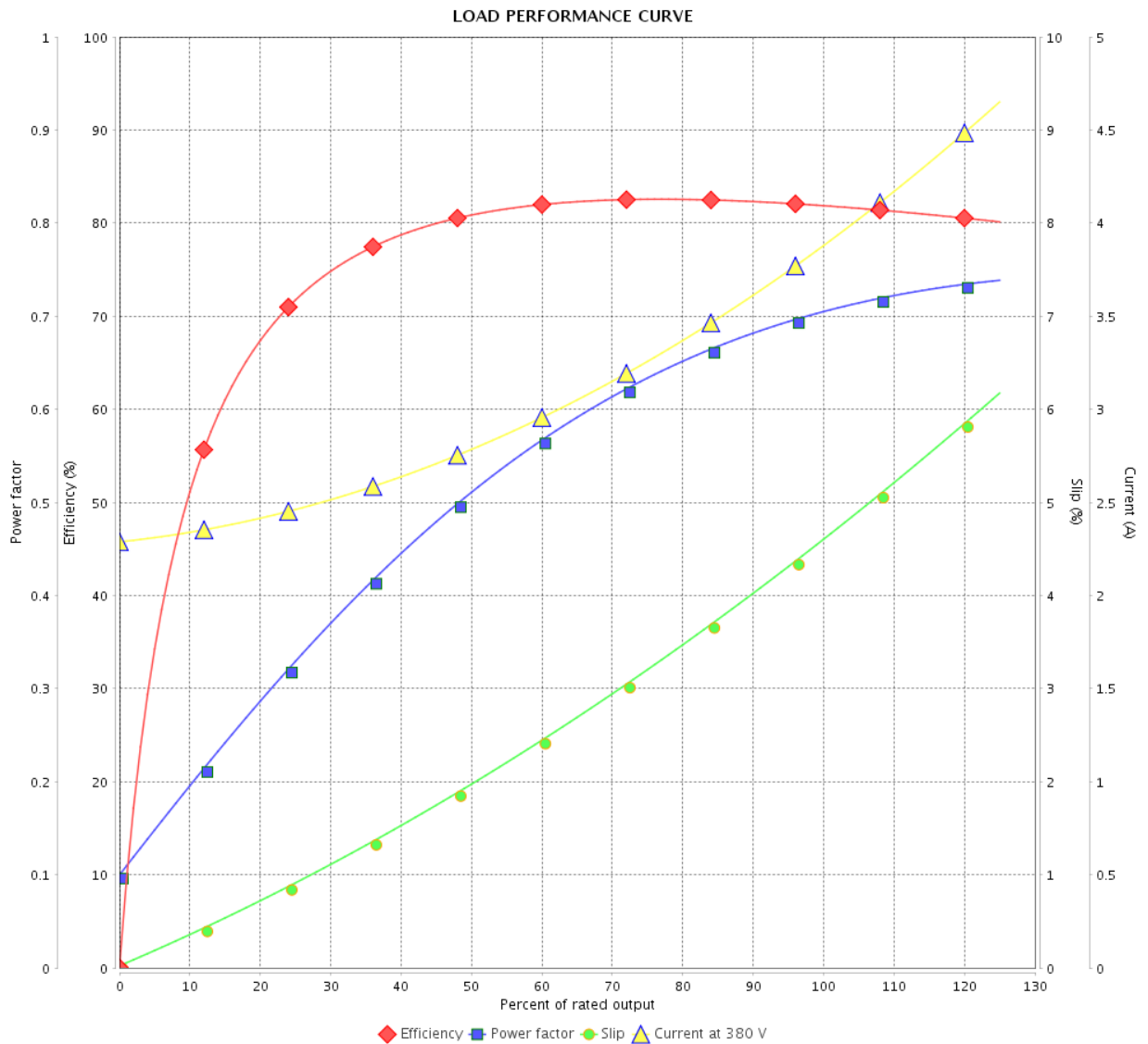


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Performance : 380 V 50 Hz 8P IE3

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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
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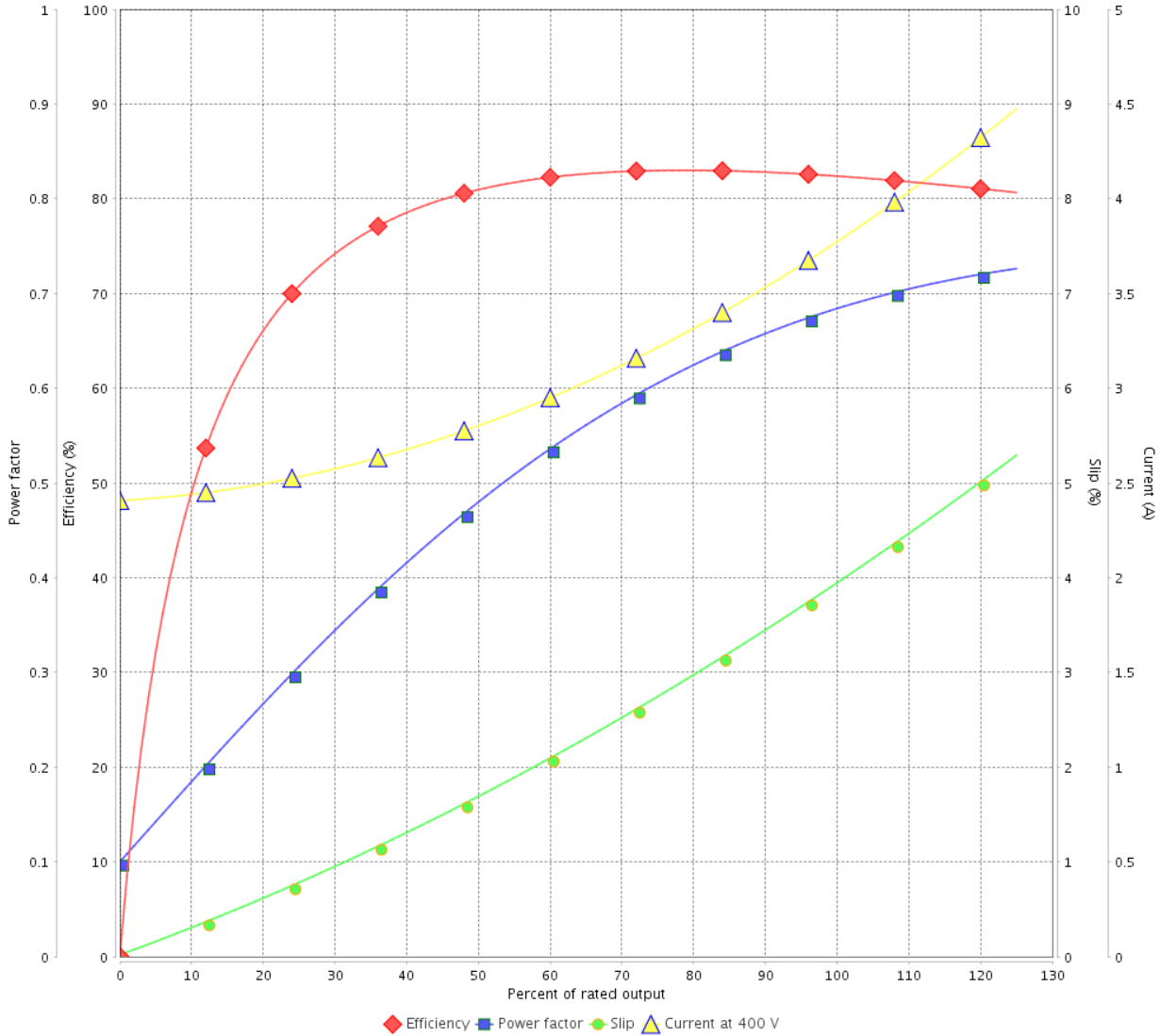
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Performance : 400 V 50 Hz 8P IE3

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 Locked rotor torque : 229 %
 Breakdown torque : 250 %
 Rated speed : 720 rpm

Moment of inertia (J) : 1.79 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

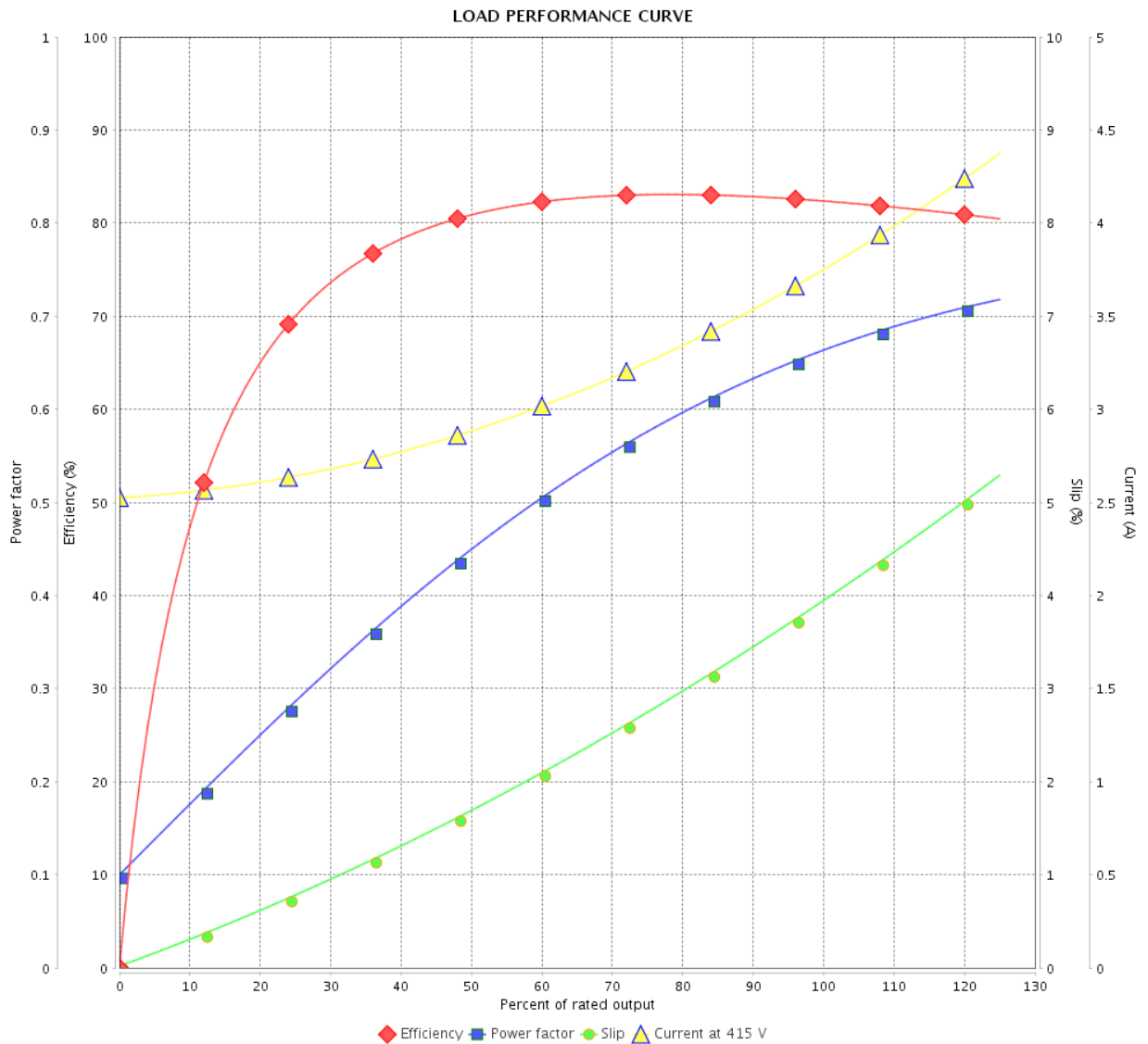


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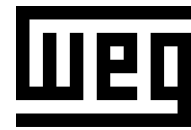
Performance : 415 V 50 Hz 8P IE3

Rated current : 3.78 A
 LRC : 7.6
 Rated torque : 14.6 ft.lb
 Locked rotor torque : 270 %
 Breakdown torque : 280 %
 Rated speed : 720 rpm

Moment of inertia (J) : 1.79 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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Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 875 rpm	Design	: B

Heating constant

Cooling constant

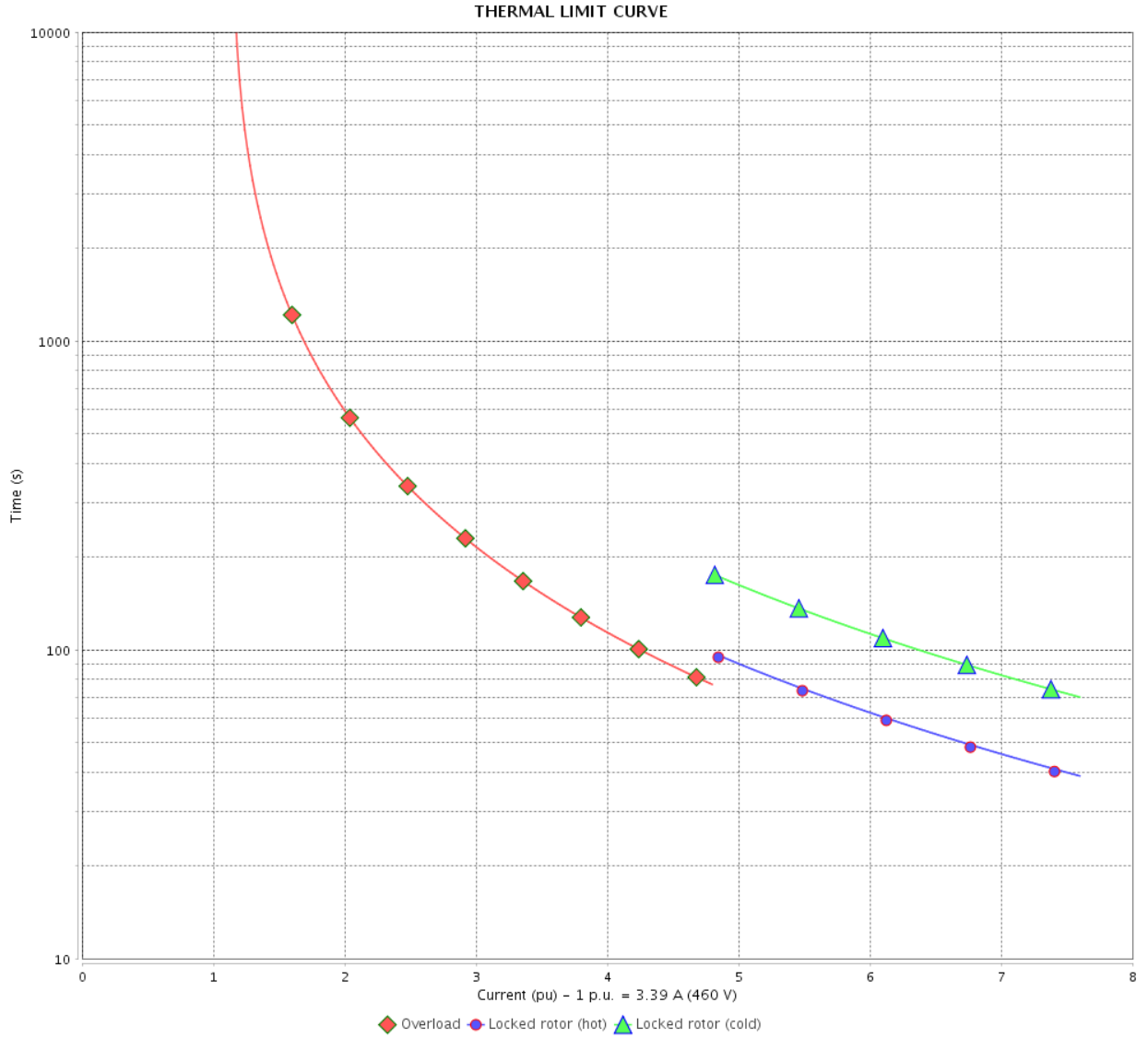
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THERMAL LIMIT CURVE

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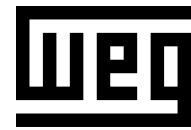


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LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 14.7 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 715 rpm	Design	: B

Heating constant

Cooling constant

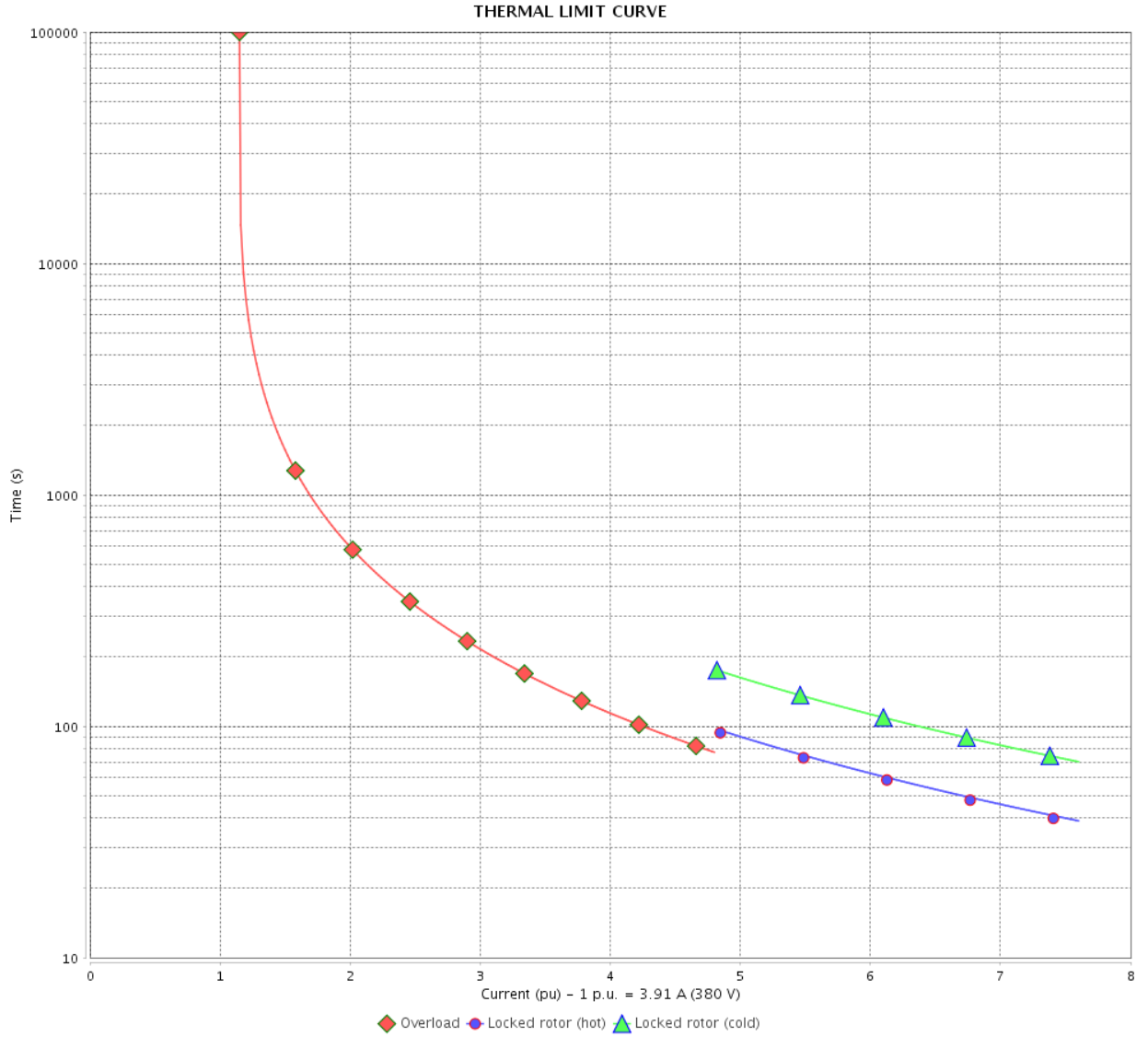
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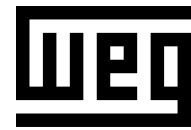


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LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 14.6 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Heating constant

Cooling constant

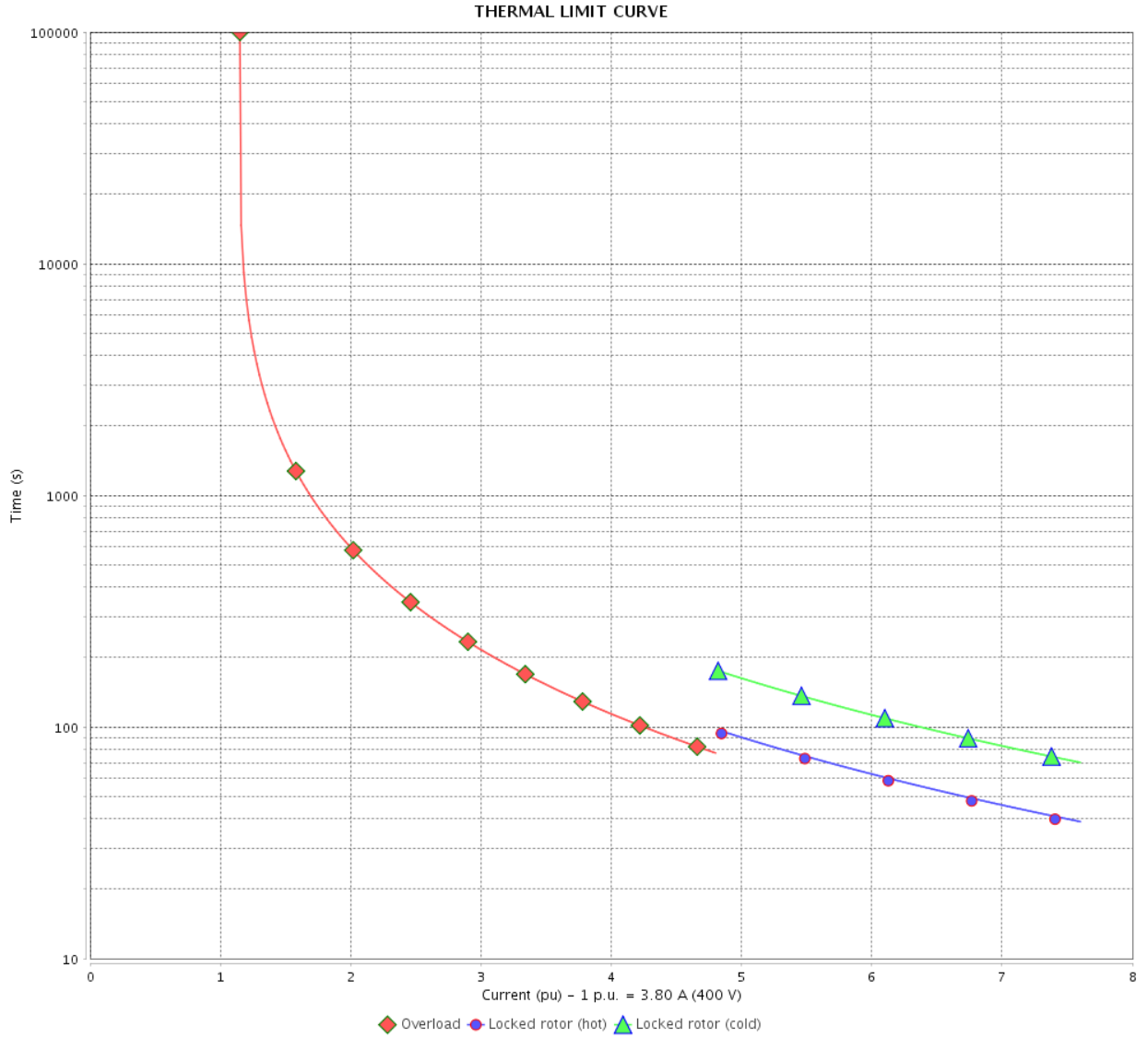
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Customer : _____



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THERMAL LIMIT CURVE



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Rated torque	: 14.6 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 720 rpm	Design	: B

Heating constant

Cooling constant

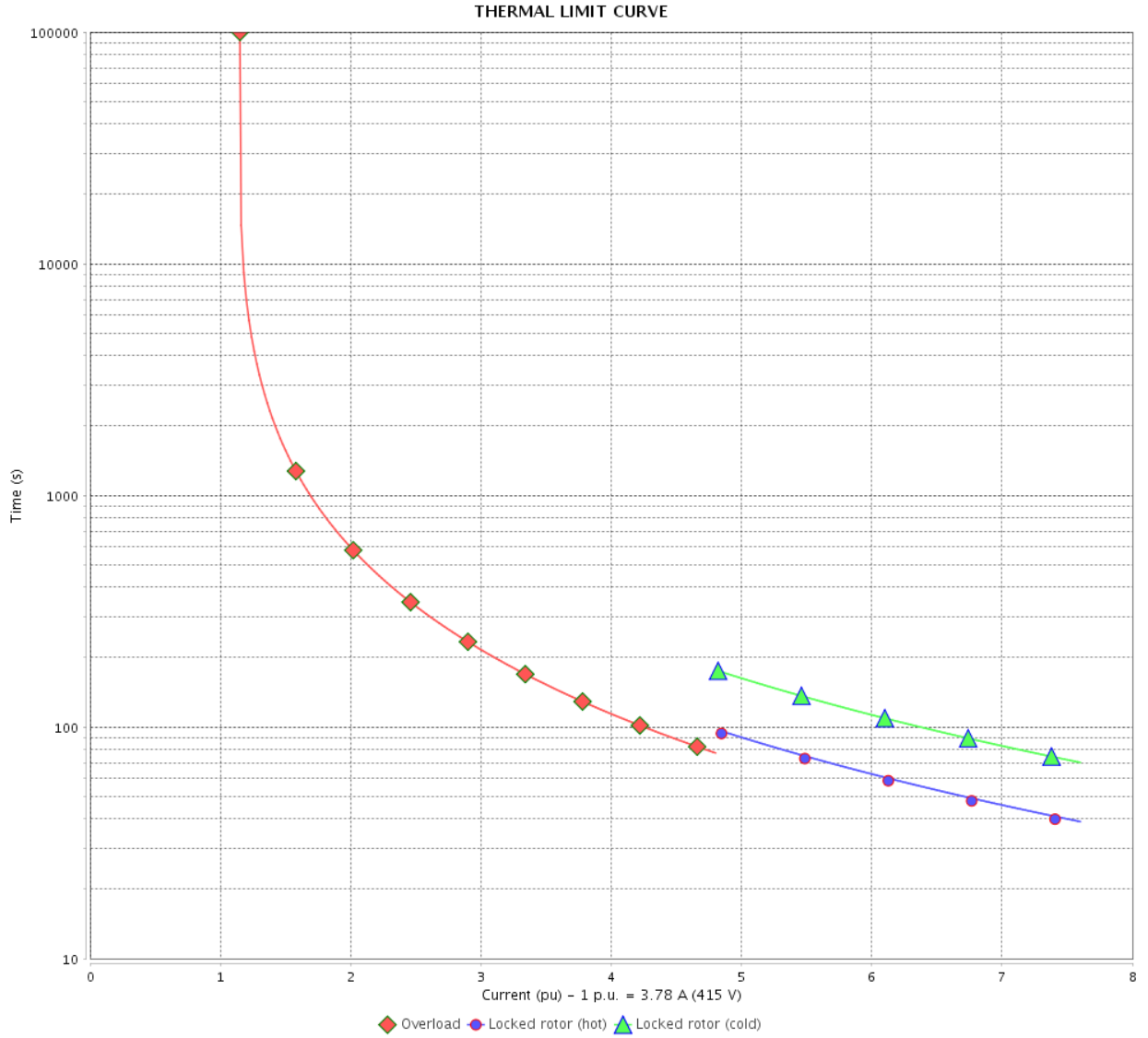
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



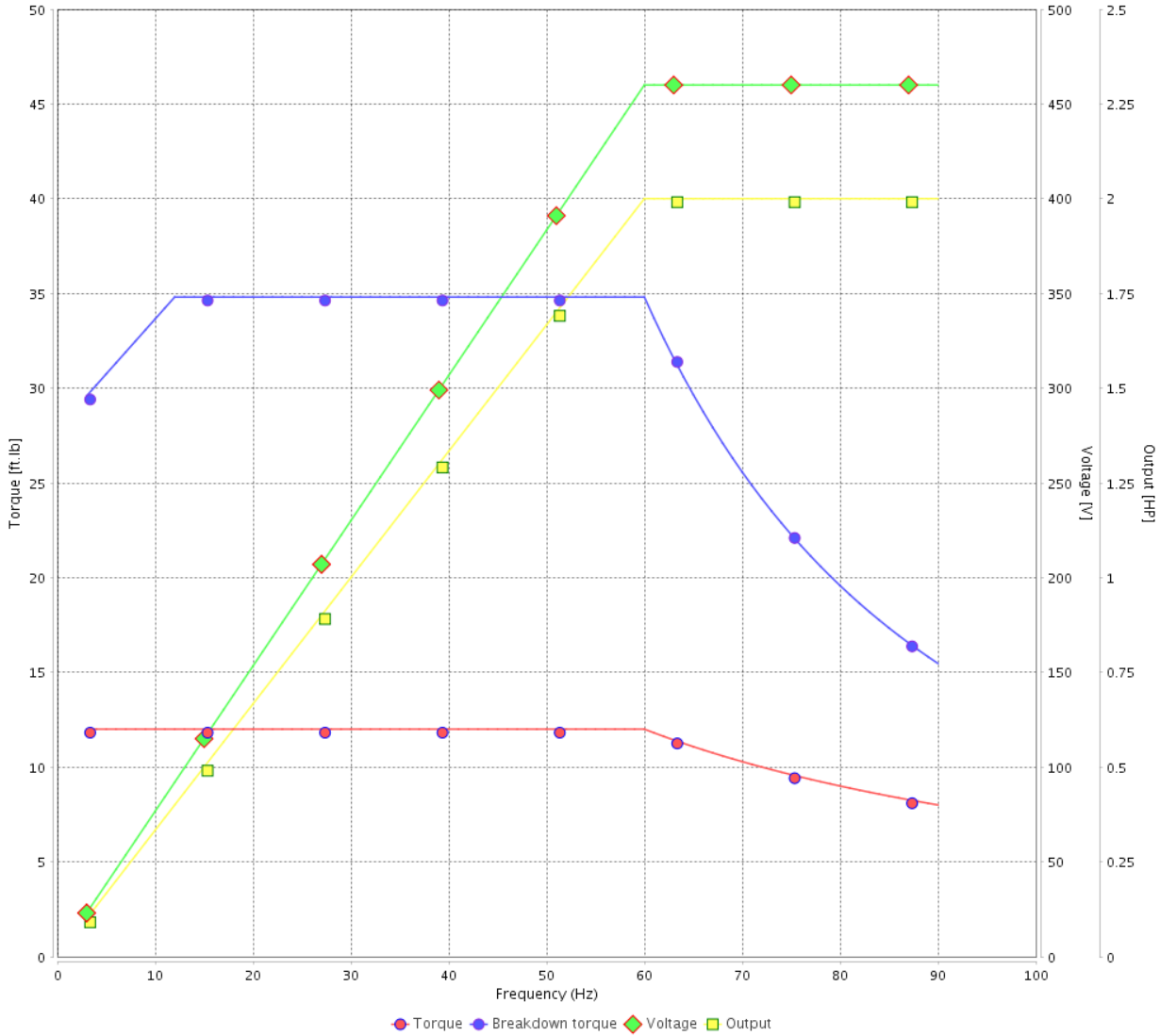
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VFD OPERATION CURVE



Performance : 460 V 60 Hz 8P

Rated current : 3.39 A
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 Locked rotor torque : 240 %
 Breakdown torque : 290 %
 Rated speed : 875 rpm

Moment of inertia (J) : 1.79 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

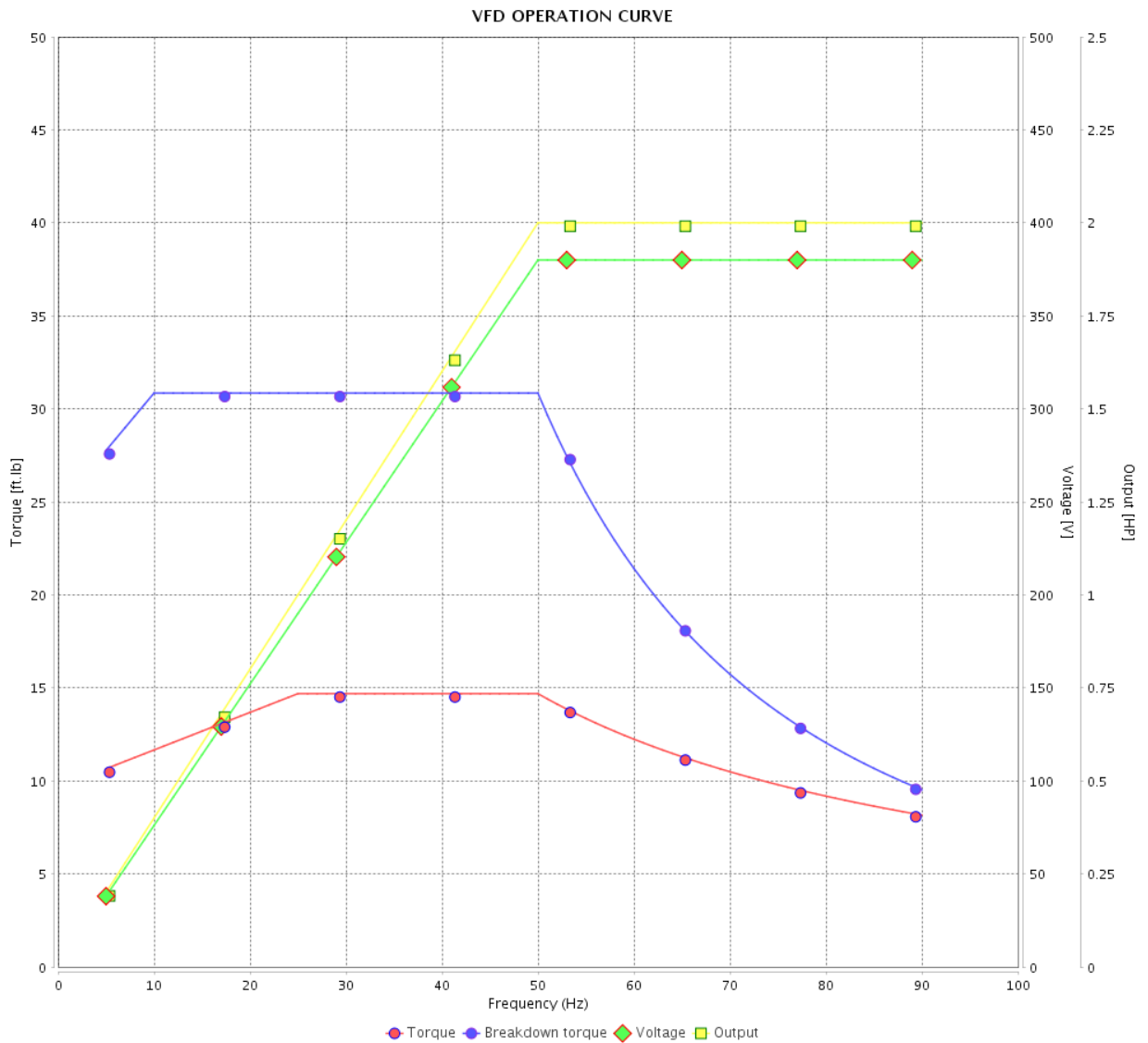


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Performance : 380 V 50 Hz 8P IE3

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 Insulation class : F
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



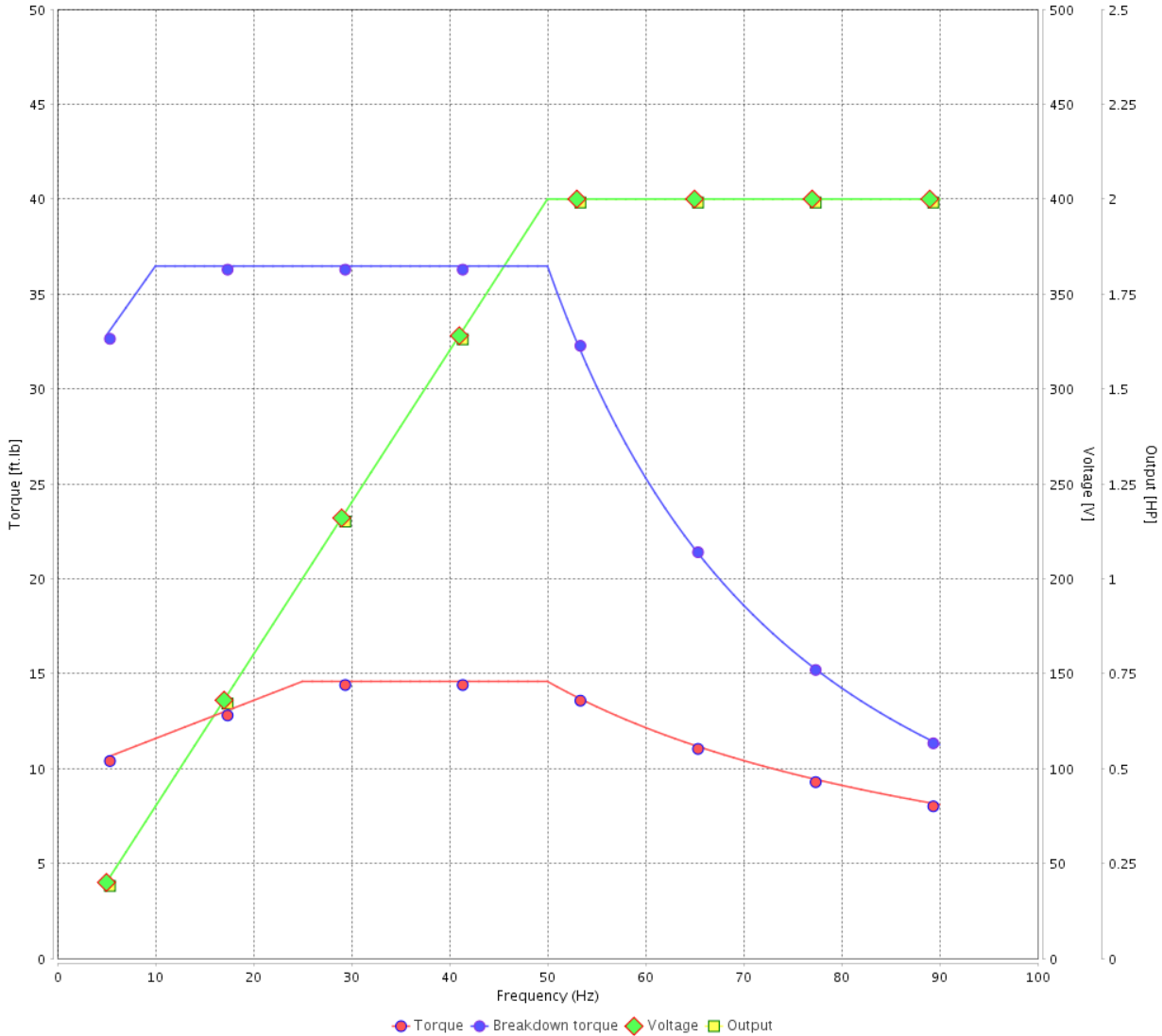
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Performance : 400 V 50 Hz 8P IE3

Rated current : 3.80 A
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 Breakdown torque : 250 %
 Rated speed : 720 rpm

Moment of inertia (J) : 1.79 sq.ft.lb
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

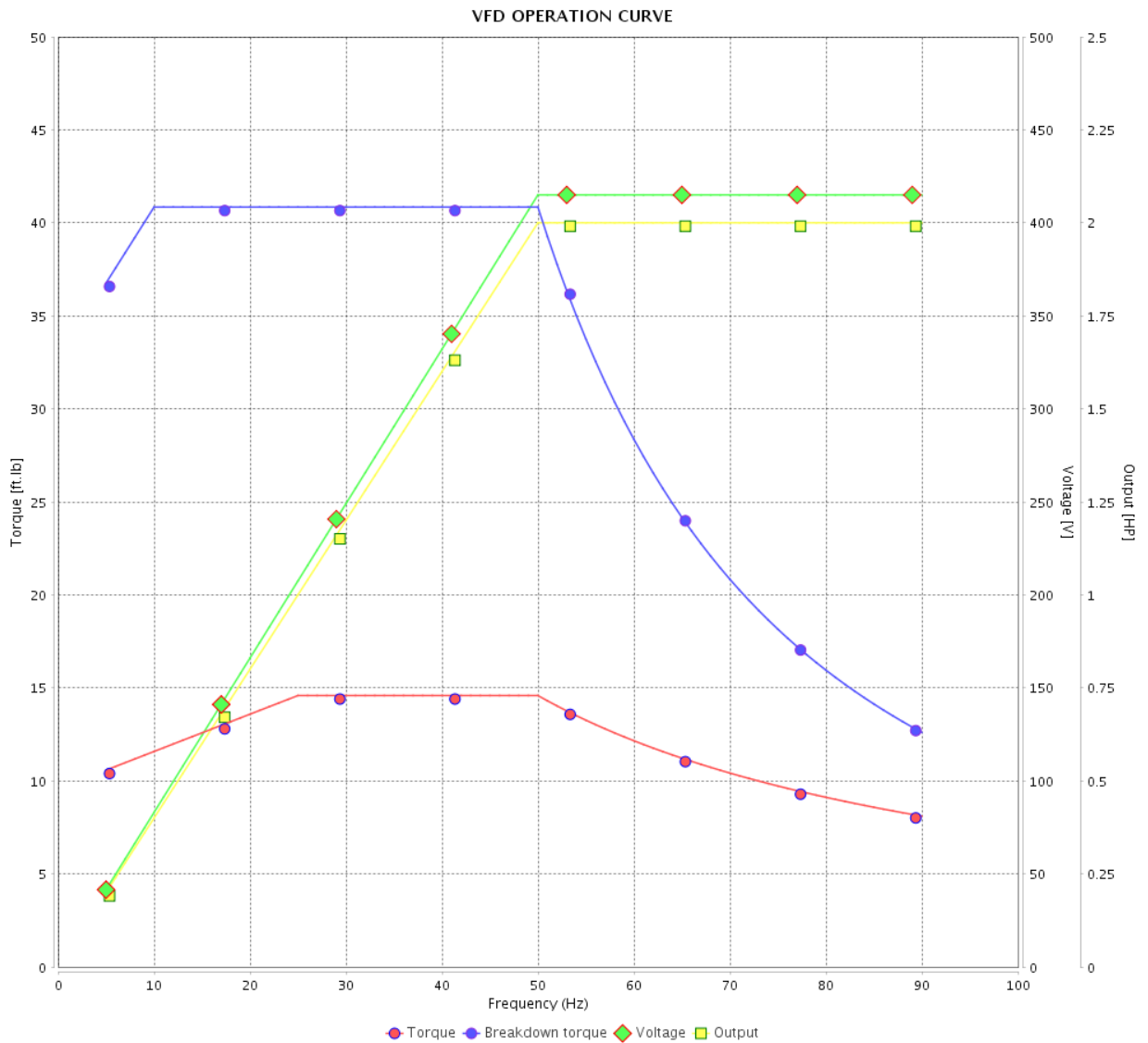


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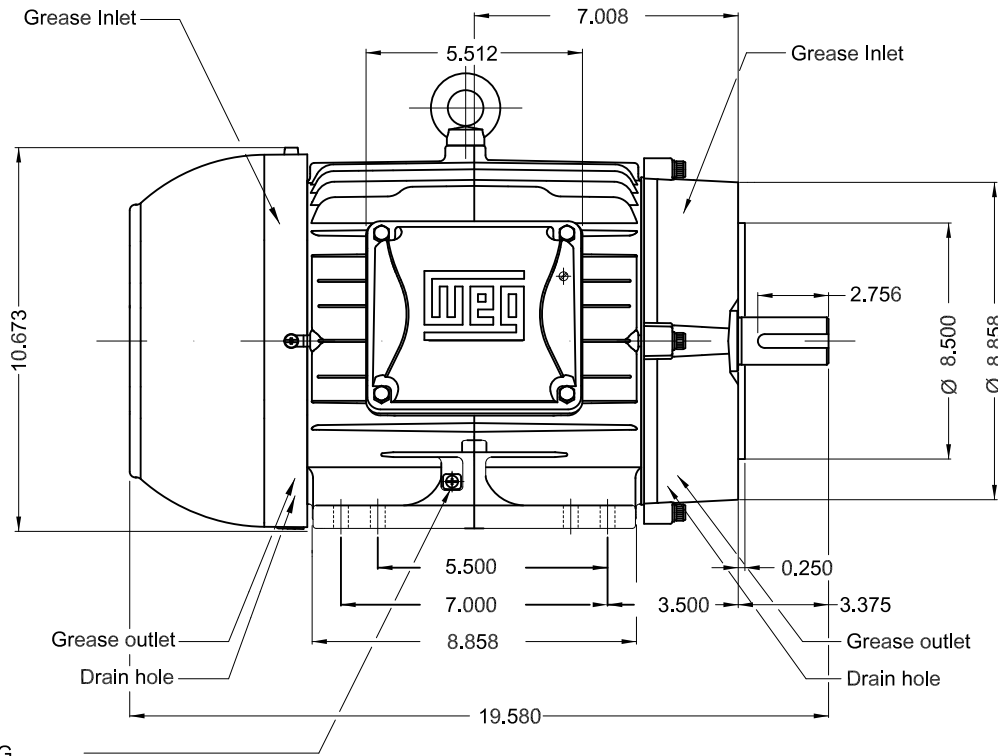
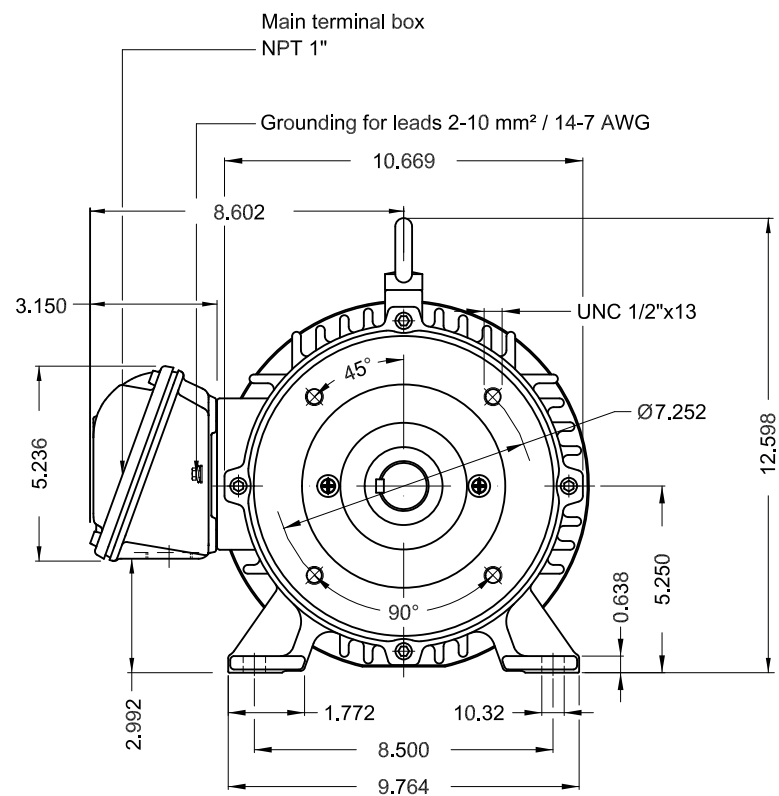
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1 2 3 4 5 6

A

B

C



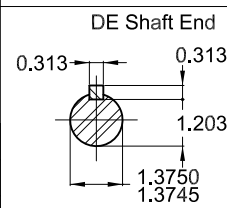
Grounding for leads 2-10 mm² / 14-7 AWG

D

E

2 HP 08 Poles 60 Hz A

Color RAL 5009
Painting plan 202E
Mounting B34R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 213/5TC IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

PREVIEW
WDD

